



2022 Environmental, Social and Governance Report

China Yangtze Power Co., Ltd.

Stock code: 600900.SH

CYPC

Providing flood protection in the Yangtze River Basin and
contributing clean energy to the society



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About This Report

This report mainly introduces the philosophies and policies of CYPC on Environmental, Social and Governance (ESG) as well as its efforts made in 2022. This report aims to enhance communication with stakeholders and systematically respond to the concern of all parties on sustainable development.

Report scope and data verification

This report is an annual report, covering the period from January 1, 2022 to December 31, 2022. To make the report be more comparable and perspective, some contents may be traced back to previous years or extended to the coming years as necessary. The policies and data provided in this report cover CYPC and its affiliated companies, and a list is attached at the end of this Report to disclose the business scope of subsidiaries. All currency amounts referred in this Report are in RMB unless otherwise stated. Data and cases in this Report are mainly derived from the Company's statistical reports and relevant documents. The Board of Directors of the Company guarantees that there is no false record or misleading statement in this report, and it is responsible for the authenticity, accuracy and completeness of the contents.

Terms of address

For ease of presentation and reading, China Yangtze Power Co., Ltd. is hereinafter referred to as "CYPC", "the Company" or "We" in this Report. Full names and abbreviations are also provided for all companies/institutions referred to in this Report, please see the "Explanation of Terms" at the end of this Report.

Disclosure of the Report

The financial data involved in this Report are the same as those in the annual report. The latter has been audited by an independent third party, promising that all information and data in this Report are authentic, complete and accurate.

Basis for preparation

This Report was prepared by reference to the Sustainable Development Reporting Standards of the Global Reporting Initiative (GRI Standards), the TCFD's Recommendations of the Task Force on Climate-related Financial Disclosures, the Measures for the Administration of the Law-based Disclosure of Environmental Information by Enterprises issued by the Ministry of Ecology and Environment of the P.R.C., the Rules Governing the Listing of Stocks on Shanghai Stock Exchange among other guidelines.

Company Profile

CYPC adheres to the state's New Development Philosophy, actively responds to the Belt and Road Initiative and serves the development of the Yangtze River Economic Belt. We aim to made great achievements in consolidating large-scale hydropower, expanding new space for high-quality development, as well as promoting scientific and technological innovation from a big-picture. Meanwhile, we are dedicated to accelerating market-oriented reform, digital transformation, international expansion, and the integration of "development-distribution-sales", thus to reinforce our position as a global leader in hydropower industry and build CYPC into a world-class listed clean energy company with hydropower as its core business.



About Us

As a limited liability company, CYPC was established by China Three Gorges Corporation (CTG) as the leading promoter on September 29, 2002. CYPC was listed on the Shanghai Stock Exchange via its IPO in November 2003 with stock code of 600900. The Company currently has 24.468 billion shares. In September 2020, the Global Depository Receipts (GDRs) issued by the CYPC under the Shanghai-London Stock Connect mechanism got listed on the London Stock Exchange.

By the end of 2022, the Company's controllable hydropower installed capacity had reached 45,595 MW. In January 2023, CYPC completed the acquisition of assets in Wudongde and Baihetan Hydropower Plants (a total of 26,200 MW). With an installed capacity of controllable hydropower increasing to 71,795 MW, the Company has become the largest listed electric company in China and the largest listed hydropower company in the world.

In 2022, the Company's four cascade hydropower plants had an accumulative power generation of 185.581 TWh. With a total asset of RMB 327.268 billion, we achieved a total operating income of RMB 52.06 billion and a total profit of RMB 26.313 billion. With stable and abundant cash flow, we have maintained an excellent asset-liability ratio in the industry and followed a high dividend policy for many years. For the year of 2022, we distributed a cash dividend of RMB 20.092 billion at a dividend ratio of 94.29%.

In 2022

an accumulative power generation of	a total asset of RMB	a total operating income of RMB	a total profit of RMB
185.581	327.268	52.06	26.313
TWh	billion	billion	billion

Development strategy



Business profile



Large-scale hydropower

CYPC operates and manages six cascade hydropower plants along the main stream of the Yangtze River, including Wudongde, Baihetan, Xiluodu, Xiangjiaba, Three Gorges, and Gezhouba HPPs. The six cascade hydropower plants, which form the world's largest clean energy corridor, continuously generate and send clean power to Central China, East China as well as Sichuan, Yunnan, Guangdong and other provinces. Moreover, they play an enormously important role in flood control, drought relief, navigation and ecological safety, greatly helping to safeguard the Yangtze River, ensure national energy security and fulfill the "carbon peaking and carbon neutrality goals".



- ① Wudongde HPP
- ② Baihetan HPP
- ③ Xiluodu HPP
- ④ Xiangjiaba HPP
- ⑤ Three Gorges HPP
- ⑥ Gezhouba HPP



Integrated smart energy

In 2022

CYPC expanded business in over **20** provinces and cities across China

CYPC started the construction of **48** projects

completed **22** projects and put them into operation

a total investment of over RMB **3** billion for projects completed and under construction

Taking into account its business practice and regional resource endowment, CYPC proposed "one energy storage, two networks, three load sources and four energy sources" in an innovative way, focused on the field of integrated smart energy and expanded business in over 20 provinces and cities across China. In 2022, CYPC started the construction of 48 projects, completed 22 projects and put them into operation, with a total investment of over RMB 3 billion for projects completed and under construction.



New energy

CYPC insists on the profound collaboration among new energy, large-scale hydropower, pumped storage and integrated smart energy. We are exploring and carrying out a development mode of pumped storage and new energy, under which "resources are developed, bases are constructed and power plants are operated in an integrated manner".

¹ "one energy storage, two networks, three load sources and four energy sources": one energy storage refers to energy storage and charge of electric vehicle and ship; two networks refer to the energy supply network and the energy information network; three load sources refer to types of typical energy users (i.e. single building, complex building, smart city); four energy sources refer to distributed photovoltaic, distributed natural gas, biogas, heat pump among other clean energy.



Pumped storage

CYPC properly sets up its pumped storage business along the Wudongde - Gezhouba clean energy corridor and in the heavy load centers along the main stream of the Yangtze River. Following the principle of pursuing excellence, while considering the regional abundance of wind and solar energy resources and the user-side needs, we have made solid efforts not only to manage the investment, operation and maintenance of pumped storage power stations, but to orderly prepare for the operation management of pumped storage power plants.



International business

CYPC has developed international business in Peru, Pakistan, and Brazil among other countries. In 2022, there was a steady increase in all operational indicators of the Company's international business, among which the operating income was RMB 7.15 billion, the total profit was RMB 1.421 billion and the net profit was RMB 827 million.

In 2022

the operating income was RMB **7.15** billion

the total profit was RMB **1.421** billion

the net profit was RMB **827** million



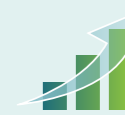
Power distribution and sales

Throughout the year, CYPC signed contracts with around 600 electricity retail users, sold about 4,500 GWh of electricity and made itself qualified to be issued with a Green Energy Certificate of 200 MW. Meanwhile, the Company developed 40,000 international green certificates in market-based ways, further elevating the added value of electricity sales. Besides, the Company undertook 730 GWh of hydropower in Shanghai, thus achieving the integration of electricity generation with electricity sales for the first time in Shanghai.

In 2022

CYPC sold about **4,500** GWh of electricity

undertook **730** GWh of hydropower in Shanghai



Investment business

Being oriented in value creation, CYPC steadily carried out investments according to its business prospects, and firmly promoted asset rotation in the fields of clean energy, regional energy platforms as well as upstream and downstream areas of the industry chain. The Company also promoted its invested equity assets to concentrate on the key responsibility and major business in order, and increased about RMB 3.5 billion of foreign investments in 2022. In addition, The Company conducted effective management on the dynamic market capitalization of listed equity and earned an annual investment income of RMB 4.6 billion.

In 2022

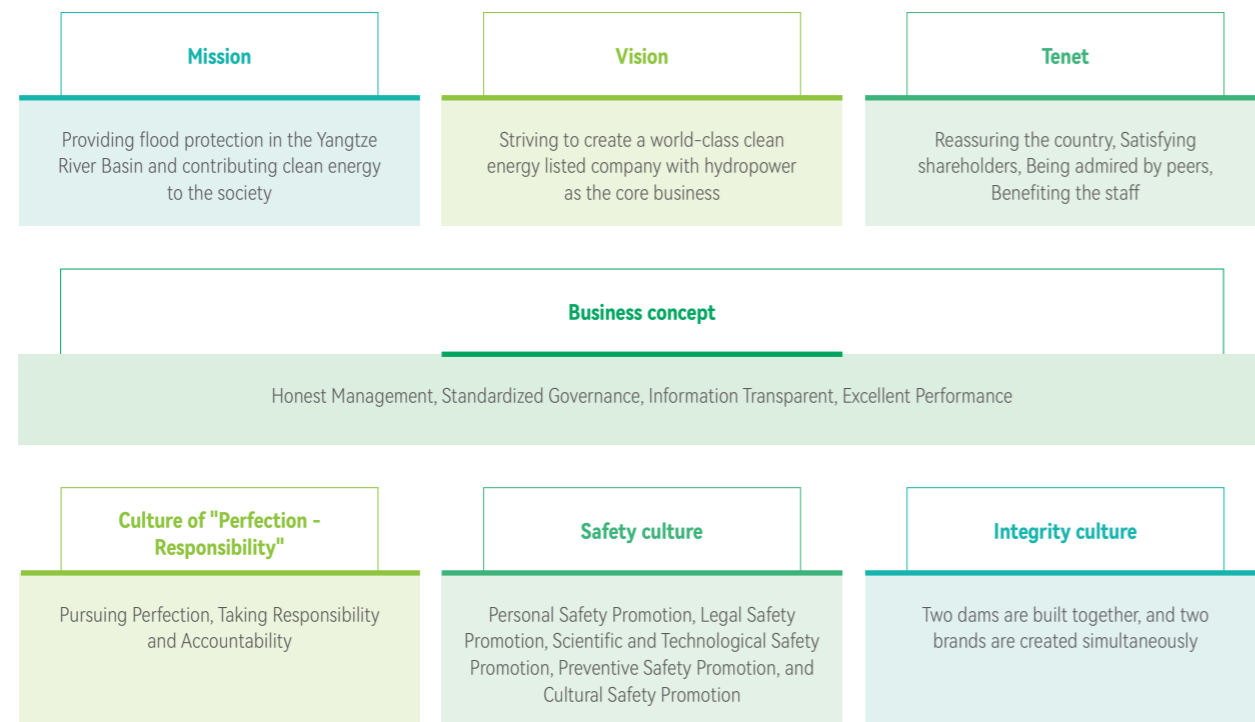
CYPC increased about RMB **3.5** billion of foreign investments

earned an annual investment income of RMB **4.6** billion



Corporate Philosophy

Corporate culture



Main honors

Name of award and honor	Awarded to	Awarded by
Model Enterprise for State-owned Enterprise Governance	CYPC	SASAC
"Benchmarking" Enterprise in the Annual Appraisal of "Double-Hundred Action"	CYPC	SASAC
China A-Share Listed Company with the Best Governance Practice in 2022	CYPC	China Securities Regulatory Commission
Class-A Enterprise in Information Disclosure	CYPC	Shanghai Stock Exchange
GoldenBee Excellent CSR Report - Evergreen Award	CYPC	Ministry of Commerce of P.R.C.
Excellent Enterprise in Responsibility Information Disclosure	CYPC	The Chinese Institute of Business Administration
Model Enterprise of the Year 2022 in the Credit System Construction of Power Industry	CYPC	China Electricity Council
One of the Ten Classic Cases of Overall Listing in the Capital Market	CYPC	China Association for Public Companies
China A-Share Listed Company with the Best ESG Practice	CYPC	China Association for Public Companies
Generous Returns List under the Cash Dividend Chart of China A-Share Listed Companies	CYPC	China Association for Public Companies
Sincere Returns List under the Cash Dividend Chart of China A-Share Listed Companies	CYPC	China Association for Public Companies
The First Prize in 2022 Hubei Provincial Science and Technology Progress Award	CYPC	The People's Government of Hubei Province
Hydropower Science and Technology Award	TGHPP	China Society for Hydropower Engineering
National Model Enterprise for Safety Culture Promotion in 2022	TGHPP	China Association of Work Safety
Yangtze River Science and Technology Award	Gezhouba HPP	Changjiang Technology and Economy Society
Hydropower Science and Technology Award	Gezhouba HPP	China Society for Hydropower Engineering
"Golden Apple Award" for Scientific and Technological Achievements in Power Industry	Xiluodu HPP	China Electricity Technology Market Association
First Prize in National Innovation Outcomes of Power Equipment Management (the Management Category)	Xiluodu HPP	China Electric Equipment Management Association
Excellent Institution in the Workers' Event of "Small Invention, Small Creation, Small Innovation, Small Design and Small Suggestion" in Sichuan Province	Xiluodu HPP	Sichuan Provincial Federation of Trade Unions
"Silver Medal" of Excellent Demonstration Cases of Thermal Control Automation and Intelligent Power Generation Technologies in Power Industry 2022 (the Fifth Session)	Wudongde HPP	China Electricity Technology Market Association
"First-Rate Project" with Innovation Outcomes of Power Equipment Management in Chinese Power Industry 2022	Wudongde HPP	China Electric Equipment Management Association
Electric Power Innovation Award	Baihetan HPP	China Electricity Council
Special Prize in National Innovation Outcomes of Power Equipment Management	Baihetan HPP	China Electric Equipment Management Association
Second Prize in 2022 Electric Power Innovation Award	The Three Gorges Cascade Dispatch & Communication Center	China Electricity Council
Grand Prize in the 2022 Science and Technology Achievement Award presented by Changjiang Water Resources Commission	The Three Gorges Cascade Dispatch & Communication Center	Changjiang Water Resources Commission (CWRC)
Hubei Provincial Science and Technology Progress Award	Overhaul and Maintenance Factory (OMF)	Department of Science and Technology of Hubei Province

Selection of Material Issues for the Report

Issues Identification

CYPC identified 51 ESG issues, by reference to domestic and foreign disclosure standards, while considering the requirements of national macro policies, industry development trends as well as its business and development strategies.

Environmental issues

17

Social issues

13

Governance issues

21

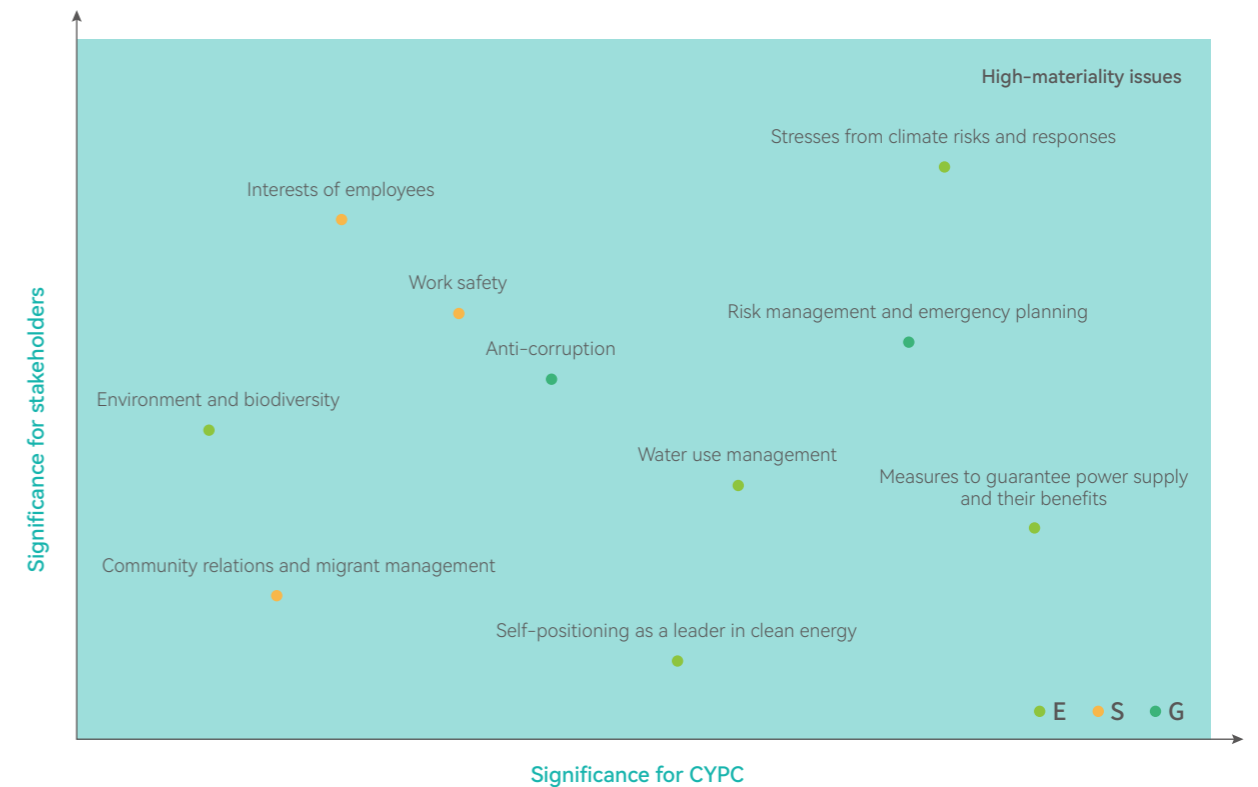
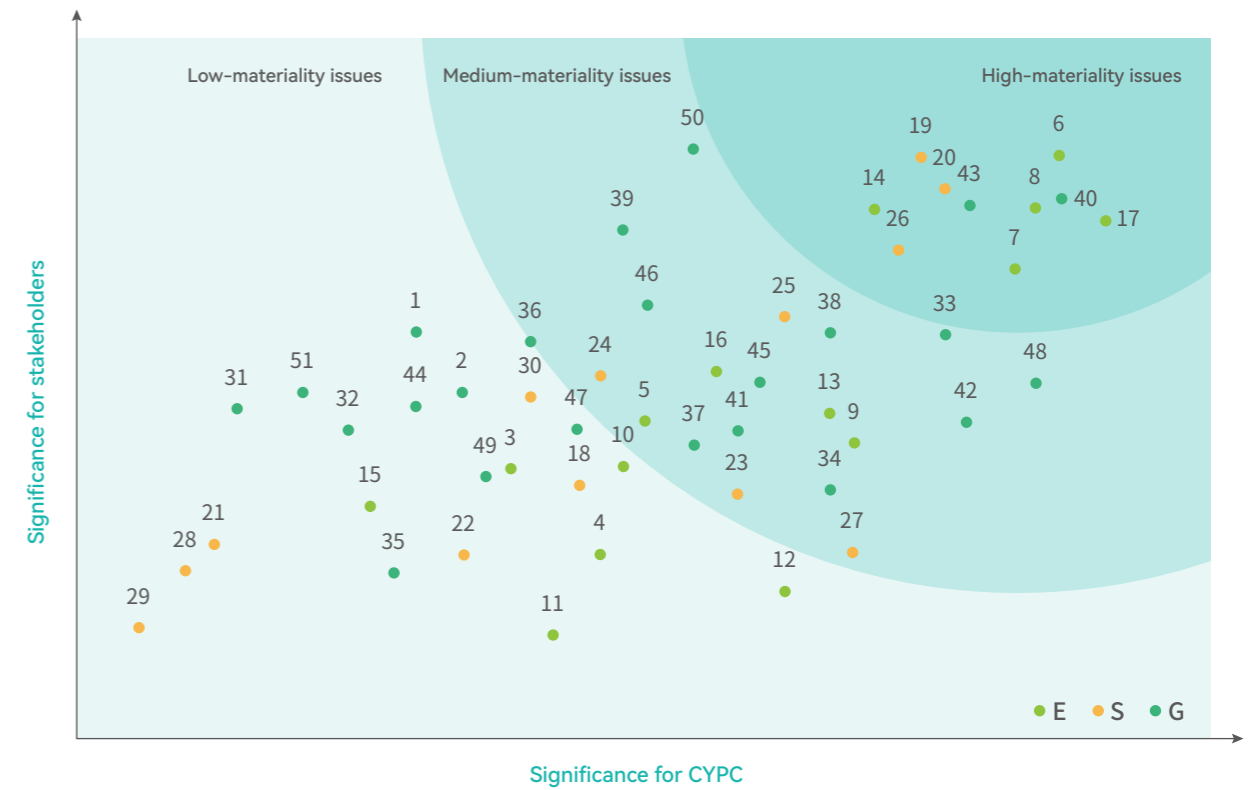
Investigation and research on stakeholders

Through online questionnaires, the Company invited internal and external stakeholders to evaluate the materiality of the issues from their own interests.

Respondents of the survey included government departments/regulatory bodies, shareholders, investment institutions, credit institutions, employees, customers, suppliers and partners, non-governmental organizations, local communities and other stakeholders. Totally 441 valid questionnaires were collected.

Analysis and replies on material issues

Stakeholder	Material issues	Way of communication
Shareholders/investors	Sustainable profitability, equity-based incentives, cash dividends and compliance operation	General Meeting of Shareholders, performance briefing, brokerage strategy meeting, investor hotline, mailbox of Board Secretary, Wide Area Network, SSE E-Interaction Platform, and so on
Government/regulatory body	Compliance operation, supporting the economic development of reservoir areas, relocation of migrants, and public welfare donations	Daily communication and reporting, special research and on-site meeting, and so on
Clients and consumers	Product quality, after-sales service, health and safety, performance of social responsibility	Daily communication, satisfaction survey, special meeting, and so on
Suppliers/contractors	Procurement practice, anti-corruption, compliance operation	Purchasing activities, social media, field investigation, satisfaction survey, and so on
Employees	Occupational health and safety	Staff and Workers' Representative Congress, satisfaction survey, on-boarding training, regular communication and training, mailbox of the President, and so on





Topic I

Ensuring Power Supply with Green Electricity and Contributing to Flood Control along the Yangtze River

In 2022, in view of the severely low inflow in the Yangtze River, as well as the frequent occurrence of extreme weather and an unprecedented huge threat to energy supply, CYPC took the responsibility and accountability of ensuring power supply, water supply and people's livelihood. By giving full play to the overall benefits of the hydro-complexes, the Company effectively served as a "pillar" in the efforts to guarantee energy supply, and successfully completed the task of ensuring power supply.

In 2022

Over

36^{TWh}

of electricity were delivered to Shanghai

Account for about

23[%]

of Shanghai's total electricity consumption

Providing clean energy

During the operation and management of the world's largest clean energy corridor, CYPC plays an important role in the safe and stable operation of power grids. Besides, provides strong support for the national key strategy of "West-to-East Electricity Transmission", and contributes to the country's efforts in accomplishing "Carbon Peaking and Carbon Neutrality" goals.



Case

"Illuminating" Shanghai's Economy with Clean Electric Power

In 2022, CYPC delivered over 36 TWh of green hydropower to Shanghai, which accounted for about 23% of Shanghai's total electricity consumption. This contributed strong support to the "illumination" of the economy and people's livelihood in Shanghai.



Electricity Transmission Line of Three Gorges HPP

Contributing to flood control along the Yangtze River

The Company has made full use of the role of cascade reservoirs (mainly based on the Three Gorges) in flood control and drought relief in the Yangtze River basin. In 2022, the cascade reservoirs accumulatively replenished over 32 billion cubic meters of water downstream during the drawdown period, and provided a total of 5.57 billion cubic meters of water to downstream during the two special drought-relief actions and anti-salty tide replenishment campaigns (led by the Ministry of Water Resources), which effectively ensured people's demands of production water and domestic water in the middle and lower reaches of the Yangtze River.



Fighting the worst drought in the Yangtze River Basin in 60 Years through scientific dispatch

From August to September 2022, in response to the special water replenishment action led by the Ministry of Water Resources, CYPG accumulatively provided 1.51 billion cubic meters of water to the middle and lower reaches of the Yangtze River, and raised the water level of such regions by 0.1-0.9 m. This satisfied the agricultural water demand of 356 large and medium-sized irrigation areas in the middle and lower reaches of the Yangtze River as well as the domestic water demand of major areas, and guaranteed the irrigation water demand of 43.16 million mu (about 2,877,333 hectares) of autumn grain crops. The water supply benefited 13.85 million people, and effectively alleviated the drought in the mainstream area of the Yangtze River (at the middle and lower reaches) in addition to Hubei and Hunan provinces.

Implementation of measures to guarantee power supply

CYPG intensively conducted special tasks including seeking out and eliminating safety risks and hazards in hydropower plants, as well as technical supervision and inspection to ensure that equipment and facilities are in sound condition and provide hardware support for the safety of power grid operation. The Company set up a business management team to guarantee power supply led by the Company's chief managers and steadily advanced the efforts of ensuring power supply by stages. The annual maintenance and overhaul of CYPG were dynamically rescheduled in real time based on power demand and the inflow status. During the National Day holiday, only 2 hydropower units were in a state of overhaul.



Progress in guaranteeing power supply

In 2022, the Company successfully completed multiple rounds of tasks to guarantee power supply, in spite of severe challenges such as extremely low inflow in the Yangtze River basin, continuous drought in summer and autumn, and the resulted arduous task of ensuring power supply. Following the instructions of competent dispatching authority, the Company reinforced cooperation with the meteorological bureau to provide more updates on hydrological and meteorological forecast, and accurately operated the cascade reservoirs. Due to its efforts in guaranteeing energy supply, the Company was spoken highly of by dispatching authorities such as the State Grid and China Southern Power Grid, as well as the provinces where energy was consumed, and received letters of thanks from the Zhejiang Provincial Energy Bureau, the State Grid Hubei Electric Power Co., Ltd. among others.



Strengthening hydrological and meteorological analysis to ensure power supply under hot weather

Since July 2022, the inflow in flood season has decreased by about 50% compared to multi-year average. In early July of 2022, the Company predicted that the Three Gorges Reservoir would encounter a small flood process of over 30,000 cubic meters per second in mid-to-late period of the month, and that it would be operated at high water levels in a short term. Accordingly, the Three Gorges Reservoir would increase water storage by 1.62 billion cubic meters, followed by an increase of energy storage capacity by 330 GWh. The maximum output of Three Gorges HPP lifted from 20.3 GW to 21.5 GW with increased power generation of about 130 GWh, which guaranteed power supply under high temperature at the end of the month with more power and greater peak capacity.

工业互联网平台

CYPC INDUSTRIAL INTERNET OF THINGS

平台介绍

核心组件

综合展示



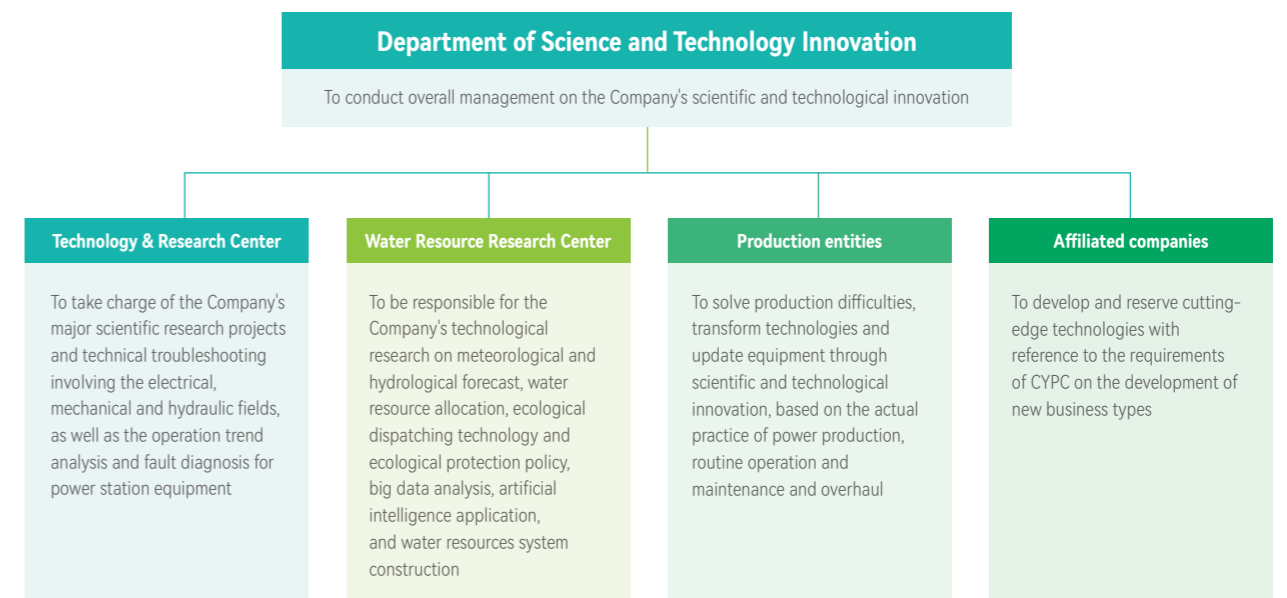
Topic II

Driving Development with Innovation, Seeking Self-reliance through Science and Technology

CYPC keeps boosting scientific and technological innovation by increasing investment. The Company has applied artificial intelligence, robots, lasers and other advanced technologies to large-scale hydropower, obtaining over 1,900 patents and bringing new technical breakthroughs to large-scale hydropower operation and maintenance. In response to the action of "Registering Cloud Computing Platform and Using Big Data to Empower Intelligence", the Company has built the data middle platform, technology middle platform and business middle platform with hydropower characteristics, with the aim of promoting its digital transformation and development.

Scientific and technological innovation

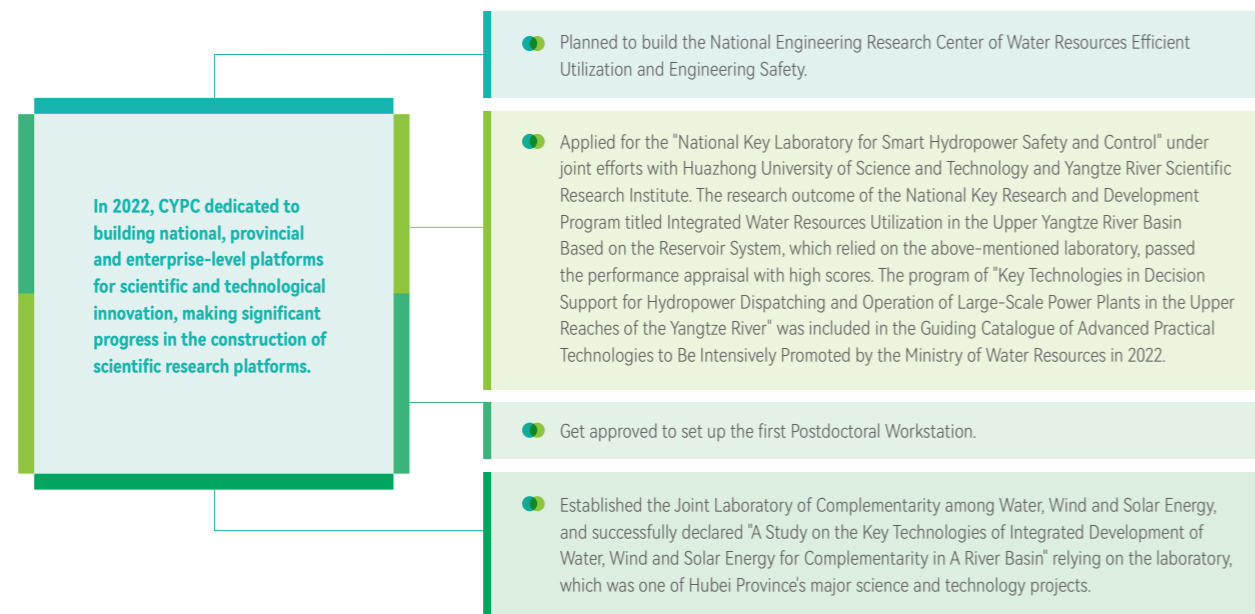
Scientific innovation system



» Goals for scientific and technological innovation



» Building a scientific and technological innovation platform



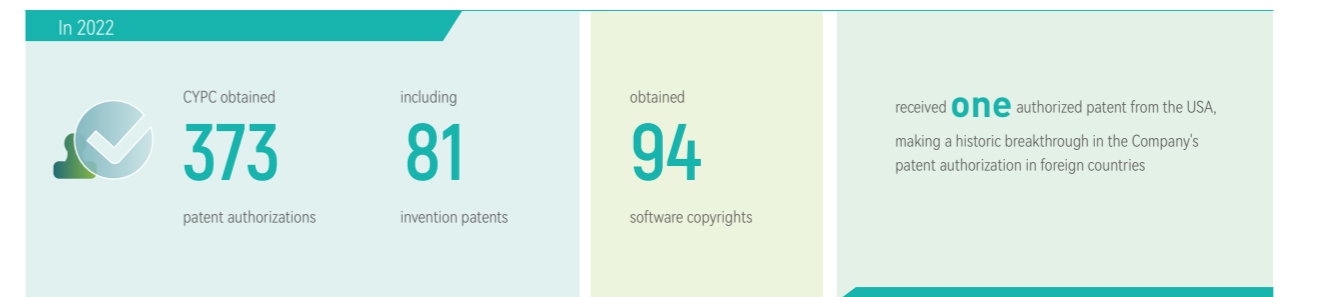
» Bringing in scientific and technological talents

CYPC has made greater efforts in the regular introduction of scientific and technological talents, explored the feasibility of bringing in scientific research teams, and continued to expand scientific research exchanges and cooperation in academic visits. In 2022, one leading talent in the field of simulation computing was introduced and included in the National Talent Plan, and 3 high-level special talents from overseas were recruited.

» Scientific and technological achievements

In 2022, CYPC edited and compiled a collection of national standards, of which one has been submitted for approval and release. A total of 13 collections of industry technical standards, which was also edited or compiled by CYPC, has been submitted for approval and release. Additionally, CYPC successfully declared the preparation and revision of 6 collections of industry technical standards in 2022 (3 of which were edited and the other 3 were compiled by CYPC).

CYPC made greater efforts in the declaration of awards for scientific and technological achievements. In 2022, CYPC won 3 provincial and ministerial science and technology awards, as well as 12 industrial science and technology awards.



Key technical breakthroughs of CYPC

- We have mastered the core repairing technology for 500 kV welded gas-insulated metal-enclosed transmission lines.
- We have pioneered the rotating ring repair technology based on laser cladding, opening up a new chapter for the application of laser cladding technology in the traditional hydropower industry.
- We have developed a total of 14 tools including intelligent robots and high-pressure water jet concrete demolition equipment, in three categories - patrol inspection, testing, and operation. These advancements have significantly improved the efficiency and safety factor of operation and maintenance.
- We have conducted research on crucial technologies for hydropower plants, including Computer-based Supervisory Control System, programmable logic controllers, key components of gas-insulated metal-enclosed transmission lines, and imported high-precision sensors.
- We have studied and developed the world's first set of detection robot clusters for giant penstocks, filling in the international technology gap.





Exploring new types of business

>> Building an integrated base of water, wind, solar and stored energy in an innovative way

Focusing on the complementary development model of "Water, Wind, Solar and Stored Energy" (which means the integrated use of such sorts of energy), CYPC has furthered its exploration on such bases in the lower reaches of the Jinsha River (Yangtze River), including putting forward feasibility schemes through the bundled integration of new energy and hydropower plants, putting forward an intelligent operation and equipment plan for the new energy station in the Lower Jinsha River Base; actively developing a new intelligent operation mode of "online management and unified control" with the assistance of advanced technology and equipment such as drones and robots.

>> "Steward" of urban integrated smart energy

Adhering to serving as a "Steward" of urban integrated green energy, CYPC has provided professional service of energy solutions and developed an integrated smart energy mode with CTG characteristics. In this way, the Company has achieved seamless connection between energy flow and information flow, realized a collaborative supply of coldness, heat, electricity, steam, water among other types of energy, improved the interaction of source-grid-load-storage-use links, and given rise to more energy-use portfolios, creating a "Lego" effect of energy supply.

>> Creating a zero-carbon industrial chain

CYPC has boosted the development of the electrification of ships on the Yangtze River, and promoted the trial installation of the first batch of "on-ship power bank" for converter stations along the mainstream of the Yangtze River. We developed a carbon asset management platform in order to accelerate the accumulation of capacities in carbon footprint management and carbon asset verification. We boosted the construction of various zero-carbon industrial parks, among which the integrated smart energy project of Huafo Group's Zero-Carbon Industrial Park in the Yangtze River Delta was rated as "China's Top Ten Typical Cases on Carbon Neutrality in 2022". We intensively participated in the trade in the Guangdong electricity spot market and formed a demonstration mode of green electricity trade. Through devoting great efforts to the integrated source-grid-load-storage projects, we won a third-class prize in Typical Cases of the Action of "Carbon Peak and Carbon Neutrality" presented by China Business Executives Academy (Dalian) for the source-grid-load-storage project in Ordos City.

>> Hydrogen energy

In 2022, the Integrated Station Project of Hydrogen Production and Hydrogenation in Yangjiawan Wharf was launched on the right bank of the Three Gorges in Yiling District, Yichang, with an annual designed hydrogenation amount of 56 tons and a designed hydrogen production amount of 200 standard square meters per hour. The Company has completed equipment commissioning, and successfully produced 99.999% high-purity hydrogen.



Undertaking the development of "Three Gorges Hydrogen Boat-1"

As the first hydrogen fuel cell powered ship enlisted with CCS classification in China, "Three Gorges Hydrogen Boat-1" was jointly developed by CYPC, Three Gorges Navigation Authority, No.712 Research Institute of China State Shipbuilding Corporation, Wuhan Branch of China Classification Society and Wuhan Standard Research Institute of China Classification Society.

"Three Gorges Hydrogen Boat-1" adopts a power system of hydrogen fuel cell and lithium cell, with the rated output power of its hydrogen fuel cell reaching 500 kW and the maximum speed reaching 28 km per hour. Its endurance mileage may come up to 200 km with 20km/h cruise speed. Featuring high environment-friendly performance, high amenity, low energy consumption, low noise among others, it will be used for traffic, tour inspection, emergency response and other tasks in the Three Gorges reservoir area and between the two dams.



Three Gorges Hydrogen Boat-1

>> Innovation in international business

To develop a synergistic effect corresponding to global power generation projects of "water, wind and light", the Company has thoroughly considered the optimal allocation scheme of capacity and electricity compensation among wind, solar and water energy, and actively explored new development trends of smart integrated energy and grid intelligence.

Innovation in management

The Company has profoundly improved management by benchmarking world-class management. By means of all-round and multi-angle benchmarking, we have summarized the common law and common practices of similar hydropower enterprises in the transformation and development under the new situation, extracted and analyzed its own competitive advantages and shortcomings in creating world-class enterprises, clearly put forward measures for improving management and gradually implement them. In such aspects as power production management, new business development, market capability cultivation, digital transformation and upgrading, we have endeavored to promote management innovation and put management outcomes into practice in a "project-based" mode, to further improve management level, enrich management tools and consolidate management foundations, thus promoting the modernization of the Company's management system and management capability.

Corporate Governance

In strict accordance with the *Company Law of the People's Republic of China*, *Code on Corporate Governance*, related laws and regulations, and regulatory requirements for listed companies, CYPC has been continuing to perfect its corporate governance structure and has established modern business organizational policies and operational mechanism, which are characterized with the check and balance among the General Meeting of Shareholders, Board of Directors and special committees, Board of Supervisors, and the Management, thus forming a corporate governance system featuring well-defined power and responsibilities, rational operation, and high efficiency.



Corporate governance structure

Governance system



Notes: For details about the General Meeting of Shareholders, Board of Directors, Board of Supervisors, and identity information and remuneration of senior management, please see the 2022 Annual Report of CYPG.



Board of Directors

In 2022, the Company kept optimizing the diversity of directors, improving the policies for the Board of Directors, optimizing the functions of special committees, and giving full play to the functions of independent directors, thus laying solid foundation for the sustainable growth of the Company.

>> Diversified Board of Directors

Ever since 2016, the Board of Directors has realized diversification with outside directors being the majority and established a check and balance mechanism. Specifically, the expertise of directors covered diversified fields such as enterprise management, risk & compliance, finance, strategic investment, power generation, eco-environmental protection, and energy planning, etc.

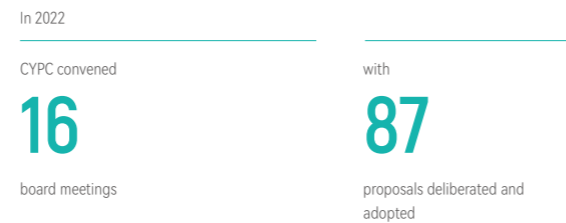
>> Independence of the Board of Directors

Promote the function of outside directors	Independence of resolution vote	Vote avoidance
Among 13 directors of the Board of Directors, 11 ones are outside directors (including 5 independent directors and 6 directors from shareholders), thus ensuring the diversity as well as check and balance among the directors. Furthermore, the Company fully guarantees the right to be informed and the right to make decisions for the outside directors and, so as to enhance independent and efficient operation of the Board of Directors and, in the meantime, realize the diversity of directors and professional decision-making for the Company.	Any board meeting shall be held only in the presence of over half of all directors. Any resolution made by the Board of Directors must be adopted by over half of all directors. Any resolution of the Board of Directors shall be voted on the basis of one-person-one-vote.	The Company strictly implements the avoidance policy. If any director is associated with any enterprise involved in the resolution adopted by the board meeting, such director shall not exercise the voting right on such resolution, nor exercise the voting right on behalf of any other director.

» Performance by the Board of Directors

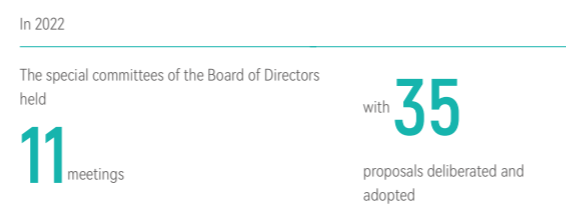
The Board of Directors brings into full play its functions of "determining strategies, making decisions, preventing risks", which are specified by the Articles of Association. In 2022, the Company convened 16 board meetings with 87 proposals deliberated and adopted, thus safeguarding the orderly implementation of various works in compliance with related laws and regulations.

Notes: For details about the attendance of directors at the board meetings and their votes, please see the 2022 Annual Report of CYP.



» Special committees of the Board of Directors

The Board of Directors consists of 4 special committees, including the Strategy and ESG Committee, the Remuneration and Evaluation Committee, the Audit Committee, and the Nomination Committee. Among them, the independent directors serve as conveners and committee members for the Remuneration and Evaluation Committee, the Audit Committee and the Nomination Committee. In such special committees, the independent directors hold important positions, thus providing professional decision-making support and playing supervisory roles in the scientific decision-making of the Board of Directors.



Name of special committees	Convener	Committee members	Duties
Strategy and ESG Committee	LEI Mingshan	MA Zhenbo, ZHANG Xingliao, ZHANG Biyi, WEN Bingyou, and YAN Hua	<ol style="list-style-type: none"> Study the development strategy and planning of the Company, and put forward corresponding suggestions; Study the ESG matters involved in the Company, and put forward corresponding suggestions; Study the important investment decisions to be approved by the Board of Directors, and put forward corresponding suggestions; Study the matters relating to the rule of law in the Company, and put forward corresponding suggestions; Study other important matters influencing the growth of the Company, and put forward corresponding suggestions.
Auditing Committee	ZHANG Biyi	WEN Bingyou, YAN Hua, HUANG Delin, and HUANG Feng	<ol style="list-style-type: none"> Propose to employ or replace the external auditor/audit authority; Audit the internal control of the Company; Supervise the Company's internal audit policy and its implementation; Supervise the efficient implementation and self-evaluation of internal control; Coordinate the audit of internal control and other relevant matters; Audit the Company's financial information and information disclosure; Perform the control of related-party transactions and daily management duties;
Remuneration and Evaluation Committee	WEN Bingyou	ZHANG Biyi, YAN Hua, HUANG Delin, and HUANG Feng	<ol style="list-style-type: none"> Study the evaluation criteria for directors and senior management; Formulate the remuneration plan or scheme according to the major scope, duties and importance of management positions held by the directors and senior management, while considering the remuneration level of other related enterprises and posts; The remuneration plan or scheme includes, but is not limited to: Performance evaluation criteria and procedures, major evaluation system, and major plans and policies of reward and punishment; Review the performance of duties among the directors (excluding the independent directors) and senior management, and carry out regular performance evaluation; Supervise the implementation of the Company's remuneration policy.
Nomination Committee	WEN Bingyou	ZHANG Biyi, YAN Hua, HUANG Delin, and HUANG Feng	<ol style="list-style-type: none"> Study the selection criteria and procedures for directors and senior management, and put forward corresponding suggestions; Elect the qualified nominees for directors and senior management; Review the nominees for directors and senior management, and put forward corresponding suggestions.

» Construction of the boards of directors for share-holding companies and joint-stock companies

In 2022, the Company actively took part in the construction of the boards of directors of its subsidiaries and joint-stock companies.

The Company guided and supervised its 10 subsidiaries to establish their boards of directors, and guaranteed that such boards are mainly consisted of outside directors. Moreover, the Company improved the management mechanism for the full-time directors assigned to subsidiaries, set up a bank of full-time directors and supervisors in subsidiaries, regulated the corporate governance structure of subsidiaries, improved the performance evaluation policy for the directors and boards of subsidiaries, thus promoting the standardized and efficient operation of boards of directors for subsidiaries.



Standardized operation of three boards

Optimize the structure of three boards	In March 2022, the Company completed the general election of board of directors and board of supervisors. After that, 6 new directors joined the board of directors.
Improve related systems	The Company comprehensively reviewed 30 policies relating to the three boards, thus establishing a dynamic mechanism of perfection. In 2022, the Company formulated 5 and revised 7 policies for the three boards.
Standardize the operation of three boards	The Company set up a mechanism featuring "three reports" (pre-report, daily report and major event report), "two researches" (regular research and special research), and "one closed-loop" (report-implementation-re-report). In addition, the Company convened the meetings in strict compliance with the listing rules and corporate governance policies. For such meetings, the Company strictly followed the requirements relating to notice, avoidance and signature. All meetings were provided with complete documents and efficient decision-making procedures.
Optimize the functions of the Board of Directors	The Company fully ensured the board of directors to exercise its rights on the following affairs: to make decisions on the medium and long-term development plans; to select and recruit members of the Management; to assess the performance of members of the Management; to manage the remuneration of members of the Management; to manage the salary distribution of employees; and to manage the major financial matters. Therefore, it was able to offer all-around support for the performance of duties by the directors, and ensure the standardized and efficient operation of the board of directors.

Training and communication of directors and supervisors

In 2022, during the general election of board of directors and board of supervisors, CYP assigned 19 person-times of directors and supervisors to attend the training of directors organized by the Listed Companies Association of Beijing as well as the training of independent directors and new directors organized by Shanghai Stock Exchange. The Company also provided the directors and supervisors with the latest laws, rules and regulatory requirements. The directors and supervisors got a deeper understanding of their rights and obligations, and knew the principles for performance of duties.

Investors' rights and interests

Information Disclosure

Adhering to the requirements of the regulatory body, CYPC kept improving its information disclosure and management policies, and increasing the voluntary information disclosure, so as to fully demonstrate its operating conditions. By holding internal lectures and sending employees for external training, the Company aimed to master the latest regulatory dynamics. The Company also improved the quality of information disclosure. For the reconstructing projects of Wudongde and Baihetan HPPs, the Company effectively handled the matters relating to the issuance of shares, supporting funds, and regular reports. Moreover, the Company studied the disclosure rules specified by Shanghai Stock Exchange and London Stock Exchange, and kept close communication with the supervisors and international consultants from such stock exchanges, thus safeguarding its standard operation as well as ensuring "zero error" for information disclosure on both Chinese and UK stock markets.

The Company also compiled and renewed its documentation series in English and Chinese, such as the *Value Handbook*, *CYPC in One Graph*, *Regular Report and Presentation Materials*, and *Q&A of Key Issues for Investors*, so as to demonstrate the growth and potential value in a comprehensive way.

Protection of shareholders' rights and interests

CYPC promoted the mutually beneficial relationship between the Company and capital market by various means, such as information disclosure, general meeting of shareholders, investor communication platform (e-Interaction of Shanghai Stock Exchange, e-mail of board secretary, communication hot line, and official Weibo account), strategy meeting, on-site investigation, and online performance briefing, etc. Moreover, the Company enhanced channels of information communication through the emerging platforms such as the Wechat Groups, Wechat Video Channel and Tik Tok of investors as well as domestic and overseas financial media.

- In 2022, the company held 3 performance briefings. In the form of "one-to-one" or "one-to-multiple",
- The company carried out online or offline communication with 1,085 investors from 514 domestic and overseas investment institutions,
- Received 1,820 calls from investors via hot lines,
- Replied 494 letters received by the e-mail of board secretary,
- Posted 63 updates about investor relations on its official website,
- Replied to 179 questions from investors,
- Posted 92 updates about the company via its official weibo account and e-interaction of shanghai stock exchange



Strengthened media relations

In 2022, the Company was awarded the "Best Listed Company" from the 4th New Fortune Forum, the "Golden Roundtable Award-Special Contribution Award for Corporate Governance" for board of directors from the 17th Chinese Listed Companies Forum, and "Best Practice for Board Director Office of Listed Companies" from the China Association for Public Companies. Moreover, the Company was also enlisted in the "List of Public Companies with Abundant Returns" and "List of Public Companies with Sincere Returns" for cash dividends of China A-share listed companies. *CYPC Strategy and Summary of Electric Power GDR Information Disclosure* was awarded "First-class Excellent Research Paper" for management innovation of Chinese electric power enterprises in 2022.

Communication with stakeholders

The Company attaches great importance to the relations with government, shareholders, clients and employees. We try our best to develop channels and means to communicate with stakeholders, and take targeted measures to respond to the actual needs of stakeholders.

CYPC official website:
<https://www.cypc.com.cn/cypcweb/cypc/20161206000056.html>

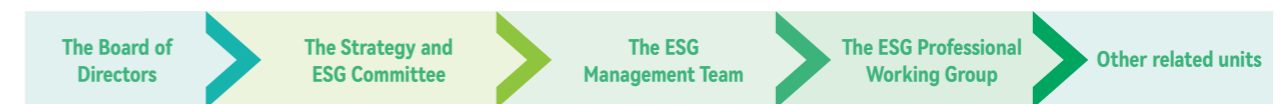
ESG Governance

CYPC has been committed to integrating ESG governance into development strategy. We integrate the concept of responsibility through all links of the Company, including strategic development, investment, construction, production and daily management, so as to promote its market credibility and forge a better brand image.

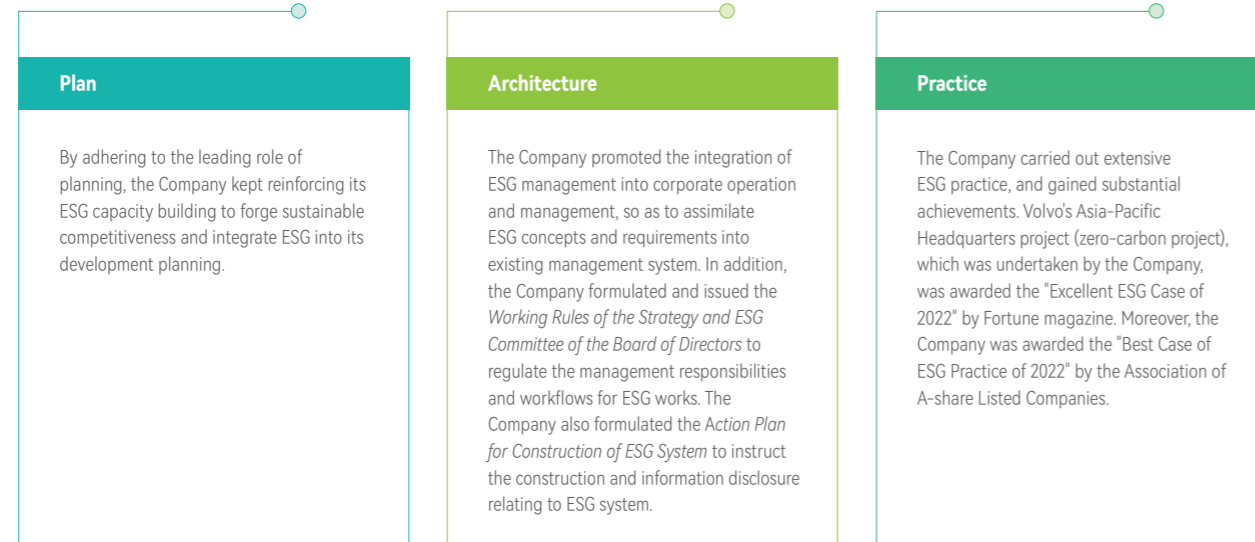
ESG management structure

On December 16, 2022, the 14th Meeting of the 6th Session of Board of Directors examined and adopted the *Proposal on Adjusting the Special Committees of the Board of Directors*, and agreed to change the name of the Strategy and Environment Committee to the Strategy and ESG Committee, so as to facilitate comprehensive management and layout for ESG works at the Board level.

Currently, the Company has built up a five-level ESG management system comprising the Board of Directors, the Strategy and ESG Committee, the ESG Management Team, the ESG Professional Working Group, and other related units.



ESG governance actions



ESG appraisal indicators

ESG-related factors	Being taken as indicators for performance appraisal
Environmental protection	The Company formulated the <i>Detailed Rules for Annual Environmental Protection Performance Appraisal</i> to clearly assess and score the environmental management system and policy development, environmental management quality, key environmental protection works, environmental management effect, and environmental protection incidents during the production and operation. Such detailed rules have been comprehensively adopted to assess the annual performance of all departments and units under the Company. In the meantime, the Company adopted the tenure system and contractual management for senior executives, integrated environmental protection into the appraisal indicator system, and carried out the annual operating performance appraisal and the tenure operating performance appraisal of senior executives.
Corporate governance	As one of annual key tasks, corporate governance was included in the appraisal indicators for related departments, so as to further clarify the interface of power and obligations, discussion and resolution workflow, and standard performance of duties among the main bodies of corporate governance such as the general meeting of shareholders, board of directors, and the management.
Work safety and anti-corruption	Work safety and anti-corruption were integrated into the annual performance appraisal of all departments and units under the Company. In the meantime, the Company adopted the tenure system and contractual management for senior executives, integrated work safety and anti-corruption into the appraisal indicator system, and carried out the annual operating performance appraisal and the tenure operating performance appraisal of senior executives.

ESG information disclosure

The Company releases ESG Report and Corporate Social Responsibility Report annually. By strictly adhering to the guidelines specified by the Shanghai Stock Exchange, the Company standardized the content of ESG information disclosure and, at the same time, enhances the disclosure of risk identification, management strategies and ESG performance relating to the excellent industrial practices and the appraisal indicators set by MSCI, FTSE Russell, Standard & Poor's, and Dow Jones. The Company set up a ESG information disclosure matrix to improve the effectiveness, timeliness and accessibility of information disclosure, so as to ensure effective responses to external needs for ESG information.

Information disclosure matrix

Disclosure content	Disclosure channel	Disclosure frequency
ESG practice ESG policy	<ul style="list-style-type: none"> Official website News media Investor Q&A 	<ul style="list-style-type: none"> Real-time
Key ESG issues	<ul style="list-style-type: none"> ESG information declaration to rating agencies News conference Investor Q&A 	<ul style="list-style-type: none"> Monthly/Quarterly (according to the Company's arrangement)
Summary of ESG practices Summary of ESG policies Summary of key ESG issues	<ul style="list-style-type: none"> ESG Report Annual report/Semi-annual report Special report 	<ul style="list-style-type: none"> Annual/Semi-annual
Study on ESG issues Long-term sustainable development strategy	<ul style="list-style-type: none"> Special release Voice of the industry 	<ul style="list-style-type: none"> Irregular/Long-term



Contribution to 2030 U.N. Sustainable Development Goals (SDGs)

SDGs	2022 CYPC Action
	<ul style="list-style-type: none"> Assistance to resettled residents from reservoir areas Contribute to rural revitalization Active participation in public welfare undertakings
	<ul style="list-style-type: none"> Promote modern agricultural production system in corresponding rural areas
	<ul style="list-style-type: none"> Build up safety management system Guarantee occupational health and safety Carry out health assistance programs favorable to public, so as to promote the healthcare capability in rural area
	<ul style="list-style-type: none"> Implement talent cultivation program featuring "setting sail-cruising-navigating" Carry out training and accreditation of technical skills Offer assistance to local education
	<ul style="list-style-type: none"> Promote Board diversity and increase the percentage of female managers Equal employment and prohibit gender discrimination
	<ul style="list-style-type: none"> Water replenishment actions against drought Promote water pollution control comprehensively Upgrade drinking water facilities to guarantee water supply in rural area
	<ul style="list-style-type: none"> Expand the scale of hydropower generation to promote the utilization of water resources Actively develop clean energy electricity generation including hydroenergy, solar energy, and hydrogen energy Build up new energy bases featuring the complementarity among multi-energy resources
	<ul style="list-style-type: none"> Safeguard the legitimate rights and interests of employees Pay the social insurance in full and on time, prohibit forced labor Provide employment opportunities and hold skill training in local communities

	<ul style="list-style-type: none"> Supply economical and effective clean energy power to the Yangtze River Economic Belt Carry out infrastructural construction in reservoir areas Enhance technological innovation and protect the intellectual property rights
	<ul style="list-style-type: none"> Safeguard the living and production interests of resettled residents in reservoir areas Extend care to disabled employees, employees from minor ethnic groups and other minority groups
	<ul style="list-style-type: none"> Flood management and risk control Improve the living conditions of local communities Protect the ecosystem
	<ul style="list-style-type: none"> Advocate resource conservation Ensure standardized processing of waste water, waste gas and solid waste Follow the green office concept
	<ul style="list-style-type: none"> Enhance the ability to cope with and adjust to climate change Develop clean energy industry Promote green production Publicize low-carbon and green concept
	<ul style="list-style-type: none"> Conduct ecological dispatch test Protect rare fish species Carry out fish proliferation and releasing activities Set up ecological protection facilities
	<ul style="list-style-type: none"> Carry out research on rare plants along the Yangtze River Protect unique / rare plants in the Yangtze River Basin Actively cooperate in the ecological protection projects in the Yangtze River Basin
	<ul style="list-style-type: none"> Adhere to law-based corporate governance and compliant business operation Build up authoritative and efficient audit and supervision systems Adhere strictly to business ethics
	<ul style="list-style-type: none"> Enhance international communication and cooperation Enhance suppliers training and forge a responsible supply chain



Compliance and risk management

Compliance management

Compliance management system

<p>The Company set up a collaborative operation mechanism for law, compliance, internal control, and risk management; kept perfecting compliance management policies; adhered to the principle of honest management; developed integrity culture; addressed on the pertinence and effectiveness of supervision; forged the environment for standardized and law-based operation.</p>	<p>The Company has a rule of law operation management team (the Compliance Management Committee, and the operation and management team for risk management and internal control). Subsidiaries and functional departments at various levels were provided with a total of 19 chief compliance officers and 85 compliance specialists to implement the duties of main body responsible for compliance management.</p>	<p>The Company revised the <i>Accountability Policy for Incompliant Operation and Investment</i>, and adjusted the Office of Accountability Management Team. In 2022, the Company received no report on non-compliance operation, nor any case relating to personnel accountability.</p>
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Schematic Diagram for Compliance Management System

Management main body	Functional orientation	Management measures
Policy system	Construction and implementation of special policies	<ul style="list-style-type: none"> Implemented policies including the <i>Compliance Management Policies</i>, <i>Compliance Manual</i>, <i>Management Measures for Compliance Consulting and Review</i> and <i>Compliance Management Measures for International Operation</i>, as well as the special guidelines, including the <i>Compliance Guidelines for Information Disclosure</i>, <i>Compliance Guidelines for Investment Business</i> and <i>Compliance Guidelines for Employment Management</i>. Issued the Compliance Responsibility List for Important Posts, Compliance Risk Identification List, and Control List of Important Business Process, thus specifying the main compliance risk points, related processes, and responsibility main body. Issued the <i>Case Selection and Compilation for Typical Compliance Risks</i>. To explain the rules through those selected practical cases, aiming to warn the colossal cost of illegal and non-compliant actions, forge the compliance culture in the Company, and enhance the compliance awareness among employees.
The Governance	Implementation of the primary responsibilities of managers	<ul style="list-style-type: none"> Implement compliance management responsibilities of the Board of Directors, the Management, and the Compliance Committee. In 2022, the Compliance Committee of the Company held 3 meetings to deliberate the important issues relating to compliance management.
Competent authority	Leadership in compliance management	<ul style="list-style-type: none"> As the leading department for compliance management of the Company, as well as the second defense line for compliance management, the Legal Compliance and Enterprise Management Department is responsible for: building and improving the mechanisms relating to the identification, early warning, and response and disposal of compliance risks; carrying out the legal and compliance audit for the rules and regulations, economic contracts, and major decisions; instructing and supervising the compliance management works of related departments and units; organizing or assisting the compliance training; accepting the compliance consulting, and; promoting the informatization development for compliance management.
Business department (unit)	Daily compliance management	<ul style="list-style-type: none"> Serving as the first defense line for compliance management, business department is responsible for, within the scope of its responsibilities: formulating the specific regulations for compliance management, or preparing the specific compliance guidelines and other related normative documents; carrying out the legal and compliance audit and other daily compliance management for business operation and management; ensuring timely report of compliance risk events, and; identifying promptly the compliance requirements in the line of business.
Supervision department	Compliance supervision	<ul style="list-style-type: none"> The auditor and other related departments, within their scope of functions and powers, investigated the non-compliant behaviors, and ascertain the accountability according to related rules, so as to serve as the third defense line for compliance management.

Compliance assessment

In strict accordance with indicators and key points of self-assessment, the Company matter-of-factly sorted out compliance issues to ensure the objective and true assessment of compliance works:

In 2022, the Company: further improved its compliance organization system; enhanced its compliance policy; optimized its compliance operation mechanism; cultivated the compliance culture; accomplished the compliance rectification as well as the investigation and rectification of compliance risks for business operation of its subsidiaries in a timely manner; effectively solved compliance risks, and; laid a solid foundation for the steady and sound operation and reform. In 2022, there reported no major compliance risk event in the Company.

Compliance publicity and training

- The Company studied and conveyed the guidelines and requirements in related documents issued by the superior competent authority and regulatory body, explained and publicized the rules and laws relating to compliance as well as the important documents relating to compliance management, thus promoting the compliance management within the Company.
- Management personnel of the Company attended the online special training course on compliance management held by China Business Executives Academy (Dalian). Personnel in key positions of all departments and units, and shareholder representatives assigned by the affiliated companies attended the 2022 annual training on risk, internal control and compliance management.
- For over 200 newly recruited employees, the Company held a compliance training and publicized its concept of compliance management.
- The Company also organized all employees to make compliance commitment, aiming to enhance the awareness of compliant operation and reinforce the ideological foundation for compliance management among them.

International compliance management

The Company attached great importance to the building of international compliance system. CYPC's international business units built and improved their international compliance management systems, and formulated corresponding compliance systems and business processes, thus regulating the operation and management activities. On a regular basis, such international business units investigated and sorted out the risks of international business, and identified and sorted out the compliance management requirements to be abide by. They also organized and carried out the identification and assessment of their compliance risks, aiming to respond appropriately to compliance risk events. Moreover, such international business units advocated the concept of compliant operation, and carried out training on international compliance, thus actively promoting compliance culture.

International compliance management			
The Company issued <i>Management Measures for International Security</i> and the <i>Management Measures for International Funds</i> to constantly improve its international business management system.	On a monthly basis, the international business units submitted their compliance management information to the Company. The compliance management departments of such units reported to the decision-making body of the Company quarterly.	The Company selected and assigned its financial officers to work in international companies, so as to exchange ideas on and gain the state-of-art experience relating to the compliance management of international business.	The Company realized compliance audit for 100% of international contracts, policies and laws. The legal and compliance personnel of the Company deeply engaged in major international businesses of the Company, and provided corresponding legal advice and solutions.

Punishment

In 2022, there reported no administrative punishment in the Company.






Risk management

The Company established a risk management organization and responsibility system, which was managed in a unified way by the Board of Directors. Various departments and units under the Company were, within the scope of their responsibility, required to implement such system. Moreover, the Company formulated a series of risk management documents including the *Comprehensive Risk Management Policies*, *Management Measures for Risk Events*, and *Management Measures for Hierarchical Control, Hazard Investigation and Management of Safety Risks*. In 2022, the key risk indicators were controlled efficiently, and no major risk event was found in the Company.



Each year, the Company conducts at least once a comprehensive risk assessment covering all businesses. While taking into consideration the characteristics of specific business, the Company promptly organizes and carries out the special risk assessment. Before making decisions on major issues, the Company carries out the risk assessment on such major issues. The corresponding risk assessment reports (including the countermeasures and response plans) are taken as necessary supporting materials for making decisions on such major issues.

Each year, the Company formulates an annual list of risks, risk control policies, key risk indicators, and risk countermeasures, which are tracked quarterly for the implementation. In 2022, the Company identified the major risks in 6 aspects, as shown below:

Lines of business	Risk point	Main measures	Effect of control
 Work safety	Major safety accident occurs.	<ul style="list-style-type: none"> Optimize the safety management system, and improve the work safety policy; Organize the safety control and patrol on a regular basis, and carry out special or comprehensive safety supervision at irregular intervals; Improve the capability of network security. 	<ul style="list-style-type: none"> No personal injury and casualty accident; no severe equipment & facilities accident, and; no network security accident.
 Power market	Electric trading price and electricity consumption are not as expected.	<ul style="list-style-type: none"> Enhance the study on related policies and rules to gain better transaction results; Coordinate and adjust the transaction plan to ensure rational electricity consumption; Try best to keep the market transaction for large-scale hydropower plants; Control the auxiliary service cost and the assessment cost of generation deviation. 	<ul style="list-style-type: none"> Reduction of profits for unified market transaction and other indicators were controlled properly within the limit.
 International operation	International compliance risk event occurs.	<ul style="list-style-type: none"> Regulate the construction of board of directors for the international subsidiaries of the Company; enhance the analysis on country risk; Carry out related research, due diligence investigation, and estimate of investment returns; guarantee legal and compliant investment process; Carry out training on public security knowledge and pre-trip safety education for all employees to be dispatched to overseas countries; Formulate the emergency plan for international emergency events, and carry out corresponding emergency drills. 	<ul style="list-style-type: none"> Its capability of international investment and operation met the strategic needs of the Company. In 2022, CYPC reported no international emergency incident or personal safety or health accident.
 New energy development	Resource acquisition is not as expected; safety risks in development.	<ul style="list-style-type: none"> Reserve high-quality project resources in the industry; Carry out related industrial and market researches; Employ a professional consulting team to offer a scientific basis for project investment; Investigate the credit standing of partners in a comprehensive way, so as to prevent the compliance risk. 	<ul style="list-style-type: none"> Resource acquisition met expectation; resource development was legal and compliant; during project construction, there was no safety accident, personal injury or casualty.
 Investment management	Investment returns are not as expected.	<ul style="list-style-type: none"> Implement project approval process as per related requirements; enhance constant tracking of business operation in shareholding enterprises; Compile the quarterly special issue on equity management; Urge the implementation subject of investment project to follow the recommendations of the Investment Committee of the Company concerning project review and investment decisions; Track the policy changes on capital market to ensure the legal and compliant operations in stock investment and information disclosure. 	<ul style="list-style-type: none"> The investment projects were provided with complete documents relating to decision-making; related processes were compliant, and; the rate of return on investment met related requirements.
 Employment integrity	Illegal behavior is found.	<ul style="list-style-type: none"> Enhance the promotion of integrity culture; supervise the integrity performance; Organize and carry out the declaration of employment integrity, integrity commitment and warning education, and; Compile and issue the pamphlet of typical integrity cases. 	<ul style="list-style-type: none"> There were no major illegal behavior or legal investigation case in the Company.

Supervision

The audit and supervision works of the Company are carried out under the direct control of the Board of Directors. The Board Chairman serves as the first person responsible for the audit. The Chief Financial Officer assists the Board Chairman to manage the specific works of internal audit.

In 2022, the Company carried out audit works in strict compliance with related rules and regulations. Throughout the year, the Company completed 12 audit projects with a completion ratio of 100%. The scope of audit and supervision covers capital management, investment of funds on new energy, major shareholders of LDS, and major engineering projects.

The Company enhanced the intensity of problem rectification, promoted long-term mechanism for problem rectification, and achieved a rectification completion ratio of 100%.

Qualified accounting firms, which have rich experience in securities and futures, were employed to audit the financial positions and internal control of the Company. The decision-making processes accord with related rules, laws and the Articles of Association. The accounting firms proposed independent, objective and impartial audit opinions, thus ensuring efficient professional service for the Company to disclose information promptly, accurately and completely.

From 2020 to 2022, the Company employed ShineWing Certified Public Accountants and Da Hua Certified Public Accountants to audit the annual reports. In addition, the Company employed Grant Thornton and Pan-China Certified Public Accountants LLP to audit the internal controls. From 2020 to 2022, the audit costs incurred to the Company are as follows: RMB 3.7498 million, RMB 3.4316 million, and RMB 3.4316 million.

Notes: For details about the appointment and dismissal of accounting firms, please see the 2022 Annual Report of CYPC.



Business ethics

The requirements for anti-money laundering, anti-monopoly, anti-commercial bribery, and anti-unfair competition are explicitly stipulated by the policy and normative documents of the Company relating to compliance management. The Company enhances the personnel management and standardizes the punishment in strict compliance with related rules and laws of China. Moreover, for each newly recruited employee, the Company holds the training on business ethics and confidentiality.

Anti-unfair competition

Prohibits commercial bribery of any form	Boycotts any monopolistic agreement with competitors	Does not infringe on the business secrets of partners
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Related party transactions

According to its normal operational needs, CYPC engages in daily related party transactions with CTG and its associated companies. Such related party transactions mainly cover the management of asset and business entrusted by others, management of asset and business entrusted to others, receipt of labor services from related parties, provision of labor services to related parties, and the leasing asset or leased asset. The information about daily related party transactions are examined and approved by the president meeting, board meeting or general meeting of shareholders. After that, such information is disclosed in Shanghai Stock Exchange in the form of company announcement. During the reporting period, no external inquiry is found.

The Company prepares and strictly implements the *Management Policy for Related Party Transactions*. At the beginning of each year, the Company prepares the annual plan for related party transactions as per related rules and regulations. After being approved by the Board of Directors, such annual plan shall be implemented strictly. In 2022, the related party transactions of the Company amounted to RMB 2.68 billion. Such related party transactions mainly covered the management of asset and business entrusted by others, management of asset and business entrusted to others, receipt of labor services, provision of labor services, and the leasing asset or leased asset. In 2022, there was no unfair related party transaction in the Company.



Anti-corruption

Over the years, CYPC has always adhered to the principles of no prohibited area, complete coverage, and zero tolerance towards corruption. By taking precautionary actions, reinforcing coercion policies and enhancing long-term deterrence, the Company has kept improving its anti-corruption system.

Anti-corruption management system

CYPC prepared and issued a series of anti-corruption documents, including *Implementation Rules for the Duty and Clean Practice Report of Managers*, *Implementation Rules for the Clean Practice Talk*, and *Implementation Rules for Employment Integrity of Employees*.

Anti-corruption supervision

CYPC deepened and enhanced its daily anti-corruption supervision by checking erroneous ideas at the outset and focusing on the key aspects, so as to find the emerging and potential hazards in time. Moreover, the Company handled the clues of anti-corruption problems in accordance with related rules and laws, thus improving the efficiency of anti-corruption audits.

Anti-corruption actions

CYPC carried out the integrity publicity and education month (day) on a regular basis, thus enhancing awareness of integrity, reinforcing education of integrity ideals and belief, and consolidating defense line of integrity among all employees.	The Company stipulated and implemented Implementation Rules for Employment Integrity of Employees and other related policies.	By focusing on orderly compliance, the Company implemented the management and supervision of bidding and procurement activities throughout the whole process. By executing internal management policy, the Company effectively controlled its internal behavior and curbed the corruption of suppliers with regard to the execution of bidding and procurement contracts. In 2022, there reported no corruption case in the supply chain of the Company.
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International anti-corruption

By focusing on the key fields of international anti-corruption, investigation of international compliance risks, and internal audit, the Company has, while considering the compliance requirements in different legal regions, established and improved its compliance management system for international anti-corruption, thus extending the management and innovating the policy for international anti-corruption. In 2022, our case titled *Compliance Management Practice for International Anti-corruption: Conflicts of Laws and Institutional Innovation* was awarded the Special Prize for Compliance Management Achievements of Electric Power Enterprises of 2022.

Green Development

CYPC has been adhering to the concept of prioritizing natural ecosystem and green development, complying with national environmental protection laws and regulations in power generation and operation management. Under the lean production mode, CYPC generates green and clean electricity, thus contributing to ecological protection of the Yangtze River, national transformation of carbon peaking and carbon neutrality as well as the construction of a new power system.





Tackling climate change

By referring to the framework recommended by the Task Force on Climate-Related Financial Disclosures (TCFD), CYPC disclosed its work plans and results related to climate change from four perspectives: governance, strategy, risk management, metrics and targets.

Governance

CYPC incorporated the governance of addressing climate change into the governance of the Board of Directors and the corporate management system. The governing institutions and corresponding responsibilities are as follows:

Department in charge of governance	Job responsibility
Board of Directors	Reviewing and guiding the Company's objectives and strategies related to the climate change; monitoring the implementation of the Company's five-year development strategy each year, including climate response measures, to ensure that it becomes an important part of the Company's strategy.
Strategy and ESG Committee	Deliberating and arranging climate change-related issues; providing intellectual support for the strategies related to climate change made by the Board of Directors; assisting the Board of Directors to regularly monitor the completion of climate change-related objectives, plans and measures.
The Management	Taking full account of climate change policies in daily operations; assessing, managing and monitoring climate change issues; and assisting decision-makers in optimizing governance structure.
Department (units)	Identifying opportunities and risks related to climate change; planning and implementing specific programs to deal with opportunities and risks related to climate change; establishing relevant goals and indicators and submitting them to the Company's decision-makers for approval.

CYPC pays attention to the latest progress related to climate change and the responding policies, and implements measures related to climate change in daily work through top-down management. Additionally, we hold work meetings regularly, organize internal education and training on climate awareness, and disclose the latest work progress related to the climate change in an open and transparent manner.

List of climate risks and responding strategies

Our power generation business mainly focus on large-scale hydropower, and the project sites are mainly distributed along the middle and upper reaches of the Yangtze River. The power generation is closely related to the incoming water of the Yangtze River, and the uncertainty of inflow in the basin may have certain impacts on power generation and generating capacity. There are two types of risks brought by climate change identified by the Company: one is the physical risk of the fluctuation of water flow caused by the climate change; the other is the transformation risk of the economic market due to the climate change, accompanied also by the opportunities. Under the scenarios of RCP2.6 low-emission and RCP8.5 high-emission, the time range and impact of climate risks are assessed through qualitative methods, and appropriate response measures are formulated based on the Company's governance framework of climate change.

>> List of climate risks and opportunities

Physical risks

Risk Classification	Risk Aspect	Risk Designation	Risk Description	Climate Scenario*	Time Scope*	Impact Strength*	Responding strategies																																				
Climate Change	Assets and operation departments	Drought	<ul style="list-style-type: none"> The drought in the basin leads to the decrease of incoming water and the decline of revenue from power generation. Water replenishment scheduling is required if water inflow decreases in the basin, which will increase operating costs. 	RCP2.6	Short-term	Moderate	<ul style="list-style-type: none"> The Company shall: pay timely attention to the drought situation in the Yangtze River (Jinsha River) basin; improve the water regime information sharing mechanism with hydrological and meteorological departments as well as project owners; carry out an integrated operation of reservoirs in the basin; and maintain the safe water level of reservoirs. 																																				
				RCP8.5	Long-term	High		Climatic Disaster	Assets and operation departments	Heat wave	<ul style="list-style-type: none"> High temperature will affect operational efficiency and increase operating and labor costs. 	RCP2.6	Short-term	Low	<ul style="list-style-type: none"> The Company shall: strengthen the control of security risks; improve the emergency management mechanism; pay close attention to meteorological orange and red warnings; strengthen patrol inspections in hot weather; and ensure the operation safety. 	RCP8.5	Long-term	Moderate	Assets and operation departments	Flood disaster	<ul style="list-style-type: none"> The fluctuation of upstream water inflow affects business continuity, leading to a decline in revenue from power generation. The progression of construction projects and facility safety may be affected. 	RCP2.6	Short-term	Low	<ul style="list-style-type: none"> The Company shall: establish emergency plans for flood control; regularly make climate predictions in critical periods (drawdown period, flood season and water storage period); strengthen precise dispatching; and maximize the benefits of power generation under the premise of ensuring flood control and flood safety. 	RCP8.5	Long-term	Moderate	Assets and operation departments	Frequency and severity of other extreme weathers	<ul style="list-style-type: none"> The increasing frequency of extreme weathers, such as extreme precipitation, may affect power generation and dispatching policies. Extreme weathers may lead to the suspension of business activities and increase labor costs. Extreme weather events and major natural disasters may cause damages to the Company's power generation equipment and infrastructure, pose a threat to the personal safety of the Company's staff, and cause property loss. 	RCP2.6	Short-term	Moderate	<ul style="list-style-type: none"> The Company shall: optimize the operation scheme; strictly implement the accountability of enterprise safety management; innovate and develop a dual prevention mechanism; implement the analysis and management of risks and hidden dangers in daily work; refine the natural disaster early warning policy; and improve the emergency response capacity under extreme weathers and major natural disasters by drills. 	RCP8.5	Long-term	High	Assets and operation departments	Extreme cold (Heavy snow)	<ul style="list-style-type: none"> Extreme cold may affect water inflow, transmission equipment, and logistics and transportation, which may reduce operational efficiency. Severe snowstorm may threaten personnel safety and cause property loss. 	RCP2.6	Short-term
Climatic Disaster	Assets and operation departments	Heat wave	<ul style="list-style-type: none"> High temperature will affect operational efficiency and increase operating and labor costs. 	RCP2.6	Short-term	Low	<ul style="list-style-type: none"> The Company shall: strengthen the control of security risks; improve the emergency management mechanism; pay close attention to meteorological orange and red warnings; strengthen patrol inspections in hot weather; and ensure the operation safety. 																																				
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Transformation risks and opportunities under the RCP2.6 scenario

Category of risks or opportunities	Aspect	Designation	Description	Time Scope*	Impact Strength*	Responding strategies
Market and technical risks	Operation and product departments	New renewable energy and low-carbon energy-saving technology	<ul style="list-style-type: none"> The emergence of revolutionary new energy and technologies may lead to a decrease in the consumption of hydropower and the feed-in tariff. The access to new energy and technologies requires an increase of input costs from enterprises. The transition to lower-emission products, technologies and services requires additional costs. 	Medium and long term	High	<ul style="list-style-type: none"> The Company shall: strengthen research and strategic layout of new technologies; optimize energy conservation and environmental protection facilities; reduce comprehensive energy consumption; promote research, development and innovation on energy conservation and energy consumption reduction technologies; and develop comprehensive energy utilization projects.
Policy and market risks	Operation and product departments	National electric power system reform and price risk	<ul style="list-style-type: none"> The deepening of the national reform of the power system, the gradual increase of electricity traded in the market, and the constant modification of auxiliary services will cause uncertain impacts of the external environment to the Company. 	Long-term	Moderate	<ul style="list-style-type: none"> The Company shall: actively adapt itself to the trends of power market development and power system reform; follow up and analyze the changes in the power supply and demands; comprehensively consider the economic facts, power supply structure and load condition of the provinces and cities receiving electricity, and the power generation characteristics of the Company's power plants; and explore the multi-dimensional strategic cooperation with relevant parties. Additionally, the Company shall continue to make the best of professional and policy advantages, and pay close attention to the relevant policies of the power market construction.
Policy and legal risks	Operation department	Increased requirements for information disclosure	<ul style="list-style-type: none"> The regulatory and mandatory disclosure of climate-related financial information may result in poor quality information due to a lack of historical data. 	Short-term	Moderate	<ul style="list-style-type: none"> The Company shall strengthen the construction and management of data platform.
Market risk	Operation department	Reputation of the Company in environmental protection	<ul style="list-style-type: none"> If the Company has bad behaviors or no timely response to the environment and climate change, it may affect the Company's reputation, resulting in loss of investors and customers, and may further affect the Company's operation. 	Long-term	Low	<ul style="list-style-type: none"> The Company shall: follow public opinions related to the Company's actions of climate change in real time; actively communicate and exchange with stakeholders; and strengthen information disclosure.
Policy and legal opportunities	Operation department	Climate policy	<ul style="list-style-type: none"> The national energy structure prefers more low-carbon green energy, facilitating the development of clean energy enterprises. 	Medium and long term	High	<ul style="list-style-type: none"> The Company shall: pay close attention to the updates of climate change-related policies; timely adjust its strategies and plans to seize policy opportunities; and give full play to the key role of clean energy in achieving the goals of carbon dioxide peaking and carbon neutrality.
Market opportunities	Assets and operation departments	Preference to low-carbon clean energy enterprises in the market	<ul style="list-style-type: none"> Policies tend to follow market preferences, and the market prefers clean-energy power companies with less greenhouse gas emissions. 	Medium and long term	High	<ul style="list-style-type: none"> The Company shall: closely follow the changes of the electricity market and the carbon market; expand the layout of new energy businesses; coordinate the development of the power source-grid-load-storage and multi-energy complementary businesses; and consolidate its competitiveness in the clean energy market.
Technological opportunities	Operation and product departments	Advanced hydropower generation technology	<ul style="list-style-type: none"> The advanced hydropower equipment and technologies of the Company, with the vigorous promotion of clean energy, is favorable to the further development in the domestic market and further expanding of international business of the Company. 	Medium and long term	High	<ul style="list-style-type: none"> The Company shall: pay attention to the development of international cutting-edge hydropower technologies; increase investment in scientific research; consolidate the basic deployment of hydropower, and actively expand hydropower operation at home and abroad.
Policy and legal opportunities	Assets and operation departments	More strict financing requirements of green finance	<ul style="list-style-type: none"> Investors prefer environmentally friendly and low-carbon enterprises or related industries. 	Medium and long term	Moderate	<ul style="list-style-type: none"> The Company shall consolidate its competitiveness in the clean energy market, and develop products and technologies more environmental.



➤ Risk response measures

CYPC actively participated in the consultation meeting on climate trend forecast organized by the National Climate Center, the Information Center of the Ministry of Water Resources, the Yangtze River Basin Meteorological Center and other authoritative institutions, in order to understand various forecasts of the parties concerned, comprehensively sort out climate risks and opportunities, develop long-term response strategies and makes plans in advance. The Company also held frequent and precise internal weather and climate forecast consultation meetings, followed the development of weather and climate risks and opportunities, conducted risk early warnings and predictions, and proposed targeted measures.

No.1



Highlight

Paid attention to the change of climate indicators and analyzed the potential climate risks.

At the beginning of each month, the Company made a short-term forecast of the monthly precipitation trend in the Yangtze River Basin, while focusing on risks of weather and climate change. In the face of weathers with major risks, the Company analyzed and discussed with industry experts to understand the weather changes in advance.

The Company has a professional meteorological and hydrological forecasting team, of which the meteorological forecasting system is built according to provincial standards, and the forecast coverage is more than 2 million square kilometers across 14 provinces and cities, and the spatial resolution of the forecast is 5 km×5 km. The Company's hydrological forecasting system covers the Three Gorges and the upper reaches of the Yangtze River basin, with a forecast period of up to 10 days, which can be extended to 30 days in key periods, with short, medium and long-term meteorological and hydrological forecasting capabilities, and a forecasting capability at the industry-leading level.

No.2



Highlight

Regularly participated in the consultation meeting on long-term climate trend forecast, regarding flood season and autumn, organized by the Yangtze River Basin Meteorological Center and other authoritative organizations. The forecasts from various institutions were analyzed and summarized, and the climate forecasts of key periods (drawdown period, flood season, impoundment period) were conducted regularly.

The Company participates in large-scale climate forecast consultation meeting nearly 10 times per year in key periods such as before flood season, during flood season and at the end of flood season. Combined with highly frequent internal and external forecast consultations, the Company has the capability to dynamically predict medium and long-term climate and incoming water trends in the Yangtze River Basin, and the ability to identify climate risks and opportunities.

No.3

Paid continuous attention to the front of researches on long-term meteorological and hydrological trends in the Yangtze River Basin, organized relevant scientific research projects and countermeasures research, and improved the risk management ability of cascade hydropower plants in changing environments.

Risk management

To tackle the challenges brought by climate change, the Company has incorporated climate risk management in its comprehensive risk management and control system. Based on the meteorological and hydrological monitoring and forecasting technology and joint operation technology, a space-air-ground integrated meteorological and hydrological monitoring system has been built, forming a joint operation system of cascade hydropower plants and a workflow consisting of monitoring and early warning, joint consultation, program calculation and decision-making on dispatching.

Metrics and targets

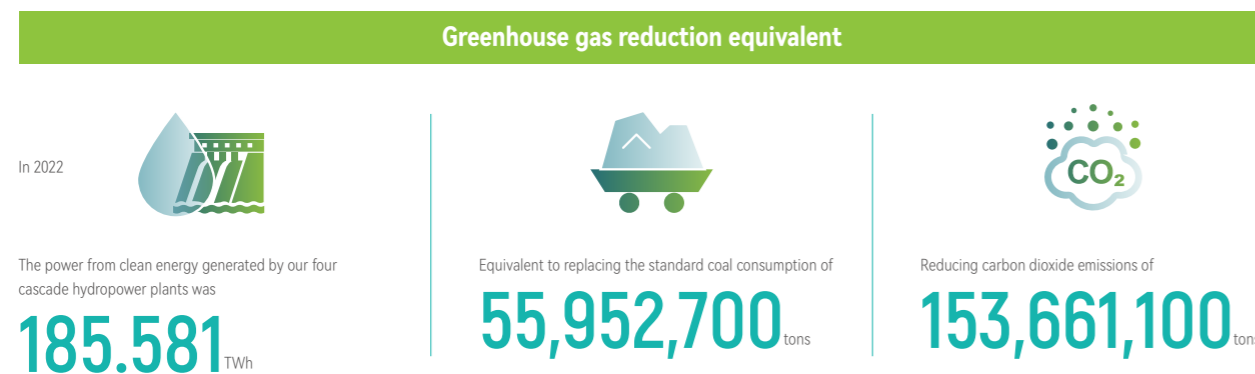
The Company conducted statistical calculation of greenhouse gas emissions from cascade hydropower plants to systematically identify the types and sources of greenhouse gases emitted during the production and operation, which showed that the greenhouse gas emission trends were generally positive. The Company will continue the energy-saving renovation of internal vehicles and office spaces to further reduce the greenhouse gas emissions specified in Scope I and Scope II.

>> Greenhouse gas emissions

According to the statistical standard of *Accounting Methods and Reporting Guidelines for Greenhouse Gas Emissions of China's Power Generation Enterprises (Trial)* (FGBQH [2013] No.2526), CYPG's greenhouse gas emissions in 2022 was about 21,500 tons of CO₂ equivalent. Where: Scope 1 (fuel consumption) was about 1,600 tonnes of CO₂ equivalent and Scope 2 (net purchased electricity) was about 19,850 tonnes of CO₂ equivalent, the total was at a low level.

Total amount of greenhouse gas emissions (tCO ₂ e)	21517
Emissions from fossil fuel combustion (tCO ₂ e)	1634
Emissions from net purchased electricity, heat and cooling (tCO ₂ e)	19850

Since 2021, CYPG has continued to conduct monitoring and analysis of greenhouse gas emissions from the Three Gorges Reservoir, assessing and analyzing the current net flux of greenhouse gas from the Three Gorges Reservoir. The study found that greenhouse gas emissions from the Three Gorges Reservoir in 2022 were about 1.56 million tons of CO₂ equivalent, remaining generally stable compared to 2021.



Environmental Management

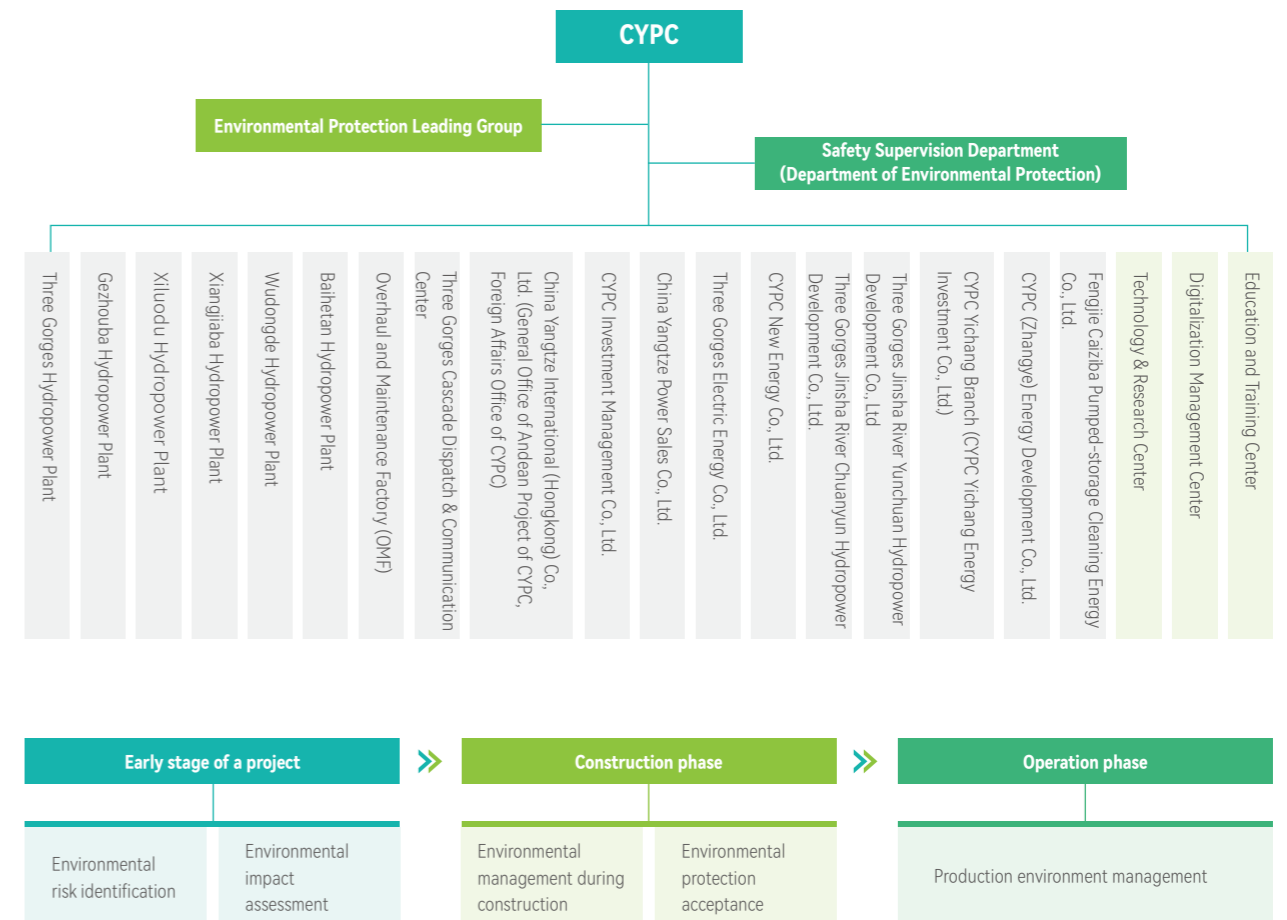
Environmental management system and measures

>> Environmental management structure

CYPG has set up a management team for environmental protection, headed by the President of the Company, to coordinate and manage the ecological environmental protection work as a whole. The Safety Supervision Department (Environmental Protection Department), as a centralized management department of environmental protection, is staffed by full-time management personnel. Each unit has assigned the department responsible for environmental protection and staffed by part-time environmental management personnel.

>> Whole-process management system

The ecological and environmental protection management of CYPG is based on the cycle of Plan-Implementation-Inspection-Treatment (PDCA). According to the national ecological and environmental protection laws and regulations, standards and norms, environmental risk identification and environmental impact assessment are carried out in the early stage of the project, environmental management and environmental protection acceptance are carried out in the construction phase, production environmental management is carried out in the operation phase, thus constantly improving management capabilities.

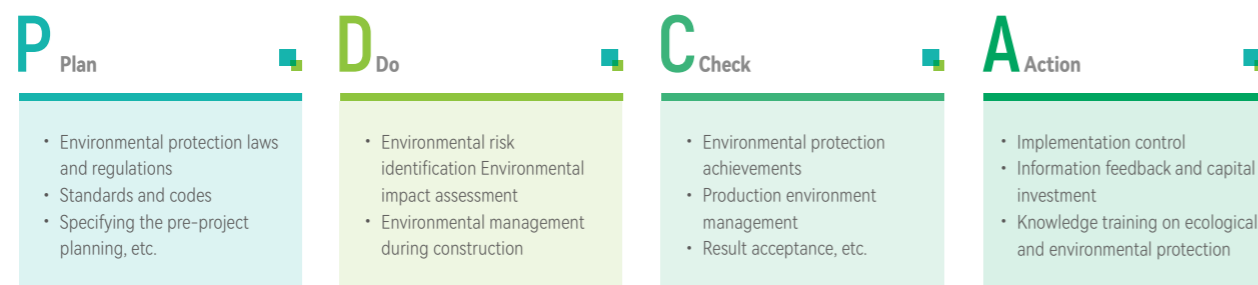




» Environmental management policy



» Building of environmental compliance system



CYPC established the Quality, Environment, Occupational Health and Safety Management System, and the work related to environmental compliance management is carried out under the guidance of the environmental management system. The environmental management system is based on GB/T 24001-2016/ISO14001: 2015 Environmental Management Systems - Requirements with Guidance for Use. CYPC identifies and evaluates environmental factors for each business process, activity and place, determine important environmental factors, formulate environmental objectives, indicators and management plans for important environmental factors, and control important environmental factors during the production and operation and office activities, and monitors environmental performance, operation control and compliance with target indicators, thus continuously improving environmental performance through PDCA cycle management.

CYPC has established environmental management system for many years, and (since the first certification in 2006) has passed the environmental management system certification by Fangyuan Testing Certification Company and China Certification Center Inc. The certification of this cycle has been conducted by CCSC in November 2021 and is valid until September 2024. The business scope of environmental management system certification covers investment management, power production and marketing, management of hydropower plant constructions, equipment and facilities, flood control and shipping support services, power distribution and sales services, and operation of international power stations, covering 13 functional departments, 3 directly-affiliated organizations, 8 production entities and 2 subsidiaries of CYPC.

» Building of environmental scientific research system

CYPC planned the theory and scientific and technological innovation direction of ecological and environmental protection for water conservancy projects in the Yangtze River Basin, and implemented projects such as the Consultation on Research Framework of Ecological Environmental Protection for Water Conservancy Projects in the Yangtze River Basin, providing strong scientific and technological support for the modernization of governance system and capacity of the Yangtze River, and promoting high-quality development of the Yangtze River Economic Belt.

Environmental management objectives and achievements

» Annual environmental protection objectives

No sudden environmental incidents, no penalties for violations causing ecological damage or environmental pollution, no incidents of concealment or false reporting, and no matters of environmental assessment.

The environmental protection project shall achieve the annual task objectives as planned.

» Performance

- CYPC achieved zero environmental pollution incident and administrative penalty throughout the year, and zero dispute about environmental pollution.
- There was no incident of "construction before approval and investment before inspection" for construction projects.
- RMB **78.16** million was invested in energy conservation and environmental protection.
- The compliance rate of pollutant discharge (such as wastewater) and noise in the dam area was **100%**, the compliance rate of hazardous waste disposal was **100%**, the coverage rate of garbage classification management was **100%**, and the compliance rate of environmental management system of production entities was **100%**.

Control of environmental risks

In 2022, CYPC organized all units to make a general investigation of the factors that cause pollutant emission and ecological environment impact on production and business activities, identified a total of 877 environmental factors, and reviewed and published 4 important environmental factors. In terms of four important environmental factors, such as hazardous waste disposal, wastewater discharge, leakage of hazardous substances caused by accidents and plant-service power consumption, CYPC formulated control measures and management programs respectively, and specified units and departments to be held accountable.

At the same time, CYPC organized a self-inspection based on the Yangtze River Protection Law, and special inspections of hazardous waste and wastewater automatic monitoring facilities, and conducted on-site supervision of cascade hydropower plants, Gangjialing Photovoltaic Power Plant in Luquan County, Yunnan and Leiyang Biological Gas Project in Hunan. CYPC also cooperated with the China Renewable Energy Engineering Institute to conduct a technical supervision of ecological and environmental protection of the Three Gorges HPP and Gezhouba HPP. The three-year campaign for hazardous waste disposal has been completed as planned. In 2022, a total of 13 internal and external supervision and inspections was conducted, and 12 problems found have been fully rectified.

In 2022

A total of

13

internal and external supervision and inspections was conducted, and 12 problems found have been fully rectified

Implementation of environmental impact assessments

- The Lower Jinsha River Base and Three Gorges cascade hydropower stations of CYPC have all completed environmental impact assessments and obtained approval.
- The Xiluodu and Xiangjiaba sewage treatment plant renovation projects, Three Gorges metal structure maintenance center, and Zhangye pumped storage project, have all completed environmental impact assessments and obtained approval.
- In construction projects that should carry out environmental impact assessment according to laws, the implementation rate of environmental impact assessment was **100%**.
- RMB **52,000** of environmental protection tax was paid in 2022. No soil and water conservation fees.

Biodiversity protection and land use

CYPC supported the construction of natural reserves, tried to avoid the occupation of natural reserves during the selection of project sites, and ensured project schemes met the standards of ecological protection and soil erosion control. We continued to support the artificial breeding, proliferation and release of Chinese sturgeon and other rare fish in dam areas, actively paid cooperative efforts in ecological dispatching activities, and promoted the construction of "Xiangjiaba and Xiluodu Regional Rare Botanical Garden". We also cooperated with relevant local government departments to take a series of comprehensive management measures and achieved remarkable results in ecosystem restoration.

» Aquatic conservation

☰ Topic
Protection of Chinese sturgeon

CYPC continued to fund the Chinese Sturgeon Research Institute to carry out artificial reproduction and technical research of Chinese sturgeon, actively participated in the release activities, and helped expand the scale of artificial breeding and release. We paid unremitting efforts to further explore the natural spawning experiment of Chinese sturgeon and realize the recovery of natural Chinese sturgeon population.

In 2022, we assisted in two release activities of Chinese sturgeon, and a total of more than 200,000 Chinese sturgeons were released into the Yangtze River. During the activities, we actively coordinated the output plan and operation mode with the National Electric Power Dispatch Center and the Central China Power Grid Dispatch Center, and strictly followed the control requirements of the downstream water level and flow of the Chinese sturgeon release activities to ensure the smooth progress of the release activities.

CYPC helped build a 1,800-kilometer monitoring system covering the middle and lower reaches of the Yangtze River, which is the most extensive and technologically advanced fish tracking system in China, and realized comprehensive monitoring of the migration trajectory of the released Chinese sturgeons in 2017. In 2019, about 73% of the second-generation Chinese sturgeons released were able to enter the ocean through the Yangtze River estuary, fully indicating that artificial breeding and release is an effective means to supplement the population of Chinese sturgeon.

Since November 2022, we have actively cooperated with the natural breeding test of Chinese sturgeon carried out in the tailrace of the Underground Station of TGHP, and the current test work is being actively promoted.



Release activity of Chinese sturgeon

In 2022

a total of more than

20

Chinese sturgeons were released into the Yangtze River

☰ Topic
Protection of rare fish and four major Chinese carps

Research on propagation technology

In 2022, after taking over the Xiluodu - Xiangjiaba Rare and Endemic Fish Breeding and Releasing Station, CYPC focused on the large-scale breeding of rare fish in the lower reaches of the Jinsha River, organized and carried out the reproduction and breeding of 5 species of fish such as coreius guichenoti, Yangtze sturgeon, sucker fish, Procypris rabaudi and Megalobrama pellegrini. A total of 8 batches of rare fish has been bred, about 2,085,000 fertilized eggs have been obtained, and about 1.03 million hatchlings have been hatched.

Compared with 2021, the breeding amount increased by about	the breeding amount of Yangtze sturgeon hatchling was	which was
62%	200,000	3.1 times that of 2021
	A total of	with the breeding amount reaching
	160,000	2.3 times that of 2021
	hatchlings of coreius guichenoti was bred	

Expanding large-scale breeding

CYPY organized researches on large-scale breeding technology of Yangtze sturgeon and round coreius guichenoti.

In 2022

the fry of five fish species that have been reproduced totally exceeded	of which: about	about
350,000	100,000	100,000
	juvenile Yangtze sturgeons	5-10 cm juvenile coreius guichenoti have been bred independently

Continuing breeding and release activities

On June 6, 2022	On October 1, 2022	
about		of which about
303,000	396,000	85,000
8-10 cm juvenile Yangtze sturgeons were released at Xiangjiaba Experimental Station and Yichang Experimental Station	fish of six species, including Yangtze sturgeon, coreius guichenoti and Megalobrama pellegrini, were released	were coreius guichenoti

Precise ecological dispatch

In 2022, CYPC helped conduct various ecological dispatch tests for a total of 17 times, effectively improving the spawning and breeding of fish in the mainstream of the Yangtze River, and playing the ecological role of the cascade reservoir system.

During the "Artificial Flood Peak" ecological dispatching experiment carried out separately in the Three Gorges Reservoir

the total spawning amount in the Yidu region downstream of Gezhouba Dam was	of which the spawning amount of the four major Chinese carps was
15.3 billion	8.8 billion

Case

Spawning amount of the four major Chinese carps increased by artificial flood peaks

Year	2020	2021	2022
Number of dispatches	1	2	2
Operation time	From May 23 to 28, 2020, Xiluodu, Xiangjiaba and Three Gorges cascade reservoirs carried out joint ecological dispatches.	From May 29 to June 3, and from June 16 to 22, 2021, the Three Gorges Reservoir carried out two consecutive ecological dispatch experiments.	From June 3 to 8, Xiluodu, Xiangjiaba and Three Gorges cascade reservoirs carried out joint ecological dispatch. From June 23 to 28, the Three Gorges Reservoir carried out ecological dispatching experiments.
Monitoring result	The fish spawning amount in Jiangjin and Yidu reaches was about 33 million and 500 million, respectively, and the total amount was about 533 million.	During the dispatch period, the total spawning scale of fish in Yidu reach exceeded 12.4 billion, of which the spawning capacity of four major Chinese carps exceeded 8.4 billion.	During the ecological dispatch of the Three Gorges Reservoir, the spawning amount of fish in the Yidu region was 15.3 billion, of which the spawning amount of the four major Chinese carps was 8.8 billion.

» Protection of rare plants

In 2022, CYPC promoted the construction of "Xiangjiaba - Xiluodu Regional Rare Botanical Garden" at Xiangjiaba HPP, and accomplished the introduction and planting of about 200 rare, unique plants in Xiangjiaba and Xiluodu reservoir areas. In the future, the Xiangjiaba - Xiluodu Regional Rare Botanical Garden will give full play to its core functions of ex-situ conservation and scientific research of rare plants, and build itself into a popularization and knowledge-building education base and showcase window of rare plant protection in the downstream region of the Jinsha River.

» Ecosystem restoration

The Gezhouba Hydropower Plant, in cooperation with relevant departments of local government, implemented a series of comprehensive management measures such as the Lake Chief Responsibility System, lake shore improvement, and a total ban on fishing. Now, the ecosystem of the Gezhouba reach has been greatly improved, providing good habitat conditions for birds, and the number and variety of birds increased year by year. More than 20 species of water birds such as egrets, herons, rhyacornis fuliginosus, phalacrocorax carbo, calidris temminckii, black-winged stilt, white wagtail and tachybaptus ruficollis can be seen in the Gezhouba reach.

» Land protection

<p>Reducing land occupation</p> <p>In the environmental impact assessment report, CYPC gave full consideration to the occupation of various types of land, including nature reserves and habitats of protected species. Specifically, the Company took preventive and mitigation measures for the land impact risks of all projects under construction, strengthened the management of construction personnel, controlled the width of work belt, minimized the damage to vegetation in and around the work area, and prohibited arbitrary occupation, disturbance and destruction of surface vegetation.</p>	<p>Controlling soil erosion of construction projects</p> <p>The Company optimized the construction technology, reduces the surface disturbance and damages to vegetation, improved the soil erosion control standards, and effectively reduced potential soil erosion.</p>	<p>Restoring land ecology</p> <p>The Company strictly implemented the ecological restoration measures after the expiration of service period, timely restored land and vegetation after the completion of construction, withdrew construction machinery, demolished engineering facilities, leveled the construction site, planted local herb seeds and took natural restoration measures for the compensation and restoration of surface vegetation.</p>
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Pollutant control

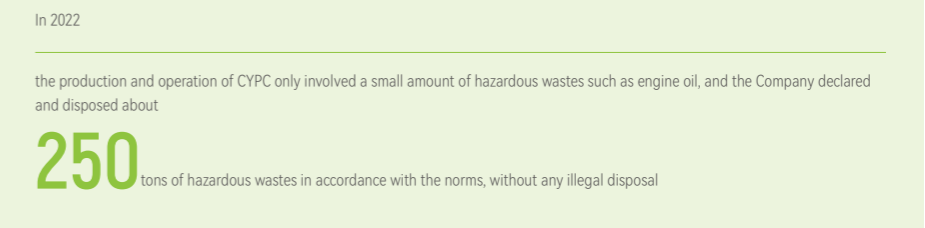
» Waste Water

- The domestic sewage from the Three Gorges and Gezhouba HPPs was all discharged to the local sewage pipelines, and "zero discharge" of domestic sewage has achieved.
- The capacity of sewage treatment facilities in the dam areas of Xiluodu and Xiangjiaba HPPs complied with the **Grade A** of *Discharge Standard of Pollutants for Municipal Wastewater Treatment Plant* (GB 18918).



» Hazardous Waste

In 2022, CYPC completed the three-year action on special rectification of hazardous waste as planned. CYPC summarized experiences, prepared the Hazardous Waste Management Procedures, Hazardous Waste Catalogue and Hazardous Waste Management Instructions, directed and supervised the implementation of whole-process management of hazardous waste by all subsidiaries. The Company strengthened the classification and collection at the source, improved the storage facilities, standardized the posting of signs and labels, and entrusted qualified recyclers to transfer and dispose wastes in time to improve the disposal efficiency and form a closed cycle of management.



» Other pollutants

Monitoring and management of reservoir water blooms

In 2022, the Three Gorges Reservoir carried out two ecological dispatch experiments for the prevention and control of water blooms in the tributaries of Three Gorges Reservoir area from June 25 to 27 and July 17 to 24, and relevant entities carried out hydrological, hydrodynamic and water quality monitoring simultaneously. The ecological dispatch experiments had a positive effect on inhibiting the water blooms in Xiaojiang estuary and Shennongxi estuary.

Removal of floating objects

In 2022, Gezhouba HPP conducted the removal of floating objects, cleaning and disposing 2,671.45 cubic meters of floating dregs in front of the dam.



Resource utilization

Utilization of water resources

The water sources of the power stations operated by CYPC are mainly located in Sichuan, Yunnan, Guizhou and Chongqing. Boasting an average annual precipitation exceeding 800 mm, there is sufficient inflow, with few risks of water resource shortage. We dynamically monitored the trends of climate and incoming water in the Yangtze River Basin in the short and medium terms, and comprehensively managed water resources of projects in operation and under construction.

» Trend prediction

We paid continuous attention to the front of researches on long-term meteorological and hydrological trends in the Yangtze River Basin, organized relevant scientific research projects and countermeasures research, and improved the risk management ability of cascade hydropower plants.

» Coordination and communication

We intensified the communication and coordination with the competent authorities responsible for reservoir operation and power dispatching, actively reported dispatching risks, updated dispatching plans, and improved the effectiveness of dispatching. A number of studies on water resources management and dispatching have been carried out, and scientific and technological innovation has been vigorously promoted.



» Reinforcement of supervision capability

Ensuring the operation of water telemetry system

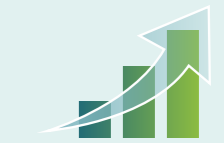
More than 650 water and rainfall monitoring stations were regularly inspected to ensure the collection of water and rainfall data of about 1 million square kilometers in the upper reaches of the Yangtze River.

The proportion of those unimpeded water telemetry systems and their availability reached

99.5%

and **99.17%**

respectively, maintaining an industry-leading level



Continue to keep a leading level in the industry

Building a solid and reliable automated dispatching system

More than **40** million

pieces of data were processed, effectively improving data quality

The annual availability of main system was

100%

the integrity rate of main equipment was

100%

Continuously improving the security performance of system and network

We regularly evaluated system protection level through repair of network security vulnerabilities, optimization of firewall policy, inspection and strengthening of operating system, secured upgrade of service software, and management of mobile storage media.

» Research on water resources management

Adhering to the idea of transforming research results into production, we accelerated the building of the research platform in terms of hardware and software, and fully explored the benefit increment of cascade optimal operation:

The integrated research and development of scientific products such as short-term hydrological forecasting systems, medium and long-term forecasting models, and multi-objective optimal scheduling models have been improved to accelerate the building of a dispatching and decision-making platform integrating functions such as reservoir system forecasting, optimal dispatching and emergency dispatching.

We also increased the study on the impact of extreme weather on the operation of cascade reservoirs; strove to make technological breakthrough in the snowmelt runoff analysis, the transmission between meteorological extreme abundance and drought events, and the construction of electrical and meteorological system; conducted the research on the joint optimal operation of six reservoirs.

» Training on water resources management

We planned and organized a forum consisting of experts in the field of cascade operation, and invited relevant experts from the Yangtze River Committee, Hubei Meteorological Service, Beijing Normal University and other industries to make thematic sharing.

We sent staff to participate in the special training of Hohai University on critical and difficult technologies of hydrological forecasting.

A series of activities named "Doctoral Lecture" 2022 were held to provide a platform for research and exchange on forecasting.

» Key performance of water resource management

In 2022, the comprehensive water consumption rate hit the best since 2015

The water utilization rate of the Three Gorges Reservoir reached

100%

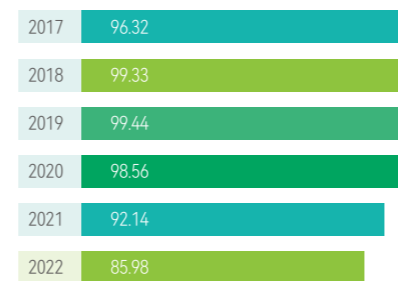
From 2017 to 2021, according to the results of the system implementation, the additional accumulated power generation from water-saving produced by cascade hydropower plants on the main stream of the Yangtze River was about

57.18 TWh

The additional power generation from water-saving produced by cascade hydropower plants of the Company reached

8.598 TWh

Additional power generation (100 GWh)



Transformation for energy conservation

CYPC revised the Management Measures for Energy Conservation to further improve the working mechanism of energy conservation management. In 2022, the electricity purchased by the Company was stable compared with 2021, among which the purchased electricity in the business of stocked hydropower and office activities decreased compared with 2021, and the increased part mainly occurred in the expansion of new businesses.

The Three Gorges Hydropower Plant has transformed the main engine and auxiliary equipment (water pump, etc.) of the central air conditioning system, and the energy saving rate of the equipment after the transformation reached **33.9%** after the transformation. At the same time, the power station responsible for the HVAC system and the dam lighting system have been maintained by professionals to improve the operating state of equipment and reduce energy consumption.

Xiangjiaba Hydropower Plant continued the lighting system renovation project, the lighting lamps in the relevant areas have been entirely replaced by LED lamps with longer service life. After the renovation, the illuminance of the measured area increased by about 6 times, and the power of the new lamps was only 37.5% of the original lamps, saving about **750,000** KWh of electricity throughout the year.

Case Providing energy conservation solutions for clients

Integrated Smart Energy Project of Natural Gas for Jingbei Campus of Jingzhou Central Hospital

The project adopted the joint supply of cooling, heat and electricity by gas, and the annual comprehensive energy utilization efficiency of the three-in-one supply system reached 81.52%. It fully satisfied the regional demand of heating and cooling, reducing the annual total energy consumption by 10%, saving 103 tons of standard coal per year and reducing 269 tons of carbon emissions.



Saving

103 tons of standard coal per year

Reducing

269 tons of carbon emissions

Energy Hosting Project of People's Government of Jinnan District in Tianjin

CYPC implemented the first demonstration project of public building energy hosting in Tianjin. The project added cooling towers coupled with water source heat pump and air source heat pump units on the basis of the original equipment to meet the cooling and heating needs, and installed photovoltaic power generation systems to achieve complementarity among multi-energy resources.



After the project is put into operation

245.27 tons

of standard coal and reduce carbon emissions by

602.5 tons per year

Social Responsibilities

CYPC always upholds the value of "Harmony Orientation, Wealth Creation, Dedication to Society and Green Development" in terms of social responsibility, and focuses on improving the competitiveness in social responsibilities, stimulating and pooling the potential and joint efforts of all stakeholders to share with them the achievements of development. By adhering to the idea of co-building and sharing with local communities, CYPC actively throws itself into community construction, people's livelihood and public welfare and charity activities, to make positive contributions in building a harmonious society.



Product responsibilities

Standardized production

CYPC always insists on the production philosophy of "precise scheduling, lean operation and careful maintenance", and strictly implements the ISO9001 management system; we have formulated a series of production systems and specifications, including *Management Policy of Production Techniques and the Quality Management System*, by which CYPC ensured the safe operation of 110 generating units along the world's largest clean energy corridor, and gave the fullest play to the comprehensive benefits of cascade hydropower plants, thus supplying reliable and stable clean energy to the public.

» Equipment maintenance and upgrading

CYPC formulated targeted standards and specifications for internal maintenance of equipment by types in accordance with the relevant national and industrial standards, in which such specific requirements as daily patrol inspection, maintenance, items and time cycle of troubleshooting were provided. The Company also required its subsidiaries to strictly follow such standards during daily patrol inspection and maintenance.

Major maintenance achievements in 2022

The annual maintenance and overhaul of river-basin stations for the year 2021-2022 have been completed, and 52 scheduled maintenance tasks and 13 unscheduled maintenance tasks have been completed perfectly on time.

The upgrading and capacity expansion of 125 MW units in Gezhouba HPP have been fully completed. In May 2022, CYPC completed the upgrading and capacity expansion of the 17# Unit in Gezhouba HPP, which marked the total completion of transformation and capacity expansion of 19 generating units over ten years.

The annual maintenance and overhaul of river-basin hydropower stations for the year 2022-2023 have been steadily promoted. The safety project quality and scheduled construction period were fully under control. 2,549 technical documents for annual maintenance and overhaul and 2,215 standard operating procedures for maintenance have been compiled, and 20,745 quality acceptance points have been identified, which has provided comprehensive technical guarantee for the safety, quality and scheduled construction period of annual maintenance and overhaul.

Policy guarantee for overhaul

For the overhaul policy of generating units owned by CYPC, there are 2 Corporate Level-I policies, 7 Corporate Level-II policies, 3 Corporate Level-III policies, 4 OMF Level-I policies and 2 OMF Level-II policies. OMF has carried out the Level-A/B maintenance in strict accordance with relevant policies of the Company and OMF.

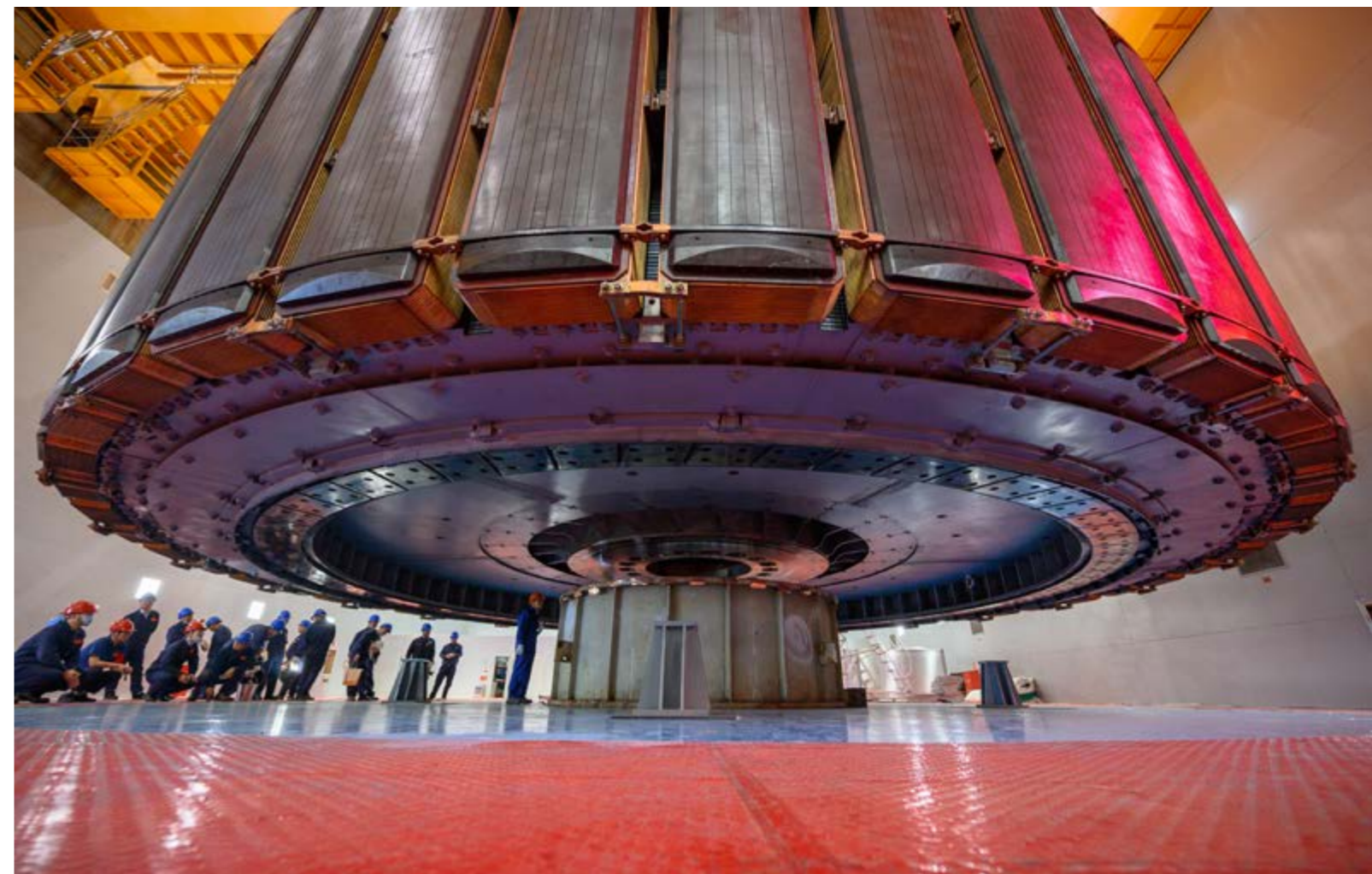
» Generating unit upgrading

As of 2022, a total of 34 overhauls has been carried out on generating units during CYPC's large-scale upgrading and capacity expansion, greatly improving the unit stability. Compared with the capacity when CYPC's hydropower generating units were initially put into operation, the current capacity has been increased by 475 MW, which is equivalent to a newly-built medium-sized power station with no need of new dams and resettlement and without any environmental impact.

Network security

CYPC always strictly implements the *Cybersecurity Law of the People's Republic of China and the Data Security Law of the People's Republic of China*. It has fully implemented the National Cybersecurity Classified Protection Policy, the Critical Information Infrastructure Protection System, among others. Thanks to such efforts, the situation of cybersecurity is generally stable, and no cybersecurity and data security incident happened in 2022.

To protect the internal production management data and customers' sensitive information, CYPC has formulated a series of policies and standards, including the *Measures for Cybersecurity Management*, the *Cybersecurity Risk Control Measures*, *Emergency Plan for Cybersecurity Incidents* and the *Technical Specifications for Cybersecurity Protection of Hydropower Station Power Monitoring System*, in which, regulations on data storage, backup and transmission are specified; CYPC has also formulated the *Implementation Rules for Cybersecurity Assessment* to ensure the implementation of the cybersecurity responsibilities at all levels.



Safety management



Honors for work safety

Three Gorges Hydropower Plant won the title of "Demonstration Enterprise in Safety Culture Promotion" in 2022 (ZAXBWB (2023), No.16).

中国安全生产协会文件

中安协标文办〔2023〕16号

**中国安全生产协会关于命名
2022年全国安全文化建设示范企业的公示**

各有关组织单位，中央企业：

湖北省

62. 中交第二航务工程局有限公司第六工程分公司
63. 中国长江电力股份有限公司三峡水力发电厂
64. 武汉长江隧道建设有限公司

Yearly objectives and performance of work safety

In 2022, no personal casualty accident, equipment accident, electricity safety accident (incident) or personal minor injury accident (no loss of working days due to occupational injury) happened in CYPC. Over many consecutive years, CYPC has fulfilled the "double-zero" objectives, namely, zero personal casualty accident and zero equipment accident. CYPC's investment in work safety was about RMB 217 million in 2022.

In 2022

CYPC's investment in work safety was about

RMB **217** million

Year-round "zero unscheduled shutdown" has been realized in the five power stations of Wudongde, Xiluodu, Xiangjiaba, Three Gorges and Gezhouba.

Three Gorges and Xiangjiaba HPPs have successfully won the Class-A certification.

After being fully put into operation, Baihetan HPP has realized stable operation.



Carry out inspection and measurement of power plant equipment



Carry out joint optimal scheduling of cascade power stations

Till the end of 2022

Gezhouba HPP has realized continuous work safety during

7,219 days



Gezhouba HPP has achieved continuous work safety during over 7,000 days

At Gezhouba HPP, departments at all levels signed written pledges for work safety goals, and an examination of safety regulations was held on a regular basis. The application of holographic monitoring system, intelligent equipment & facilities and digital patrol inspection comprehensively improved the monitoring efficiency and the overall risk control ability of Gezhouba HPP. Till the end of 2022, Gezhouba HPP has realized continuous work safety during 7,219 days.



Patrol inspection robot "Xiaobai" is capable of automatic screening, precise early warning and timely elimination of hidden dangers



Xiangjiaba HPP has realized "three-zero" objectives in work safety over eleven consecutive years

Xiangjiaba HPP has realized "three-zero" objectives (zero personal casualty accident, zero equipment quality accident, and zero environmental incident) in work safety over eleven consecutive years, and kept work safety during over 3,900 days, which breaks the world work safety record of 800 MW hydro-generating units.



Left-bank power house at Xiangjiaba HPP

Xiangjiaba HPP kept work safety during over

3,900 days



Case

Xiluodu HPP has realized the "five-100% and five-zero" objectives

The "five-100%" objectives include: 100% acceptability of power quality, 100% success rate of automatic startup and shutdown, 100% on-off success rate of flood discharge facilities, 100% operational success rate of power transmission and transformation equipment, and 100% correct actuation rate of relay protection and automatic safety devices; the "five-zero" objectives include: zero unscheduled shutdown, zero personal casualty accident, zero quality accident, zero equipment failure, and zero safety & environmental protection incident.



GIL maintenance site of Xiluodu HPP left-bank



Work Safety Management System

To effectively prevent various work safety accidents, CYPC has established a hierarchical work safety management & control system of "defining responsibilities of departments at all levels and designated persons, and ensuring clearly-divided responsibilities".

In 2022, CYPC organized the preparation of the Evaluation Standards for Inherent-Safety Type Hydropower Stations, and set up the work safety goals; Meanwhile, CYPC signed written pledges for performance appraisal with subsidiaries concerned, and implemented monthly punishment & reward according to safety performance and yearly performance appraisal of work safety.

Safety system perfection



- Formulated the 14th Five-Year Special Plan of safety & environmental protection.
- Revised safety & environmental protection policies.
- Launched the "Work Safety Forum" campaign.
- Promoted the setup of teams for safety management standardization.

Risk management enhancement



- Strengthened the management and control of "five major safety risks"¹, and the inspection of its implementation.
- Focused on the management and control of cybersecurity risks.
- Create safety management & control models for pumped storage, new energy and international businesses.
- Strengthened investigation & treatment of hidden dangers.

Strengthening emergency management



- Revised emergency management measures.
- Improved the management system for early warning of natural disasters.
- Organized emergency drills of flood prevention, precaution against earthquake, etc.
- Upgraded the safety management information system and set up an emergency command platform.

¹ Five major safety risks refer to major personal casualties, flooding of powerhouse, widespread blackout, major damage accidents of equipment and facilities, and major cybersecurity incidents.

Dual prevention mechanism

By fostering the work safety concept of "hidden dangers equal to accidents", CYPC exerted itself to promote establishing the mechanisms of hierarchical management & control of safety risks and hazard investigation & treatment; CYPC enhanced accident prevention ability through establishing rules and systems, strengthening regular and strict inspection, supervising problem handling and tightening punishment & reward appraisal.

The "quarterly meeting and weekly report" work mechanism for risk management & control were used as a key link of risk pre-control to guide CYPC subsidiaries to conduct hidden danger analysis. The "quarterly meeting and weekly report" include: Daily identification of danger sources; Weekly analysis of safety risks, and investigation and treatment of hidden dangers; Regular safety meetings were held to summarize and plan safety work. A total of 52 weekly reports, 12 monthly reports and 4 quarterly reports were published across the year.



Case

Special inspection

In 2022, CYPC organized totally 9 inspections regarding the "five major safety risks", and discovered 377 problems regarding the implementation of various management & control measures in such fields as policy implementation, construction activities, site of annual maintenance and overhaul, occupational health, special equipment, cybersecurity, road traffic safety, and environmental protection, of which 363 problems were rectified, achieving a rectification rate of 96.3%.



Safety culture promotion

CYPC took the safety culture concept of "five kinds of safety promotion", namely, personal safety promotion, legal safety promotion, scientific and technological safety promotion, preventive safety promotion and cultural safety promotion, as a good opportunity to tirelessly promote the building of an inherent safety type enterprise.

>> Safety education and training

In 2022, CYPC organized a training course of work safety and emergency management in which totally 211 persons-in-charge and special safety management personnel participated; During the Work Safety Forum, seven persons in charge of production were invited to give special lectures, and five team leaders winning the title of "Demonstration Team for Safety Management Standardization" attended a speech contest and delivered thematic speeches.

Work safety plan drill			
TGHPP	Gezhouba HPP	Xiluodu HPP	Xiangjiaba HPP
After fulfilling the preparation, review and filing of the Emergency Plan for Abrupt Environmental Incidents at Three Gorges HPP, Three Gorges HPP organized an emergency drill against domestic sewage drain pipe rupture on August 26, 2022.	In June and December 2022, Gezhouba HPP organized emergency drills against turbine oil leakage, hazardous chemical substance leakage among other abrupt environmental incidents.	In 2022, Xiluodu HPP completed four emergency drills against environmental incidents, including <i>On-site Handling Scheme of Hazardous Chemical Substance Leakage Incidents, Emergency Drill against Abrupt Environmental Incidents of the Lifting & Metal Structure Division, On-site Drill against Turbine Oil Leakage at Xiluodu HPP in 2022, and On-site Handling Scheme Drill against SF6 Gas Leakage at Xiluodu HPP</i> ; besides, Xiluodu HPP also simulated the actual production scenarios of hazardous goods leakage during transportation, hydraulic oil leakage due to blowout of equipment oil tube, turbine oil leakage, etc.	On May 20, 2022, Xiangjiaba HPP organized a practical drill against emergency environmental incidents, during which, turbine oil leakage in the oil purification room of the turbine oil storage was simulated, and other drill contents were temporarily added to further enhance the emergency response ability.

Scientific and technological safety promotion



Underwater detection robot

CYPC, together with domestically famous universities and research institutes, has successfully developed the underwater detection robots with a cable length of 450m, 1,200m and 1,800m, the Sonar Scanning Image Processing System, among other equipment and software for underwater detection. In December 2022, CYPC's project of "Development and Application Verification of an Underwater Intelligent Defect Detection Robot for Large-scale Hydropower Station Dams" was approved as a special key project of "Intelligent Robots" under the National Key Research and Development Plan during the 14th Five-Year Plan period.

CYPC's underwater robots can detect such facilities and positions as release sluice apron, flushing gate, auxiliary dam, plunge pool, cushion pond, upstream and downstream cross-sections of dam body and tailrace tunnel, and has detected over 600,000 m²; they provided data support and an important guarantee for underwater defect detection in hydraulic buildings, flood control and flood safety, improved the efficiency of underwater detection, further enhanced the emergency handling ability toward hydropower station, and provided technical support for ensuring stable operation of dam and safeguarding flood control along the Yangtze River.



The underwater detection robot was about to perform underwater



Digital intelligent dam

Based on the unified platform for dam safety management, CYPC has realized such big data mining functions as data governance, data integration, data processing and advanced application, as well as intelligent cleaning of monitoring data, intelligent modelling, smart analysis and integrated smart early warning of gravity-dam operating status; BIM and the unreal rendering engine help restore the overall dam operating status and realize panoramic, multi-dimensional management and forecast & early warning. The digital intelligent dam has opened a new era of intelligent early warning for CYPC's dam safety management.

Safety management among contractors

To clarify the management responsibilities of the relevant parties, CYPC has formulated the *Management Procedures for Engineering Project Safety Management* and signed a *Safety and Environmental Protection Agreement* with contractors.

CYPC has also formulated the *Evaluation Standards of Contractors' Safe Construction Ability*, and organized the hidden danger investigation in the six aspects of contractor qualification, personnel qualification, project department configuration, safety management, technical management and on-site management. Any contractor which was proved to be unqualified upon evaluation must suspend construction for rectification, and can only resume construction upon passing the review and recheck by the project management unit (department); any contractor who is evaluated to be unqualified for safety management for several times shall have limited qualifications of participating in future procurement bidding.

CYPC demanded that the general contractor shall take overall responsibility of the project quality, safety, construction period and cost; the subcontractors of labor services shall sign a labor contract (agreement) with every service worker to clarify the nature of employment, job responsibilities, salary payment, work safety among other issues.

Supply chain management

By following the strategic supply-chain management & control objectives, CYPC uses its institutional system, organizational system and digitalization as a handle to continuously promote the systematic, all-round upgrading of the internal supply-chain procurement management system. As for the supplier selection criteria, CYPC fully considered the ESG management levels of suppliers and set up screening criteria according to the project-specific characteristics.

Supply chain introduction

CYPC's upstream supply chain includes three categories, namely, engineering, goods and services. Among them, the engineering suppliers mainly provide their services for the maintenance and technical upgrading of equipment and facilities of hydropower generating units, hydraulic buildings and steel structures; the goods suppliers mostly are manufacturers of hydropower generating units-related equipment, manufacturers (vendors) of spare parts, and suppliers of network information equipment; service providers have their primary businesses in the fields of power station materials supply, cooperation in equipment maintenance, dam area maintenance and logistical support, as well as project design, supervision, consultancy, auditing and evaluation. The downstream link mainly consists of various energy users, including power grids, energy consuming enterprises, industrial parks, public buildings and transportation.

Supplier selection and management

In addition to finalizing reasonable procurement bidding qualification criteria in accordance with the relevant regulations and corporate policies, CYPC also formulated commercial, technical and price-related review factors. The project scale and nature have been fully considered in determining the above-mentioned qualification criteria and review factors to effectively prevent any conspired bidding or any supplier's monopoly.

CYPC included such factors as suppliers' environmental impact, safety management, legal employment and occupational health into the procurement bidding, contract provisions and material management.

CYPC demanded suppliers to separately enter the item of safe and orderly construction cost into the account, and this item can only be settled at the actual cost during contract implementation.

CYPC also signed a Safety and Environmental Protection Agreement with suppliers when signing a commercial contract to ensure that the suppliers' activities of safety management can be supervised and inspected during construction.

CYPC formulated qualification criteria of suppliers' legal employment and inspects its conformance before the start of work.

Management of suppliers' risks

CYPC carried out a risk assessment of suppliers' bidding (quotation) credit and contract performance credit in accordance with the Supplier Management Measures: In case of any discreditable behavior, the supplier concerned shall be punished by deducting the corresponding credit points or being blacklisted according to the breaching times and severity.

In 2022

CYPC completed **1,537** pieces of suppliers' bidding (quotation) evaluations



929 pieces of suppliers' contract performance evaluations

9 suppliers were blacklisted due to severe discreditable behaviors and disqualified to participate specific works in the corresponding scope of CYPC projects.

Employee's rights and interests

As of the end of 2022

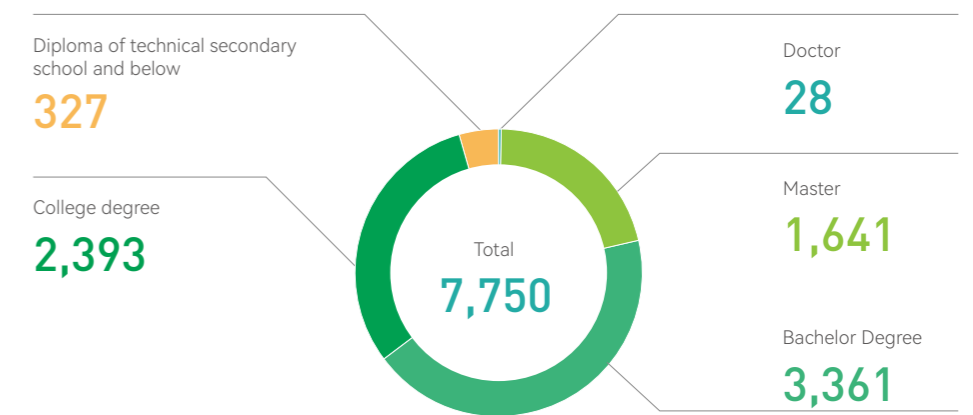
CYPC's employees amounted to

7,750 persons

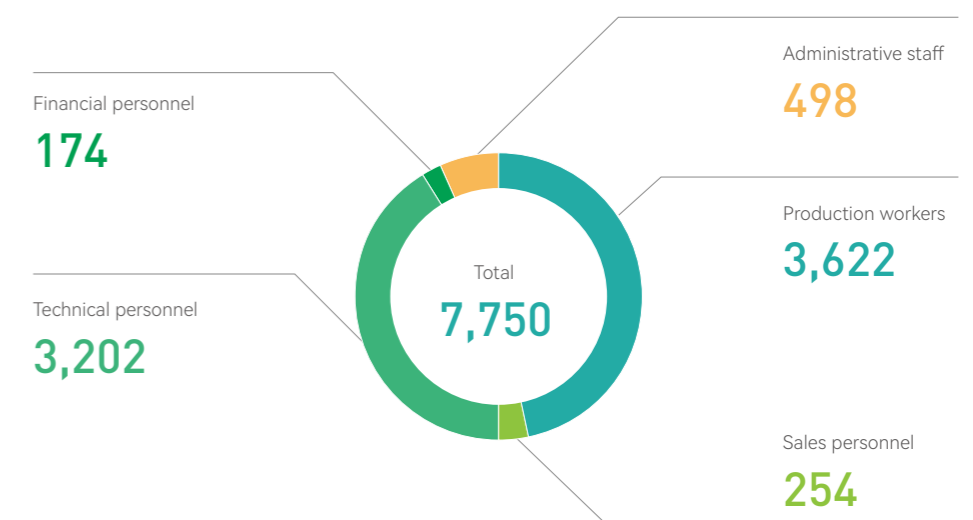
CYPC always adheres to the people-oriented philosophy, supports the international human rights-related codes and standards, such as Declaration of Human Rights, Declaration of the Rights of Man and of the Citizen and International Convention on the Elimination of All Forms of Racial Discrimination, and promises to fully respect and protect the human rights during operation. We regard every employee as the most precious wealth, share weal and woe with all employees, build a platform for the development of their career and a harmonious environment for their happy life, thereby promoting the enterprise and our employees to grow together.

Overview of employment

Educational background of employees



Professionals composition



Employee turnover

Besides the establishment and perfection of the talent introduction and administration mechanism, CYPC published the *Implementation Rules for Talent Introduction*, and organized various recruitment activities on the basis of "standard, fair and just procedures", ensuring that each link recruitment was under supervision.

In 2022, CYPC recruited 230 talents through social (23 persons) and campus (207 persons) channels; 18 persons resigned; No layoff or major large-scale merger and acquisition occurred. CYPC went through the formalities of employee turnover following applicable laws and regulations.

Legal employment

According to the *Labor Law of the People's Republic of China and the Labor Contract Law of the People's Republic of China*, CYPC strictly implemented the provisions about "special protection to female staff and juvenile workers" and "It is prohibited to recruit of juveniles under the age of 16" to fully safeguard the safety, health and lawful rights and interests of employees. In 2022, CYPC's labor contract signing rate was 100%. CYPC safeguarded the labor security of all its employees, and illegal behaviors such as recruitment of juveniles were not discovered.

To standardize the management of labor employment, CYPC published *Compliance Guidelines for Labor Employment*, in which the common compliance risks related to recruitment and hiring, on-duty management, termination of labor relationship and labor dispatching during labor employment were specially provided.

In 2022

CYPC's labor contract signing rate was

100%

Human rights protection

CYPC strictly follows the *International Conventions on Human Rights and National Human Rights Action Plan*, and consciously resists any behaviors of disregarding and abusing human rights; no forced labor has occurred in CYPC. CYPC published the *Compliance Manual*, where it clearly stated that "we strictly prohibit any form of discrimination during labor employment"; "we strictly prohibit forced labor at any pretext"; "we advocate the respect of individual difference, and oppose any discrimination, harassment and any inappropriate speech and behavior in violation of professional ethics". CYPC also urged its security service providers to organize human rights protection-related training among all the security personnel.



Employee's rights and interests

Working hours and leave

- The average monthly working time of all employees across the year did not exceed **166.6** hours.
- Female employees enjoyed marriage leave, breastfeeding leave, maternity leave, childcare leave and elder care leave according to the statutory standards.

Compensation and benefits

- CYPC paid in full the social insurance and housing fund for its employees, and has established the systems of enterprise annuity and supplementary medical insurance.
- In addition, CYPC provided its employees with the industrially competitive compensation package, including post wage, performance bonus, allowances and subsidies and overtime wage.

Employee democracy

CYPC emphasized safeguarding democratic rights of employees, and has taken further steps to institutionalize and standardize democratic management.

Democratic communication policy	
Perfected the System of Staff and Workers' Representative Congress	Organized the 3rd Session of 4th Staff and Workers' Representative Congress, deliberated the internal yearly work report and budgets and final accounts, deliberated the implementation of employee supervisors' duties and other related work, and carried out the substitution and augmentation of employee representatives. Carried out daily work during the adjournment of the Staff and Workers' Representative Congress, and all temporary important issues must be submitted to the joint session for deliberation.
Promoted collective negotiation	The labor union, on behalf of employees, held collective negotiation with CYPC on the labor reward, welfare and insurance, labor safety and health among other issues related to employees' rights and interests, and signed a "1+3" collective contract.
Assimilated into corporate governance	Insisted on the election of employee supervisors by the Staff and Workers' Representative Congress, and ensured the Congress's original and direct participation in corporate decision-making and supervision and the exercise of voting rights.
Employees' democratic rights	
Processed and implemented the proposals by the Staff and Workers' Representative Congress	Urged the process and implementation of proposals in the 3rd Session of 4th Staff and Workers' Representative Congress, of which 6 proposals and 17 pieces of general opinions and suggestions have been completed or answered properly with a proposal completion rate of 100%.

Employees' mental health

CYPC always pays close attention to its employees' mental health, advocates maintaining a harmonious and balanced state between work and life; CYPC always safeguards employees' rights of leave and recuperation, and holds various recreational and sports activities to enrich their leisure time and guide them to relieve work pressure.

Assistance to employees in need

CYPC set up subsidies for employees in need, including those injured at work or when helping others for a just cause, and the employees themselves or their direct relatives who are hospitalized due to serious disease. In 2022, CYPC provided "economic assistance" of RMB 140,000 to 133 employees, and allocated subsidies of RMB 18,6000 to the members of 9 deceased employees' families.

Employee development



Skill Improvement

Unit: person

Category of professional title	2021	2022	Increased by
Elementary	689	756	67
Medium	1652	1632	-20
Advanced	1016	1125	109
Total	3357	3513	156

Occupational health

Occupational health management

In 2022, no personal casualty accident, occupational disease incident or minor injury and above occurred in CYPC. CYPC always upholds the policy of "Prevention Foremost, Comprehensive Management", and has fulfilled occupational health and safety management objectives in 2022 by finishing the follows: continuously promoting the implementation of occupational health and safety management system, carrying out the inspection and control of on-site occupational disease hazards, implementing occupational health inspection and supervision and strengthening relevant education and training.

Identification and control of occupational disease hazards

CYPC carried out comprehensive identification of occupational disease hazards, and 4,834 items of hazardous sources were identified; totally nine unacceptable hazards were identified through review, all of which were provided with corresponding controlling measures, and the effectiveness of those measures were tracked regularly. All affiliates have implemented inspection of occupational disease hazards, and the inspection results met the occupational exposure limits.

CYPC organized a physical examination among all its employees with a physical examination coverage of 100%. Special occupational health examination has been organized for 537 employees exposed to occupational disease hazards. CYPC continuously conducted environment improvement on the construction site, standardized the setup of warning marks and signs, and distributed labor protective supplies. In addition to such publicity and education activities as the publicity week on the prevention and control of occupational diseases and the training of occupational health and safety knowledge, CYPC also organized the scientific popularization of occupational health among its employees to enable them learn the key points of occupational disease prevention and control.

In 2022, CYPC organized the implementation of various anti-epidemic measures, and purchased over 3-million various epidemic prevention materials, including masks, disinfectant wipes and alcohol spray; an integrated service mechanism was established to effectively prevent internal epidemic spread.

Occupational health training among employees

From April 25 to 29, CYPC held the Publicity Week Campaign on the Prevention and Control of Occupational Diseases of "All for Employees' Health", over 3,000 person-times of audiences benefited from this activity. All subsidiaries of CYPC organized various training of occupational health and safety knowledge, during which the laws and regulations on occupational health and safety knowledge about occupational disease prevention and control were introduced and communicated.

a physical examination coverage of

100%



Community development

Undertaking social responsibility

CYPC has set up a five-level management system featuring the General Meeting of Shareholders, Board of Directors, CSR Management Team, CSR Office, and respective departments. Alongside, we have established a work mechanism under which major CSR decisions are made by the General Meeting of Shareholders, the Board of Directors provides decision-making support and strategic direction, and the Management is accountable for organization, execution, guidance, and oversight, whilst all relevant departments and entities are assigned to clear-defined responsibilities to collaborate in moving forward.

Major action strategies and key performance

CYPC deeply respects the reciprocal growth with local communities, thus always considering and assessing the impacts on local communities in new projects. To this end, we implemented 58 social responsibility projects in 2022 with a total investment and donation of RMB 340 million. In this manner, we successfully maintained a strong connection with local communities, providing a favorable ambience conducive to the development of its primary businesses. Additionally, we consistently sponsor the overall energetic progress of social businesses, talent training, culture, ecology and organization, which in turn ensures a sustainable development of the Company.

In 2022
a total investment and donation of
RMB 340 million



Infrastructure improvement

CYPC took tangible steps to ameliorate the ecosystem of three towns of Dachang, Luoping and Wuxia of Wushan County, such as through its infrastructure improvement initiatives like street and courtyard renovation and enclosing wall construction. CYPC also participated in the construction, renovation and expansion of village and town roads in Wushan and Fengjie counties, providing inhabitants with many high-quality rural roads that are crafted and maintained to the highest standards.

Healthcare

CYPC has devoted its efforts to strengthening public health capacity, providing cochlear implants, launching the "Same Boat Project" relief effort, and other inclusive health initiatives in two counties of Wushan and Fengjie, helping to alleviate the medical costs of impoverished families affected by illnesses, while also raising rural healthcare and health management standards; nearly 20,000 people have already benefited from CYPC's assistance.

Industrial development

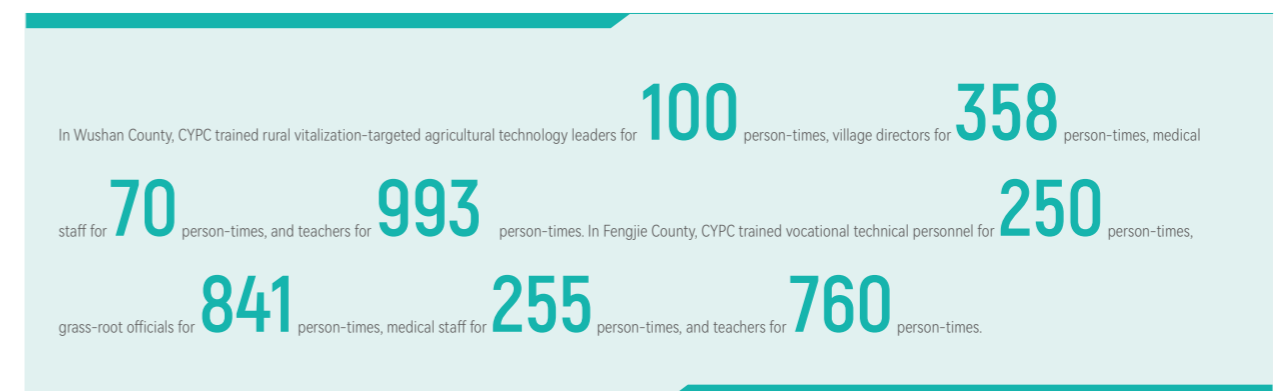
With "clean energy + digitalization + featured industries" at the core, CYPC has constructed Three-Gorges characteristic towns in the counties of Wushan and Fengjie, and developed a smart energy management and control platform. To foster the growth of emerging industries, CYPC initiated the construction of three production shops supporting Tujia Minority's delicacies in Yunwu Tujia Township, and established an intelligent management and service platform in the Caotang Industrial Park.

In Shuanglong Town of Wushan County, CYPC established a 2,000-mu industrial orchard base of "Hong Mei Ren" orange. Through maintenance and managing operations such as pruning, fertilization, and pest control, its output value was raised significantly.

Tourism development

CYPC executed the construction of "Bona Villa" in Wushan County and rural tourism in Pingcao Village of Daxi Township, effectuated the allocation of tourist attractions and renovation of tourism roads, thereby aiding in the amelioration of ancillary capabilities of scenic spots, while promoting the sound, sustainable development of the tourism industry in Wushan County. To promote the advancement of tourist attractions and upgrade the grades of tourism amenities and guest quotas, CYPC also procured and implemented chargeable dock vessels and its correlated charging mechanisms.

Skill improvement



CSR Honors

Enrolled in the "List of Top 100 ESG of Chinese Listed Companies" in 2022

Honored with the title of "Excellent Enterprise in Responsibility Information Disclosure" in 2022

CYPC's CSR Report won the "GoldenBee 2022 Excellent CSR Report - Evergreen Award"

Rural vitalization

In 2022
CYPC initiated
26 rural vitalization projects

invested and donated
RMB 150 million
in Wushan and Fengjie counties to promote rural prospering and development



Cooperation with non-governmental organizations

CYPC collaborated with China Population Welfare Foundation on the "Happy Smiles - Rescue of Children with Cleft Lip and Palate" program.

CYPC partnered with China Foundation for Poverty Alleviation to launch the "Bona Villa - Demonstration Project of Rural Tourism Assistance in Wushan County", in which we promoted the building of necessary infrastructure and public amenities, along with the renovation of old dwellings, in order to facilitate rural tourism at the village level.



Assistance to resettled residents

Resettled resident assistance program

With the aim of providing targeted assistance and public welfare to reservoir areas in an overall planned manner, thereby improving their local economic and livelihood development, CYPC invested a total of RMB 190 million in 32 projects.

Three Gorges reservoir area

CYPC initiated renovation and upgrading of Changjiang Power Plaza situated in Niuzhaping Village of Yichang City. CYPC is striving to create a pleasing and habitable environment by carrying out numerous infrastructure projects, among which is the renovation and upgrading of Koudai Park located on Xiba Heping Road of Yichang City.

Jinsha River reservoir area

CYPC is unwavering in its pursuit of executing public-benefit assistance initiatives such as "Warm Winter Action", "Light Wish" and "CYPC Sunshine Class", in addition to the "Enterprise Open Day". Furthermore, CYPC provided scholarship and grant opportunities for academically outstanding underprivileged students to study in their desired key senior high schools, and sent invited students from reservoir areas to embark on an educational tour to various power stations along the Jinsha River and the Three Gorges Building in Kunming.

In the Warm Winter Action of "Warmhearted Assistance in Wumeng Region, Sincere Aspiration for Bright Future", CYPC generously donated 5 water heaters and 185 "winter day care packages" (including cotton clothing, caps, scarves, and milk tea, etc.) to students and teachers of the elementary school located on the top of Yaoshan Mountain. In the educational assistance program in Wudongde Town of Luquan Yi and Miao Autonomous County, CYPC provided financial assistance to outstanding underprivileged students, renovated the sports field of Wudongde Town Middle School, and placed a particular emphasis on upgrading educational and teaching facilities.

To address the difficulty of supplying local villagers with both production and domestic water, CYPC renovated the weir in Baiyun Village of Wudongde Town, Huidong County. Furthermore, in Wenshui Village of Wenshui Town, Leibo County, CYPC planted a considerable quantity of organic asparagus on the mountainous area, driving the fostering of "one specialty agricultural product for each village" for agricultural industrialization.



Case

At Jinping Elementary School in Pingshan County, Yibin City, Sichuan Province, Xiangjiaba HPP introduced the project and motivated students - especially those from reservoir areas - to strive for a prosperous future. In addition, Xiangjiaba HPP provided over 1,000 books to the school, in an effort to broaden students' perspectives on knowledge and life through reading and to stimulate their aspirations.

Cultural communication and globalization

Cultural communication

- Provided superior service to local inhabitants of Peru, compiled *CYPC's Manual of International Discourse System, Guide to Cultural Communication in Peru*, and *Instruction for Public Relations with Media in Peru*, innovatively established the double approach of "on-line publicity + off-line experiencing", and enhanced local understanding of CYPC through the activities of "Enterprise Open Day" and "Community Open Day".
- Organized the Open Day Event in communities during the Mid-Autumn Festival.
- Held the first "Three Gorges Cup" friendly football game in Lima amidst the World Cup fervor, providing an opportunity to strengthen the bond between Chinese and Peruvian employees while fostering cultural integration between the two nations.



Relationship with overseas communities

- Launched the CTG Peru Scholarship at Ricardo Palma University in Peru, and provided financial support to 11 university students to enable them to complete their studies in 2022.
- To celebrate the Mid-Autumn Festival, Luz del Sur S.A.A. (LDS) made a visit to several community schools in the area and graciously presented mooncakes and books of Traditional Chinese folktales as gifts.
- Held the inaugural Exhibition of Themed Photos on the subject of "Sino-Peru Co-promotion of Sustainable Development" in collaboration with the Peru-Sino Cultural Center, the Representative Office of *China Today* in Peru, and *L'Avoz de La Galonia China*.

Human rights protection

- Acted vigorously in defending human rights in the host country, guaranteed the wellbeing of staff in the multinational company, and supported educational and healthcare opportunities in local communities.
- LDS contributed more significantly to the tuition fees of students enrolled in the special education institutions in Lima and Callao, and offered financial aid to their families. LDS additionally granted financial subsidies for its employees to pursue continuing education, annual grants to support the education of their children, as well as zero-interest loans to offset the costs of tertiary education for both employee and their children.

Appendix

Key Performance List

Economic Performance	Unit	2022	2021
Operating income	RMB (billion)	52.060	55.646
Total profit	RMB (billion)	26.313	32.409
Basic earnings per share	RMB	0.9370	1.1553
Tax paid	RMB (billion)	17.457	16.091
Total installed capacity of domestic hydropower generation	MW	45,495	45,495
Power generation from clean energy	TWh	185.581	208.322
Environmental Performance	Unit	2022	2021
Investment in energy saving and environmental protection	RMB	78,160,000	87,640,000
CO2 reduction equivalent	tCO2/Year	154 million	173 million
Greenhouse gas emissions	tCO2e	21,517.09	/
Including, Scope I	tCO2e	1,633.57	/
Scope II	tCO2e	19,849.80	/
Scope III	tCO2e	33.72	/
Comprehensive energy consumption	Standard coal, 10,000 Ton / Year	0.51	2.51
Energy consumption every RMB 10,000 output value	Standard coal, Kg / RMB 10,000	1.2	5.1
Total electricity consumption	MW / Year	34,881.3	204,460
Quantity of general solid wastes	Tons	6,300	4,800
Quantity of hazardous wastes	Tons	250	410
Disposal rate of hazardous wastes	%	86.26	97.80

Social Performance	Unit	2022	2021
Senior management	Person	8	6
Total number of ethnic minority employees	Person	288	267
Proportion of female managers	%	15.97	9.48
Coverage rate of social insurance	%	100	100
Labor contract signing rate	%	100	100
Employee voluntary turnover rate	%	0.42	0.36
Number of employees trained	Person	64,664	64,340
Total time of employee training	Hour	535,000	512,000
Total investment in employee training	RMB	14,283,900	10,708,600
Coverage rate of employee training	%	100	100
Major safety accident	Times	0	0
Total deaths in service of employees	Person	0	0
Public welfare donation	RMB (million)	340	240
R&D investment	RMB	674,018,300	642,539,200
Quantity of newly authorized patents	Nos	373	409

Explanation of Terms

Short name	Full name
CTG	China Three Gorges Corporation
CYPI	China Yangtze Power International (Hongkong) Co., Limited
LDS	Luz Del Sur
TGEE	Three Gorges Electric Energy Co., Ltd.
CYPC New Energy	CYPC New Energy Co., Ltd.
Yichang Branch	CYPC Yichang Branch (CYPC Yichang Energy Investment Co., Ltd.)
CYPC Investment	CYPC Investment Management Co., Ltd.
Three Gorges Dispatch Center	Three Gorges Cascade Dispatch & Communication Center
TGHPP	Three Gorges Hydropower Plant
Gezhouba HPP	Gezhouba Hydropower Plant
Xiluodu HPP	Xiluodu Hydropower Plant
Xiangjiaba HPP	Xiangjiaba Hydropower Plant
Wudongde HPP	Wudongde Hydropower Plant
Baihetan HPP	Baihetan Hydropower Plant
Wu-Bai HPPs	Wudongde HPP and Baihetan HPP
Lower Jinsha River Base	Lower Jinsha River Integrated Renewable Energy Base of Water, Wind, Solar and Stored Energy
SSE	Shanghai Stock Exchange
HKEX	Stock Exchange of Hong Kong Limited
Listing Rules	Rules governing the Listing of Stocks on Shanghai Stock Exchange and on Stock Exchange of Hong Kong Limited
Annual Report	Annual Report 2022 of China Yangtze Power Co., Ltd.

List of Subsidiaries

Subsidiary	Main business place	Business nature	Shareholding ratio (%)		Way of acquisition
			Direct	Indirect	
CYPC Yichang Energy Investment Co., Ltd.	Yichang, Hubei	Equity investment	100.00	—	Established by investment
Beijing Yangtze Juyuan Investment Management Co., Ltd.	Beijing	Equity investment	—	85.00	Established by investment
Three Gorges Jinsha River Chuanyun Hydropower Development Co., Ltd.	Chengdu, Sichuan	Hydropower development	100.00	—	Business combination
Three Gorges Electric Energy Co., Ltd.	Wuhan, Hubei	Power distribution and sales	70.00	—	Established by investment
Three Gorges Electric Energy (Hubei) Co., Ltd.	Yichang, Hubei	Electricity sales, technical investment and development	—	51.00	Established by investment
Three Gorges Electric Energy (Shanghai) Co., Ltd.	Shanghai	Electricity & heat production and supply	—	100.00	Established by investment
Jiangsu Suqian CYPC Smart Energy Co., Ltd.	Suqian, Jiangsu	Electricity & heat production and supply	—	100.00	Established by investment
Three Gorges Electric Energy (Tianjin) Co., Ltd.	Tianjin	Energy management	—	100.00	Established by investment
Hunan Mingsheng New Energy Co., Ltd.	Leiyang, Hunan	Fuel gas production and supply	—	60.00	Business combination
Yangtze Power Sales Co., Ltd.	Shanghai	Electricity & heat production and supply	100.00	—	Established by investment
CYPC Investment Management Co., Ltd.	Shanghai	Equity investment	100.00	—	Established by investment
CYPC New Energy Co., Ltd.	Wuhan, Hubei	Electricity & heat production and supply	100.00	—	Established by investment
CYPC Yunneng Power Generation (Yongren) Co., Ltd.	Yi Autonomous Prefecture in Chuxiong City, Yunnan Province	Electricity & heat production and supply	—	51.00	Established by investment
China Yangtze Power International (Hongkong) Co., Limited	Hong Kong	International investment	100.00	—	Established by investment
China Three Gorges Power Operation Int'l Co., Limited	Hong Kong	Overseas power plant operation and management	—	80.00	Established by investment
CYPC International Energy Investment (Hainan) Co., Ltd.	Sanya, Hainan	Electricity & heat production and supply	—	100.00	Established by investment
Yangtze Andes Holding Co., Limited	Hong Kong	Consultation, operation and management related to energy investment, power distribution and sales, and power generation	—	70.03	Established by investment
Andes Energy Investment & Management Co., Ltd.	Lima, Peru	Management consultancy	—	100.00	Established by investment
Grupo de Contratistas Internacionales S.A.C.	Lima, Peru	Emergency maintenance	—	100.00	Business combination
Los Andes Servicios Corporativos S.A.C.	Lima, Peru	Transportation services	—	100.00	Business combination
Tecsur S.A.	Lima, Peru	Project development and consultancy	—	90.21	Business combination
Luz del Sur S.A.A.	Lima, Peru	Power transmission and distribution	—	97.14	Business combination
Inmobiliaria Luz del Sur S.A.	Lima, Peru	Investment and asset management	—	100.00	Business combination
Inland Energy S.A.C.	Lima, Peru	Power generation	—	100.00	Business combination
Ontario-Quinta S.R.L.	Lima, Peru	Shareholding platform	—	100.00	Business combination
Andes Bermuda Ltd.	Bermuda	Shareholding platform	—	100.00	Business combination
Peruvian Opportunity Company S.A.C.	Lima, Peru	Shareholding platform	—	100.00	Business combination

Index of GRI Indicators

Instructions	CYPC reported the information in this GRI index from January 1 to December 31 of 2022 according to the GRI standards.
Using GRI 1	GRI 1: Foundation 2021
GRI industrial standard in use	No applicable industrial standards

S/N	Content	Page	
GRI 2: General Disclosures (2021)			
Organization and Reporting Method	2-1	Details about the organization	P9
	2-2	Entities included in the organization's Sustainable Development Reporting	P5
	2-3	Reporting period, reporting frequency and contact person	P5
Activities and Workers	2-6	Activities, value chain and other business relationship	P10
	2-7	Employees	P73
	2-8	Workers excluding employees	P73
Governance	2-9	Governance structure and composition	P28
	2-10	Nominating and selecting the highest governance body	P28
	2-11	Chair of the highest governance body	P28
	2-12	Role of the highest governance body in management influence	P34
	2-13	Responsibilities and rights in management influence	P34
	2-14	Highest governance body's role in sustainability reporting	P34
	2-16	Communicating critical concerns	P35
	2-17	Collective knowledge of the highest governance body	P34
	2-18	Evaluating the highest governance body's performance	P35
	2-19	Remuneration policies	P39
	2-21	Stakeholders' involvement in remuneration	P39
Strategies, Policies and Practices	2-22	Declaration of sustainable development strategies	P9
	2-23	Policy commitment	P9
	2-27	Compliance with laws and regulations	P37
Stakeholder Participation	2-29	Participating methods of stakeholders	P14, P15

S/N	Content	Page	
GRI 3: Substantive issues (2021)			
Stakeholder Participatio	3-1	Procedures for finalizing substantive issues	P14
	3-2	List of substantive issues	P15
	3-3	Major issue management	P15
Issues standards			
GRI 201: Economic Performance (2016)	201-1	Direct economic value generated and distributed	P9, P82
	201-2	Financial implications and other risks and opportunities due to climate change	P47
	201-3	Obligational defined benefit plan and other retirement plans	P75
GRI 203: Indirect Economic Impacts (2016)	203-1	Infrastructure investments and services supported	P79
	203-2	Significant indirect economic impacts	P79
GRI 205: Anti-corruption (2016)	205-1	Operations assessed for risks related to corruption	P43
	205-2	Communication and training about anti-corruption policies and procedures	P43
	205-3	Confirmed incidents of corruption and actions taken	P43
GRI 206: Anti-competitive Behavior (2016)	206-1	Legal actions for anti-competitive behavior, anti-trust, and anti-monopoly practices	P42
GRI 302: Energy (2016)	302-1	Energy consumption within the organization	P82
	302-3	Energy intensity	P82
	302-4	Reduction of energy consumption	P82
	302-5	Reductions in energy requirements of products and services	P60, P61
	303-1	Mutual influence between the organization and water (as a public resource)	P58
GRI-303: Water Resources and Sewage Water (2018)	303-2	Management of drainage-related impacts	59
	303-3	Water withdrawal	58
	303-4	Drainage	57
	303-5	Water consumption	60

S/N	Content	Page
GRI 304: Biodiversity (2016)	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	P54
	304-2 Significant impacts of activities, products, and services on biodiversity	P54
	304-3 Habitats protected or restored	P56
	304-4 Species on IUCN Red List species and national conservation list species with habitats in areas affected by operations	/
GRI 305: Emissions (2016)	305-1 Direct (Scope 1) GHG emissions	P50, P82
	305-2 Energy indirect (Scope 2) GHG emissions	P50, P82
	305-4 GHG emissions intensity	P82
	305-5 Reduction of GHG emissions	P50, P82
GRI-306: Waste (2020)	306-2 Management of significant waste-related impacts	P57
	306-3 Waste generated	P57
	306-5 Waste directed to disposal	P57
GRI 307: Environmental Compliance (2016)	307-1 Non-compliance with environmental laws and regulations	P53
GRI 308: Suppliers' Environmental Assessment (2016)	308-1 New suppliers that were screened using environmental criteria	P72
	308-2 Negative environmental impacts in the supply chain and actions taken	P72
GRI 401: Employment (2016)	401-1 New employee hires and employee turnover	P74
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	P75
	401-3 Parental leave	P75
GRI 402: Labor / Management Relations (2016)	402-1 Minimum notice periods regarding operational changes	P74
GRI 403: Occupational Health and Safety (2018)	403-1 Occupational safety and health management system	P77
	403-2 Hazard identification, risk assessment, accident investigation	P77
	403-3 Occupational health service	P77
	403-4 Occupational health and safety issues: Worker participation, consultation and communication in health and safety	P77
	403-5 Worker training on occupational safety and health	P77
	403-6 Promoting worker health	P77
	403-8 Workers subject to occupational safety and health management system	P77
	403-9 Labor-related injuries	P77
	403-10 Work-related health issue	P77
	GRI 404: Training and Education (2016)	404-1 Average hours of training per year per employee
404-2 Programs for upgrading employee skills and transition assistance programs		P76
404-3 Percentage of employees receiving regular performance and career development reviews		P76

S/N	Content	Page
GRI 405: Diversity and Equal Opportunity (2016)	405-1 Diversity of governance bodies and employees	P29
GRI 406: Non-discrimination (2016)	406-1 Incidents of discrimination and corrective actions taken	P74
GRI 408: Child Labor (2016)	408-1 Operations and suppliers at significant risk for incidents of child labor	P74
GRI 409: Forced or Compulsory Labor (2016)	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor	P74
GRI 410: Security Practices (2016)	410-1 Security personnel trained in human rights policies or procedures	P74
GRI 412: Human Rights Assessment (2016)	412-2 Employee training on human rights policies or procedures	P74
GRI 413: Local Communities (2016)	413-1 Operations with local community engagement, impact assessments, and development programs	P80
	GRI 414: Supplier Social Assessment (2016)	414-1 New suppliers that were screened using social criteria
	414-2 Negative social impacts in the supply chain and actions taken	P72
GRI 416: Customer Health and Safety (2016)	416-1 Assessment of the health and safety impacts of product and service categories	P69
GRI 417: Marketing and Labeling (2016)	417-1 Requirements for the information and labels of product and service	/

TCFD Information Disclosure Framework

	Content	Corresponding Chapter
Governance	Climate-related management of decision-makers and managements	Corporate Governance - ESG Governance Green Growth - Tackling Climate Change
Strategy	Enterprise's strategic analysis process of climate-related issues	Corporate Governance - ESG Governance Green Growth - Tackling Climate Change Green Growth - Water Resources Utilization
Risk management	Enterprise's management of climate-related risks	Corporate Governance - ESG Governance Green Growth - Tackling Climate Change Green Growth - Water Resources Utilization
Metrics and targets	Enterprise's indicators and objectives related to climate risk management	Green Growth - Tackling Climate Change Green Growth - Environment Management

List of Internal ESG Policies

Policies	Corresponding GRI disclosure item
Articles of Association	GRI 102: General Disclosures
Rules of Procedures of the General Meeting of Shareholders	GRI 102: General Disclosures
	GRI 103: Management Approach
Rules of Procedures of the Board Meeting	GRI 102: General Disclosures
	GRI 103: Management Approach
Working Rules of the Strategy and ESG Committee under the Board of Directors	GRI 102: General Disclosures
Internal Reporting System of Major Information	GRI 102: General Disclosures
Information Disclosure System	GRI 102: General Disclosures
Related-party Transaction System	GRI 102: General Disclosures
Management Measures for CSR Work	GRI 203: Indirect Economic Impacts
Implementation Rules of CSR Management	GRI 203: Indirect Economic Impacts
Management System of Donations	GRI 203: Indirect Economic Impacts
Supplier Management Measures	GRI 204: Procurement Practices
	GRI 308: Suppliers' Environment Evaluation

Policies	Corresponding GRI disclosure item
Compliance Management System	GRI 205: Anti-corruption
	GRI 308: Suppliers' Environment Assessment
	GRI 419: Socioeconomic Compliance
Compliance Management Measures for International Operation	GRI 205: Anti-corruption
Management Procedures of Business Partners' Compliance in International Operation	GRI 205: Anti-corruption
Approach to tax	GRI 207: Tax
Management Procedures of Value Added Tax Invoice	GRI 207: Tax
Management Measures for Energy Conservation	GRI 302: Energy
Management Procedures for Geological Disaster Prevention and Control at Hydropower Stations	GRI 303: Water Resources and Sewage Water
Environmental Protection Management System	GRI 303: Water Resources and Sewage Water
	GRI 304: Biodiversity
	GRI 305: Emissions
	GRI 307: Environmental Compliance
Hazardous Waste Management Procedures	GRI 306: Waste
Management Procedures for Material Rejection and Disposal	GRI 306: Waste
Management Measures for Labor Contracts	GRI 401: Employment
Implementation Rules of Talent Introduction	GRI 401: Employment
Management Measures for Employees' Welfare	GRI 401: Employment
Management Measures for Employee Attendance and Leave	GRI 401: Employment
Management Measures for Occupational Hazards Prevention and Control	GRI 403: Occupational Health and Safety
Specifications for Post Work Safety Responsibility	GRI 403: Occupational Health and Safety
Implementation Rules for Work Safety Training	GRI 404: Training and Education
Management Measures for Employee Education and Training	GRI 404: Training and Education
Work Safety Management Regulations	GRI 416: Customer Health and Safety
Management Measures for Reporting, Investigation and Handling of Work Safety Accidents	GRI 416: Customer Health and Safety
Management Measures for Work Safety Responsibility	GRI 416: Customer Health and Safety
Management Measures for Fire Safety	GRI 416: Customer Health and Safety
Management Procedures for Engineering Project Safety	GRI 416: Customer Health and Safety
Management Procedures for Hazardous Chemicals	GRI 416: Customer Health and Safety

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