



中国神华能源股份有限公司
CHINA SHENHUA ENERGY COMPANY LIMITED

(a joint stock limited company incorporated in the People's Republic of China with limited liability)

Stock Code: 01088





Promote Green Development,
Pursue Excellence

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About the Report

The report mainly introduced the core values and policies of China Shenhua in aspects of environmental protection, social responsibility, and corporate governance (“ESG”), as well as the efforts made in 2022. The report aims at enhancing communication with all stakeholders in response to their concerns and hopes. The compilation of this report may not be entirely satisfactory due to various objective constraints. Readers are welcome to put forward their comments and suggestions by completing the Feedback Sheet attached to this report. The Company will improve and enhance the report on a best effort basis in the future.

Reporting Period

The report is an annual report. The reporting period is from 1 January 2022 to 31 December 2022. Some contents have been retrospectively reviewed and extended in accordance with the principle of information consistency.

Scope of the Report

Unless otherwise indicated, the information and data in this report cover China Shenhua and its subsidiaries.



Basis for Preparation

The report is prepared in accordance with the requirements of the Environmental, Social and Governance Reporting Guide as set out in Appendix 27 of *the Rules Governing the Listing of Securities* on HKEx, and *the Guidelines for the Self-Regulation of Listed Companies No. 1 – Standardised Operation* on SSE, and with reference to the requirements of the GRI Standards of the Global Sustainability Standards Board (the “GSSB”). The section of Response to Climate Change was partially prepared with reference to the HKEx *Guidelines on Information Disclosure of Climate* and the recommendations of the Task Force on Climate-related Financial Disclosures (the “TCFD”).

Reporting Principles

Materiality principle: This report focuses on matters that may have material effects on stakeholders and the Company on the basis of the evaluation results of material ESG issues approved by the Board of the Company.

Quantitative principle: All data and information in this report come from the Company’s official documents, statistical and financial reports and ESG information collected, compiled, and reviewed by the Company. Statistics and calculations related to the data contained herein were conducted in accordance with the regulations or industry standards of the PRC such as *the General Principles for Calculation of Comprehensive Energy Consumption* (GB/T2589-2020), *the General Rules for Water Statistics in Water-use Organization* (GB/T 26719-2022), *the Calculation Method for Pollution Discharge Volume at the Discharge Outlet of State-controlled Pollution Sources* (H.B. [2011] No. 8), *the Energy Statistical Reporting System (2021)* (National Bureau of Statistics of the PRC), etc.

This report is published in Chinese and English. If there are any discrepancies between the two versions, the Chinese one shall prevail. Unless otherwise stated, the currency unit is CNY.

Balance principle: The contents of this report reflect objective facts, and disclose indicators involving positive and negative information.

Consistency principle: Unless otherwise stated, this report has no significant adjustment in the disclosure scope of the Company’s ESG reports for previous years and uses consistent statistical methods to disclose 3-year comparison of key quantitative ESG indicators to reflect the trend of performance level.

Assurance Information

This report has been assured independently by our independent auditor, KPMG Huazhen LLP. The proof, scope, methodology and conclusion of the assurance are included in Appendix IV.

Availability of the Report

This report is published in Simplified Chinese characters, Traditional Chinese characters and English. This report is available to stakeholders and the public in a PDF document, which can be downloaded from the websites of the SSE and HKEx and the official website of China Shenhua (www.csec.com or www.shenhuachina.com). Please email ir@csec.com or dial 86-10-5813-3355/3399 to request a printed copy of this report.

Board Statement

Dear friends,

In 2022, the Chinese government put forward an array of important initiatives and propositions to strengthen the development of global eco-civilization and biodiversity conservation, and actively and steadily promoted emission peak and carbon neutrality in its efforts to modernize the harmonious coexistence between human and nature. As a part of its pursuit of consolidating the cornerstone of energy security, the energy industry of China steadily promotes transformation toward green and low-carbon energy, further enhancing the resilience and tenacity of the energy supply chain and industrial chain. Over the past year, China Shenhua thoroughly studied and publicised the spirit of the 20th National Congress of the Communist Party of China, and fully implemented the spirit of General Secretary Xi Jinping's important speeches and instructions during his inspection at China Energy by actively integrating into the new development paradigm. We therefore scaled a new height in our ability to perform our duties and missions and serve the national strategy.

Securing high-standard supply of energy to consolidate the cornerstone of energy.

We resolutely safeguarded the national energy artery. As a part of our reliance on coals to ensure the energy security and coal power to ensure electricity security, we strictly implemented the safety responsibility system to strengthen the guarantee in terms of personnel, materials and equipment, and technology. The coal industry has made every effort to stabilise and increase production, stabilise prices and market, and to honour contracts in compliance with laws and regulations. The power industry has been generating electricity at full capacity to ensure output, and the transportation industry has been tapping potential and increasing efficiency. The chemical industry improved the quality and efficiency of work safety. We have successfully warmed thousands of cities and lit up the light of million homes in the hard battle to ensure the supply of energy.

Pursuing high-quality green transformation to shoulder the main responsibility of transformation.

Adhering to the concept of green development, we formulated the Company's action plan for peaking carbon dioxide emissions, and accelerated the planning and materialisation of a new energy system. We gave full play to the role of coal as the main energy source,

strengthened the clean and efficient utilisation of coal, and promoted the construction of green mines. We leveraged the role of coal power as the basic guarantee and basic regulator by building new thermal power plant projects with high quality and new standards, and promoting the technological transformation of existing units. We made steady progress in development of renewable energy, while actively exploring how to extend our presence to the emerging strategic industries such as energy storage and hydrogen energy. We strictly implemented the standard discharge of pollutants, and accelerated the upgrading and transformation of energy conservation, pollution reduction, and carbon reduction with a view to becoming the main force in implementing the "dual carbon" goal.

Enhancing the capability of promoting economic development through efficient collaborative operations among industries.

Relying on our core advantages, we deepened the linkage and integration among the industrial chain, innovation chain, ecosystem chain and value chain to enhance our energy supply and service capabilities. We tapped the potential of industrial synergy to promote the steady growth of business performance, leading to "two profits and four rates" better than those over the same period last year and better than expected. We continuously optimised our asset layout and structure to promote mutual driving between capital appreciation and brand premium, thus creating new advantages for high-quality development.

Independently developing high technologies to improve our innovation capability as an innovation pioneer.

We continuously improved the new driving force of technological innovation, perfected the technological innovation mechanism, put more efforts into developing core technologies, and vigorously pursued smart coal mines, smart transportation, smart power plants, and smart chemicals. We have made landmark results in several key scientific research projects such as enterprise-level 5G core networks and high-power hydrogen shunting locomotive. Thanks to our open, low-code automatic and modular technologies, we have taken the lead in the smart development of each of these industries.

Developing into a high-quality listed company as a backbone of the reform.

We thoroughly implemented the general requirements of Party building in the new era by promoting the in-depth integration of Party building and business, and leading and securing high-quality development on the basis of high-quality Party building. We developed a proposal for developing us into a world-class integrated listed energy company around the standard of “excellent products, reputable brands, advanced innovation and modern governance”. We further promoted the three-year action campaign for the reform of state-owned enterprises and built an integrated pattern with strong coordination among various governance subjects. We deepened capital operation, optimised investment management, and strengthened market value management to serve the overall development. We disclosed information in strict accordance with the relevant requirements, made innovation in ESG governance, and optimised investor relations to maintain an excellent image of the Company and build an excellent brand of the Company.

Being well-positioned to serve the people’s lives to undertake our commitment.

In our pursuit of high-quality development, we have been committed to satisfying people’s needs for a better life, and unswervingly improving people’s livelihood and well-being, demonstrating our commitment as a state-owned backbone enterprise. We continuously eliminated risks and potential dangers in the working environment, improved safety equipment, and ensured the physical and mental health of employees. We effectively helped local governments consolidate and expand the achievements of poverty alleviation and comprehensively promoted rural revitalisation. We spared no efforts to contribute to emergency rescue, disaster prevention and relief, and promoted public community welfare projects such as donations for students, medical assistance, and facility construction. We also increased investments in ecological civilisation to enhance people’s sense of fulfilment, happiness and security.

Though the road ahead is dangerous and difficult, we can only achieve our goals with constant efforts.

Looking forward to 2023, China Shenhua will, under the guidance of Xi Jinping’s Thought on Socialism with Chinese Characteristics for a New Era, fully implement the spirit of the Party’s 20th National Congress. We will give consideration to the balance between current interest and long-term interest, between development and security, and between supply guarantee and transformation. In this course, we will, under the orientation of “steady growth and sustainable development”, promote supply guarantee, advance transformation, deepen the reform, optimise innovation, prevent risks, and strengthen Party building in an all-round way. By doing so, we will further advance the in-depth integration of ESG with the Company’s strategy and production and operation, which will in turn accelerate our evolution into a world-class integrated listed energy company, allowing us to make new achievements in contributing to sustainable economic and social development along the new journey towards building China into a modern country with Chinese characteristics!

Board of Directors of China Shenhua Energy Company
Limited
24 March 2023

ESG Governance Statement from the Board

The Board of the Company is the highest responsible and decision-making institution for ESG matters, which takes full responsibility for the Company's ESG strategies and report, and monitors ESG related matters that may affect the Company's business or operation, shareholders and other stakeholders. The Safety, Health, Environment and ESG Working Committee of the Board is responsible for supervising the commitment and performance of ESG key issues, and reporting to the Board to ensure the integration of ESG concept and the Company's strategy.

The Company attaches great importance to ESG governance and continuously improves the ESG governance system. The Company regularly conducts analysis and assessment of material ESG issues and identification of ESG risks based on the internal and external environment of development and the results of communication with stakeholders. The Board considers and determines material ESG issues and ESG risk list, takes them as the key work to manage and supervise, ensures that ESG concepts are integrated into the Company's development strategy and implemented in production, operation, and management activities in order to promote the Company's economic development, social equity, and environmental sustainability.

The Company has established an ESG target management mechanism covering major ESG performance indicators such as carbon emissions, pollutant emissions, energy consumption and water resources management, and the Board reviews the progress of those targets annually. The Company has incorporated ESG indicators into the annual performance appraisal system of the management and subsidiaries and branches of the Company to promote the achievement of the Company's ESG targets and improve the Company's ESG performance.

This report discloses the details of progress and effectiveness of ESG work of China Shenhua in 2022, and it was considered and approved at the 20th meeting of the 5th session of Board of Directors on 24 March 2023. The Board and all the Directors of the Company guarantee that the report does not contain any false representation, misleading statement, or major omission, and bear joint and several liabilities for the truthfulness, accuracy and completeness of the content hereof.

About China Shenhua

Profile of the Company

China Shenhua was founded on 8 November 2004 and is a listed company of China Energy with A+H shares. H shares and A shares were listed on HKEx and SSE on 15 June 2005 and 9 October 2007, respectively.

China Shenhua is the world's leading listed coal-based comprehensive energy company, mainly engaged in seven business segments, namely coal, electricity, new energy, coal-to-chemicals, railway, port and shipping. Starting from the coal mining business, the Company leverages its own transportation infrastructure and sales network, as well as the downstream power plants, coal chemicals facilities and new energy to achieve a cross-sector and multi-industry vertical integration mode for its development and operation, thus forming the core competitive advantage of China Shenhua.

By the end of 2022, the Company had assets of CNY625.2 billion, a total market value of USD75.2 billion and a total of 83,029 employees.



Income in 2022

CNY **344.533** billion



year-on-year
growth

2.6 %

Basic earnings per share

CNY **3.669** /share



year-on-year
growth

41.8 %

Net cash inflow from
operating activities

CNY **109.734** billion



year-on-year
growth

16.3 %



Business Overview



Coal Industry:

The Company has high-quality coal resources such as Shendong Coalfeild, Zhunge'er Coalfeild, Shengli Coalfeild, and Baorixile Coalfeild, with an approved production capacity of 346 million tonnes, accounting for approximately 8% of the national total. The Company has built a cluster of mines each with an annual capacity of over 10 million tonnes featuring 100% mechanised operation and world-leading indicators such as production, technology, quality, energy consumption and environmental protection. All mines are safe and efficient mines. 20 of those collieries are included in the national or provincial catalogue of green mines, marking that the Company takes the lead in the production from green mines in China.



Electricity Industry:

China Shenhua controls and operates power plants with a total installed capacity of 40.30 GW, consisting of coal-fired capacity of 39.16 GW, gas-fired capacity of 950 MW and hydropower capacity of 130 MW. The Company actively promotes green, low-carbon and clean development. All of its coal-fired generation units are equipped with desulfurization and denitration installations, leading to 100 percent ultra-low emissions in all conventional units. The Company's clean thermal power projects in Indonesia have become a model and benchmark among Chinese companies seeking to "go global".



New Energy Industry:

China Shenhua actively promotes the development of new energy by investing in industrial funds and new energy projects. It leverages its own land resources with a focus on the development of characteristic photovoltaics in the principle of attaching equal importance to the centralised PV and distributed PV. The Company has co-established Guoneng New Energy Industrial Investment Fund and Guoneng Green and Low-carbon Development Investment Fund, which will spur the launch of wind and PV power projects with a total capacity of nearly 10 GW. Some of those projects have been connected into the grid at full capacity.





Coal-to-chemicals Industry:

The Baotou Coal-to-olefin project is a national strategic key project, and it is also the world's first coal-based MTO industrial demonstration project with an annual production capacity of approximately 600,000 tonnes. The main products are polyethylene, polypropylene and a small number of by-products.



Railway Industry:

China Shenhua controls and operates a network of concentric and radiating transportation railways around the major coal production bases in western Shanxi, northern Shaanxi and southern Inner Mongolia, "Shenshuo – Shuohuang Line", the second largest channel for coal transportation from western to eastern China, as well as Huangda Railway, a new energy channel in Bohai Rim. The Company has a total mileage of railway operation of 2,408 km, an annual transportation capacity of 530 million tonnes, more than 800 locomotives at its disposal, and more than 50,000 self-owned wagons. China Shenhua is the second largest railway operator in China.



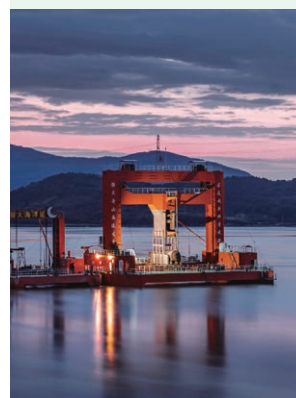
Port Industry:

China Shenhua runs three dedicated ports and terminals, namely Huanghua Port, Tianjin Coal Terminal and Zhuhai Gaolan Port, with a combined designed annual handling capacity of 270 million tonnes. Huanghua Port is an important outlet of the second channel of "Coal Transportation from West to East" and "Coal Transportation from North to South". Its sophisticated technologies in dust-suppression and intelligent control of ship-loading are second to none in China. The port ranks first in terms of labour productivity and profitability per capita in domestic ports.



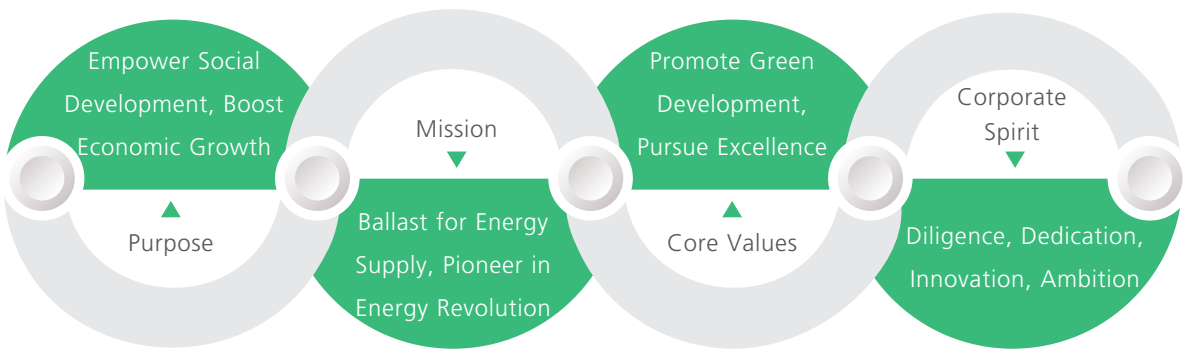
Shipping Industry:

China Shenhua has 40 cargo vessels with a deadweight capacity of 2.18 million tonnes and an annual transportation capacity of 55 million tonnes. The route covers Huanghua Port, Tianjin Port, Qinhuangdao Port and other major domestic ports in coastal and riverine provinces and cities. The fleet size and profitability rank in the forefront among those of shipping enterprises in China.



Corporate Culture

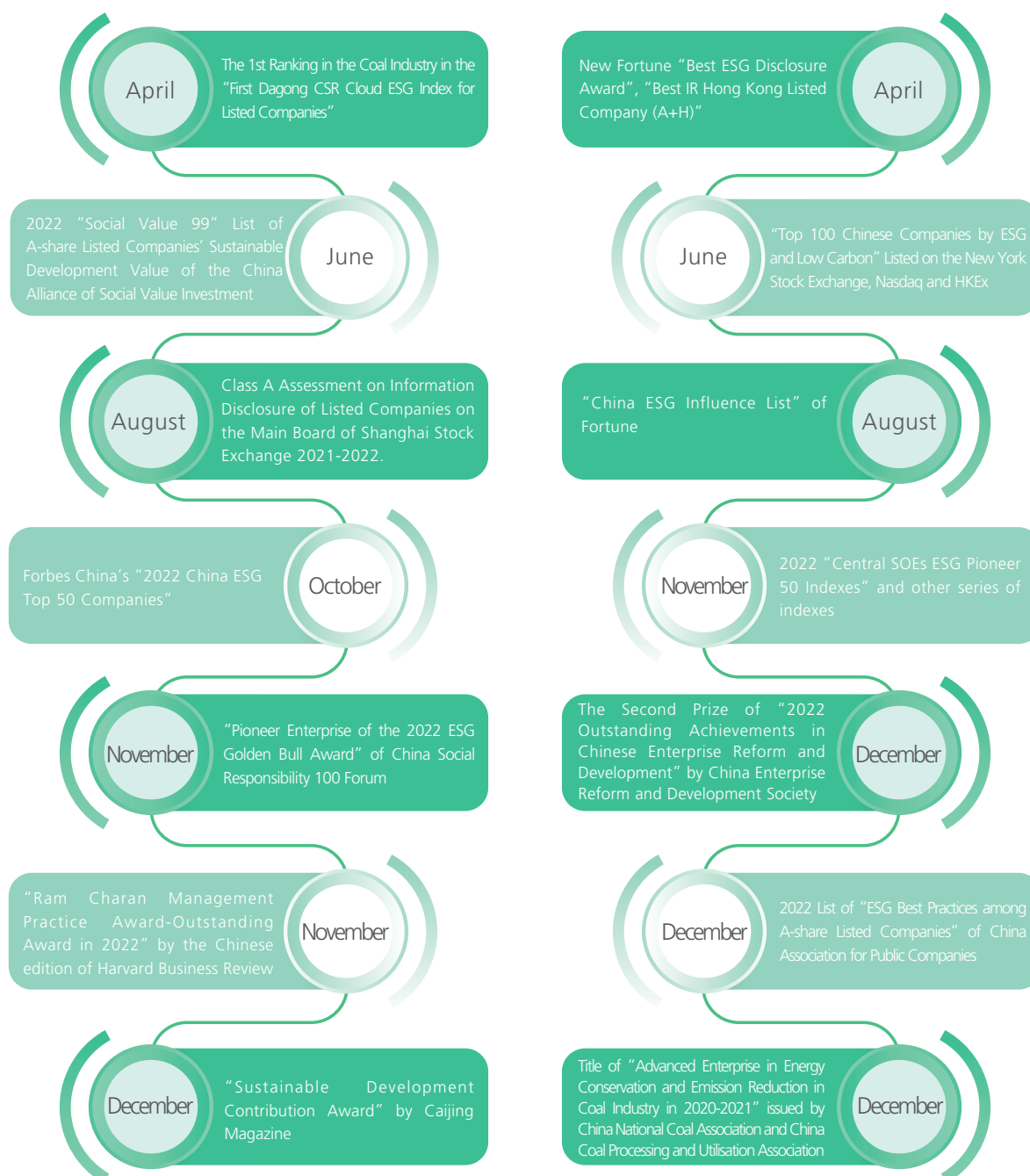
Philosophy



Strategy



Key ESG Honours in 2022





Corporate Governance

China Shenhua adheres to the development strategy of “building a world-class listed integrated energy company with global competitiveness”, establishes and optimises the modern enterprise system with Chinese characteristics, continuously improves the corporate governance mechanism, clarifies the authority of the Board of Directors, deepens corporate reform, operates with integrity and compliance, strengthens capacity building, and effectively safeguards legitimate rights and interests of investors to lay a solid foundation for sustainable development.

中国神华2022年第一次临时股东



Governance System

China Shenhua strictly abides by the *Company Law of the People's Republic of China*, the *Corporate Governance Code*, and other laws and regulations, as well as the regulatory requirements of the jurisdiction of listing. The Company continuously improves its corporate governance structure. The Board of Directors and the management under the special committees remain clear in responsibilities and efficient in execution to ensure the stable and healthy operation of the Company. In 2022, the Company was selected into the list of Demonstration State-owned Enterprises (SOEs) on Corporate Governance released by the State-owned Assets Supervision and Administration Commission of the State Council (SASAC).

Upgrading the Board of Directors

In 2022, the Company continued to optimise the composition of the Board of Directors, improved the institutional system of the Board of Directors, enhanced the functions of special committees, and focused on the performance of Independent Directors, thus laying a solid foundation for the sustainable development of the Company.

Optimising the structure of the Board of Directors

- Appointment and replacement of 2 Directors and addition of 1 female Director.
- Adjustment in the names and rules of procedure of the special committees, and addition of contents involving assessment, investment, ESG, and risk management.

Improving the institutional system

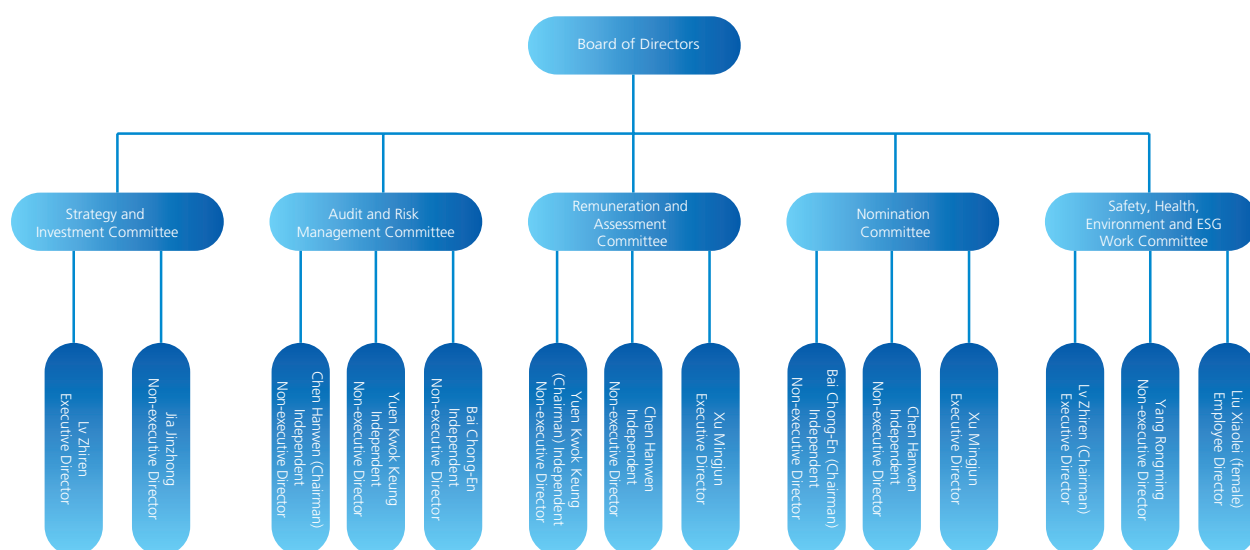
- Formulation (revision) of 10 supporting systems for implementing the authority of the Board of Directors, the rules of procedure for thematic meeting of the Chairman and the Independent Director system.
- Revision of the *List of China Shenhua Decision-Making Issues* to standardize the decision-making subject and duties and responsibilities of 161 issues in 12 categories.

Regulating the operation of the Board of Directors

The meetings are convened and held in compliance with the requirements of the listing rules and corporate governance system. The requirements of notification, recusal and signature are strictly fulfilled. The meeting documents are complete, and the decision-making procedures are effective.

Exerting functions

The Board of Directors deliberated and approved important resolutions such as the *Company's Action Plan for Carbon Peaking*, *2022-2024 Shareholder Return Plan*, acquisition of minority stake of subsidiaries, and annual internal control evaluation report, thus effectively ensuring the implementation of the Company's development strategy.



Directors' Performance of Duties

Directors of the Company perform their duties in the interests of all shareholders in the principles of diligence, integrity and pragmatism.

In 2022, China Shenhua held a total of 8 Board meetings, at which the Board listened to 5 work reports, and deliberated 78 proposals. Those meetings were attended by 56 Directors in person and 2 by proxy, representing an attendance rate of 96.6%. 22 meetings of special committees were held to consider 67 proposals, and 2 meetings of the Independent Board Committee were held.

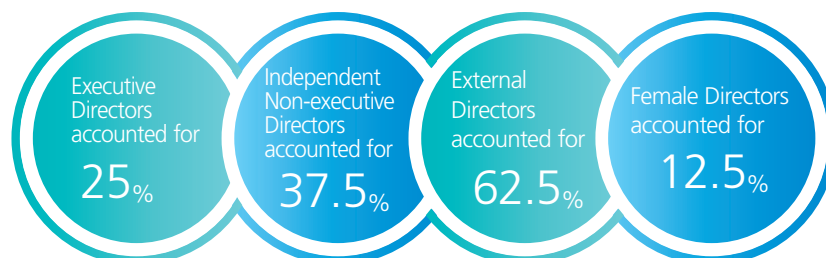
In addition, the Company held 4 general meetings throughout the year, at which 14 proposals were adopted with a vast majority of votes. The Company held 6 meetings of the Supervisory Committee to ensure that all work was carried out in a compliant and orderly manner.

In 2022, Directors and supervisors conducted 3 on-site investigations on the Company's pursuit of information-enabled and intelligence-oriented development, the research on clean and low-carbon technology, and centralised fund deposit and loan and provided opinions and suggestions, eventually preparing an investigation report.



Diversity of the Board

The Company formulates the *Policy on Member Diversity of the Board of Directors*. The nomination and appointment of the Board members take multiple factors into consideration, such as gender, age, cultural and educational background, professional experience, and skills. By the end of 2022, the fifth session of Board of Directors of China Shenhua is composed of 8 Directors from different industries in Chinese Mainland and the Hong Kong SAR, China. They are professionals in sectors of energy, law, economy, accounting, engineering, audit and risk. For details of the members of the Board, please refer to the *Company's 2022 Annual Report*.

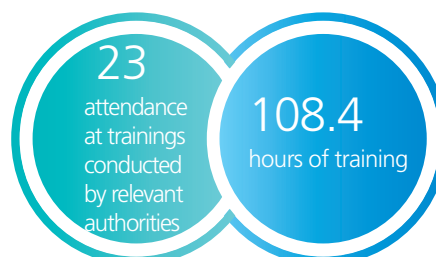


Independence of the Board

The Company appoints Independent Directors in strict accordance with the qualifications stipulated in the *Articles of Association*, and the number and background of Independent Directors in office comply with the listing rules of the jurisdiction of listing. The Company's three Independent Directors serve as the Chairman of the Audit and Risk Management Committee, the Nomination Committee, and the Remuneration and Assessment Committee, respectively. In 2022, the Company's Independent Directors played a supervisory role in strict accordance with relevant laws and regulations, the Articles of Association of the Company, relevant rules of procedure, and the requirements of Independent Director system, providing independent audit opinions on the Company's major decisions. This exerts an important role in the Company's standardised operation while safeguarding the legitimate rights and interests of minority shareholders.

Training of Directors

In 2022, China Shenhua arranged with members of the Board to participate in training sessions conducted by regulatory authorities such as the exchanges and associations for listed companies. The attendance reached 23, and the training hours were 108.4 hours in total, which enhanced the understanding of regulatory rules and requirements of the performance of duties, and effectively improved the knowledge level and the performance of duties of members of the Board.



Integrity and Compliance



China Shenhua strictly abides by relevant laws and regulations such as the *Supervision Law of the People's Republic of China* and *Anti-Money Laundering Law of the People's Republic of China*, continuously improves compliance management policies and systems, adheres to operation in good faith, cultivates a culture of integrity, and continuously improves the pertinence and effectiveness of supervision to create a standardised operation environment based on laws.

Compliance in Operation

China Shenhua follows the principles of “comprehensive coverage, emphasis on key points, clarity of authority and responsibility, and efficient coordination”, and improves the compliance management system, comprising decision-making by the Board of Directors, supervision by the Supervisory Committee, coordination by the compliance management committee and promotion of managers, under the leadership of the Party Committee. In 2022, the Company carried out the event titled The Year for Strengthening Compliance Management and formulated the *Guidelines on Compliance Risk Prevention and Control of A+H Listed Company*, the *Compliance Issue Compilation in Key Areas*, and the *Implementing Measures for Compliance Review*, thus consolidating the management foundation of listing supervision and compliance investigation for key areas.

Anti-corruption

The Company strictly abides by anti-corruption and anti-bribery laws applicable to the place where it operates, supports relevant initiatives such as the *United Nations Convention Against Corruption*, and upholds the “zero tolerance” attitude to prevent corruption.

The Discipline Inspection Committee of the Company is a special agency for inner-party supervision, and the Office of the Disciplinary Inspection Committee is responsible for specific tasks such as supervision, discipline enforcement and accountability. The Company has set up a coordination group to improve Party conduct and clean administration and anti-corruption work. According to the working rules, the group promotes the organic integration and mutual coordination of inner-party supervision and audit, finance, legal and business supervision. The Company's subsidiaries and branches have established discipline inspection bodies to achieve full coverage of anti-corruption and supervision of all employees and supply chains.

In 2022, the Company's Discipline Inspection Committee formulated 13 management regulations including the *Implementing Measures for the Discipline Inspection Committee to Strengthen Supervision on Key Personnel of the Company's Headquarter* and revised six regulations containing the *Measures for Issue Clue Management*, to ensure the effective implementation of anti-corruption work at the mechanism level. Supervision has become concrete and normalised. Throughout the year, 93 regulatory talks have been held for key personnel in key positions in the headquarters and 23 talks on clean administration were held for employees before they assumed their office. Combining the content of “three types of key groups, four special educations, five entry guarantees, and six node educations”, the “3456” immersive education model for clean administration was established. The Company headquarters carried out positive education, discipline and law publicity education, family tradition education, case study for warning purposes, and other diversified education for 15 times.

Integrity Education and Training of the Company in 2022

Trainees	Total Number of Trainees	Number of Training Sessions	Total Training Hours	Percentage of Trainees Receiving Training (%)
Director	10	15	85	100
Supervisor	5	15	32	100
Senior management	9	15	101	100
Management of subsidiaries	2,730	241	25,755	79.9
Other employees	61,619	290	370,859	77.4
Supply chain	1,805	28	2,599	–

Complainant and Whistleblower Protection

The Company has formulated the *Policy of Safeguarding the Rights and Interests of Whistleblower and Complainant (Trial)* and other relevant systems. The Company accepts reports by letters, visits, and phone calls, publicises the whistleblowing hotline, and safeguards the legitimate rights and interests of whistle blowers and accusers. The Company strictly executes the procedures, handles corruption reports received in accordance with the management authority level, and establishes management standing books for records. The staff of the Company's Disciplinary Committee strictly abide by the work discipline, implement the confidentiality system, control the scope of knowledge of corruption reports and clues, strictly prohibit the disclosure of relevant clues and how they are handled, and no one is allowed to review the relevant clues without approval. When corruption reports and relevant clues involve management personnel, investigation and reviewing personnel, or their close relatives and interested parties, the avoidance system shall be implemented.

Anti-corruption Work in 2022

Number of corruption lawsuits occurred (cases)	0
Number of corruption lawsuits finalised within the year (cases)	0

Business Ethics

China Shenhua strictly abides by laws and regulations such as the *Anti-Unfair Competition Law of the People's Republic of China*, adheres to compliant operations and fair competition, opposes any form of commercial bribery, money laundering, monopoly, and unfair competition, and strictly requires all employees and suppliers to abide by business ethics. The Company has a complete supervision and verification mechanism for business ethics. According to the *Business Ethics System of China Shenhua (Trial)*, the Company strengthens its supervision and management in production and daily operations and discovers and solves violations in a timely manner.

In 2022, the Company revised the *Internal Audit Management Regulations of China Shenhua (Second Edition)*, which included business ethics audits within the scope of internal audit supervision duties, and made it clear that business ethics policy supervision and inspections will be carried out every two years. The Company conducted a special audit investigation on the formulation and implementation of China Shenhua's business ethics policy and standards and issued an audit investigation report. The special audit investigation included the audit content of the supplier's business ethics management.

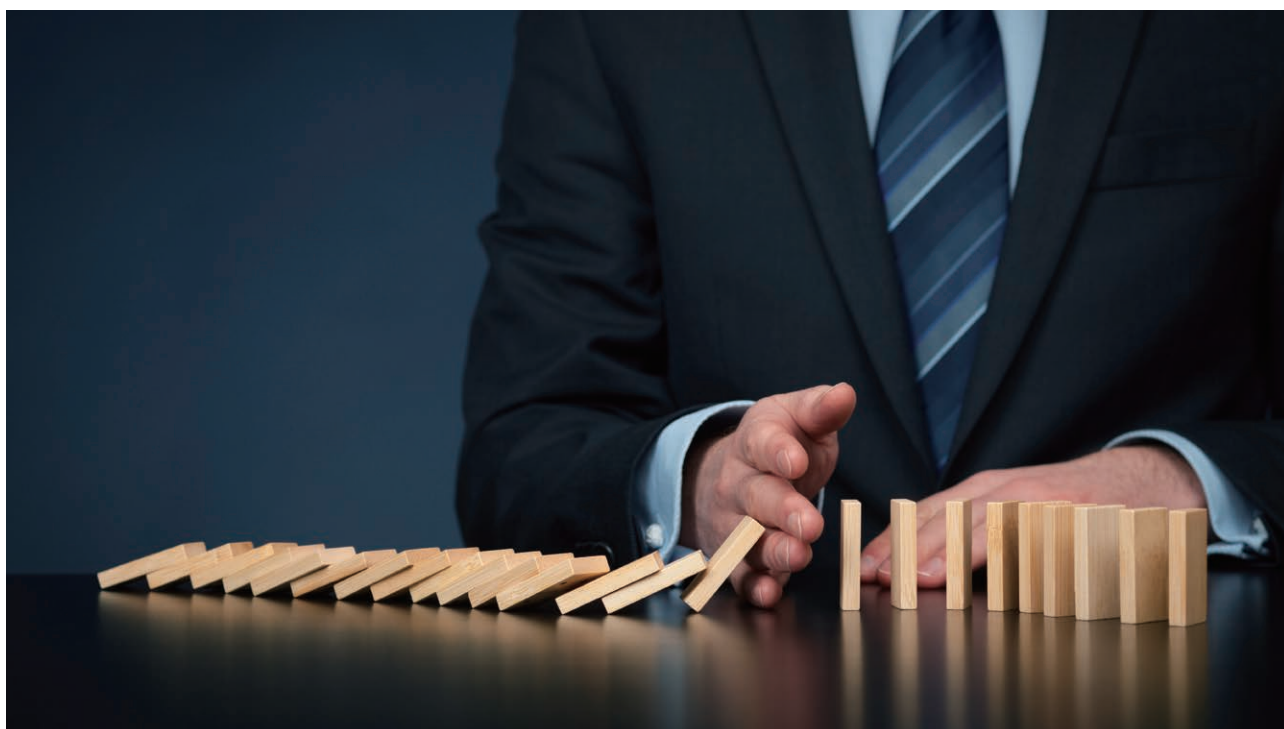
Case: China Shenhua launched online business ethics training

China Shenhua cooperated with external organisations to develop business ethics training courses, provided online business ethics training for all employees, suppliers and contractors of units at all levels, and provided detailed interpretations of anti-money laundering, insider trading and other relevant behaviours that violate business ethics. As of 31 December 2022, China Shenhua's business ethics training courses were effectively learned by 9,848 participants, and the total length of training was 5,877.58 hours.

Risk Control

China Shenhua pays attention to risk and internal control management. In this regard, it establishes a risk-oriented system of internal control and risk management in accordance with the *Internal Control Risk Management Regulations*, and sets up a work organisational structure in which the Company's Board of Directors and its Audit and Risk Management Committee, headquarters departments, subsidiaries and branches undertake the risk control at different levels, thus ensuring the effective implementation of internal control and risk management. The Company's procedures for internal control and risk management include an integrated closed-loop management mechanism such as risk assessment and reporting at the beginning of the year, quarterly major risk monitoring, daily internal control risk review, special internal control supervision and inspection, as well as annual internal control evaluation.

Through the information-enabled platform for internal control and risk management, the Company realises business functions such as information collection, risk warning, risk assessment, management improvement, monitoring and reporting, and internal control evaluation; establishes a risk warning indicator system and strengthens the monitoring of risk indicators; builds the mechanism for major risk event submission, formulates response plans, and prevents the spread and superposition of major risks; conducts the assessment for the Company's major risk every year, formulates risk control measures for major risks; continues to track and monitor the Company's major risk management and control and major risk event handling on a quarterly basis, so as to promote the corporate sustainable development. In 2022, the Company completed the annual internal control effectiveness evaluation and major risk assessment without any major risk events.



Party Building

The Party Committee of China Shenhua upholds Xi Jinping's Thought on Socialism with Chinese Characteristics for a New Era as its guide, while publicising and executing the spirit of the 20th CPC National Congress based on in-depth learning. The Company coordinates and promotes the organic unification of Party leadership and corporate governance, which facilitates the deep integration of Party building, reform, and development. The Company also manifests the effectiveness of comprehensive and strict governance of the Party, so as to provide a strong political guarantee for the Company's pursuit of becoming a first-class listed integrated energy company.

Main Activities Conducted by the Company's Party Committee in 2022

Strengthening political building	Implementing the "first issue" system and following up the study on 59 important speeches and documents in a timely manner throughout the year.
	Formulating the work plan to carry out in-depth study and dissemination of the spirit of the 20th CPC National Congress and promoting the proceeding of 16 key tasks.
	Formulating the task list to implement the spirit delivered in the important speech of General Secretary Xi Jinping when he was inspecting China Energy Yulin Chemical Company, and refining the overall plan and dividing it into 38 key tasks and 119 work measures.
Strengthening the deep integration	Formulating 32 measures to achieve the normalisation and long-term effect of the study and education regarding the Party history, and consolidating and expanding the fruits yielded by the study and education.
	Regularly convening meetings to facilitate full and strict governance over the Party, conducting analysis and research on the Party conduct and clean administration and anti-corruption cases, and continuously optimising the political ecology.
	Organising and convening 29 Party Committee meetings to review 222 items for preliminary decision-making, thus effectively playing the role of setting the right direction, keeping in mind the big picture, and ensuring implementation.
Carrying out publicity education	Promoting the brand creation activities of the Party branch of the headquarters under the "five standards" initiative to consolidate the organisational foundation.
	Centring on ensuring energy supply, realising green transformation, enhancing quality and efficiency, carrying out activities of making position-oriented contributions based on the belief of "socialism is achieved through hard work".
	Deepening reform of "three systems" to incentivize employees through remuneration, optimise employee structure, and enhance team building.
	Formulating the list of key tasks regarding publicity and ideological work, and grasping the main tone of ideology and politics.
	Formulating management measures for corporate culture construction, and carrying out activities for publicising the corporate core value and corporate culture.
	Opening an online library column on the Intranet of the Company for continuous reading sharing.
	Organising and carrying out special events and commendations to strengthen team building and the spirit of competitiveness.

施“一个目标、三型五化、七个一流”发展战略 加快建设具有全球竞争力的世界一流能源



Case: The “1233” innovative learning method adopted by the Theoretical Learning Central Group of the Party Committee of China Shenhua

In 2022, the Party Committee of China Shenhua created the innovative and distinctive learning method of “1233” for the Party Committee’s Theoretical Learning Central Group. The method highlights the political nature, pertinence, and effectiveness of learning and helps the Company to take the lead in facilitating action through learning, improving knowledge through action, and combining knowledge with action.

“One main line” calibrates the learning direction. The Company firmly grasps the “main line” of studying and implementing Xi Jinping’s Thought on Socialism with Chinese Characteristics for a New Era, and conveys the learning content in a timely manner by following the “first issue” and other forms to enhance the political determination of Party members and cadres. “Two

guarantees” strengthen the quality of learning. The Company attaches equal importance to standardised procedures and innovative mechanisms and takes “faithful belief, authentic learning, and actual application” as the foothold of learning to ensure that learning is deep, detailed, and practical. “Three combinations” enhance learning effectiveness. By combining the situation and mission, key and difficult issues, and practical problems, the Company transforms the learning ability into productivity. “Three leads” expand learning outcomes. When leading the improvement of the effectiveness of Party building, leading the green and low-carbon transformation of energy, and leading the construction of a world-class enterprise, the Company utilises learning outcomes to guide practice and promote work.

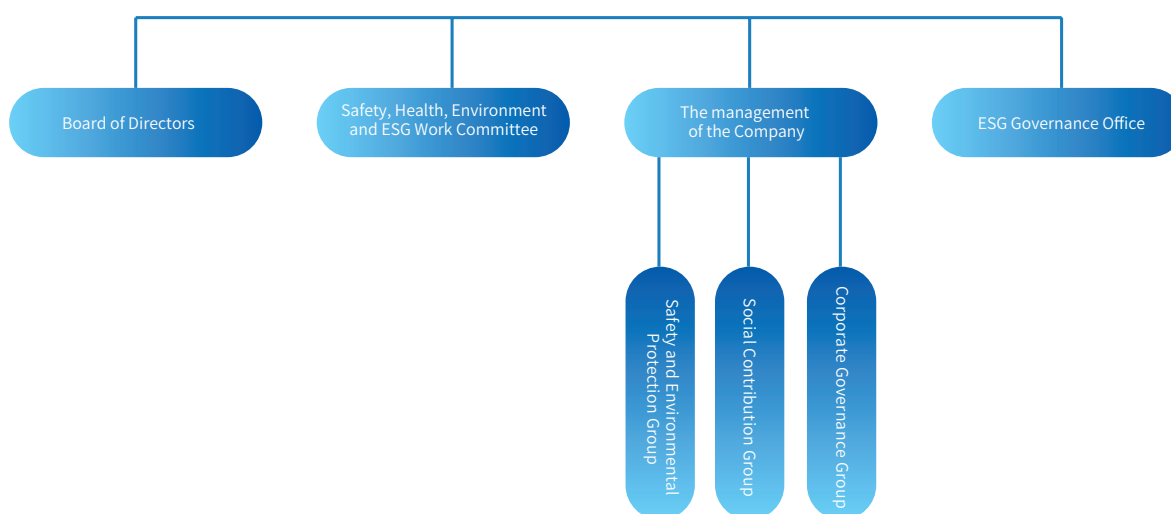
ESG Governance



China Shenhua integrates the concept of sustainable development into its corporate strategy and penetrates it into every business link, continuously improves the ESG governance structure and operating mechanism, and actively responds to the requirements and expectations of stakeholders to fulfil its social responsibilities whenever possible.

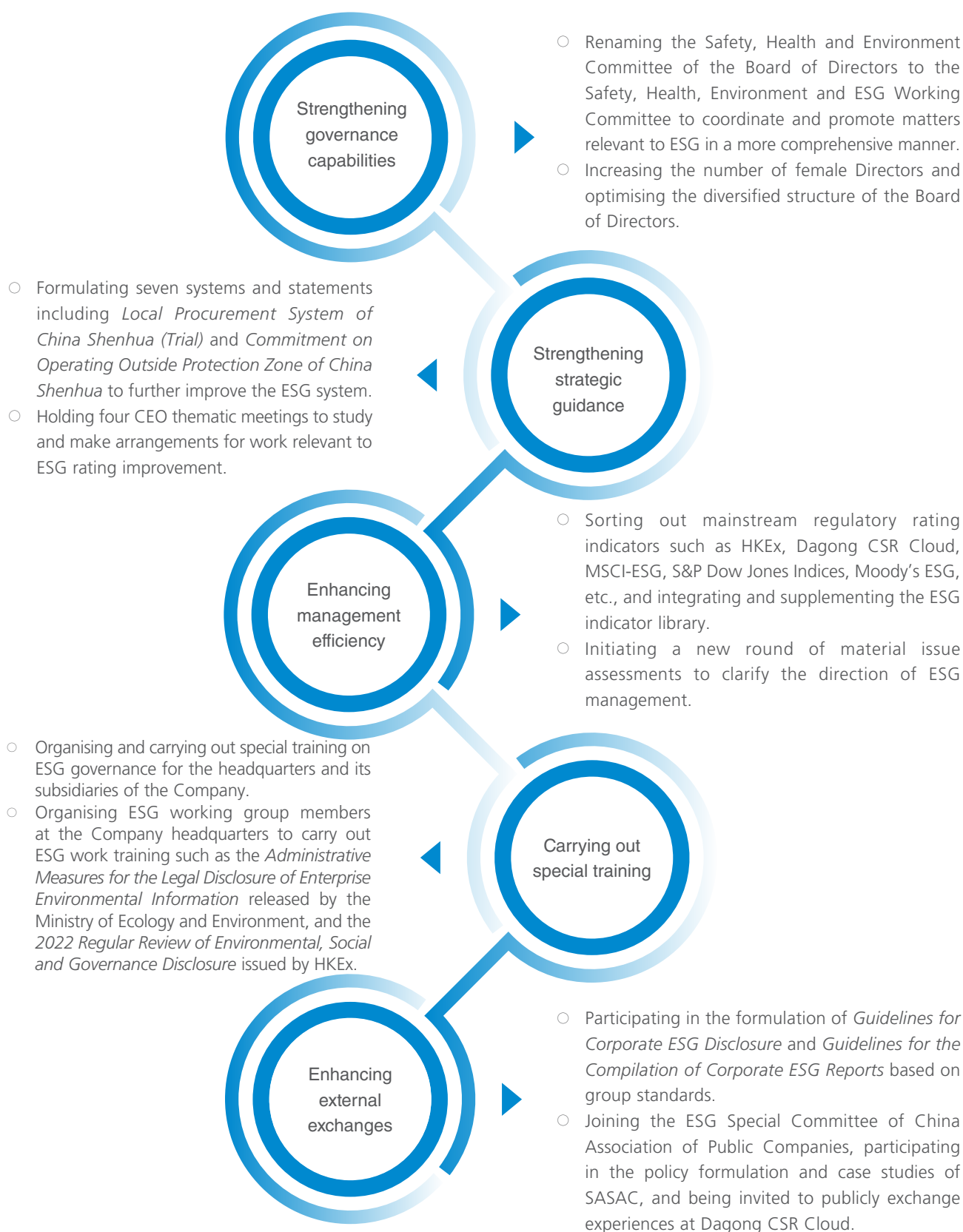
ESG Governance Structure

ESG governance system of China Shenhua covers the headquarters and all subsidiaries. The Board of Directors, as the top decision-making body for ESG work, is responsible for overall planning and decision-making and deployment of major issues. The Safety, Health, Environment and ESG Work Committee under the Board of Directors is mainly responsible for supervising the implementation of the Company's safety, health, environmental protection and ESG work plan, and providing suggestions to the Board of Directors or the Chief Executive Officer on major issues affecting the Company's safety, health, environmental protection and ESG work, including but not limited to employees development, climate change, biodiversity and water resources management. The Committee also supervises and inspects the identification, evaluation, management process and progress of relevant goals of the Company's ESG activities. The Company's headquarters have established a safety and environmental protection group, a social contribution group and a corporate governance group to fulfil the proceeding and implementation of strategies, involving topics of energy supply, energy conservation and emission reduction, safety production, etc. The ESG Governance Office is responsible for coordinating and promoting the implementation of daily ESG management work. The affiliated enterprises carry out relevant work in accordance with ESG management systems and procedures.



China Shenhua ESG Governance Structure

ESG Actions of the Company in 2022



Assessment of Remuneration of Director and Senior Management

The Board has set up a Remuneration and Assessment Committee to make recommendations to the Board of Directors on formulating remuneration plans or programs for Directors, Supervisors, Chief Executive Officer and other senior management personnel. The Company has established a management tenure system and a contractual management system, signed the *2022 Letter of Liabilities for Annual Operational Performance of the Management*, and incorporated ESG indicators into the operational

performance assessment. Among ESG indicators, safety production and environmental protection are binding indicators. Points will not be added if the annual goal is reached and points will be deducted for failure to complete the annual goal. Other ESG indicators, including corporate governance, implementation of dual carbon goals, green mine construction, technological innovation, etc. are used as personal performance indicators, and the assessment scores account for about 30%.

ESG Goals Management

Based on its actual operating conditions, China Shenhua has formulated management and control goals for 2020-2025 in four aspects of greenhouse gas emissions, pollution prevention and control, energy use, and water efficiency.

Project		Management Goal	2022 vs. 2020
Greenhouse gases emissions	Total carbon emissions	Peaking carbon emissions by 2030	increase by 30.8%
	COD emissions	4% reduction in 2025 based on 2020	decrease by 12.8%
Pollution prevention	Thermal power SO ₂ emission performance	2% reduction in 2025 based on 2020	even
	Thermal power NO _x emission performance	2% reduction in 2025 based on 2020	decrease by 14.3%
	Thermal power soot emission performance	3% reduction in 2025 based on 2020	decrease by 23.1%
	Comprehensive utilisation rate of general solid waste	increase by 5 percentage points in 2025 based on 2020	increase by 22 percentage points
Energy use	Comprehensive energy consumption per CNY10,000 output	0.8% reduction in 2025 based on 2020	decrease by 13.4%
	Standard coal consumption for power supply	1% reduction in 2025 based on 2020	decrease by 3.3%
Water efficiency	Utilisation rate of sewage and wastewater	increase by 5 percentage points in 2025 based on 2020	decrease by 0.69 percentage points

Communication with Stakeholders

According to the industry dynamics and the characteristics and development of the Company, we identify various stakeholders and provide channels for direct communication, reporting and complaints. We listen to their suggestions, respond in a timely manner, and handle them properly. The Company regularly reports investors' concerns and appeals to the management and members of the Board of Directors on a weekly and monthly basis to ensure that investors' voices are heard and delivered in a timely and effective manner, so as to formulate corresponding management strategies.

The Company answers the questions from investors in a timely manner by holding operation results briefings and shareholders' meetings, participating in investment seminars, welcoming visits of mainland and overseas investors, and communicating on the Internet. In 2022, the Company held 68 one-on-one meetings and group discussions, interviewed more than 1,600 person-times investors, and answered 122 questions raised by investors on the interactive e-platform of the Shanghai Stock Exchange.

List of Stakeholders

Stakeholders	Key Issues	Communication Channel
Government and regulators	<ul style="list-style-type: none"> • Law-abiding • Compliance of operation • Energy security • Sustainable development • Tax payment in conformity with the law • Boosting local economy 	<ul style="list-style-type: none"> • Inspection and supervision • Approval and audit • Communication and reporting • Research and discussion
Shareholders and investors	<ul style="list-style-type: none"> • Compliance of operation • Sustainable development • Income return • Unimpeded information 	<ul style="list-style-type: none"> • Information disclosure • Website and WeChat official account of the Company • Performance briefing • Roadshow and communication • Cash dividend
Clients	<ul style="list-style-type: none"> • Good faith performance • Quality assurance • Excellent service 	<ul style="list-style-type: none"> • Visit and research • Satisfaction survey • Contract performance
Employees	<ul style="list-style-type: none"> • Remuneration and benefits • Protection of rights and interests of employees • Career development • Health and safety • Humanistic care 	<ul style="list-style-type: none"> • The Employees' Congress • Cultural activities • Regular training • Chairman mailbox
Community	<ul style="list-style-type: none"> • Response to climate change • Water resource protection • Pollution prevention • Energy conservation and emission reduction • Biodiversity • Community development • Public welfare activities • Jobs creation 	<ul style="list-style-type: none"> • Environmental impact assessment • Declaration and commitment • Collection and disclosure of environmental data • Community communication and exchanges • Open Day • Public welfare activities • Rural revitalisation • Media communication
Industry and partners	<ul style="list-style-type: none"> • Business ethics • Transparent procurement • Mutual benefit and win-win result • Fair competition • Promoting industry progress • Promoting the development of the industrial chain 	<ul style="list-style-type: none"> • Contract performance • Public procurement and e-procurement • Business cooperation • Special training • Exchange of experience • Technical cooperation

Identification and Evaluation of Material Issues

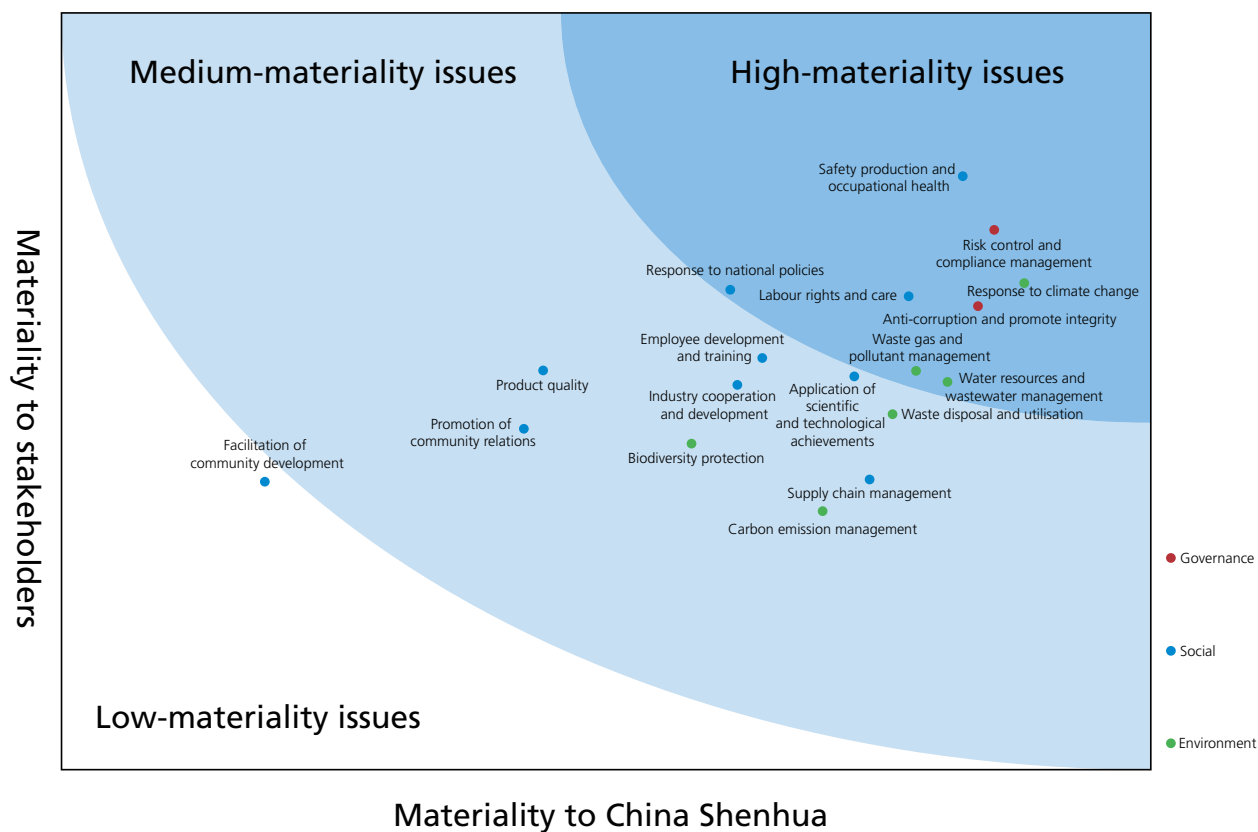
In order to understand the concerns, expectations and demands of stakeholders on the Company's sustainable development, and to review the effectiveness of internal management, the Company conducts ESG materiality assessment every three years or so. In 2022, China Shenhua identified and screened the list of ESG issues relevant to the Company in accordance with the established work process, organised internal assessments from two dimensions, namely the concern by stakeholders and the impact on China Shenhua, and drew a materiality matrix. Furthermore, the Company selected material issues and reported them to the Board of Directors for review and approval, which functioned as the goal and direction of our ESG management work.

Material ESG Issues of China Shenhua in 2022

High-materiality issues	Safety production and occupational health, Risk control and compliance management, Anti-corruption and promote integrity, Labour rights and care, Response to national policies, Response to climate change, Waste gas and pollutant management, Water resources and wastewater management.
Medium-materiality issues	Carbon emission management, Waste disposal and utilisation, Biodiversity protection, Promotion of community relations, Employee development and training, Supply chain management, Product quality, Application of scientific and technological achievements, Industry cooperation and development.
Low-materiality issues	Facilitation of community development.



ESG Materiality Issues Matrix of China Shenhua in 2022



Environmental Protection

A good ecological environment is the fairest public product and the most accessible welfare for the people. China Shenhua focuses on the development of clean and low-carbon, safe and efficient modern energy, actively promotes the optimisation and upgrading of industrial structure, intensifies the development and construction of clean and renewable energy, performs excellently in pollution prevention and ecological restoration, and strives to function as the main force in the process of carbon peaking and carbon neutrality. The Company aims to establish an ecological system that respects nature and develops in a green manner and to promote the harmonious coexistence between humans and nature, so as to build a beautiful world.





国家能源集团 国内首台大功率氢能源调车机车试验运行

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Response to Climate Change



China Shenhua strictly follows the national goal of realizing carbon peak and carbon neutrality, complies with relevant international agreements including the United Nations Framework Convention on Climate Change and the Paris Agreement, and refers to Task Force on Climate-related Financial Disclosure (TCFD) created by the Financial Stability Board (FSB) to fully implement climate risk assessment and management. The Company continues to enhance the climate change response system, and strengthens the management of climate change affairs from four dimensions of governance, strategy, risk management, as well as indicators and goals.

Governance

With reference to the *Guidelines for Climate Information Disclosure* and other documents released by HKEx, China Shenhua has built a climate change governance structure that complies with the “Dedicated Approach” to comprehensively supervise the impact of climate change issues on the Company’s business and operations, and systematically carry out climate change risk governance, strategy formulation, information disclosure, etc.

Climate Change Governance Structure	Responsible Agency	Duties
The governance level	Board of Directors	It is the top decision-making body in charge of issues involving climate change. The main responsibilities include examining and approving the Company’s climate change management strategy, the Company’s mid- and long-term climate change management plans and annual plans, and the Company’s climate change risk management and control goals.
	Safety, Health, Environment and ESG Work Committee	It is the main organisation in charge of climate change risk management. The main responsibilities include reviewing the Company’s climate change strategy, understanding and assessing the possible impact of climate change risk, reviewing the content of climate change risk management, etc.
The management level	Senior management	The leadership organisation of climate change risk management makes arrangements and plans for the Company’s climate change risk management work, and organises and coordinates risk management work in the area of responsibility.
The execution level	Safety and Environment Protection Group	It is composed of personnel selected from five departments at headquarters with professional backgrounds. Their main responsibilities include assessing the impact of climate change risks, issuing internal reports in accordance with the TCFD framework, formulating action plans for mitigating the impact of climate change, and implementing specific tasks.
	Subsidiaries	The main responsibilities include establishing the risk management system of their own, implementing the Company’s decisions involving climate change, and strictly managing carbon emissions and energy conservation and emission reduction goals.

China Shenhua focuses on improving the effectiveness of climate change management, and incorporates issues involving climate change in the scope of work of other special committees of the Board of Directors. The Strategy and Investment Committee of the Board of Directors is responsible for reviewing the long-term development strategic plan, annual comprehensive plan, etc., and making suggestions to the Board of Directors on the Company’s strategic positioning, major investment and financing, etc. The Company incorporates climate change risks into its comprehensive risk management system. The Audit and Risk Management Committee of the Board of Directors regularly supervises risks involving climate, and reviews relevant major risk lists and annual evaluation reports.

To ensure that the Board of Directors gets updated on the latest trends in issues involving climate change, China Shenhua regularly organises climate change knowledge training sessions to assist the Company’s Directors in learning essential professional knowledge and skills. In addition, to better support the decision-making process, the Board of Directors may also seek professional advice and assistance from external experts as needed.

Strategy

China Shenhua attaches great importance to the potential impact of climate change risks and has raised the issue of climate change to the level of corporate strategy. In 2022, China Shenhua formulated the Action Plan for Carbon Peaking based on the characteristics of the industry and carbon dioxide emissions, proposing a carbon peaking action strategy that focuses on the green and low-carbon development of electric power

and is supported by low-carbon technology research and development to achieve the synchronised promotion of coal, electricity, transportation and chemicals. Furthermore, the Company formulated targets for greenhouse gas emission reduction and implementation paths to mitigate the impact of climate change, laying a solid foundation for the ultimate achievement of net zero emissions.

Action Roadmap for Carbon Peaking of China Shenhua



Aiming to comprehend the potential impact of climate change on China Shenhua's business more carefully, we selected low-emission scenario (the sustainable development scenario pathway based on RCP2.6, SSP1 and supplemented by the Net Zero Emissions by 2050 Scenario (NZE) of the International Energy Agency (IEA)) and high-emission scenario (SSP3 pathway) in accordance with the integrated consideration of socioeconomic environment, business nature, and geography to analyse the external environment that the Company may face.

Main Factor	Low-emission Scenario	High-emission Scenario
Average temperature	By 2040, the temperature will rise by 1.6 Degrees Celsius above pre-industrial level. By the end of this century, the temperature will rise by 2 Degrees Celsius ^[1] .	By 2040, the temperature will rise by 1.6 Degrees Celsius above pre-industrial level. By the end of this century, the temperature will rise by 3.9 Degrees Celsius ^[2] .
Precipitation	Some regions will experience the phenomenon of uneven precipitation distribution. The change in rainfall intensity is limited, and the frequency of drought and flood disasters has increased slightly.	Most regions in the world are affected by drought and flood disasters, and the rainfall intensity increases significantly.
Extreme weather	Limited increase in frequency and intensity of extreme weather events.	Significant increase in frequency and intensity of extreme weather events.
Environmental protection and climate policy	The intensity of environmental protection policies is greatly improved, and most countries and regions in the world actively propose and promote the plan for carbon neutrality.	Some countries and regions have failed to strictly fulfil the plan for carbon neutrality, and the implementation of international climate agreements has encountered greater resistance.
Domestic energy structure	In 2030, the proportion of domestic non-fossil fuels in primary energy consumption will increase to 25%. The use of renewable energy has increased significantly in proportion, leading to the impact on the business of traditional coal power industry ^[3] .	The proportion of domestic non-fossil fuels in primary energy consumption is on par with the current level, which is about 17.3% ^[4] .
Domestic greenhouse gas emissions	In 2030, carbon dioxide emissions per unit of GDP will be reduced by more than 65% compared with 2005, achieving the goal of carbon peaking ^[5] .	After 2030, domestic greenhouse gas emissions will continue to rise.
Domestic carbon trading price ^[6]	The price of carbon trading is gradually rising. In 2030, the domestic carbon price is expected to reach CNY77-139 per tonne.	In 2030, the domestic carbon emission price is expected to be the same as the current price, with the average price of about CNY49 per tonne.

Climate Risks and Opportunities

China Shenhua manages climate change risks in strict accordance with the responsibilities, methods, and procedures stipulated in the Company's comprehensive risk management system. The Company organises annual comprehensive risk identification and assessment, and conducts special climate risk identification and assessment for specific projects from time to time.

Meanwhile, we have developed a thorough procedure for climate change risk identification and assessment. Acting in accordance with national policies, regulations and listing rules, the Company organises relevant departments of the headquarters and key subsidiaries to identify possible climate change risks in line with their own operating conditions. When essential issues are involved for identification, the Company proactively communicates with various stakeholders regarding the types of risks they are concerned about and guarantees the communication channel are smooth and open.

China Shenhua adopts qualitative analysis method to formulate the climate change risk list, evaluates the possibility of risk occurrence and impact degree, with identifying two categories of climate change risks, namely physical risks and transitional risks based on Company's comprehensive risk management system framework, and ranks the risks according to the importance and then formulates corresponding responses.

Relevant information cited sources:

^[1]Source: The shared socio-economic pathway (SSP) greenhouse gas concentrations and their extensions to 2500

^[2]Source: SSP3: AIM implementation of Shared Socioeconomic Pathways

^[3]Source: *Action Plan for Carbon Dioxide Peaking Before 2030* issued by the State Council in 2021

^[4]Source: *Guiding Opinions on Energy Work in 2022* issued by the National Energy Administration in 2022

^[5]Source: *Action Plan for Carbon Dioxide Peaking Before 2030* issued by the State Council in 2021

^[6]Source: *2021 China Carbon Pricing Survey* published by the China Carbon Forum

List of Climate Change Risk

Risk Type		Risk Category	Risk Name	Risk Description	Time Range	Response to risk
Physical risk	Acute risk	Assets and operation	Extreme weather	Suspend production and operation, or impact workplace at the operation location and company assets.	Short to long-term	Conduct climate risk assessment before selecting a new operating site; improve emergency plans to enhance disaster response capabilities; and add defence equipment and facilities for extreme weather.
		Operation	Rise of the average temperature	Accelerate energy consumption, reduce operational efficiency, and increase frequency of accidents such as fires.	Short to long-term	Optimise energy-saving and environmental protection facilities to reduce comprehensive energy consumption; and strengthen inspections in hot weather to ensure operational safety.
	Chronic risk	Assets and operation	Sea level rise	Pose a direct threat to the Company's coastal business assets, or force the relocation of infrastructure which increases operating costs.	Short to long-term	Regularly monitor water level changes; strengthen the construction of prevention facilities for typhoon and flood.
		Operation	Water shortage	Affect the production and operation of the Company's water-intensive industries.	Short to long-term	Incorporate the shortage of water resources into the Company's overall risk management; advance the efficiency of water resource utilisation; publicise water-saving concept and raise water-saving awareness.
Transitional risk	Policy risk	Operation	Climate policy	Lawmakers and regulators put forward higher requirements on the management of corporate greenhouse gas emissions, which may lead to higher management costs.	Short to mid-term	Note the update of policies involving climate change and adjust strategic planning in a timely manner; strengthen the development of renewable energy; carry out R&D of carbon reduction and carbon sequestration technologies; and perform excellently in compliance work in the carbon market.
			Carbon market trading	The rise in carbon trading prices may increase the Company's operating costs.	Short to mid-term	
	Technology risk	Operation	Low-carbon technology costs	Driven by the trend of policy background, the Company's demand for low-carbon transformation and the introduction of energy-saving and consumption-reducing equipment has increased, so as the investment costs.	Short to long-term	Promote R&D and innovation of energy-saving and consumption-reducing technologies; develop integrated energy utilisation projects.
	Market risk	Product	Changes in market demand	The gradually increasing proportion of new energy applications and the declining use of coal affect the Company's operating income.	Short to long-term	Promote the optimised combination of coal power and new energy, and provide clean products and services.
	Reputation risk	Operation	The concerns of stakeholders	Failure to respond to demands involving climate change responses may result in loss of investors or customers, leading to a negative impact on the Company.	Short to long-term	Actively communicate with stakeholders on climate change response and ESG work, strengthen information disclosure, and maintain a good corporate image.

The climate change has brought challenges, along with opportunities for development, to the Company. In 2022, China Shenhua fully identified the opportunities brought by climate change and organically integrated them into the production and operation process, thus cultivating new driving forces for corporate transformation and development.

Opportunity Dimension	Opportunity Name	Opportunity Outcome
Product	Provision of green and environmentally-friendly products and services	In 2022, the Company actively responded to the requirements at national level by building and putting into operation 3 clean and high-efficiency coal power units. The Company implemented three types of technical transformations on existing coal power units as planned to provide clean energy for the society. The railway business promoted the conversion from road transportation to railway transportation and from bulk transportation to container transportation. The non-coal transportation volume exceeded 31 million tonnes. Huanghua Port won the China Environment Excellence Award.
Operation	Usage of clean energy	The Company continues to increase the use of green and clean energy, emphasizing the landing of renewable energy projects based on local conditions. The Company has formulated the action plan for carbon peaking to speed up the deployment of new energy industry and boost the transformation and development of energy structure.
Investment	Investment in low-carbon energy	The industrial funds invested and participated by the Company inject capital into photovoltaic, wind power and other renewable energy projects. The Company gives full play to the advantages of corporate funds, and provides all-round support for the implementation of China's new energy strategy.

Indicators and Targets

With the goal of “Carbon Peaking and Carbon Neutrality”, China Shenhua should consider the security of energy supply and low-carbon development as a whole and protect the bottom line of energy security, so as to proceed with the work of carbon peaking in an orderly and steady manner. In 2022, the Company adjusted and supplemented the original goals according to *China Shenhua’s Action Plan for Peaking Carbon Emission* under internal and external environmental conditions.

Overall target: To reach the peak of carbon dioxide emissions by 2030, and explore effective pathways to achieve carbon neutrality before 2060.

Medium and short-term targets:

Indicator	Target Type	2020 Baseline	2022	Target for 2030 (Scenario of Medium Goals)
Total carbon emissions of scope I and scope II (10,000 tonnes of CO ₂ equivalent)	Absolute	13,490	17,640	Increase by no more than 70%
Carbon emission intensity per CNY10,000 of income (tonnes of CO ₂ equivalent/CNY10,000)	Relative	5.78	5.10	Decrease by 6%

Explanation: According to the future development plan of the coal, electric power, chemical industry, transportation and other sectors, the Company calculates the total carbon emissions based on the scenarios of high, medium and low scores. The above-mentioned targets are formulated as per the calculation results of the medium scenario. For example, the power sector with the largest proportion of carbon emissions is calculated by 200 hours higher than the national average coal power utilisation level. According to the calculation of energy-saving potential of existing energy-saving and emission reduction projects, it is set that the emission intensity of existing projects will decrease by 1% year by year from 2021 to 2030.

The Company’s Board of Directors and the Safety, Health, Environment and ESG Work Committee regularly supervise the fulfilment of goals and indicators involving climate change, link up the “Implementation of Dual Carbon Goals” with the performance of the management of the Company, and conduct performance appraisals on an annual basis to ensure that the established goals are reached.

In 2022, the Company calculated carbon emissions in accordance with reporting standards or technical specifications such as *the Corporate Greenhouse Gas Emissions Accounting Methods and Reporting Guidelines – Power Generation Facilities* released by the Ministry of Ecology and Environment. The emission facilities include boilers, gas turbines, etc., and purchased power generation facilities using electric power.

Carbon Emissions and Intensity ¹	2020	2021	2022
Total emissions (10,000 tonnes of CO ₂ equivalent)	13,490	15,861	17,640
Including: Scope I total greenhouse gas emissions (10,000 tonnes of CO ₂ equivalent)	12,668	15,333	17,239
Scope II total greenhouse gas emissions (10,000 tonnes of CO ₂ equivalent)	822	528	401
Intensity of carbon emissions (tonnes of CO ₂ equivalent/CNY10,000 income)	5.78	4.73	5.10

¹ The statistics in this table exclude thermal power projects in Indonesia. Carbon emission data in 2021 which has been not yet reviewed has been modified based on the review result of the carbon emission in 2021 and *the Corporate Greenhouse Gas Emissions Accounting Methods and Reporting Guidelines – Power Generation Facilities* released by the Ministry of Ecology and Environment in 2021. Meanwhile, the carbon emission intensity data for 2020 and 2021 is restated as per the income of CNY10,000.

Our Actions in 2022

In 2022, China Shenhua took a variety of measures to improve energy use efficiency, accelerated the transition of clean energy, strengthened carbon asset management, and actively explored to apply carbon reduction technologies such as carbon capture and carbon offset to solidly promote emission reduction goals.

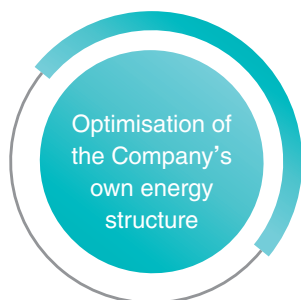
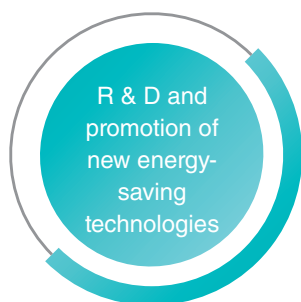
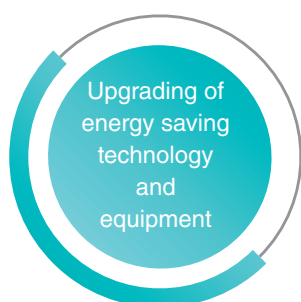
Reduce Comprehensive Energy Consumption

The comprehensive energy consumption per CNY10,000 of output value decreased year-on-year by

9.6%

We strictly adhere to *the Law of the People's Republic of China on Energy Conservation* and other laws and regulations and implement various energy conservation and carbon reduction measures in accordance with *the Company's 14th Five-Year Plan for Energy Conservation and Environmental Protection* and other management systems to improve energy use efficiency.

Means of energy consumption reduction



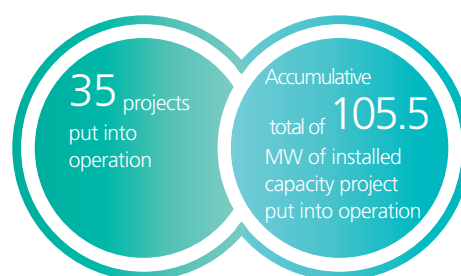
Examples of measures and their effects

- Jinjie Energy has completed the flow passage transformation of Unit 1, and the heat consumption of the transformed unit has been significantly reduced, with an average decrease of coal consumption by 23.3g/kWh. It is estimated that the annual carbon dioxide emission can be reduced by about 140,000 tonnes;
- Full coverage of shore power facilities has been achieved for ships owned by the Shipping Corporation. It is estimated that the annual fuel consumption will be reduced by about 6,000 tonnes and the carbon dioxide emission will be reduced by 19,000 tonnes;
- Subsidiaries eliminated high-energy-consumption equipment in accordance with the requirements of the National Motor Energy Efficiency Improvement Plan and the National Catalogue of Eliminated Products.
- Energy-free drainage transformation was carried out in Halagou Mine of Shendong Coal. By utilizing the drainage height difference and based on the siphon principle, the energy-free drainage has been achieved, and the annual electricity cost was saved by about CNY370,000;
- Shuohuang Railway developed energy recycling technology for railway locomotives. The annual indirect carbon dioxide emissions can be reduced by about 244,000 tonnes by using the regenerative braking technology to reduce the energy consumption of vehicles.
- The Company deploys distributed photovoltaic power projects in the plant area to supply power for self-use. The Company applied 72.016 million kWh of "Green Power" throughout the year.
- Shendong Coal used two 15-tonne biomass boilers instead of coal-fired boilers. It is estimated that Liuta Mining Area can save 807 tonnes of standard coal and reduce carbon emissions by about 1,982 tonnes per year.
- Zhunge'er Energy has made new breakthroughs in key indicators of coal-based nano-hydrocarbon fuel thermal power plant, and for the first time, it has replaced diesel to produce ANFO explosive and successfully made it explode and replaced heavy diesel to achieve compression ignition and continuous and stable operation of diesel engines.

Clean Energy Transformation

China Shenhua attaches great importance to the use of renewable energy and sets a task target of adding approximately 6 GW of new energy installed capacity during the 14th Five-Year Plan period. China Shenhua has adopted a “Double-Wheel-Driver” strategy of construction, production, operation, and equity investment and M&A, emphasizing the simultaneous development of centralised and distributed operations, diversifying the potential of development, and promoting the large-scale development of the new energy industry. By the end of the Reporting Period, all the subsidiaries and branches have put 35 projects into operation, with a total installed capacity of 105.5MW.

In addition, China Shenhua invested in the form of equity in the establishment of Beijing Guoneng New Energy Industrial Investment Fund and Beijing Guoneng Green and Low-carbon Development Investment Fund, focusing on investing in photovoltaic, wind power, and other new energy-related projects in Shanxi, Jiangsu, Zhejiang, Hunan, Hubei and other places.



Photovoltaic Project at Dumping Site of Shengli Energy Open-cut Mine



Distributed PV Project of Taishan Power

Case: Xinshuo Railway successfully completed the operation test of the first high-power hydrogen-powered shunting locomotive in China

In September 2022, the first high-power hydrogen-powered shunting locomotive in China successfully completed the operation test with Xinshuo Railway. The locomotive has a hydrogen capacity of 5,880 litres and can run continuously for more than 12 hours with full hydrogen and has an endurance range of about 800 km. During the operation, only water is discharged. A single locomotive can reduce 164 tonnes of fuel consumption and 508 tonnes of carbon dioxide emissions per year, effectively solving the “sore points” of high energy consumption, heavy pollution, and loud noise of traditional diesel locomotives, and achieving great results in environmental protection.



Hydrogen-Powered Locomotives Undergoing Hydrogen Refuelling Operations

Case: Shouguang Power steam supply transformation provided clean energy for society

In November 2022, “System, Method and Electronic Equipment for Units to Increase Their Capacity to Supply Steam to External Industrial Facilities” of Shouguang Power was granted the national invention patent certificate. This project for increasing capacity to supply steam to external industrial facilities is a nationally recommended energy cascade utilisation project. The project is an important way for the unit to promote the profitability, save energy, and reduce emissions by continuing to carry out steam supply capacity increasing transformation for external industrial steam supply based on the unit’s heat supply transformation. It can replace the surrounding small coal-fired boilers and air compressors to meet the needs of steam and compressed air for Yangkou Science and Technology Park, which has significantly improved the comprehensive utilisation rate and comprehensive benefits of energy and provided clean energy security for social and economic development.

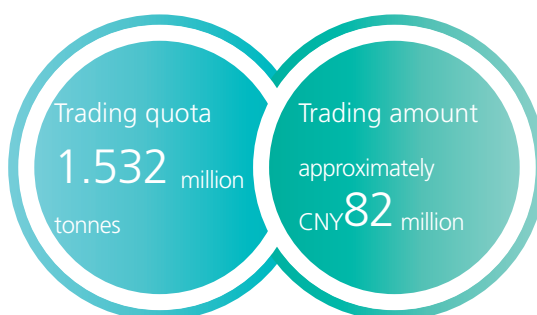


Pipe Network of Units for Increasing Capacity to Supply Industrial Steam

Carbon Asset Management

In 2022, the Company comprehensively carried out carbon emission data inventory and verification, covering all production enterprises affiliated with the Company. In addition, the key energy consumption and emission control units affiliated with the Company strictly complied with the standards and specifications issued by the local government in the place of operation to manage and reserve carbon assets and ensure compliance.

In 2022, the Company’s power plants actively participated in the national carbon emissions trading market, with a total trading quota of 1.532 million tonnes and a trading amount of approximately CNY82 million (tax exclusive).



Carbon Capture-Utilisation-Storage Technology

In 2022, the Company continued to improve the operation management system and scientific research support capability of CCUS demonstration units, focused on the two perspectives stating as carbon dioxide capture melioration and multi-channel integrated utilization to carry out technical research, carried out technical analysis and market-oriented development strategy research such as cost reduction and output improvement to improve the economic benefit of the whole chain of coal-fired power CCUS.



Since the Post-combustion Carbon Dioxide Capture and Storage Whole-Process Demonstration Project of Jinjie Energy Coal-fired Power Plant was put into operation, it has been safely operating for more than 500 days, breaking the long-term operation record of the CCUS demonstration project of coal-fired power. In 2022, the project normally functioned as a whole, capturing 43,000 tonnes of carbon dioxide, with gas purity higher than 99.5%, and selling more than 55,000 tonnes of industrial-grade liquid carbon dioxide. Its relevant core design and operation and maintenance technologies have been popularised to the 500,000-tonne coal-fired CCUS demonstration project of Taizhou Power Plant of China Energy, which is under construction.

Carbon Compensation

China Shenhua attaches great importance to the carbon compensation and vigorously promotes the construction of ecological forests. All subsidiaries proactively enhance the greenery coverage of its operation sites, and exert the effect of carbon reduction and sequestration by means of afforestation and mine reclamation to increase natural carbon sinks. In 2022, the Company increased the green area by 45.45 million square metres, and the carbon sink conversion amount was approximately 185,000 tonnes.



Ecological Forest Construction along the Yellow River



"Two Lakes and Two Wetlands" Ecosystem of Huanghua Port

Environmental Management



China Shenhua insists on integrating the concept of green development into the whole process from site selection, design, and construction to operation of projects. The Company continues to improve the environmental protection management system, implements the list of ecological and environmental protection responsibilities, and improves the ability of environmental protection risk prevention and control. China Shenhua is committed to building itself into a “leader in energy conservation and environmental protection, a model in ecological governance, and a pioneer in achieving the dual carbon goals”.

Environmental Management System Building

The Company accelerates the construction of resource-saving and environment-friendly enterprises, implements the responsibility system for ecological environmental protection, and strengthens supervision, restraint and incentives to effectively mitigate the impact on the ecological environment.

Environmental Management Goals

The Company earnestly implements *the Special Planning for Energy Conservation and Ecological Environmental Protection of China Energy in the 14th Five-Year Plan Period* and promotes the realization of the annual ecological environmental management goals.

2022 Environmental Management Goals of China Shenhua

Goal	Completion
To eliminate major and above ecological and environmental emergencies, and curb general environmental emergencies	No major and above ecological environmental incidents occurred.
The standard discharge rate of main pollutants under normal working conditions to reach 100%	The discharge of main pollutants met the standard.
The tasks of reclamation of open-cut mine dumping site and treatment of underground mine subsidence area to be completed on schedule	Annual reclamation and treatment tasks were completed.
The energy consumption of main products to reach an advanced level in China, and the energy consumption of chemical products to be continuously reduced on the basis of meeting national requirements	The comprehensive energy consumption intensity decreased by 9.6% on a year-on-year basis, and the comprehensive energy consumption of coal chemical products decreased by 1.2% on a year-on-year basis.

Environmental Management System

The Company strictly adheres to *the Environmental Protection Law of the People's Republic of China* and other laws and regulations, clarifies the overall requirements of the Company's environmental protection, establishes a three-level environmental protection management system for decision-making deployment, supervision and management, and organization and implementation, formulates systems such as *the Responsibility System for Environmental Protection*, and integrates environmental management into daily operations. Subsidiaries and branches shall fulfil their main responsibilities for environmental protection, and grassroots units shall ensure that environmental protection measures are implemented in place.

Implementation Assurance of Environmental Management System



- The responsibility system for ecological environmental protection and the responsibility system for safety production shall be operating in an integrated manner.
- Units at all levels shall establish ecological environmental protection organizations, working systems and regular meeting systems, and pay close attention to the rectification and implementation of potential problems to ensure that ecological environmental risks are controllable and under control.
- Environmental protection indicators shall be integrated into the annual performance assessment system to strengthen environmental accountability.



- The Company has built and applied an information management system for environmental protection covering the headquarters and its affiliated enterprises to achieve the sharing and online monitoring of information resources and ensure the integrity and reliability of management data.



- Units at all levels regularly organise training on laws, regulations, knowledge and skills of ecological environmental protection to improve the awareness, management level and professional skills of management staff and front-line employees on ecological environmental protection.
- By the end of 2022, the Company's affiliated enterprises formulated 36 emergency plans for environmental emergencies and filed with the environmental protection department, and carried out 78 emergency drills for environmental emergencies throughout the year.



- The Company actively promotes environmental management system certification, energy management system certification and occupational health and safety management system certification.
- By the end of 2022, 19 affiliated enterprises obtained ISO14001 environmental management system certification; 13 enterprises obtained ISO50001 energy management system certification; 1 enterprise obtained ISO45001/OSHAS18001 occupational health and safety certification.
- The Company continuously carries out certification of the environmental management system in accordance with the requirements of GB/T24001-2016 (ISO 14001:2015). The certified enterprises carry out internal audit and external audit once a year, and supervisory audits are conducted by the third-party certification agency.

Environmental Risk Management and Control

The Company has been improving the environmental early warning mechanism and incorporates environmental risks into the comprehensive risk management system. According to the risk control system and process, comprehensive risk identification and assessment are organised by level, classification and discipline every year. Special risk identification and assessment of specific projects are carried out irregularly, and risks are effectively controlled from the aspects of organisation, system, technology and response to emergency to prevent the occurrence of major environmental pollution emergencies.

The Company implements the environmental risk management throughout the whole process of project construction and operation and standardises the environmental management system requirements covering the whole process from site selection, construction completion, production and operation, and emergency management of project to exit from the project, in a way to avoid and mitigate the negative impact on the ecological environment.

Main Pollutants and Monitoring Plans

The nature of affiliated enterprises of China Shenhua is different from each other, and the requirements for environmental protection and pollutant monitoring vary from region to region. The following are representative monitoring plans or those implemented by most enterprises.

Pollutants	Main Monitoring Indicators	Monitoring Frequency	Sampling and Samples	Monitoring Analysis Methods
Air pollutants	Sulfur dioxide and nitrogen oxide particles	Continuous monitoring	Automatic sampling	Light Backward Dispersion Method, Ultraviolet Fluorescence, and Chemiluminescence
Water pollutants	COD	Once every 1 to 4 hours	Automatic and on-site sampling	Potassium Dichromate Method
	Mine water fluoride and heavy metals	Once a month	On-site sampling	Ion Chromatography HJ/T 84-2015 and Determination of 65 Elements in Water by Inductively Coupled Plasma Mass Spectrometry (HJ 700-2014)

Pollution Prevention and Control



China Shenhua adheres to the coordinated promotion of carbon reduction, pollution reduction, green expansion and growth. We continue to improve the mechanism of pollution prevention and control, strictly control the discharge of wastewater, exhaust gas, and solid waste, and enhance our capability of pollution prevention and control to mitigate the negative impact on the environment. We resolutely fight the battle to protect blue skies, clean water and pure land.

Disposal and Utilisation of Waste

In strict accordance with *the Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste* and other laws and regulations, the Company formulated *the Solid Waste Treatment and Disposal System* and other systems. In the principles of reduction, recycling, and harmless treatment, the Company actively promoted the resource utilisation of general solid waste. Hazardous wastes were disposed of in accordance with laws and regulations to effectively prevent the risk of soil pollution. The Company also minimised waste discharge. In 2022, the comprehensive utilisation rate of general solid waste was 62.76%, and all hazardous wastes were disposed of in compliance with regulations.

Disposal Measures

- Advanced coal mining and preparation technologies such as all-coal roadways were arranged to reduce the amount of gangue generated during tunnelling. Coal gangue replacement was carried out in the underground gangue discharge roadway filling, and efforts were made to prevent gangue from flowing out of the shaft or reduce gangue from flowing out of the shaft.
- The comprehensive utilisation rate of general solid wastes such as coal gangue and fly ash was increased. The washed gangue was used to make bricks, and the remaining part was used to fill up the natural gullies in the coal gangue dumping site for reclamation and greening.
- Management of ash and slag yards was improved to prevent the hazards of dust and leakage, and put an end to environmental emergencies such as dam breach.
- A list and ledger of hazardous wastes were established. Temporary storage facilities were taken as a breakthrough point to strengthen the standardised management from storage, classification, and transfer to other processes.
- Third-party companies with professional qualifications were entrusted to transfer and dispose of hazardous wastes.



Use of Packaging Materials

China Shenhua's coal chemical business segment involves the use of product packaging materials, mainly woven packaging bags for polyolefin products and sulfur products. Baotou Coal Chemical formulated *the Regulations on Product Packaging Quality Management* and other systems to strictly ensure the packaging quality and strictly control the packaging weight, and actively promote the reduction of packaging materials.

Use of Packaging Materials for Coal Chemical Products	2021	2022
Total quantity of packaging materials used (tonne)	3,741.7	4,023.0
Quantity of packaging materials used per unit product (kg/tonne)	5.8	5.8

Air Pollutants Management

In strict accordance with the *Law of the People's Republic of China on the Prevention and Control of Atmospheric Pollution* and other laws and regulations, the Company formulated *Administration Measures of Atmospheric Pollution Prevention and Control*. In addition, we take multiple measures to prevent and control pollution at the source, and continuously promote the comprehensive treatment of air pollutants to ensure stable standard discharge. Please refer to the "ESG Goals Management" section of this report for the completion of air pollutant emission control targets in 2022.

Control Measures

Total emission control

- Control the discharge concentration and total quantity in strict accordance with the Pollutant Discharge Permit

Process control

- Promote ultra-low transformation of unconventional coal-fired units, deep treatment of conventional pollutants and full-load denitration and strengthen the comprehensive treatment of volatile organic compounds
- Carry out closed reconstruction, take dust suppression measures, and control the unorganised emission of particulate matter in coal yard, ash yard, transportation, and transfer parts
- Promote the use of non-road mobile machinery powered by new energy or clean energy, carry out centralised heating and waste heat utilization, and reduce the emission of air pollutants

Environmental monitoring

- Achieve on-line real-time monitoring of environmental parameters, strengthen the operation and maintenance of monitoring facilities, and ensure the authenticity and effectiveness of monitoring data

Emergency management

- Formulate environmental emergency management plans for special periods such as major events and heavily polluted weather, and improve the emergency plans for emission reduction and productive organization under different emergency levels.

Case: Device transformation of Shangwan Mine of Shendong Coal to reduce air pollution

In 2022, Shangwan Mine of Shendong Coal eliminated and replaced industrial boilers and applied exhaust air waste heat technology. After transformation, 1,310 tonnes of coal can be saved annually, 3,046 tonnes of carbon dioxide emissions, 11.14 tonnes of sulfur dioxide emissions, 9.69 tonnes of nitrogen oxide emissions, and 14.41 tonnes of dust emissions can be reduced. The standard emission rate of air pollutants can reach 100%.

Case: The electrification reconstruction project of Huanghua-Wanzhou Railway helped Beijing-Tianjin-Hebei region won the battle against air pollution

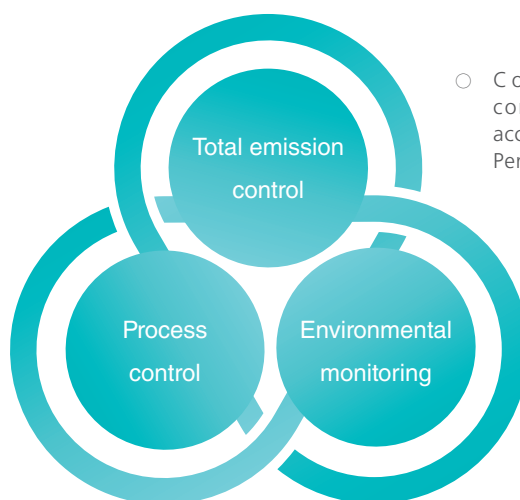
In September 2022, Shuohuang Railway launched the electrification reconstruction project of Huanghua-Wanzhou Railway. After the completion of the project, Huanghua-Wanzhou Railway will replace the diesel locomotives by electric locomotives, which can completely solve the problem of atmospheric environmental pollution. Meanwhile, it can connect with Shuozhou-Huanghua Railway smoothly, and reduce the operation steps such as coupling and uncoupling of diesel locomotives to improve the efficiency of transportation organisation.

Wastewater Management

China Shenhua strictly implements the *Law of the People's Republic of China on Prevention and Control of Water Pollution* and other laws and regulations and promotes the coordinated planning of sewage treatment. Each of the Company's operating plants and mines measures and records the amount of effluent produced and the parameters of each pollutant. By selecting appropriate wastewater treatment technology and recycling method, the Company improves the recycling rate of sewage and wastewater to ensure that the discharged sewage meets the national regulatory standards and protect the water quality of the basin where the operation site is located. In 2022, the overall utilization rate of sewage and wastewater reached 74.15%, reaching the 2022 annual control target of sewage and wastewater utilisation.

Control Measures

- Carry out special rectification focusing on "diverting wastewater from clean water and from rainwater" and build supporting sewage treatment facilities for recycling
- Build an underground reservoir in the goaf of the coal mine and carry out three-level purification treatment of mine water with supporting surface water treatment, reuse the treated water by production reuse, domestic miscellaneous use, ecological irrigation and other means



- Control strictly the discharge concentration and total quantity in accordance with the Pollutant Discharge Permit

- Achieve on-line real-time monitoring of environmental parameters, and strengthen the operation and maintenance of monitoring facilities to ensure the authenticity and effectiveness of monitoring data

Case: Huanghua Port was awarded the "China Environment Excellence Award"

In recent years, Huanghua Port has vigorously carried out environmental governance by building an ecological water system with "two lakes and three wetlands" as the main measures, and collecting and storing ballast water, coal sewage, and rainwater for recycling, achieving zero discharge of coal sewage into the sea. In June 2022, Huanghua Port was awarded the "Excellence Award" of the 11th China Environment Award, becoming the first port enterprise in China to win this award.

Utilisation of Natural Resources



China Shenhua has firmly established the ecological civilisation concept of respecting, conforming, and protecting nature. We adhere to the principle of giving priority to the protection and focusing on natural restoration and strengthen the protection of water resources and land resources. We actively participate in biodiversity management, protect the natural ecological environment and wildlife species, unswervingly follow the path of harmonious coexistence with nature, and jointly build a beautiful home where nature and human beings live in harmony.

Protection of Water Resources

China Shenhua strictly implements relevant laws and regulations such as *the Water Law of the People's Republic of China* and *the Regulations on the Prevention and Control of Pollution in Drinking Water Source Protection Areas*. We adhere to the combination of broadening sources of water and reducing consumption of water, and strictly implement the rigid constraint of water resources. In the process of production and construction, we fully consider the carrying capacity of water resources and the water environment, take water in accordance with the law and regulations, and determine production based on water. We also improve the utilization rate of water resources and strive to protect precious water resources by exploring the potential of water conservation and improving awareness of water conservation.

Management System

The Board of Directors and senior management of the Company, including the Chief Executive Officer, are accountable for water management-related strategies or performance. The Company has established a water resources management system. All subsidiaries and branches have defined water resources management departments, formulated water resources conservation and protection management systems such as *Water Resources Management Measures*, and organised the preparation of water resources planning so as to rationally utilise and protect water resources.

Water Resources Management

Total fresh water intake

129.18 million tonnes

Total water consumption

179.92 million tonnes

Total drainage volume

36.55 million tonnes

The proportion of reclaimed water and other alternative water sources in the total water consumption

28.20%

Our main water intake sources are municipal pipe network and surface water resources. At present, there is no risk of difficulty in water intake. In terms of the water intake management, the Company adheres to the principle of combining the development and utilisation of water sources with water conservation and ensuring supply with ensuring water quality and safety. To do this, the Company obtains water intake permits in accordance with the law, reduces the use of fresh water, and increases the amount of recycling to mitigate or eliminate the impact on the sustainable utilisation of water resources in the basin where the Company is located by continuously optimizing the production process and water conservation technology. In terms of the drainage management, the Company adheres to the principle of "legal drainage, utilisation priority and safety guarantee" to ensure that the sewage meets the discharge standards.

The Company organises the investigation on the characteristics of the basin where each operation site is located and carries out water resources risk assessment in combination with internal statistics and third-party data. The assessment is conducted with reference to the requirements and opinions of various stakeholders such as regulatory authorities and local communities, and the results of the assessment are used for water-related operational improvement and watershed protection. The Company spares no efforts to jointly protect local water resources through close exchanges and cooperation with all parties.

In 2022, the total fresh water intake of the Company was 129.18 million tonnes, the total water consumption was 179.92 million tonnes, and the water consumption for output value per CNY10,000 was 7.53 tonnes/CNY10,000. The total drainage volume of the Company was 36.55 million tonnes, all of which were transported to the sewage treatment plant through the sewage pipe network and discharged after reaching the standard. In 2022, the water consumption of the Company's reclaimed water and other alternative water sources accounted for 28.20% of the total water consumption.

Water-saving Measures

- Apply for water intake permit in accordance with the law, and maintain the “three simultaneities” system for water-saving facilities
- Organise the preparation of water distribution plan, water quota and water scheduling plan in case of emergency
- Promote cleaner production and water-saving production process, adopt advanced water-saving equipment and water-saving appliances, improve the water-saving rate, and reduce leakage rate of water supply pipe network



- Make full use of mine water and municipal reclaimed water to replace productive water
- Apply seawater desalination technology
- Collect and reuse ballast water
- Construct sewage treatment facilities to improve the sewage reuse rate

Case: The construction method of underground reservoir dam won the 23rd China Patent Gold Award

The Yellow River Basin is the main coal-producing area in China, supplying more than 70% of the national coal output, and 9 of the 14 large-scale coal production bases are distributed in the Yellow River Basin. According to statistics, 7 billion tonnes of mine water are produced every year due to coal mining. How to protect and utilize these water resources is particularly important in the water-shortage areas of the Yellow River Basin. The coal mine underground reservoir technology initiated by Shendong Coal provides reliable water resources guarantee for the development of the mining area and is gradually applied in the western coal mining area, leading the technical level of water resources protection and utilization in the Yellow River Basin.

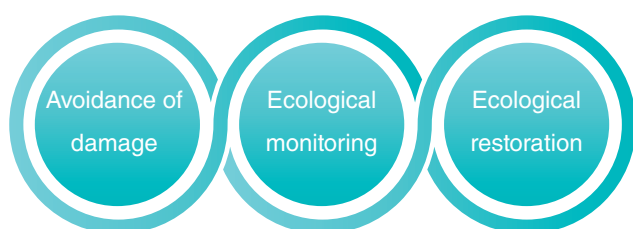
Case: Cangdong Power has supplied more than 4 million tonnes of water to external parties

Based on making every effort to ensure the long-term safe and stable operation of seawater desalination equipment, Cangdong Power deeply taps the potential of seawater desalination equipment to ensure the safe and economical operation of water production and water supply equipment. In 2022, the accumulative water supply to external parties exceeded 4 million tonnes, providing a reliable guarantee for the water supply of enterprises such as port logistics, the petrochemical and biomedicine in the Cangzhou Bohai New Area.

Biodiversity Conservation

China Shenhua strictly adheres to the *Law of the People's Republic of China on the Protection of Wild Animals*, the *Regulations of the People's Republic of China on Nature Reserves*, and the laws and regulations related to biodiversity in the place of operation, issues *Commitment on Operating Outside Protection Zone by China Shenhua*, and clarifies the requirements of biodiversity protection in the ecological environmental protection management system to guide all production and operation enterprises to avoid developing in the reserves prohibited by the ecological red line. We also adopt responsible biodiversity management approaches to ensure that fragile ecosystems, habitats, and endangered species are not compromised.

Our biodiversity conservation plan includes the following measures:



Strictly implement the control requirements of ecological protection red line and carry out biodiversity impact and environmental risk assessment for all production operations and new projects

Regularly investigate the potential dangers involving the ecological red line through the monitoring system of ecological management and soil and water conservation and monitor and supervise the ecological restoration in the production process

Implement the strategy of great protection of the Yangtze River and the Yellow River, carry out in-depth ecological restoration and management, build green mines, offset and compensate the damaged forest land area, and protect the local precious species

Case: China Energy (Lianjiang) Port Power carried out "Breeding and Releasing" activities

China Energy (Lianjiang) Port Power Company has improved the ecological environment of the waters, maintained and restored fishery resources, and promoted the protection of biodiversity by raising and releasing fish seedlings in the sea area of Luoyuan Bay, Fuzhou. From 2017 to 2022, China Energy (Lianjiang) Port Power Company released more than 6.23 million fish fries such as Red Sea Bream and Large Yellow Croaker, promoting the construction of marine ecological civilization with practical actions.



"Breeding and Releasing" Activity Site

Case: Investigation through plant quadrats and transects methods by Daliuta Mine

In June 2022, the Daliuta Mine of Shendong Coal carried out animal and plant quadrat and transect sampling investigation within the coalfield. A total of four wildlife monitoring sample lines were set up for investigation and monitoring; there were 23 fixed quadrats of plants, involving arbor forest, shrub forest, plantation forest, grassland, and other groups. The dynamic changes of wild animal and plant populations are grasped in time, and the threatening factors of wild animal and plant protection are understood, providing an effective scientific basis for studying the flora and wild animal populations in coal mining subsidence areas.



The Staff is Conducting On-site Investigations on Animal and Plant Quadrats and Transects

Land Resource Management

14 mines included in the national green mine list

6 mines included in the provincial green mine list

China Shenhua strictly abides by the *Mineral Resources Law of the People's Republic of China*, the *Water and Soil Conservation Law of the People's Republic of China*, the *Regulations on Mine Geological Environment Protection* and other laws and regulations, implements the *Management Measures for Ecological Governance and Water and Soil Conservation Monitoring of China Energy*, implements the requirements of "treatment while mining", and reasonably plans the land use. China Shenhua also actively assumes the main responsibility of ecological restoration and management, vigorously promotes the construction of green mines, coordinates the overall ecological management of water, soil, vegetation and other resources in disturbed areas and subsidence areas, and minimizes the disturbance to land and the impact on the ecological environment. In 2022, China Shenhua completed the ecological management and soil and water conservation monitoring of 14 underground mines and 6 open-cut mines of 6 subsidiaries and branches. By the end of 2022, accumulated treatment area of subsided land was 502.92 million sq.m. with accumulated successful treatment rate of 100%; accumulated rehabilitation area of waste dump in open-cut coal mines was 52.01 million sq.m. with accumulated rehabilitation rate of 99%. 14 mines of the Company have been included in the national green mine list, and 6 mines have been included in the provincial green mine list, with green mines accounting for 80%.

Case : "Technology and Demonstration of Ecological Restoration and Comprehensive Improvement of Large-scale Coal-fired Power Bases in Eastern Grassland Area", a national key R&D program, successfully passed the project acceptance by the Ministry of Science and Technology of the People's Republic of China

By the time the project passed the acceptance inspection in January 2022, it took five and a half years to implement the project, with a total of more than 300 participants. One monitoring system and three methods and theories were created, four types of technologies were developed, three demonstration areas were built, and one set of ecological restoration mode was formed. For the first time, the project quantified the ecological impact law and the cumulative effect of the development of large-scale coal-fired power bases. The project developed and established a series of technology system, including the ecological loss reduction mining-dumping-reclamation integration for large-scale open-cut mining, a three-dimensional water retention of "underground reservoir-near-surface aquifer-distributed water retention and erosion control facilities-ground reservoir" for open-cut mines, and the large-scale open-cut mining water-soil-vegetation integrated restoration. Three demonstration projects have been completed, including Shengli Open-cut Mine and Baorixile Open-cut Mine, with an area of 27,538 mu, vegetation coverage increased by more than 35%, wasteland treatment rate reaching 100%, and direct economic benefits of CNY731 million. Through the implementation of the project, the technical level of regional ecological security and ecological restoration of large-scale coal-fired power bases in the cold grassland area has been improved, providing scientific and technological support for the green mining of open-cut coal mines in China and the energy supply guarantee in the northeast region.



Social Responsibility

China Shenhua fulfils its social responsibilities to the public, employees, and partners, adheres to the basic principle of “quality first” and takes “safe development” as the core to ensure the stable supply of national energy and the healthy development of the national economy. The Company actively responds to national policies, strives to give full play to its own advantages, and carries out a series of charity activities, achieving a “win-win” outcome between the Company and society.



Product Responsibilities



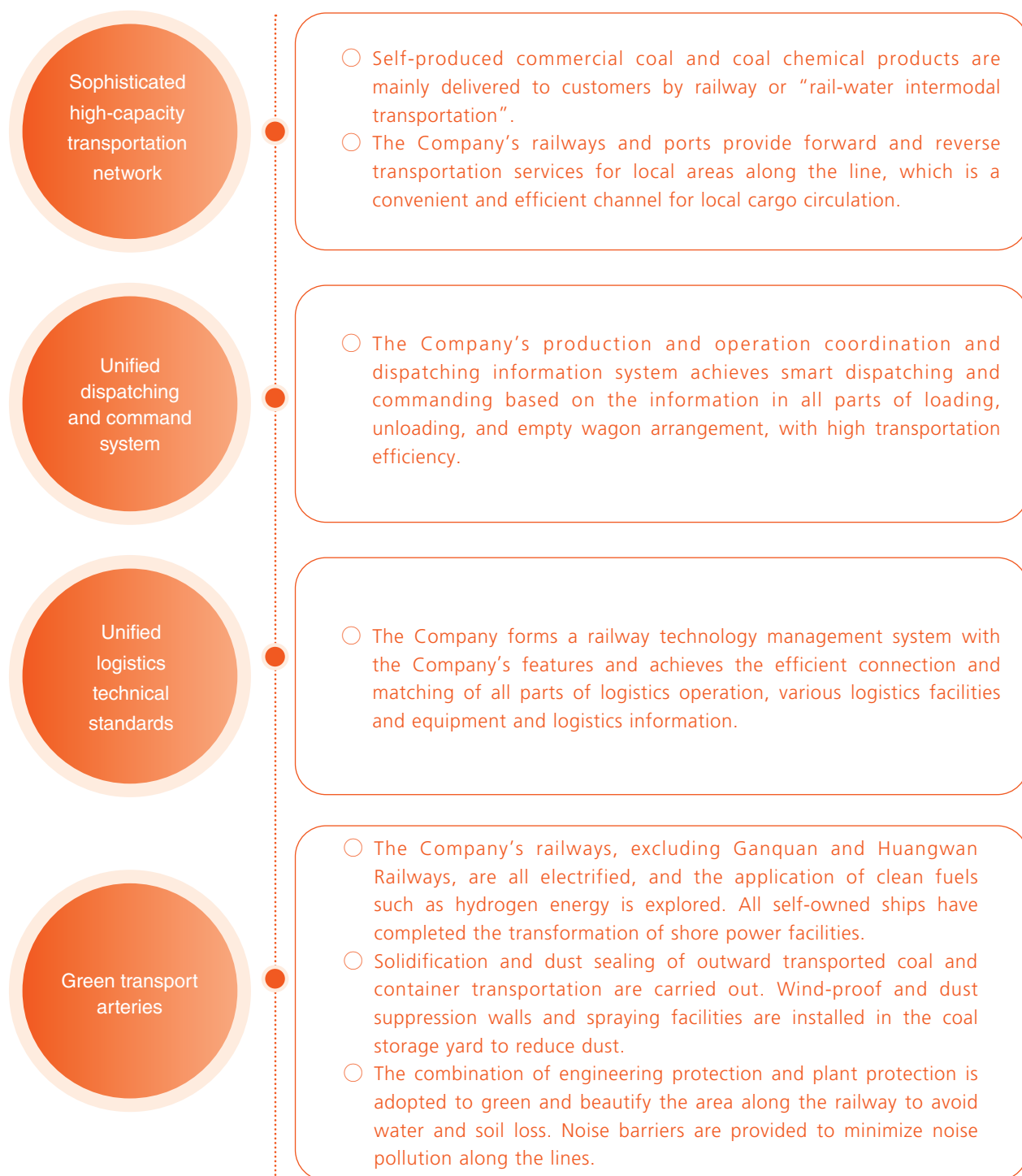
China Shenhua has always been strictly controlling product quality, and is committed to strict and comprehensive product and service quality management to drive the improvement of production efficiency with innovative technology. We also actively carry out intellectual property protection actions to continuously enhance the core competitiveness of the industry and create greater value for the industry and the Company.

Product Quality Management

Based on the *Law of the People's Republic of China on Product Quality*, the *Metrology Law of the People's Republic of China*, the *Standardisation Law of the People's Republic of China* and other laws and regulations applicable to the place of operation, China Shenhua formulates and continuously improves the product quality-related systems such as the *Coal Quality Management Measures* to improve the product quality and service.

Product	Quality Management Measures
Commercial coal	Establish a comprehensive coal quality management system to form a whole-process coal quality management network from production, preparation and processing to loading of self-produced coal and from receiving, storage and metering to shipment of purchased coal.
Coal chemicals	Formulate strict manufacturing processes, specifications, and quality control procedures, and review the quality in accordance with inspection procedures, test the products according to the finished product test method and allow the products to leave the factory for sales after meeting the acceptance criteria.
Power and thermal products	Improve the power quality and process quality, ensure safe and stable operation, and reduce unplanned outage accidents of the units.

China Shenhua's Green and Environmental-friendly Modern Logistics Service System



China Shenhua gives full play to the concept of “keeping improving”, carries out a series of quality management measures internally, establishes a complete product quality verification and recovery process for various risks that may appear in the production chain, and implements high-quality products and service standards from top to bottom.



The detection rate of polyolefin products in Baotou Coal Chemical reached in 2022

100%



The qualification rate of polyolefin products reached

100%

Case: Promote the powder removal process before the preparation to improve coal quality

Wulan Mulun Coal Preparation Plant of Shendong Coal actively promoted the powder removal process before the preparation. After the removal of raw coal powder, dry separation for lump coal and heavy-medium washing for slack coal were carried out to reduce coal slime. The monthly calorific value of commercial coal was 44 kcal/kg higher than the planned index, achieving “stabilising coal quality to create a brand and ensuring the market share with better coals”.

Protection of Customer Rights and Interests

The Company strictly implements *the Law of the People’s Republic of China on the Protection of Consumer Rights and Interests*, adheres to the principle of “customer-centred and market-oriented”, continuously improves the comprehensive service ability and quality of significant parts such as pre-sales consultation and Q&A, in-sales performance fulfilment and after-sales special service, effectively protects the reasonable and legal rights and interests of customers, and pursues to establish a long-term, stable and win-win partnership with customers.

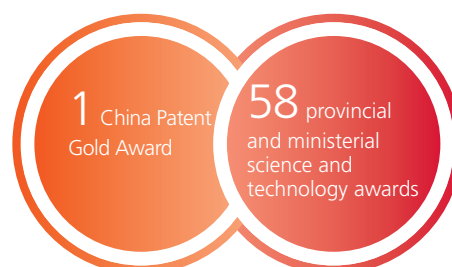
Trading Group of the Company has set up a hotline and maintains close communication with customers through letters, visits and exchanges, customer exchange meetings, and product ordering meetings to establish detailed customer files. The Company attached great importance to customer privacy protection, adhered to the confidentiality-related principle of “access and use due to work needs” and the control principle of “sectionalised access to core business secrets and mastering by special personnel”, implemented the confidentiality responsibility of information use, did a great job in network security protection, and eliminated potential dangers of information security. In 2022, there was no customer privacy disclosure.

We also act based on customers’ needs by listening carefully to customers’ demands, actively responding to product and service complaints, handling customer feedback on time, and formulating corresponding service improvement measures. In 2022, there were no incidents of recovery of the Company’s commercial coal and coal chemical products for safety and health reasons, and no complaints were received about the above products and services. According to the annual customer satisfaction survey carried out by the Company, the customer satisfaction with seaborne coal is 96.6/100, and the customer satisfaction with coal transported directly from the coal origin to the place of demand is 99.7/100.

Technological Innovation



China Shenhua complies with *the Patent Law of the People's Republic of China* and its scientific and technological innovation strategy, takes the practice of promoting the energy technology revolution as the action direction, gathers first-class innovative talents, cultivates first-class innovation capabilities, develops first-class key core technologies, and creates first-class scientific and technological achievements to build a source of original technologies in the energy industry, promote the integration and transformation of scientific and technological innovation and value creation, and support the Company to achieve safe, efficient, clean, green, and smart development.

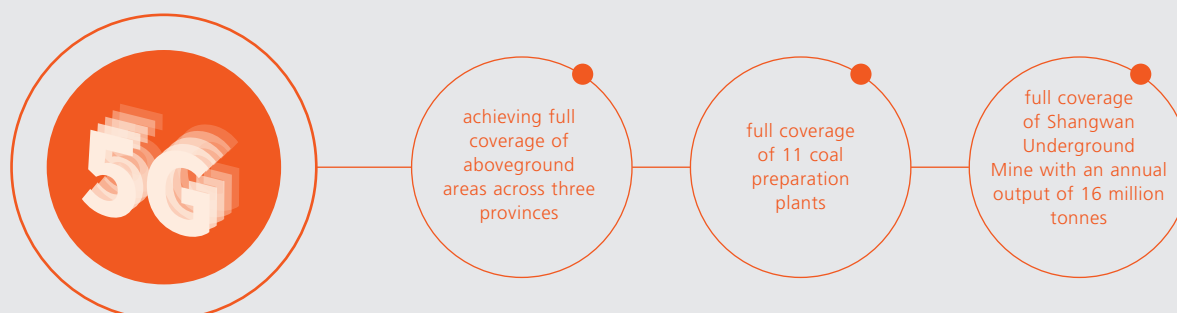


In 2022, the Company carried out scientific and technological research on key projects such as coal gangue filling and mining, Mining Harmony OS, flexible smart thermal power, heavy-haul train group operation control, and comprehensive utilization of carbon dioxide. The Company was granted 1 China Patent Gold Award and 58 provincial and ministerial science and technology awards.

Case: Shendong Coal has built the world's largest enterprise-level 5G private network in the mining industry

In February 2022, Shendong Coal built the world's largest enterprise-level 5G private network in the mining industry, achieving full coverage of aboveground areas across three provinces, full coverage of 11 coal preparation plants, full coverage of Shangwan Underground Mine with an annual output of 16 million tonnes, and full coverage of ten long-wall mining faces, four tunnelling working faces and three types of dozens of robots in other underground mines.

The 5G deployment of Shendong Coal has solved the problems of data acquisition, data transmission, and remote control, aggregated the data of more than 200 systems such as the smart park, safety, operation, and underground mining, tunnelling, machinery, transportation, and ventilation, built an integrated digital smart control platform, and achieved the access of 20,000 smart devices underground. Meanwhile, the existing networks such as cabled network, wireless network, and core networks have been managed in a unified manner, and the operator-level network management platform has been deployed to improve the network reliability to five "9s".



We also adhere to the scientific outlook on development for a long time and regard the cultivation of scientific and technological talents as the foundation for the development of the Company. Focusing on the core technology needs of innovation strategy, we, starting from motivating the front line and employees, continuously strengthened the building of scientific research teams by building a platform for employees to create innovation and benefits, implementing the reward and incentive system, and expanding the career development channel for talents, which created a strong atmosphere for innovation and benefits. By the end of 2022, the Company has a total of 2,940 R&D staff, one national key laboratory, 1 national scientific research platform, and 11 national key R&D projects (topics) led (participated in) by the Company.

Case: Huanghua Port has improved the incentive mechanism for scientific and technological talents and built a talent training platform

In 2022, Huanghua Port earnestly put all efforts to build a talent training platform by relying on the provincial technological innovation centre, flexible R&D centre, innovation studio and research group. Liu Hualin Innovation Studio won the National Coal Youth May Fourth Medal. Relying on scientific and technological projects, we created a training mode of “talents + projects”, attracting more than 80 on-the-job R&D staff to participate in scientific and technological projects. Relying on the transformation of scientific and technological achievements, more than 10 scientific and technological promotion talents were cultivated, and 5 employees were awarded the “Innovative Talents of S&T SMEs in Hebei Province in 2022”.

The Company strengthens joint scientific and technological research with authoritative scientific research institutes in the industry and gives full play to the role of industry-university-research integration innovation in key core technology research and achievement transformation. In 2022, the headquarters and affiliated enterprises of the Company cooperated with universities such as Beijing Jiaotong University and China University of Mining and Technology, as well as research institutions such as the Institute of Geographic Sciences and Natural Resources Research and Inner Mongolia Academy of Science and Technology, to carry out national key R&D projects and industrial optimization projects and achieved initial results.

Intellectual Property Protection

China Shenhua strictly adheres to laws, regulations, and system documents such as *the Anti-unfair Competition Law of the People's Republic of China* and *the Regulations on the Protection of Science and Technology Secrets of the State Scientific and Technological Commission*, and has formulated systems such as *the Measures for the Administration of Intellectual Property Rights* to protect its legitimate rights and interests while avoiding infringement of the intellectual property rights of others and boost and safeguard R&D innovation. In 2022, the Company had 15 cases related to intellectual property litigation, involving an amount of CNY4,801,300.

Protection Measures

Strengthening business top-level design

Incorporate intellectual property work into the “14th Five-Year Plan” and improve the supporting system, build a national intellectual property demonstration enterprise and promote the identification of high-tech enterprises of production enterprises

Improving the management system

Assign full-time intellectual property management staff to implement the intellectual property management in the whole process of scientific and technological projects. Carry out targeted patent mining and reward achievement layout and cultivate high-level and high-value patents and high-level achievements

Strengthening risk prevention

Integrate the awareness of intellectual property risk prevention throughout the whole process of scientific research, production, and operation activities to prevent intellectual property loss and infringement

Organising special training

The Company and its affiliated enterprises organised special trainings on the whole process management of achievements and intellectual property rights of scientific and technological projects to enhance employees’ awareness of intellectual property protection.

We attached great importance to the application and management of intellectual property rights, linked them with the annual performance assessment of enterprises, and encouraged internal innovation of the Company from multiple perspectives. In 2022, the Company was granted 900 new patents, including 208 invention patents. The cumulative number of patents granted was 6,642, and the cumulative number of invention patents was 1,570.

Case: Shendong Coal carried out training on the publicity and implementation of intellectual property laws and regulations and the writing skills of technical disclosure

In 2022, to enhance the awareness of intellectual property protection of all employees and improve the writing quality of patent technical disclosure of inventors, Shendong Coal carried out trainings on the publicity and implementation of intellectual property laws and regulations and the writing skills of technical disclosure for business backbones. In addition, business backbones were trained and organised to work at the grass-roots front line. Through face-to-face communication and one-to-one explanation, the awareness of intellectual property protection and risk prevention of all employees was improved, and the intellectual property protection of key core technologies was promoted in a timely manner. During the reporting period, the trainings received a total of 500 attendances.

Safety and Health



China Shenhua has always regarded production safety and employee health as a key part of achieving the sustainable and steady development of the Company. Focusing on the general idea of “cultural guidance, responsibility implementation, risk pre-control, strong guarantee, and solid foundation”, the Company strives to embed safety production in all aspects of operation and protect the physical and mental health of employees from multiple perspectives.

Safety Management System

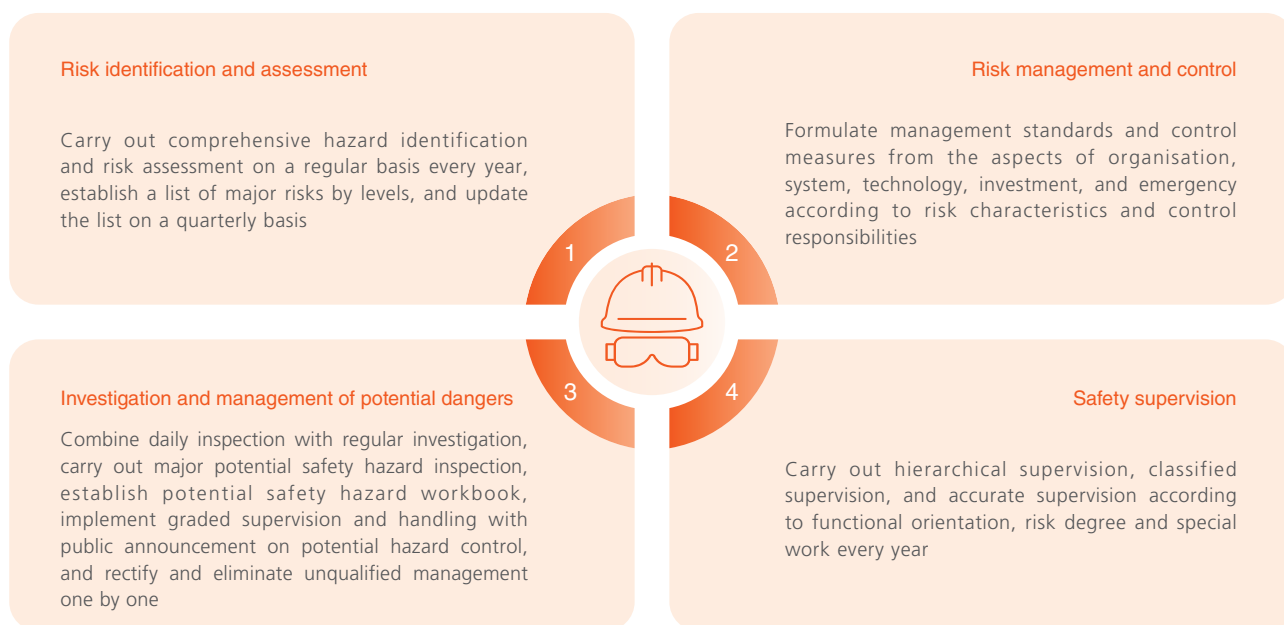
Adhering to the policy of “safety first with precaution and comprehensive management”, the Company develops a three-level safety management system covering “headquarters-subsidaries and branches-grassroots units”, and formulates and continuously improves the safety production responsibility system and safety risk prevention and control mechanism to provide institutional guarantee for the smooth development of safety management.

During the reporting period, we also implemented a strict safety production reward and punishment assessment mechanism of “hierarchical management, hierarchical assessment and covering all employees”. Safety performance was linked to the salary of senior management. In principle, the proportion of safety performance salary of the management shall not be less than 30%, and the proportion of safety-related salary of the leadership of grassroots production units shall not be less than 40%.

Safety Production Responsibility System of China Shenhua

Hierarchical Responsibility System for Safety Production	Accountability System for Safety Production
<ul style="list-style-type: none"> Strictly implement the legal responsibilities of the main responsible persons of units at all levels as the first responsible person responsible for safety production 	<ul style="list-style-type: none"> Strictly implement the principle of “veto power for safety production” in the appraisal of advanced and excellent staff and the appointment of cadres and trace the full process of liability accidents during the on-the-job period
<ul style="list-style-type: none"> Sign the safety production responsibility statement level by level and clarify the five-structure safety production responsibility and the contractor’s responsibility 	<ul style="list-style-type: none"> Regard the implementation of safety production responsibilities as an important part of the annual performance assessment and promotion appointment assessment, and link the assessment results to the performance evaluation
<ul style="list-style-type: none"> Establish a list of safety production responsibilities of different positions and publicize the announcement to improve the safety production responsibilities of all employees 	<ul style="list-style-type: none"> Carry out point management on safety for all staff, executing penalty points for unsafe behavior and awarded points for safety production contribution, and implement “high rewards and heavy penalties”

Safety Production Risk Prevention and Control Process of China Shenhua



Strengthening Safety Production

China Shenhua implements laws and regulations such as *the Law of the People's Republic of China on Safety Production*, complies with corporate management systems such as the *Safety Production Regulations*, continuously implements safety production objectives, standardises safety risk management and potential danger investigation and management, and strengthens safety culture publicity and education, which effectively prevents and reduces the occurrence of safety production accidents.

Safety Production Objectives of China Shenhua for 2022

Objectives	Completion Status
To eliminate major and above safety production accidents, and effectively curb general accidents to strive for achieving "zero death"	No major or above safety production accidents occurred.
To fully complete the annual task of safety production standardization	25 mines of the Company were named as safe and efficient mines in the coal industry from 2020 to 2021 by China National Coal Association.
The regular detection rate of occupational hazard factors in the workplace to be 100%, the occupational health examination rate of personnel exposed to hazards to be 100%, and the incidence of occupational diseases to decrease year-on-year	These two 100% targets were completed, and 42 additional cases of occupational diseases were added.

Comparison of Mortality Rates per Million Tonnes of Raw Coal Production

Year	2016	2017	2018	2019	2020	2021	2022
Nationwide	0.156	0.106	0.093	0.083	0.058	0.044	0.05236
China Shenhua	0	0.003	0.0126	0	0.0034	0.00597	0.00588

Prevention of Safety Risks

China Shenhua strictly implements the requirements of *the Decision on Safety Production in 2022* and other regulations. It strengthens source control, focuses on targeted policies, and actively carries out hierarchical control of safety production risks and potential danger investigation and management to resolutely build a strict defence line for safety production. In 2022, we carried out investigations of key hazard sources and special potential dangers in different business segments from the dimensions of major coal mine disaster control, hazardous chemical leakage, high-risk operations, flood and typhoon prevention, and the rectification rate of potential dangers reached 80.8%.

Laying a Solid Foundation for Safety

China Shenhua has always been committed to standardising safety production behaviours within the scope of operation by reasonable means. We have comprehensively implemented standard operating procedures covering all posts, promoted the application of smart technologies to prevent violations, maintained and upgraded production facilities and equipment, and built safety management information systems to continuously improve safety production factors. In 2022, the Company invested CNY1.879 billion in safety production.

Strengthening Process Monitoring

China Shenhua has included the crackdown on “three violations” in its work priority and continuously strengthens warning education. China Shenhua enhances the safety production awareness of employees by strictly implementing the construction operation plan, conducting surprise checks and spot checks of worksite safety, realizing full coverage of video monitoring on high-risk operation sites, organizing experts to conduct safety supervision, carrying out safety supervision on the construction site, and other means. In 2022, the Company carried out special safety supervision for 46 times, covering all production enterprises.

Safety Culture Publicity

Based on the business features of the Company, we implement *the Measures for the Administration of Contingency Plans for Production Safety Incidents* and continue to carry out reasonable and effective safety culture publicity and emergency drill activities, so that the awareness of safety production can become a mindset of the employees. By the end of 2022, the Company and its affiliated enterprises formulated 624 emergency plans for safety production, conducted 1,368 emergency rescue drills for safety incidents throughout the year, and organised 2,074 training activities such as safety production months and safety production skills competitions.

Case: The first cross-regional multi-unit emergency drill for flood control of Baoshen Railway

In June 2022, a multi-unit, multi-discipline, and cross-regional flood control emergency drill was held in ShenmuBei area of the Baoshen Railway, in which more than 360 people from four subsidiaries and branches involving 10 disciplines in Inner Mongolia and Shaanxi participated. The drill was conducted in a “double-blind” manner. The drill was launched in an unexpected manner without advance notice and specific drill content, at an irregular time and place, to truly simulate natural disaster emergencies and improve the ability of multi-professional coordination and cooperation among units across regions and companies in practice.



Safety Culture Training



Safety Production Skills Competition

Safety Management of Contractors

China Shenhua has formulated a contractor safety management system and a series of safety management regulations, thereby incorporating contractors into the safety management system according to the requirements of “non-differentiation, and integration” so as to implement the same arrangement, inspection, and assessment. In 2022, the Company continued to carry out contractor safety management and supervision activities to promote standardised and orderly management of outsourced projects. Throughout the year, the Company conducted the safety supervisions and inspections on suppliers and contractors for 923 times, and provided safety management training for suppliers and contractors for 928 times.

Safeguarding Occupational Health

China Shenhua fully implements the “Healthy China” strategy and is committed to providing great working conditions and perfect health protection for its employees. In accordance with the *Law of the People’s Republic of China on Prevention and Control of Occupational Diseases*, the *Labour Law of the People’s Republic of China*, and other laws and regulations, and in accordance with the *Management Measures for the Prevention and Control of Occupational Diseases of China Energy* and other management systems, we have steadily carried out assessment and prevention and control, of occupational disease risks, continuously improved the working environment, paid attention to the mental health of employees, and improved the happiness level of employees. During the reporting period, the Company invested a total of approximately CNY557 million in occupational health.

Prevention and Control of Occupational Disease

In accordance with the policy of “prevention in the first place and integrating prevention with control”, we have identified and recorded the types, degree of hazard, and causes of occupational diseases that may occur in the production and operation process. We carried out hierarchical management of occupational hazard factors, focused on the management of places with serious occupational hazards such as “dust, poison and noise” to prevent and reduce the occurrence of new occupational diseases. We have also equipped outdoor workers with self-heating cotton clothes, dust masks, goggles, earplugs, and other protective products to continuously improve the labour protection effect.

Key Work of Occupational Disease Prevention and Control for 2022

General management

- To improve the occupational disease prevention and control management system and assessment index system to promote the full implementation of occupational disease prevention and control work.
- To strictly implement the simultaneous design, simultaneous construction and simultaneous operation of occupational disease prevention facilities and main works in new construction, reconstruction, and expansion projects.
- To carry out activities such as the publicity week of the *Law of the People’s Republic of China on Prevention and Control of Occupational Diseases* in 2022 to improve the popularizing rate of occupational health knowledge among employees.
- To continuously carry out the establishment of “Healthy Enterprise” and hold the selection activity of “occupational health experts”.
- To include contractor and the outsourcing party into integrated management of occupational disease prevention and control in accordance with the principle of “same work with equal treatment”.

Site management

- To improve the existing dust suppression and prevention, poison control and noise prevention technologies, improve the effect of protective facilities, complete the treatment of about 222 workplaces with occupational hazards throughout the year, and invest approximately CNY260 million to manage the hazard workplace in respect of occupational disease.
- To implement the measures of “replacement by mechanisation and reduction by automation”, and upgrade and transform the production system to improve the production intelligence.
- To carry out occupational hazard factor detection at least once a year and occupational hazard status assessment at least once every three years for units with serious occupational hazards.
- To distribute personal protective equipment regularly and sufficiently, and improve the comfort, effectiveness, and safety of protective equipment.

Monitoring and filing

- To organise the health and safety inspection for new employees before they start working and for old employees before they leave.
- To fully consider the physical condition of employees and arrange the work reasonably.
- To improve the management ledger of “one file for one person and one policy for one disease” for personnel with occupational disease and strengthen the protection and treatment.
- To pay workers’ compensation insurance in full and on time.
- To carry out occupational health examination for all employees exposed to occupational hazards.

Case: The first dry fog dust suppression device of Guangdong Taishan Power Plant was put into operation to solve problems

In November 2022, the first dry fog dust suppression device of the coal handling system of Guangdong Taishan Power Plant was installed and officially put into operation. After the device was put into operation and tested, the average dust concentration at the outlet of the guide chute of the belt conveyor of the fuel system was lower than 4 mg/m³ under various coal conditions, further improving the working environment of employees.



Fuel personnel is measuring the dust concentration after the dry fog dust suppression device is started

In April 2022, China Shenhua headquarters and its subsidiaries and branches successively organised and carried out the thematic activity of “Everything for the Health of Workers” in the 20th publicity week of the *Law of the People’s Republic of China on Prevention and Control of Occupational Diseases* in China. Through a series of activities such as hanging thematic banners, carrying out thematic signature activities, distributing occupational disease prevention and control manuals, playing occupational disease warning education videos, and posting occupational disease prevention and control publicity cartoons and slogans, China Shenhua strengthened employees’ awareness of health and safety.

In 2022, China Shenhua conducted 3,856 times of activities for promoting occupational disease prevention or occupational health education.

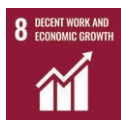
Mental Health Care

We attach great importance to the mental health of employees. In 2022, we actively carried out various forms of mental health protection programs to guide employees to establish a positive and healthy mindset and be able to engage in their work with full enthusiasm.

Case: Yulin Energy organised mental health team building and counseling activities of “Getting into the Soul, Helping Each Other Growth”

In November 2022, the mental health team building and counselling activities of “Getting into the Soul, Helping Each Other Growth” organised by Yulin Energy were officially started in Guojiawan Mine. Experts such as consultants of Yuyang District Mental Health Service Centre of Yulin City were invited to preside over the activity, and mental health group counselling was carried out through group ice-breaking action, group style display, non-verbal communication and comprehension. In addition, one-to-one psychoanalysis and psychotherapy were conducted for employees according to occupational stress, personality defects and emotional problems.

Employee Care



China Shenhua fully recognises that employees are the driving force of the Company's development and is committed to building a talented team in the new era. Based on protecting employees' legitimate rights and interests, we continue to improve the human resources management system and empower employees with the right to expression and participation. We also implement employee care and well-being, extensively absorb and cultivate outstanding talents, and smooth their career development paths. Our goal is to form a virtuous circle in which career-oriented talents achieve career success.

Labour Rights and Care

China Shenhua effectively protects employees' legitimate rights and interests and builds a good employment relationship. We are committed to creating a legal, compliant, inclusive and fair work environment to achieve the harmony and stability of labour relations.

Employment in Accordance with the Law

China Shenhua strictly adheres to *the Labour Law of the People's Republic of China*, *the Labour Contract Law of the People's Republic of China*, and other laws and regulations. We revise and improve the human resources system such as *the Management Measures for Attendance and Leave of Employees in the Company Headquarters*, clarifying the management regulations of employees' working hours and various types of leave, and fully protecting the legitimate rights and interests of employees. The Company strictly adheres to the national *Regulations Banning Child Labour* and the legal requirements of the country (region) where it operates, resolutely forbids the employment of child labour, and rejects any form of forced work. We implement labour employment supervision and inspection system, and conduct irregular inspections on labour management. There was no employment of child labour and forced labour in 2022.

In case of labour disputes, the Company actively seeks the best solution to protect the interests of employees based on the principle of equal consultation, to maximise the benefits of employees.

Protection of Human Rights

China Shenhua supports international norms and standards on human rights such as *the Universal Declaration of Human Rights*, *the Declaration of the Rights of Man and of the Citizen*, and the *International Convention on the Elimination of All Forms of Racial Discrimination*, and fully respects and protects human rights in the operation process regarding the Social Accountability 8000 (SA8000). The Company has formulated *the Policies on Human Rights Protection & Anti-Violence and -Conflict of China Shenhua Energy Company Limited* for all employees, contractors and suppliers to eliminate all acts that may cause human rights violations.

China Shenhua actively prevents potential violence in the workplace and business practices and establishes a whole-process response procedure to protect the human rights of employees from being violated.

Regulatory and Response Process:



Reporting

When a violent incident occurs, the person involved and witnesses are encouraged to report (publicly or anonymously) to the team leader, manager and personnel department.



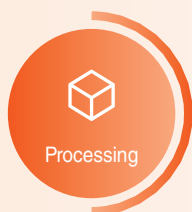
Mediation

The personnel department sets up a special investigation team and a mediation team to deal with the case to effectively protect the interests of the informant.



Communication

The investigation team communicates the relevant information with the related parties and discusses the investigation results with them.



Processing

The personnel department takes necessary measures to deal with acts of violence that violate the employees' code of conduct, including but not limited to instruction and training, verbal or written warning, performance rating and salary reflection. If the circumstance is severe, we will give punishment such as demotion, suspension, change of post or even termination of employment.



Tracking

After the incident, the personnel department publicly discloses the investigation results and the processing measures in the form of a notice and continuously tracks the situation of the person involved.

In 2022, the Company conducted 228 human rights training sessions with cumulative trainees of 34,996 and total learning time of 474,200 hours to effectively improve employees' awareness of human rights and guide the employees to identify human rights issues and make reasonable complaints.

Democratic Management

The Company adheres to the policy of wholeheartedly relying on the employee to run the Company and implements the democratic management and supervision system with the employee representative assembly as the primary form. When formulating rules and regulations or deciding on essential matters of immediate interest to the employees, the Company fully protects their rights to information, participation and supervision, cultivates the employees' sense of ownership and listens to their opinions and suggestions comprehensively.

The Company has established communication mechanisms such as making the Company's operation business public and collective consultation, elected employee directors and supervisors according to democratic procedures. We have built a bridge for communication between employees and the management, encouraged and guided employees to reflect their needs lawfully, and provided a practical path for the management to listen to the voices of employees. By the end of 2022, the Company's worker's union coverage (the proportion of employees covered by collective bargaining agreements) reached 100%.

Diversity and Integration

The Company provides equal opportunities for all employees, creates a diversified and inclusive workplace environment, and builds a diversified workforce, without affecting recruitment, salary and welfare, career development and promotion due to race, ethnicity, nationality, gender, age, religion, and other factors. The Company has formulated the *Measures for Implementation on Female Employees in the New Era*, enhanced the protection of rights and interests of female employees in daily business operation, strictly implemented the regulations on maternity leave and lactation leave for female employees and regular physical examination system. We also actively encourage female employees to participate in the democratic management of enterprises and protect the legitimate rights and interests of female employees.

As of the end of
2022, the Company
has employed

151 people
with disabilities

Employee Care

The Company has purchased medical insurance for all employees, formulated an enterprise annuity system, and provided endowment insurance for employees. The Company has also carried out care projects such as caring for employees with difficulty, paying attention to specific groups, and focusing on the life and medical treatment. The Company advocates work-life balance of employees, guarantees the rights of employees to leave and recuperation, and holds various forms of recreational and sports activities to enrich the leisure time of employees and promote their physical and mental health.

In 2022, the Company formulated the Work Plan for the "Healthy China Shenhua" Project, pursuant to which the Company implemented 10 key measures and promoted the complementary improvement in the physical and mental health of all employees based on occupational health.

Case

Caring for female employees and focusing on “Her Life”

While promoting the self-development of female employees, Trading Group gives full play to their “two unique roles” in social life and family life. In 2022, Trading Group organised a series of special recreational and sports activities for female workers with the theme of “Her Life” to activate their leisure time. The company also organised female health examinations, provided lectures on safety and family relations, and cared physical and mental health of employees. In addition, “Mother’s Love Room” was set up, equipped with disinfection cabinets and other equipment and facilities to care for female employees during pregnancy and childbirth. The company carried out special supervision and inspection of collective contracts for female employees, implemented special protection regulations for female employees, and protected the rights and interests of female employees.

Safeguarding mental health of employees

In November 2022, the Baotou Federation of Trade Unions and Baotou Energy Trade Union successfully held a special lecture on “Mental Health Care of Employees” through an online meeting to relieve the employees’ pressure and guide them to work and live with a positive and rational attitude. More than 500 employees participated in the event, and the employees who worked from home participated through video conferencing.



China Shenhua Worker’s Union Sends the Character Fu (Blessing) to Employees

Employee Training and Development

China Shenhua adheres to the strategy of “strengthening the Company with talents”, attaches great importance to the self-development of employees, provides a competitive and reasonable salary, benefit and promotion mechanism, and strengthens the construction of a talent team to ensure sufficient talents, reasonable echelon and optimised structure.

Remuneration

The Company continuously improves the salary management system and designs a reasonable salary structure based on various factors such as employees’ value contribution, skills and posts, labour productivity and corporate economic benefits. The Company provides more benefits to the front line of production, key posts, and core skilled talents with priority and focuses on differentiated salaries while ensuring fairness to provide all employees with industry-competitive salary benefits.

The Company has established a performance-oriented incentive system, revised and improved *the Assessment Methods for Departments and Employees of the Headquarters*, and implemented quarterly and annual performance assessments for all employees. The quarterly evaluation is mainly to assess work performance, and the annual assessment includes four categories: political quality (20%), work performance (40%), professional ability (20%), and work style and image (20%). The performance salary of employees is based on the assessment results. In addition, we give one-time rewards to employees who have made outstanding contributions to science and technology innovation, safety production, job contribution and skill competition to stimulate their vitality according to the regulations.

Promotion Potential

The Company has formulated *the Implementation Plan for Strengthening Talent Work in the New Era* to promote the construction of a talent team. Based on the employment principles of democratic and fair selection on the basis of merit, the Company adheres to the talent development strategy and selection mechanism driven by both external attraction and internal training, improving the young cadres’ selection system. We have built three sequential promotion channels of management, professionalism and skills to provide broad development potential for all talents and maximise employees’ potential.

In 2022, the headquarters of the Company conducted competitive employment and selected 11 young cadres, accounting for 48% of the promotion. We promoted the multi-post practice of cadres, recommended 4 cadres to take temporary posts in government agencies, 4 cadres to take temporary positions in grass-roots enterprises, 9 grass-roots cadres to take temporary posts in the headquarters, and recommended 3 young cadres for exchange and promotion in subsidiaries and branches.

Employee Training

The Company adheres to the concept of growing up with employees, and formulates annual training plans and special training plans based on the development needs of employees, with a focus on the Company's strategy and annual key work arrangement. The Company focuses on improving comprehensive quality, strengthening the learning and training by using new knowledge and skills such as big data and artificial intelligence, and selected online training courses such as human history, laws and regulations and security risks. In addition, the Company continuously improves the knowledge system necessary for employees to perform their duties, tracks the progress and completion of training, improves in the employee training ledger, and further optimises the training system and content based on the feedback. In 2022, China Shenhua invested CNY245 million in training, representing an increase of 8.35% on a year-on-year basis.

Case

China Shenhua continued to develop the “Youth π ” Youth League culture brand

In 2022, the headquarters of China Shenhua organised a series of informative thematic activities, such as the “May Fourth” thematic League classes, the League classes and the youth employee symposium chaired by the Party Secretary of “Welcoming the 20th National Congress of the Communist Party of China and Making Contributions to the New Era”, the online series of League class exhibition of “Youth Speech · Listening”, the thematic Youth League activity of “Inheriting the Spirit of Lei Feng and Lighting up the Passion of Youth”, the donation of love books, and the shooting of short videos of China Shenhua youth learning the spirit of General Secretary Xi Jinping's “May Fourth” speech.

The Company has established a platform, provided opportunities and services to help the youth grow and become successful, and effectively promotes improving their spiritual quality and comprehensive ability.



China Shenhua strived to develop a reading activity brand of “Enjoy Books”

China Shenhua continues to create a learning-oriented enterprise with the “Three Ones” reading activity of “reading one book every month, sharing once a quarter and forming one achievement every year”. In 2022, the Company's headquarters opened a new column of “Enjoying Books” on the intranet, established an online library, and encouraged employees to borrow books and communicate with each other. At present, there are nearly 700 books available in the online library. The Company's headquarters has carried out 45 reading-sharing activities and published 92 publicity reports and excellent experiences of reading activities, creating a strong atmosphere of reading and learning for all employees.



Win-win Cooperation

China Shenhua attaches great importance to the rights and interests of all stakeholders. In the context of the “dual carbon” goal, the Company further promotes the sustainable and low-carbon development of supply chain while maintaining a great partnership with suppliers (including contractors, and service providers, the same below). Meanwhile, as a leading comprehensive energy enterprise, the Company actively participates in industry exchanges and industry-university-research cooperation, continuously leads industrial innovation and jointly builds a new ecosystem in the industry.

Supply Chain Management

China Shenhua insists on responsible procurement by integrating the concept of sustainable development into the requirements of supply chain management, and comprehensively evaluating and effectively avoiding ESG-related risks of suppliers. The Company encourages suppliers to continuously improve their environmental protection awareness and practice the concept of green development.

Green Procurement

The Company formulated the *Green Procurement Measures (Trial)* and fully integrated “green, low-carbon, energy-saving, and environmental protection” into the procurement standards. On this basis, we formulated the *Policy of China Shenhua for Suppliers’ Management of Environment, Social and Governance (ESG) (Trial)* in 2022, which further standardised the ESG risk control mechanism and procurement process management for suppliers and covered all suppliers. China Shenhua requires suppliers to pay attention to environmental protection and encourages the development of environmental protection policies related to their businesses. The suppliers shall reasonably use natural resources in the production and supply of products and services and strictly control the discharge of sewage and wastes to meet the standards of the place (country) where they operate. The subsidiaries and branches of China Shenhua are encouraged to cooperate with suppliers of products or services with excellent performance in environmental protection.

Access and Audit

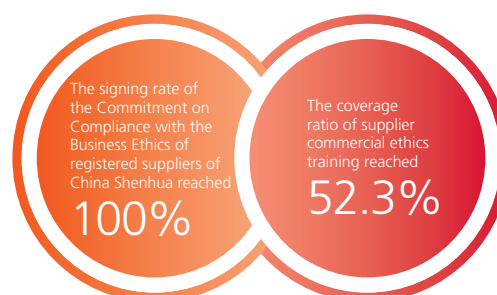
The Company implements a hierarchical supplier management system by evaluating the ESG risks of suppliers from two dimensions: industry type and the purchase amount to identify suppliers with high, medium, and low-risk levels, and then to adopt a stricter access and evaluation mechanism for suppliers with a high-risk level.

Link	Evaluation Contents
Access	In the process of supplier access, the Company requires the suppliers to provide certifications related to product quality, occupational health, environmental protection, data security and other aspects (including but not limited to ISO 9001 system certification).
Risk management and assessment	The Company sets up supplier assessment indicators covering enterprise governance, environmental performance, service quality and other aspects. We use the final score as the basis for the hierarchical management of suppliers in the next stage. The Company irregularly invites high-risk suppliers to fill in the Supplier ESG Questionnaire, timely updates the evaluation and feeds back the results. We will reward excellent suppliers and request unqualified suppliers to make corrections within a time limit. Otherwise, we will withdraw them.
Exit	The Company withdraws the suppliers with ESG evaluation scores below 60, false response to ESG questionnaires or with inability to provide relevant certification materials, violation of the supplier code of conduct, and ESG incidents such as significant environmental pollution accidents, major safety production accidents, and major community disputes. In 2022, a total of 4,837 suppliers were disqualified due to violations or dishonest behaviours, and 40 were included in the list of key concerns.

Integrity Procurement

The Company requires all suppliers to adhere to the *China Shenhua Energy Company Limited Business Ethics Policy (Trial)*, which prohibits any form of corruption, bribery, and other practices. Suppliers must sign the Commitment on Compliance with the Business Ethics upon registration. In case of commercial bribery, malicious defamation, false accusation or framing of other competitors, the Company will give “disqualification” and implement collective punishment within China Energy. In 2022, the signing rate of the Commitment on Compliance with the Business Ethics of registered suppliers of China Shenhua reached 100%.

In 2022, the Company conducted commercial ethics training for suppliers, requiring them to conduct various businesses of the Company based on the principles of integrity and fairness and to prevent multiple misconducts, such as anti-money laundering and insider trading.



Case: Materials Company was awarded as the National Supply Chain Innovation and Application Demonstration Enterprise

In November 2022, eight ministries and commissions, including the Ministry of Commerce, the Ministry of Industry and Information Technology, and the Ministry of Ecology and Environment, jointly announced the list of 15 demonstration cities and 106 demonstration enterprises in the national supply chain innovation and application in 2022. The Materials Company won the honor of National Supply Chain Innovation and Application Demonstration Enterprise in 2022, ranking the 19th.

Up to now, the purchasing platform E-Chine Energy has formed a comprehensive social coordination and cooperation ecosystem with the participation of purchasers, operators, suppliers, logistics providers, financial industry, public trust parties and other parties.



Employees Keep Track of Supply Chain Situation on Real Time Basis Through Smart Management Cockpit

Industrial Cooperation and Development

China Shenhua attaches great importance to industrial exchanges. With an open and inclusive attitude and the spirit of continuous cultivation, we continue to conduct various and extensive industrial cooperation and promote collaborative innovation in the industry chain to write a new chapter in the energy industry.

Case

The Group Standard Guidelines for Preparation of ESG Report of Enterprise jointly drafted by China Shenhua was released

In November 2022, the Group Standard Guidelines for the Preparation of ESG Reports of Enterprise (T/CERDS 4-2022), led by China Enterprise Reform and Development Society and mainly drafted by China Energy, China Shenhua and other units, was released and officially implemented on January 1, 2023. Based on lessons drawn from international ESG standards and considering China's domestic conditions, the Guidelines set forth the basic principles, main contents, and preparation process of ESG reports and provide a report preparation indicator system, which are scientific, practical and operable and of great significance to standardise the preparation of ESG reports and promote the performance of ESG governance.

Shuohuang Railway and China Academy of Railway Sciences established a joint laboratory

In March 2022, the signing and opening ceremony of the heavy-haul railway technology laboratory jointly built by Shuohuang Railway and the China Academy of Railway Sciences was held in Beijing. The co-construction is a practical measure that fully combines the innovative scientific research advantages of scientific research institutes and the extensive heavy-haul application scenarios of the enterprise. It is an important strategic step for the enterprise to independently participate in and gradually lead the exploration of cutting-edge technologies in the heavy-haul field, which is of great significance to promote the high-quality development of intelligent transportation.



Community Prosperity



China Shenhua has fulfilled corporate responsibilities and established a community engagement mechanism oriented by community needs, focusing on mutually-benefit results and respecting the cultural customs of the place of operation. The Company comprehensively promotes the coordinated and healthy development of the community economy, culture, and environment and strives to achieve shared prosperity and growth with the community.

Improving Relationship with Community

China Shenhua attaches great importance to community interests and local culture, formulates and improves a series of policies related to community operation. The Company maintains and promotes community relations as equals, actively listens to the needs of local people, and makes a solemn commitment to respect human rights.

Community Engagement Mechanism

China Shenhua has established a community operation mechanism following the *Mining Principles* and the *Indigenous Peoples and Mining: Position Statement* of International Council on Mining and Metals (ICMM). In 2022, the Company issued the *Statement on Local Community Engagement*, which incorporated social performance management into business decisions by discovering social risks related to business activities throughout the business life cycle (including closure), identifying relevant risks and assessing adverse impacts, and actively communicating with local people.

The Company actively builds constructive and strategic partnerships with the governments and communities where it operates, maintains timely, honest and active communication with them, respects local culture, religion, customs and business etiquette, and avoids infringing the legitimate rights and interests of communities and residents. In addition, the Company actively conducts community-building activities to establish good neighbourly relations. The Company has formulated the *Measures for Overseas Compliance Management (Trial)* to promote the sustainable development of the Company's international business.

Protection of Local Human Rights

China Shenhua thoroughly implements the human rights policies of the Company, respects the guidelines and laws on human rights and anti-violence conflicts, and respects the fundamental rights and interests of people in the place of operation when conducting business activities and operations.

Case: Yulin Energy actively carried out the relocation and resettlement of the migrants in the goaf

With the fundamental goal of "smooth relocation and resettlement" for the residents in the goaf, Yulin Energy adheres to the specified relocation procedures, resettlement procedures and collapse compensation procedures to ensure that the relocation and compensation work was completed according to schedule, and to effectively protect the fundamental rights and interests of the migrants in the goaf.

Mitigating Environmental Impact

In 2022, China Shenhua issued the *Promise to Operate Outside Protection Zone by China Shenhua* to mitigate the impact and interference on the environment of the local reserve. We strictly adhered to the laws and regulations on environmental protection in each operation place to ensure the local ecological civilisation and achieve harmonious coexistence with nature.

The Company strictly conducts ecological feasibility analysis of site selection (route selection) to avoid ecologically protected or ecologically sensitive areas. The Company evaluates the impact on the ecological environment and puts forward corresponding protection measures.

Case

The planning Environmental Impact Assessment (EIA) of Xinjie Energy Taigemiao Mining Area advocates public participation

Xinjie Energy Taigemiao Mining Area is located in Ordos City, Inner Mongolia Autonomous Region, with a planned area of 800.77 km². In 2022, China Shenhua opened channels for public participation in the planning EIA process of the project and applied the FPIC (Free, Prior, and Informed Consent) principle to conduct a community impact assessment. The public can better understand the basic situation of the planning and construction of the mining area and its potential impact on the regional ecosystem and environment and fully express their opinions and attitude towards the planning and construction. Meanwhile, the Company also dramatically promotes the establishment of the public environmental supervision and management mechanism in developing and constructing of the Company's mining areas.

Pembangkitan Java protected the local ecological environment

In 2022, Pembangkitan Java accelerated the construction of the ecological civilisation and continuously planned and implemented the natural environmental protection project of mangroves, wild animals and plants protection. Pembangkitan Java designed mangrove ecological reserves to protect biodiversity and expand the area of local mangroves. By the end of the reporting period, the mangroves in the sea area were expanded from 13 hectares during the construction period to approximately 17 hectares, and nearly 120,000 dominant mangrove species were replanted throughout the year.



Promoting Community Development

China Shenhua continuously focuses on social concerns and community development needs, actively responds to the problems of all parties in society, and demonstrates its responsibility in rural revitalisation, community assistance, donations and co-construction of overseas operating places.

Local Procurement and Employment

In 2022, China Shenhua formulated the *Local Procurement Policy (Trial)* to optimise the local procurement process, provide equal opportunities for local suppliers and contribute to the economic development of the community area. The Company focuses on local employment and creates employment opportunities for residents in the communities where we operate as much as possible, prioritising recruiting employees from local or neighbouring communities and further ensuring the stability of community residents through localised employment programs.

Percentage of localized employment for overseas companies of China Shenhua was **89.1%** in 2022

Case: Creating jobs and promoting the livelihood development of local people

By the end of 2022, PT.GH EMM Indonesia had provided more than 2,000 jobs in aggregate for local communities, and the proportion of Indonesian employees employed reached 82%. It has trained many management talents in safety production, power plant maintenance, logistics management, security, and greening in the power plant and coal mine, effectively easing the employment pressure in the surrounding areas of the project. The living standard of the surrounding villagers has also improved.



Group Photo of Outstanding Indonesian Employees of the Year

Support for Community in Operation Place

In the process of overseas operation, China Shenhua has been adhering to the concept of “perpetual happiness and great love”, actively assuming social responsibilities, participating in social welfare activities in the operation place, and giving back to the local society.

Case: PT.GH EMM Indonesia actively serves the community

During the local dry season, PT.GH EMM Indonesia supplies clean drinking water to the surrounding villages through the plant’s domestic water system to ensure the villagers’ normal life. Meanwhile, a long-term assistance mechanism has been established with local orphanages and nursing homes to solve their difficulties in life effectively. In 2022, PT.GH EMM Indonesia donated teaching hardware facilities to surrounding schools, living materials to surrounding villagers, donated necessary supplies to surrounding governments and non-governmental organizations, and funded the construction of surrounding highways and other infrastructure. On the occasion of the Muslim Festival, PT.GH EMM Indonesia visited retired employees, employees in difficulty and surrounding villages, towns, and local government organizations, actively enhanced the communication with the local government and villages, strove to improve the living standards of surrounding villagers, and helped develop and construct surrounding areas, thus establishing an excellent corporate image.



Donating Materials to the Local Government



Hardening the Main Roads in Surrounding Villages

Social Responsibility

The Company fulfils its responsibilities as a central state-owned enterprise, focuses on the needs of the people, invests its resources in the people in need, and continues to conduct public welfare undertakings and play its role as a role model in many fields such as rural revitalization, donations to students, people's livelihood guarantee, and voluntary services. In 2022, China Shenhua's external donations reached CNY531 million.

Rural Revitalisation

In 2022, China Shenhua continued to conduct assistance work in three paired-up assistance counties, including Wubu County, Mizhi County in Shaanxi Province, and Butuo County in Sichuan Province. From the aspects of industrial revitalisation, talent revitalisation, cultural revitalization, ecological revitalization, and organizational revitalization, we kept helping all counties firmly hold the achievements of poverty alleviation. The Company spent about CNY78.30 million on rural revitalisation funds throughout the year and implemented 29 projects. China Shenhua was selected as an excellent practice case of rural revitalisation by the China Association for Public Companies.



Industrial Revitalization

In Bozuo Village, Butuo County, the farming scale of the Farmers' Professional Cooperatives for breeding indigenous chickens in the alpine-ecological zone was expanded to 6,000, with sales revenue of more than CNY1.2 million. The Company assisted the building of live poultry trading market and cold chain service centre in Butuo County which can provide an average of 240 local jobs per year. The distributed PV power generation project in Gaoxigou Village, Mizhi County was built to drive the green economy with the new energy industry. The Company built smart water-fertilizer integration and improved grain breeding base in Wangshagou Village, Mizhi County, and promoted a new mode of modern dry-farming water-saving agriculture, industrial quality and efficiency improvement.



Talent Revitalization

The Company organized trainings on grass-roots cadres, rural revitalization leaders and skilled talents with the attendances exceeding 4,700. The Company recruited 25 college students from families in difficulty into enterprises affiliated with China Shenhua and helped 10 people from families in difficulty seek employment outside their hometowns.



Cultural Revitalization

The main structure of the teaching building of the nine-year school in Mixi District, Mizhi County was successfully capped. Yisa Primary School in Butuo County came into service.



Ecological Revitalization

The construction of the 600-mu ecological forest project along the Yellow River in Xinjiagou Town, Wubu County can drive more than 60 people in the surrounding area to be employed nearby every year, increase the income by more than CNY2,000 per capita. Three new rural water security projects in Wubu County were built to solve the problem of safe drinking water for approximately 1,000 farmers.



Organizational Revitalization

The Company deepened the mechanism of co-construction of Party branches, and organised Party members and cadres in the village to strengthen Party spirit at the revolutionary history education base. The Company continued to conduct activities to change customs and solved the problem of returning to poverty due to concepts and customs.

Case

China Shenhua's rural revitalisation project won the best case in the Third "Global Poverty Reduction Case Collection Activity"

In November 2022, the 2022 International Seminar on Global Poverty Reduction Partnerships released a list of 104 award-winning cases in the Third Global Poverty Reduction Case Collection Activity. Among them, the "Apple Noodle Industry Opens up the Road to Prosperity in Rural Areas" of China Shenhua was selected as the best case, reflecting the outstanding achievements and effectiveness of the Company in planting, breeding and agricultural product processing in recent years. It reflected the executive ability and initiative of the Company to resolutely implement the decisions and arrangements of the central government to consolidate and expand the achievements of poverty alleviation and comprehensively promote rural revitalisation.

The collective economy of village assisted by Sichuan Energy made annual dividends again

In November 2022, Bozuo Village, Tuojue Town, Butuo County, with support from Sichuan Energy, held the 2022 Village Collective Economic Dividend Conference, which distributed the collective economic dividend of CNY234,600 to 362 households. The annual dividend of the village collective economy reached the highest level ever, immensely stimulating the enthusiasm of villagers to develop rural industries.

Based on the local topography and climate features, the Company has successively helped the village to establish village collective economic organisations such as Boyuan Alpine Ecological Chicken Farmers' Professional Cooperative and Benniu Livestock Farmers' Professional Cooperative in Butuo County, adopted the operation mode of "Cooperative + Expert + Farmer" to develop an alpine ecological breeding industry and driven the villagers to get rich and increased their income. The Company has cultivated a group of wealthy leaders, which has become a model for the county to develop the collective real economy of villages.



Educational Assistance

China Shenhua attaches great importance to educational assistance. During the reporting period, the Company invested approximately CNY31.50 million to comprehensively improve the educational conditions of students in areas with weak development of primary education in terms of hardware construction, software upgrading and student funding.



Sichuan Energy-aided Yisa Primary School in Butuo County was Put into Operation



Taishan Power Provides Financial Aid to Students in Need

Livelihood Guarantee

China Shenhua strives to play the role of stabiliser and ballast as a backbone central state-owned energy enterprise, resolutely fulfills its duties and missions, and provides reliable guarantee for the stable operation of social economy and normal life of residents during special periods.

Case: China Shenhua strove to ensure electricity for the livelihood in Sichuan and Chongqing

In the summer of 2022, Sichuan and Chongqing experienced severe high-temperature and dry weather, and tense situation between power supply and demand. China Shenhua gave full play to its advantages of integrated operation and effectively played its role as the backbone of energy supply guarantee. The Trading Group strove to coordinate the transportation of coal from northwestern China into Sichuan and Chongqing and ensured the coal demand of regional power plants by combining the supply of self-produced coal, purchased coal, and other coal sources. The units of the power plant affiliated with Sichuan Energy were in peak operation, and the daily power generation hit a record high, providing a solid guarantee for the reliable power supply of the Sichuan-Chongqing power grid.

Case: “Heart-warming Coal” of Baorixile Energy warms farmers and herders

In November 2022, Baorixile Energy actively fulfilled its social responsibilities and supplied 50,000 tonnes of coal for its livelihood in winter to farmers and herders in surrounding towns and counties. With the drop in temperature, the Company investigated the coal consumption of farmers and herdsmen in the surrounding towns and counties for heating in winter and established a coordination and security mechanism for heating coal guarantee in advance, demonstrating the social responsibility of a central state-owned enterprise.

Voluntary Services

Adhering to the mission of “dedication, love, unity and mutual assistance”, China Shenhua actively participates in community construction and public welfare activities via voluntary service, contributing to create a harmonious society and a beautiful community. The Company clarifies the rights and obligations, service guarantee measures and service scope of volunteers to guarantee the organised and planned development of voluntary services.



Volunteers from Wanzhou Power Are Cleaning up Wastes Along the Yangtze River



Volunteers from Zhunge'er Energy Are Volunteering for Tree Planting



Voluntary Blood Donation by Volunteers from Taishan Power



Volunteers from China Shenhua Headquarters Are Visiting Disabled Children

Appendix I: Table of ESG Performance

Primary indicators	Secondary indicators	2020	2021	2022
Greenhouse gas emissions	Total carbon emissions (10,000 tonnes of carbon dioxide equivalent)	13,490	15,861	17,640
	Including: Scope I (10,000 tonnes of carbon dioxide equivalent)	12,668	15,333	17,239
	Scope II (10,000 tonnes of carbon dioxide equivalent)	822	528	401
	Carbon emission intensity (tonnes of carbon dioxide equivalent/CNY10,000 revenue)	5.78	4.73	5.10
	Mine gas extraction (10,000 m ³)	3,523.00	2,343.78	3,886.96
	Mine gas utilisation (10,000 m ³)	2,911.00	1,571.46	3,286.04
Exhaust gas	Total sulfur dioxide emissions (10,000 tonnes)	1.16	1.18	1.73
	Sulfur dioxide emission of thermal power (10,000 tonnes)	0.89	0.92	1.25
	Sulfur dioxide emission performance of thermal power (g/kWh)	0.065	0.055	0.065
	Total nitrogen oxide emissions (10,000 tonnes)	3.26	3.42	4.52
	Nitrogen oxide emission of thermal power (10,000 tonnes)	1.87	1.94	2.31
	Nitrogen oxide emission performance of thermal power (g/kWh)	0.14	0.12	0.12
	Total soot emissions (10,000 tonnes)	0.222	0.19	0.30
	Soot emission of thermal power (10,000 tonnes)	0.147	0.126	0.158
	Soot emission performance of thermal power (g/kWh)	0.0108	0.0076	0.0083
Wastewater	Chemical oxygen demand (10,000 tonnes)	0.086	0.046	0.075
	Output of sewage and wastewater (million tonnes)	168.74	159.99	141.37
	Including: Output of industrial wastewater (million tonnes)	25.17	26.65	27.94
	Output of mine (pit) water (million tonnes)	132.82	125.24	105.11
	Output of domestic wastewater (million tonnes)	10.75	8.10	8.31
	Utilisation amount of sewage and wastewater (million tonnes)	126.27	121.65	104.83
	Including: Utilisation amount of industrial wastewater (million tonnes)	20.23	23.15	25.87
	Utilisation amount of mine (pit) water (million tonnes)	99.29	92.34	73.91
	Utilisation amount of domestic wastewater (million tonnes)	6.75	5.51	5.05
	Utilisation rate of sewage and wastewater (%)	74.84	76.03	74.15
	Including: Utilisation rate of industrial wastewater (%)	80.38	86.85	92.59
	Utilisation rate of mine (pit) water (%)	74.76	73.73	70.32
	Utilisation rate of domestic wastewater (%)	62.79	68.02	60.77

Primary indicators	Secondary indicators	2020	2021	2022
General solid waste	Output of general solid waste (10,000 tonnes)	4,773.23	5,132.74	5,395.23
	Output of general solid waste per CNY10,000 output value (tonne/CNY10,000)	3.4	3.0	2.38
	Including: Output of Gangue (10,000 tonnes)	3,683.49	3,891.87	3,777.99
	Output of fly ash (10,000 tonnes)	703.93	780.63	1,063.03
	Output of cinder (10,000 tonnes)	/	/	282.34
	Output of flue-gas gypsum (10,000 tonnes)	/	/	190.28
	Discharge of general solid waste per CNY10,000 output value (tonne/CNY10,000)	2.0	0.9	0.89
	Comprehensive utilisation rate of general solid waste (%)	41.20	70.04	62.76
	Including: Utilisation rate of gangue (%)	34.10	68.10	58.99
	Utilisation rate of fly ash (%)	71.20	85.20	77.08
	Utilisation rate of cinder (%)	/	/	64.38
	Utilisation rate of flue-gas gypsum (%)	/	/	80.77
	Utilisation amount of general solid waste (10,000 tonnes)	1,966.57	3,594.97	3,386.21
	Including: Utilisation amount of gangue (10,000 tonnes)	1,254.05	2,650.63	2,228.75
	Utilisation amount of fly ash (10,000 tonnes)	500.95	664.97	819.43
	Utilisation amount of cinder (10,000 tonnes)	/	/	181.77
	Utilisation amount of flue-gas gypsum (10,000 tonnes)	/	/	153.68
	General solid waste discharge (10,000 tonnes)	2,806.66	1,537.77	2,009.02
Hazardous waste	Output of hazardous waste (tonne)	4,608.93	6,202.56	53,193.24
	Output of hazardous waste per CNY10,000 output value (kg/CNY10,000)	0.3196	0.3510	2.34
	Disposal rate of hazardous waste (%)	96.88	96.92	97.04

Primary indicators	Secondary indicators	2020	2021	2022
Energy consumption	Direct energy: Total oil consumption (10,000 tonnes)	39.88	40.33	40.37
	Total natural gas consumption (100 million m ³)	8.41	8.05	8.31
	Indirect energy: Total electricity consumption (100 million kWh)	169.06	158.30	170.68
	Comprehensive energy consumption (10,000 tonnes of standard coal)	4,324.04	5,155.47	6,041.39
	Comprehensive energy consumption per CNY10,000 output value (tonne standard coal/CNY10,000)	3.05	2.92	2.64
	Standard coal consumption for power supply (g/kWh)	307	301	297
Water resources	Total water consumption (million tonnes)	157.24	155.11	179.92
	Including: Total fresh water (million tonnes)	130.89	118.67	129.18
	Including: Land surface water (million tonnes)	92.93	96.18	105.05
	Underground water (million tonnes)	2.65	11.48	12.41
	Tap water (million tonnes)	35.31	11.01	11.72
	Recycled water (million tonnes)	11.22	28.22	26.13
	Other alternative water (million tonnes)	15.13	8.22	24.61
	Water consumption per CNY10,000 output value (tonne/CNY10,000)	10.68	8.51	7.53
	Proportion of the consumption of recycled water and other alternative water sources accounted in the total water consumption (%)	16.76	23.49	28.20
	Water savings (10,000 tonnes)	/	/	546
Environmental protection input	Environmental protection input (CNY100 million)	20.99	23.45	38.43
	Including: ecological construction input (CNY100 million)	7.54	7.61	12.35
Ecological protection	New green area (10,000 square metres)	1,083	9,256	4,545
	Carbon sink conversion volume of newly increased green area (10,000 tonnes)	4.4	37.7	18.5
Product responsibilities	Percentage of products recalled for safety and health reasons in the total products sold or delivered	0	0	0
	Number of complaints related to product and service	0	0	0
	Number of recalled products	0	0	0

Primary indicators	Secondary indicators	2020	2021	2022
Technological innovation	Mechanisation rate of coal mining and tunneling (%)	100	100	100
	Number of super-safe and efficient mines	22	22	21
	Capital investment in research and development (CNY100 million)	21.49	33.47	54.04
	Number of patents obtained	915	754	900
	Number of invention patents obtained	198	199	208
Safety and health	Investment in safety production (CNY100 million)	38.15	25.62	18.79
	Mortality rate per million tonnes of raw coal production (person/million tonnes)	0.0034	0.00597	0.00588
	Number of serious accidents and above	0	0	0
	Number of deaths due to production safety accidents (person)	1	5	4
	Including: Death of employees (person)	1	2	2
	Death of contractors (person)	0	3	2
	Death ratio of employees due to production safety accidents (person/hundred persons)	0.0013	0.0026	0.0024
	Death ratio of contractors (person/hundred persons)	0	/	0.0070
	Total number of work-related injuries (person)	149	129	33
	Days of work suspended due to work-related injuries (day)	10,961.1	8,428	3,692
	Total recordable injury rate (%)	0.20	0.16	0.04
	Occupational health input (CNY100 million)	6.75	5.56	5.57
	New occupational diseases (case)	11	24	42
	Employee health examination coverage (%)	100	100	100

Primary indicators	Secondary indicators	2020	2021	2022
Employee development	Total number of employees (person)	76,182	77,872	83,029
	Including: Male employees (person)	61,966	64,306	70,029
	Female employees (person)	14,216	13,566	13,000
	Including: Contract staff (person)	76,182	77,872	83,029
	Senior management (person)	228	256	234
	Middle management (person)	3,398	3,025	3,229
	General level employees (person)	72,556	74,591	79,566
	Including: Employees aged 29 or Under (person)	8,976	9,041	10,187
	Employees aged 30-39 (person)	35,000	35,262	35,580
	Employees aged 40-49 (person)	19,167	18,903	21,007
	Employees aged 50 or above (person)	13,039	14,666	16,255
	Including: Chinese Mainland (person)	75,867	77,456	82,585
	Hong Kong, Macao and Taiwan regions (person)	4	3	2
	Other countries and regions (person)	311	413	442
	Percentage of ethnic minority employees (%)	/	5.30	5.31
	Number of newly-employed employees during the year (person)	/	3,696	2,963
	Percentage of localised employees in the overseas enterprises (%)	/	77.4	89.1
	Number of part-time contract staff (person)	0	0	0
	Number of labour dispatch staff (person)	/	18,866	13,189
	Labour contract coverage rate (%)	100	100	100
	Percentage of employees joining trade union (%)	100	100	100
	Number of complaints on labour issues (case)	/	17	10
	Rate of complaints processing on labour issues (%)	/	100	100
	Number of employees turnover (person)	949	999	1,173
	Percentage of employees turnover (%)	1.25	1.28	1.41

Primary indicators	Secondary indicators	2020	2021	2022
	Including: Percentage of male employees turnover (%)	1.03	0.99	1.17
	Percentage of female employees turnover (%)	2.09	2.67	2.56
	Including: Percentage of employees aged 29 or under turnover (%)	1.27	2.07	1.54
	Percentage of employees aged 30-39 turnover (%)	1.00	1.00	0.73
	Percentage of employees aged 40-49 turnover (%)	0.60	0.87	0.66
	Percentage of employees aged 50 or above turnover (%)	3.85	2.96	3.63
	Including: Percentage of employees in China's Mainland turnover (%)	1.25	1.27	1.40
	Percentage of employees in China Hong Kong, Macao and Taiwan regions turnover (%)	0	33.33	33.33
	Percentage of employees in other countries and regions turnover (%)	0	2.91	0.90
	Total training sessions for employees (times)	/	26,439	26,207
	Total number of trainees (person)	74,784	76,239	81,125
	Including: Number of male employees trained (person)	61,089	63,103	68,232
	Number of female employees trained (person)	13,695	13,136	12,893
	Including: Number of senior management trained (person)	220	253	233
	Number of middle management trained (person)	3,303	3,013	3,175
	Number of general level employees trained (person)	71,274	72,973	77,717
	Total training hours (10,000 hours)	670.21	805.28	932.45
	Including: Training hours of male employees (10,000 hours)	556.56	657.22	776.79
	Training hours of female employees (10,000 hours)	113.65	148.05	155.66
	Including: Training hours of senior management (10,000 hours)	3.28	4.02	3.65
	Training hours of middle management (10,000 hours)	34.11	44.26	44.17
	Training hours of general level employees (10,000 hours)	632.81	756.99	884.64
	Proportion of employees trained (%)	98.16	97.90	97.71

Primary indicators	Secondary indicators	2020	2021	2022
	Including: Training proportion of male employees (%)	98.58	98.13	97.43
	Training proportion of female employees (%)	96.34	96.83	99.18
	Including: Training proportion of senior management (%)	96.49	98.83	99.57
	Training proportion of middle management (%)	97.20	99.60	98.33
	Training proportion of general level employees (%)	98.23	97.83	97.68
	Training hours per person (hour)	89.60	103.41	114.94
	Including: Average training hours of male employees (hour)	91.11	102.20	113.85
	Average training hours of female employees (hour)	82.97	109.13	120.73
	Including: Average training hours of senior management (hour)	149.29	157.03	156.65
	Average training hours of middle management (hour)	103.28	146.31	139.12
	Average training hours of general level employees (hour)	88.79	101.49	113.83
	Total number of employed professional and technical personnel (person)	10,927	10,304	11,980
	Proportion of employed professional and technical personnel (%)	14.34	13.23	14.43
	Total number of skilled workers (person)	/	43,324	50,107
	Proportion of skilled workers (%)	/	55.63	60.35
	Employee productivity rate (CNY10,000/person)	77.92	101.67	120.02
Community contributions	Social contribution value per share (CNY/share) (ASBE)	5.69	6.99	9.39
	Social contribution value per share (CNY/share) (IFRS)	5.52	7.06	9.55
	Social donations (CNY million)	178	389	531
	Total tax amount (CNY million)	41,996	51,305	71,825
	Cumulative cash dividends (CNY million)	300,998	351,464	402,129
	Number of volunteers (person)	9,668	10,137	9,870
	Total time of volunteer service (hour)	48,413	154,658	117,544

Primary indicators	Secondary indicators	2020	2021	2022
Supply chain management	Total number of compliance suppliers	115,371	127,440	118,611
	Including: Chinese Mainland	115,223	127,039	117,896
	Hong Kong, Macao and Taiwan	68	172	314
	Asia (excluding China)	37	104	172
	Europe	29	63	132
	America	11	49	83
	Africa	0	1	2
	Oceania	3	12	12
Corporate governance	Number of members of the Board concurrently serving as CEO of other companies (person)	0	0	0
	Number of financial experts in Audit Committee (person)	1	1	1
	Number of Directors against voting (vote)	0	0	0
	External auditing expenses (CNY million)	8.55	8.55	8.55
	Number of information disclosure documents released	382	237	236
	Shareholding proportion of the controlling shareholder at the end of the period (%)	69.45	69.52	69.52
	Number of shares of the Company held by Directors, Supervisors and the senior management at the end of the period (share)	0	0	0

Notes:

- Indonesia Java Company is managed under BOT mode, whose operational data including power generation is excluded from the Company. The emission data of Indonesia Java Company is not taken into consideration when calculating waste gas emission and emission performance of thermal power.
- Intensity indicators related to output value in the environmental scope listed in the table above are emission (consumption) volume of unit production value of industrial enterprises (CNY10,000).
- Starting from 2022, the Company has been gathering statistics of the total discharge of solid hazardous waste in full caliber in accordance with the "National Hazardous Waste Catalogue (2021 Edition)".
- Total water consumption = fresh water + recycled water + other water
- Upon measurement and calculation based on the China Carbon Trading Network (<http://www.tanjiaoyi.com/article-4820-1.html>), the planting number for adult woods per mu (667 square meters) is about 60 to 110 strains, which can absorb about 24.455 tonnes of CO₂ per year (taking the median of 90 strains). Then the calculation formula of carbon sink is: carbon dioxide absorption volume = green area (mu) × 24.455. In order to balance the green area scale of woodland and grassland, China Shenhua set the benchmark of 10 plants per mu, and calculated the carbon sink conversion volume of newly afforested area over the years.
- Days of work suspended due to work-related injuries = (total number of working days suspended * 1,000,000)/total number of working hours; Source of calculation formula: OHSAS 18001 (number of lost working days per million working hours)
- Employee productivity = profit before tax/total number of employees

Appendix II: ESG Indicator Index

Contents		ESG Guidelines of HKEx	Guidelines of SSE ¹
About the Report		A1.6, A3.1, B2.3, B8.1	1.1, 1.3
About China Shenhua		B8.2	3.5.14, 5.2, 6.5.4, 6.5.7, 8.3, 8.4, 8.8
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Corporate Governance	Integrity and Compliance	B4.1, B6.3, B7, B7.1, B7.2, B7.3	4.1.1, 8.1, 8.2
	Risk Control		6.3.3, 6.3.13
	ESG Governance	A1.5, A1.6, A2.3, A2.4	7.1.3, 8.6, 8.14
Environmental Protection	Response to Climate Change	A1, A1.1, A1.2, A1.5, A4, A4.1	
	Environmental Management	A1, A1.1, A1.3, A1.4 A1.5, A1.6, A2, A2.1, A2.3, A3, A3.1	8.1, 8.6, 8.8, 8.9, 8.13
	Pollution Prevention and Control	A1, A1.1, A1.2, A1.3, A1.4, A1.5, A1.6, A2, A2.1, A2.3, A3, A3.1	8.1, 8.3, 8.6, 8.8, 8.9, 8.10, 8.12, 8.13, 8.15
	Natural Resource Utilisation	A2, A2.3, A3, A3.1	8.1, 8.3, 8.6, 8.8, 8.9, 8.10, 8.12, 8.15

¹ No. 1 Guidelines for the Self-Regulation of Listed Companies Standardized Operation on SSE is referred to as "Guidelines"

Contents		ESG Guidelines of HKEx	Guidelines of SSE ¹
Social Responsibility	Product Responsibilities	B6.1, B6.2, B6.4	8.9, 8.13
	Safety and Health	B2, B2.1, B2.2, B2.3	8.13, 8.14
	Employee Care	B8, B8.1, B8.2	8.1, 8.7, 8.14, 8.15
	Win-win Cooperation	B5, B5.1, B5.2, B5.3, B5.4, B2.3	8.6
	Community Prosperity	B6, B6.2, B6.5	8.1, 8.3, 8.4, 8.6, 8.15
Appendix	ESG Performance Table		8.1, 8.2, 8.5, 8.8, 8.15

Appendix III: GRI index

Instruction China Shenhua reported the information cited in this GRI content index from January 1, 2022 to December 31, 2022 with reference to GRI standards.

The GRI 1 used GRI 1: Foundation 2021

Disclosure topic/ Disclosure item	Disclosure title	Chapter index	Page
GRI 2: General Disclosures 2021		About the Report	P2-3
The organization and its reporting practices			
2-1	Organizational details	About the Report	P2-3
2-2	Entities included in the organization's sustainability reporting	About the Report	P2-3
2-3	Reporting period, frequency and contact point	About the Report	P2-3
2-4	Restatements of information	About the Report	P2-3
2-5	External assurance	About the Report	P2-3
Activities and workers			
2-6	Activities, value chain and other business relationships	About China Shenhua	P7-9
2-7	Employees	Table of ESG Performance	P82-89
2-8	Workers who are not employees	Table of ESG Performance	P82-89

Disclosure topic/ Disclosure item	Disclosure title	Chapter index	Page
Governance			
2-9	Governance structure and composition	Corporate Governance-Governance System	P14-16
2-10	Nomination and selection of the highest governance body	Corporate Governance-Governance System	P14-16
2-11	Chair of the highest governance body	Corporate Governance-Governance System	P14-16
2-12	Role of the highest governance body in overseeing the management of impacts	Corporate Governance-Governance System	P14-16
2-13	Delegation of responsibility for managing impacts	Corporate Governance-Governance System	P14-16
2-14	Role of the highest governance body in sustainability reporting	Corporate Governance-Governance System	P14-16
2-15	Conflicts of interest	Table of ESG Performance	P82-89
2-16	Communication of critical concerns	Corporate Governance-ESG Governance	P22-27
2-17	Collective knowledge of the highest governance body	Corporate Governance-ESG Governance	P22-27
2-18	Evaluation of the performance of the highest governance body	Corporate Governance-ESG Governance	P22-27
2-19	Remuneration policies	Corporate Governance-ESG Governance	P22-27
2-20	Process to determine remuneration	Corporate Governance-Governance System	P14-16
2-21	Annual total compensation ratio	Social Responsibility-Employee Care	P64-69

Disclosure topic/ Disclosure item	Disclosure title	Chapter index	Page
Strategy, policies and practices			
2-22	Statement on sustainable development strategy	Corporate Governance-ESG Governance	P22-27
2-23	Policy commitments	Corporate Governance-ESG Governance	P22-27
2-24	Embedding policy commitments	Corporate Governance-ESG Governance	P22-27
2-25	Processes to remediate negative impacts	Corporate Governance-ESG Governance	P22-27
2-26	Mechanisms for seeking advice and raising concerns	Corporate Governance-ESG Governance	P22-27
2-27	Compliance with laws and regulations	Corporate Governance-Integrity and Compliance	P17-18
2-28	Membership associations	Corporate Governance-ESG Governance	P22-27
Stakeholder engagement			
2-29	Approach to stakeholder engagement	Corporate Governance-ESG Governance	P22-27
2-30	Collective bargaining agreements	Social Responsibility-Employee Care	P64-69
GRI 3: Material Topics 2021			
3-1	Process to determine material topics	Corporate Governance-ESG Governance	P22-27
3-2	List of material topics	Corporate Governance-ESG Governance	P22-27
3-3	Management of material topics	Corporate Governance-ESG Governance	P22-27

Disclosure topic/ Disclosure item	Disclosure title	Chapter index	Page
Economy			
GRI 201: Economic Performance			
201-1	Direct economic value generated and distributed	Social Responsibility-Community Prosperity	P73-81
201-2	Financial implications and other risks and opportunities due to climate change	Environmental Protection-Response to Climate Change	P30-39
201-3	Defined benefit plan obligations and other retirement plans	Social Responsibility-Employee Care	P64-69
GRI 204: Procurement Practices			
204-1	Proportion of spending on local suppliers	Social Responsibility-Win-win Cooperation	P70-72
GRI 205: Anti-corruption			
205-1	Operations assessed for risks related to corruption	Corporate Governance-Integrity and Compliance	P17-18
205-2	Communication and training about anti-corruption policies and procedures	Corporate Governance-Integrity and Compliance	P17-18
205-3	Confirmed incidents of corruption and actions taken	Corporate Governance-Integrity and Compliance	P17-18
GRI 206: Anti-competitive Behavior			
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	Social Responsibility-Win-win Cooperation	P70-72

Disclosure topic/ Disclosure item	Disclosure title	Chapter index	Page
Environment			
GRI 301: Materials			
301-1	Materials used by weight or volume	Table of ESG Performance	P82-89
GRI 302: Energy			
302-1	Energy consumption within the organization	Table of ESG Performance	P82-89
302-3	Energy intensity	Table of ESG Performance	P82-89
302-4	Reduction of energy consumption	Environmental Protection-Response to Climate Change	P30-39
302-5	Reductions in energy requirements of products and services	Environmental Protection-Environment Management	P40-42
GRI 303: Water and Effluents			
303-1	Interactions with water as a shared resource	Environmental Protection-Utilisation of Natural Resources	P46-49
303-2	Management of water discharge-related impacts	Environmental Protection-Pollution Prevention and Control	P43-45
303-3	Water withdrawal	Table of ESG Performance	P82-89
GRI 304: Biodiversity			
304-2	Significant impacts of activities, products and services on biodiversity	Environmental Protection-Utilisation of Natural Resources	P46-49
304-3	Habitats protected or restored	Environmental Protection-Utilisation of Natural Resources	P46-49

Disclosure topic/ Disclosure item	Disclosure title	Chapter index	Page
GRI 305: Emissions			
305-1	Direct (Scope 1) GHG emissions	Environmental Protection-Response to Climate Change	P30-39
305-2	Energy indirect (Scope 2) GHG emissions	Environmental Protection-Response to Climate Change	P30-39
305-4	GHG emissions intensity	Environmental Protection-Response to Climate Change	P30-39
305-5	Reduction of GHG emissions	Environmental Protection-Response to Climate Change	P30-39
305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	Environmental Protection-Response to Climate Change	P30-39
GRI 306: Waste			
306-1	Waste generation and significant waste-related impacts	Environmental Protection-Pollution Prevention and Control	P43-45
306-2	Management of significant waste-related impacts	Environmental Protection-Pollution Prevention and Control	P43-45
306-3	Waste generated	Environmental Protection-Pollution Prevention and Control	P43-45
306-4	Waste diverted from disposal	Environmental Protection-Pollution Prevention and Control	P43-45
306-5	Waste directed to disposal	Environmental Protection-Pollution Prevention and Control	P43-45

Disclosure topic/ Disclosure item	Disclosure title	Chapter index	Page
GRI 308: Supplier Environmental Assessment			
308-1	New suppliers that were screened using environmental criteria	Social Responsibility-Win-win Cooperation	P70-72
308-2	Negative environmental impacts in the supply chain and actions taken	Social Responsibility-Win-win Cooperation	P70-72
Society			
GRI 401: Employment			
401-1	New employee hires and employee turnover	Table of ESG Performance	P82-89
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Social Responsibility-Employee Care	P64-69
GRI 402: Labor/Management Relations			
402-1	Minimum notice periods regarding operational changes	Social Responsibility-Employee Care	P64-69
GRI 403: Occupational Health and Safety			
403-1	Occupational health and safety management system	Social Responsibility-Safety and Health	P58-63
403-2	Hazard identification, risk assessment, and incident investigation	Social Responsibility-Safety and Health	P58-63
403-3	Occupational health services	Social Responsibility-Safety and Health	P58-63
403-4	Worker participation, consultation, and communication on occupational health and safety	Social Responsibility-Safety and Health	P58-63

Disclosure topic/ Disclosure item	Disclosure title	Chapter index	Page
403-5	Worker training on occupational health and safety	Social Responsibility-Safety and Health	P58-63
403-6	Promotion of worker health	Social Responsibility-Safety and Health	P58-63
403-9	Work-related injuries	Table of ESG Performance	P82-89
403-10	Work-related ill health	Table of ESG Performance	P82-89
GRI 404: Training and Education			
404-1	Average hours of training per year per employee	Table of ESG Performance	P82-89
404-2	Programs for upgrading employee skills and transition assistance programs	Social Responsibility-Employee Care	P64-69
GRI 405: Diversity and Equal Opportunity			
405-1	Diversity of governance bodies and employees	Table of ESG Performance	P82-89
GRI 406: Non-discrimination			
406-1	Incidents of discrimination and corrective actions taken	Social Responsibility-Employee Care	P64-69
GRI 413: Local Communities			
413-1	Operations with local community engagement, impact assessments, and development programs	Social Responsibility-Community Prosperity	P73-81
GRI 418: Customer Privacy			
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	Social Responsibility-Product Responsibilities	P52-54

Appendix IV: Independent Limited Assurance Report

To the Board of Directors of China Shenhua Energy Company Limited:

We were engaged by the Board of Directors of China Shenhua Energy Company Limited ("CSEC") to provide limited assurance on the 2022 Environmental, Social and Governance Report of CSEC for the year ended 31 December 2022 ("the ESG Report").

I. Responsibilities of the Board of Directors

The Board of Directors of CSEC is solely responsible for the preparation and presentation of the 2022 ESG Report, including the information and assertions contained within it, in accordance with the disclosure recommendations of the following guidelines issued by the Shanghai Stock Exchange ("SSE Guidelines") and by the Hong Kong Exchange ("HKEX Guidelines"):

SSE Guidelines include:

- Circular on Issuing the Guidelines on the Rules of the Shanghai Stock Exchange for the Self-regulation of Listed Companies No.1 – Standardized Operation
- Preparation and review of internal control report and social responsibility report

HKEX Guidelines include:

- Environmental, Social and Governance Reporting Guide

The Board of Directors is also responsible for determining CSEC's objectives in respect of social responsibility performance and reporting, including identification of stakeholders and material issues that are relevant to these stakeholders; for establishing and maintaining appropriate performance management and internal control systems from which the reported performance information is derived; for establishing and maintaining the internal control that is necessary to make ESG report free from material misstatements due to fraud or error, and for maintaining adequate records.

II. Responsibilities of KPMG

Our responsibility is to carry out a limited level of assurance engagement on below selected key ESG-related performance indicators:

- Total carbon emissions
- Carbon emission intensity
- Total sulfur dioxide emission
- Total nitrogen oxide emissions
- Total soot emission
- Chemical oxygen demand
- Output of sewage and wastewater
- Utilisation amount of sewage and wastewater
- Output of general solid waste
- Output of hazardous wastes
- Total natural gas consumption
- Comprehensive energy consumption
- Total water consumption
- Amount of environmental protection input
- Number of patents obtained
- Number of invention patents obtained
- Number of serious accidents and above
- Number of deaths due to production safety accidents
- Total number of employees
- Number of female employees
- Percentage of employees turnover

We conducted our work in accordance with International Standard on Assurance Engagements 3000: *Assurance Engagements other than Audits or Reviews of Historical Financial Information*, issued by the International Auditing and Assurance Standards Board. The standard requires us to plan and execute our work to obtain limited assurance that ESG reports are free of material misstatements.

Our independent limited assurance report is made solely to CSEC in accordance with the terms of our engagement. Our work has been undertaken so that we might state to the Board of Directors of CSEC those matters we have been engaged to state in this independent limited assurance report and for no other purpose. We do not accept or assume responsibility to anyone other than CSEC for our work, for this independent limited assurance report, or for the conclusions we have reached.

III. Our independence and quality control

We have complied with our independence and other relevant ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, and complied with the applicable requirements of International Standard on Quality Control 1 to maintain a comprehensive system of quality control.

IV. Summary of work performed and the limitations

A limited assurance engagement on a ESG report consists of making inquiries, primarily of persons responsible for the preparation of information presented in the ESG report, and applying analytical and other evidence gathering procedures, as appropriate. Our procedures included:

- Interviewing management and staff at CSEC Head Office responsible for collating and reporting the Disclosed Information, and interviewing staff of the centralized departments for business management at CSEC Head Office;
- Comparing the information presented in the ESG Report to corresponding information in the relevant underlying sources from CSEC Head Office to determine whether key information contained in such underlying sources has been included in the ESG Report in accordance with the disclosure recommendations of the SSE Guidelines and HKEX Guidelines;

- Performing analytical review procedures on the selected key indicators relating to environmental protection, production safety and others recommended to be disclosed by SSE Guidelines and HKEX Guidelines;
- Carrying out assurance work to some major subsidiaries (branches), selected on the basis of a risk analysis including the consideration of both quantitative and qualitative criteria;
- Reconcile key financial data in the ESG Report with the audited financial statements.

The scope of this limited assurance engagement is the headquarter of China Shenhua Energy Company Limited, China Energy Yudean Taishan Power Co., Ltd. and Shendong Coal Branch Daliuta Coal Mine of China Shenhua Energy Company Limited, the information of other branches and subsidiaries is not included in the scope of this limited assurance engagement. Where the ESG report has included information or year-on-year comparisons of information not contained in previous reports, we have not examined the information for previous years. Meanwhile, the scope of this limited assurance engagement is also excluded other information beyond selected key ESG-related performance indicators in the 2022 ESG Report.

The extent of evidence gathering procedures performed in a limited assurance engagement is less than that for a reasonable assurance engagement, and therefore, a lower level of assurance is provided. In addition, our work was not undertaken for the purpose of opining on the effectiveness of CSEC's systems and procedures.

V. Conclusions

Our conclusions are based on and shaped by the matters outlined in this report.

Based on the procedures performed and the evidence obtained, nothing has come to our attention that causes us to believe that the selected key ESG-related performance indicators disclosed in the 2022 ESG Report is not prepared, in all material respects, in accordance the disclosure recommendations of the SSE Guidelines and HKEX Guidelines.

KPMG Huazhen LLP

24 March, 2023

Appendix V: Definitions

Abbreviation	Full Name
China Shenhua or the Company	China Shenhua Energy Company Limited
China Energy	China Energy Investment Corporation Limited
Shendong Coal	China Energy Shendong Coal Group Co., Ltd.
Baorixile Energy	China Energy Baorixile Energy Co., Ltd.
Shuohuang Railway	Guoneng Shuohuang Railway Development Co., Ltd.
Xinshuo Railway	China Energy Xinshuo Railway Co., Ltd.
Trading Group	China Energy Trading Group Co., Ltd.
Huanghua Harbour Administration	China Energy Huanghua Harbour Administration Co., Ltd.
Tianjin Harbour Administration	China Energy (Tianjin) Harbour Administration Co., Ltd.
Zhuhai Harbour Administration	China Energy Zhuhai Harbour Administration Co., Ltd.
Shipping Corporation	Guoneng Yuanhai Shipping Co., Ltd.
Baoshen Railway	China Energy Baoshen Railway Group Co., Ltd.
Baotou Energy	China Energy Baotou Energy Co., Ltd.
Yulin Energy	China Energy Yunlin Energy Co., Ltd.
Baotou Coal Chemical	China Energy Baotou Coal Chemical Co., Ltd.
Sichuan Energy	China Energy Sichuan Energy Co., Ltd.
EMM Indonesia	PT. GH EMM Indonesia
Taishan Power	China Energy Yudean Taishan Power Co., Ltd.
Cangdong Power	China Energy Hebei Cangdong Power Co., Ltd.
Jinjie Energy	China Energy Jinjie Energy Co., Ltd.
Shouguang Power	Shenhua Guohua Shouguang Power Generation Company Limited

Abbreviation	Full Name
Pembangkitan Jawa	PT. Shenhua Guohua Pembangkitan Jawa Bali
Shengli Energy	Shengli Energy Branch of the Company
Material Company	China Energy Supply Chain Management Group Co., Ltd.
SSE	Shanghai Stock Exchange
HKEx	The Stock Exchange of Hong Kong Limited
Listing Rules	The Rules Governing the Listing of Stocks on Shanghai Stock Exchange and the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited
Accounting Standards for Business Enterprise	The latest Accounting Standards for Business Enterprises issued by the Ministry of Finance of the People's Republic of China and the related application guidelines, interpretations and other related requirements
International Financial Reporting Standards	International Financial Reporting Standards issued by the International Accounting Standards Committee
Articles of Association	Articles of Association of China Shenhua Energy Company Limited
CNY	Renminbi, unless otherwise specified

Feedback from Readers

China Shenhua values your opinions on the Company's endeavours on environmental, social and governance and this ESG Report. Your opinions and advice will add momentum to the continual improvement of this Report.

Please fax this sheet to +86-10-58131814 or email it to ir@csec.com after you have answered the following questions.

1. Is there any topic that you are concerned about but is not covered in this Report? If so, please write down the issue(s) that you are concerned about.

2. Which part(s) of this Report are you most interested in?

You are welcome to provide personal particulars if you wish:

Name: _____

Occupation: _____

Organisation: _____

Telephone: _____

Fax: _____

Email: _____

Postal code: _____

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