



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

2019

Environmental, Social Responsibility and Corporate Governance Report



沪市公司质量行——走进中国神华

About the Report

This is the second environment, social responsibility and corporate governance report (referred to as “ESG Report”) issued by China Shenhua Energy Company Limited (referred to as “China Shenhua” or the “Company”), which mainly introduced information of the Company in aspects of environmental protection, social contribution and corporate governance with an eye to enhancing communication and liaison with all stakeholders. 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.

Main Scope of the Report

The report is mainly about China Shenhua Energy Company Limited and its subsidiaries. For details of the main scope of the report, please refer to the 2019 Annual Report as disclosed together with this report.

Reporting Period

The ESG Report of the Company is issued annually. The reporting period is from 1 January 2019 to 31 December 2019 while certain contents exceed this period.

Preparation Basis of the Report

“Notice on Strengthening Listed Companies’ Undertaking of Social Responsibilities and Issuance of Guidelines on Environmental Information Disclosure by Companies Listed on the Shanghai Stock Exchange”, “Guidelines on Environmental Information Disclosure by Companies Listed on the Shanghai Stock Exchange”, “Guidelines on Preparation of Corporate Report on Performance of Social Responsibilities”, “Notice of Information Disclosure in Relation to Further Optimizing Poverty Alleviation Work of Listed Company”, and the “Guidelines on Environmental, Social Responsibility and Corporate Governance Information Disclosure by Listed Companies (Draft for Public Comments)” issued by the Shanghai Stock Exchange;

“Environmental, Social and Governance (“ESG”) Reporting Guide” issued by the Hong Kong Stock Exchange;

The GRI Sustainability Reporting Standards (referred to as “GRI standards”) issued by the Global Sustainability Standards Board (the “GSSB”).

Note The Company has issued 11 annual social responsibility report since the first corporate and social responsibility report in 2008, accumulatively. In order to further fulfill the information disclosure requirements for listed companies, the Company firstly issued environment, social responsibility and corporate governance report in 2019.

Principles of Data Processing

Unless otherwise indicated, the reporting period of data and statement disclosed in this report is consistent with the reporting period of this report. The financial information contained in this report is sourced from the audited financial report of the Company for 2019. Unless otherwise indicated, Renminbi is the denomination currency in this report. The major indicators on safety and environmental protection of the Company are calculated in accordance with China's regulations or industry standards, including General Principles for Calculation of the Comprehensive Energy Consumption (GB/T2589—2008), the General Principles of Water Statistics in Enterprises (GB/T 26719-2011), Calculation Method for Pollution Discharge Volume at the Discharge Outlet of State Controlled Pollution Sources (H.B. [2011] No.8), Energy Statistical Reporting System (2019) (National Bureau of Statistics), etc.

Assurance

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

Language Versions and Availability of the Report

This report is published in Simplified Chinese, Traditional Chinese and English. The financial data contained in the Simplified Chinese version are extracted from the A-Share financial report of the Company, whereas those in the Traditional Chinese version and English version are extracted from the H-Share financial report of the Company. This report is available to stakeholders and the public in a PDF document, which can be downloaded from the websites of the Shanghai Stock Exchange and the Hong Kong Stock Exchange and the official website of China Shenhua (www.csec.com). Please email 1088@csec.com or dial 86-10-5813-3355 to request for a printed copy of this report.

We have taken into consideration the different reading interests and requirements of different stakeholders to the extent possible during the compilation of this report to make it as plain, clear and easy to read as possible. The compilation of this report may not be entirely satisfactory due to various objective constraints. You are welcome to put forward your opinions and suggestions by completing the Feedback Sheet attached with this report. The Company will improve and enhance the report on a best effort basis in the future.

Contents

1	About the Report
4	Chairman's Statement
6	ESG Governance Statement from the Board
7	Journey to China Shenhua

10 Corporate Governance

10	Governance System
16	Compliance Operation
22	Party Building

24 ESG Governance

24	ESG Governance Structure
26	ESG Governance System

32 Safe Production

32	Safety Management System
34	Implementation of Safe Production Responsibility
35	Safety Risk Prevention
40	Safety Management of Contractors
41	Enhancement of Employee Safety Awareness

42 Environmental Protection

42	Response to Climate Change
50	Environmental Management System
55	Water Resources Protection
56	Biodiversity

58 Employee Development

58	Protection of Rights and Interests of Employees
62	Assistance to Employee Growth
63	Occupational Health
67	Focusing on Employees' Happiness

68 Harmonious Society

68	Adhering to Quality Service
71	Creating a Responsibility Supply Chain
73	Creating a Beautiful Community Together

79	Future Outlook in 2020
80	Appendix I: Table of Key Performance
84	Appendix II: Indicator Index
87	Appendix III: MSCI-ESG Self-evaluation Table
95	Appendix IV: Independent Assurance Report
97	Appendix V: Definitions
99	Feedback

Chairman's Statement

Dear Stakeholders:

In the past year, many investors have enquired about the future of China Shenhua, citing as examples the withdrawal from coal and coal-fired power plants by Europe and the United States. We have also noticed that large asset managers in the market plan to phase out proactive investments in thermal coal producers and strengthen the ESG management for passive investment targets. We understand the actions of the above-mentioned investors; we are also responding positively to the above ESG management and disclosure requirements, and you can feel our efforts in this report.

While insisting on ESG governance, China Shenhua will remain an integrated coal-based energy company. You may better understand China Shenhua in three ways. First, in terms of energy security, for a long time, even in the long run, China is still under a energy landscape dominated by coal, but with decline proportion and China will not distract attention from coal. Second, China Shenhua is a leader in the clean, efficient, safe and large-scale production of China's coal industry, only large-scale coal companies like China Shenhua insist on quality production and tax paying, so that China can be secured with national energy supply while having unsafe, highly polluted and inefficient small and medium-sized coal mines shut down to subsidize and develop renewable energy, gradually solve problems such as re-employment, social transformation and environmental protection, and complete supply-side structural reform and energy revolution. This is the original intention and historical mission of China Shenhua. Third, if China's coal is essential for China, China Shenhua would be one of its best suppliers. China Shenhua respects the views of all shareholders and various stakeholders, the Company will strengthen the efforts of ESG governance, fully disclose the operation and governance information, strive to enhance the ESG rating, and support the decision-making of investors and various stakeholders.

Next, I would like to report on the implementation of the ESG tasks by China Shenhua in 2019.

2019 is the 70th Anniversary of the Founding of New China, and it is also a year for us to keep our shoulder to the wheel. Under the guidance of Xi Jinping's Thought on Socialism with Chinese Characteristics for a New Era, China Shenhua assiduously implements the comprehensive development strategy of "One Target, Three Models and Five Strategies, and Seven First-class" of the China Energy, adheres to the new development concept, and promotes high-quality development, and wades through challenges with certainty.

This year, we continued to give priority to business efficiency, we prevented operational risks and further improved our operational quality. We have achieved a revenue of RMB241.87 billion and a total profit of RMB49.78 billion for the year, ranking 14th among the world's top 250 energy companies in 2019 in Platts. We have steadily promoted the themed education of "remaining true to our original aspiration and keeping our mission firmly in mind", strengthened our ideological and political propaganda, and guided the first-class enterprises construction with first-class Party building. With our focus on improving ESG governance, we have further strengthened the foundation of corporate governance.

This year, we firmly established the concept of "Lucid waters and lush mountains are invaluable assets", actively responded to the climate change risks, conducted comprehensive assessment on climate risks and examination and verification of greenhouse gas emission, vigorously implemented clean production and energy resources utilization, intensively carried out the "Year of Implementation" campaign, and worked with our partners to build a moat of production and environmental safety. In 2019, the fatality rate per million tonne of raw coal output was nil, and the transportation industry has not recorded a single casualty for three consecutive years. 14 coal mines have entered the national green mine directory, and Zhunneng Group has built the first digital open-pit mine in China. Guohua Power was the only coal-fired power enterprise in China to win the "China Environment Award" Enterprise Excellence Award; Huanghua Port was ranked No. 1 in terms of green safety among 22 major coastal ports in China, and has passed the national 3A industrial scenic spot inspection.

This year we also completed a number of innovations and breakthroughs. The world's first 8.8-m ultra-high mining equipment has successfully completed its first work-phase production; the world's first pure water hydraulic system was successfully tested, achieving zero pollution from the emulsion; the vacuum of Intelligent driving operation on China's heavy-loaded railroads was filled since the operation of intelligent driving on Shenshuo Railway commenced train.

This year, no matter whether its employee development or social progress, every drop of happiness contained our hard work and sweat. We have adopted a variety of measures, such as democratic management, evaluation and employment of "Chief Principals" and assistance to employees in difficulties, we ensured that our employees' rights and interests are not infringed, we balanced the work and life of our employees, developed and progressed together with our employees. We have adopted various targeted poverty alleviation methods such as people's livelihood, intelligence, and industry to help Mizhi County and Wubu county in Shaanxi Province and Nierong County in the Tibet Autonomous Region to successfully relieve from poverty.

No pain no gain. The year of 2020 is a decisive year of getting rid of poverty, China will build a well-off society in an all-round way and achieve its first century-old goal. We have never retreated at crucial moments, and we have always shouldered the mission of safeguarding national energy security and providing clean energy for social development. This is a new era for China Shenhua and an unshirkable duty of China Shenhua. In the first quarter, by resolutely implementing the decision-making deployment of the Party Central Committee and the State Council, we acted swiftly, and mobilized our employees in an all-round way to solidly implement the "One Prevention and Three Guarantees" work, namely the prevention and control of novel coronavirus pneumonia epidemics, the guarantee of production safety, employee health, and energy supply. While joining the prevention and control of novel coronavirus pneumonia epidemics, we ensured energy supply for the country, especially for Hubei, and advanced all work in an active and orderly manner. Let us joint hands to build a world-first-class energy company with global competitiveness, let us seize the day and live it to the fullest!

Chairman Wang Xiangxi

27 March 2020

ESG Governance Statement from the Board

The Board of Directors of China Shenhua undertakes that the Company will strictly comply with the disclosure requirements of the environmental, social and governance report guidelines of the stock exchange in the place of listing.

The Safety, Health and Environmental Protection Committee of the Board of Directors is responsible for monitoring the commitment and performance of key ESG issues of China Shenhua. We will, through convening regular meetings and other forms, discuss and clarify the regulatory responsibilities of the Board of Directors, and improve its regulatory process, so as to integrate ESG into the Company's business operation and long-term development goals, and ensure that ESG truly integrates into the Company's corporate culture.

In 2019, in order to enhance the awareness of ESG governance of members of the Board of Directors, the Board of Directors launched ESG knowledge training. The Company improved the ESG issue database, evaluated the importance of these issues, and selected ten key ESG issues, so as to clarify the annual work priorities, and formulate the Company's ESG indicators and goals.

In 2020, the Board of Directors of the Company will further improve the ESG risk management, information collection and reporting system, establish the reward and punishment mechanism relating to ESG, and promote the continuous improvement of the Company's ESG governance level.



Journey to China Shenhua

Profile of the Company

China Shenhua, controlled by China Energy, is cross-listed in both Hong Kong and Shanghai stock exchanges. The headquarters is located in Beijing.

China Shenhua is a world-leading, coal-based integrated energy company with a complete coal industry chain, whose main businesses include the production and sales of coal and electricity, railway, port and ship transportation, and coal-to-olefin, etc, achieving a one-off operation for production, transportation and sales. Resource sharing, deep cooperation, effective coordination and low-cost operation among various industrial sectors have formed China Shenhua's core competitive advantages.

Business profile



Coal

China Shenhua is the world's largest listed coal company and the largest coal production and sales enterprise in China. The Company possesses high quality coal resources in Shendong Mines, Zhunge'er Mines, Shengli Mines and Baorixile Mines, etc. The coal business has become a model for large-scale, highly-efficient and safe production in China's coal industry.



Transportation

China Shenhua is the second-largest domestic railway operator, controlling and operating a network of concentric transportation railways around the major coal production bases in western Shanxi, northern Shaanxi and southern Inner Mongolia as well as along "Shenshuo – Shuohuang Line", a major channel for coal transportation from western to eastern China. China Shenhua has numerous self-owned integrated port and docks, such as Huanghua Dock, Tianjin Coal Dock, Zhuhai Coal Dock, and a fleet comprising self-owned vessels with approximately 2.18 million tonnes of loading capacity, realizing the low-cost and high-efficiency in core mining areas.



Power

China Shenhua continues to promote clean development of coal power, controls and operates large-scale and high-capacity clean coal-fired power generators, and keeps the proportion of installed capacity of ultra-low emission coal-fired power generators at the leading level in the industry.



Coal to chemical

China Shenhua owns the world's first coal-to-olefin demonstration plant, which is of great significance to realize China's energy strategy and ensure national energy security.

About China Shenhua 2019



Revenue
RMB241,871 (million)



Basic earning
2.097 (RMB/share)



Total paid tax
RMB48,389 (million)



Social donation
RMB279 (million)



Annual final dividend 1.26 (RMB/share,
tax inclusive) (plan)



R&D contribution
RMB1,245 (million)



Environmental protection contribution
RMB1,424 (million)



Occupational health
contribution RMB652 (million)

ESG Honours



Corporate Governance

China Shenhua has adhered to the strategic objective of “establishing a global top-tier energy listed company with international competitiveness”, and complied with the national laws and regulations and domestic and foreign listing rules to promote the establishment of compliance management system; leveraged the effectiveness of “setting the right direction, managing the overall situation and safeguarding the implementation” of the Party organization by promoting the in-depth integration of leadership of the Party and corporate governance as the orientation to guarantee scientific and highly effective decision-making of the Board and strengthen the duties of operation and management of the management level; seized the democratic management system with the establishment of “three in one” enterprise comprising comprehensive employee representative meeting, publicity of plant affairs and employee representative supervisor to leverage the effectiveness of participation in decision-making of the Company by employees; regarded the regulated internal control system and mechanism as the focus to organize a team with work ethic and integrity when performing duties, so as to strengthen the capability of the Company to withstand risks.

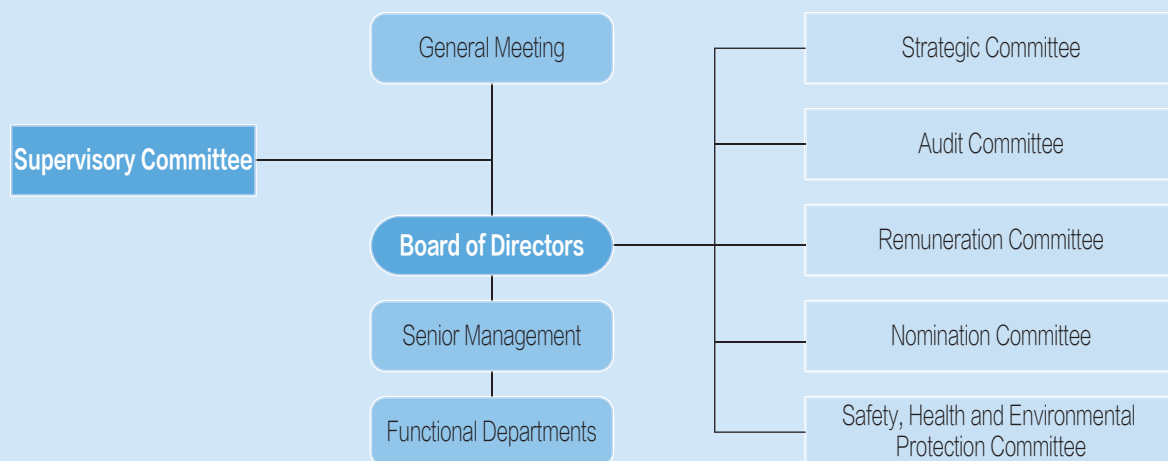


Governance system

Decent corporate governance mechanism, conducive to the enhancement of corporate value and maintenance of shareholders' interests, is an important basis for the Company to realize sustainable development. China Shenhua has constantly optimized its corporate governance system and constantly improved its management level during the long-term corporate governance practice. General meetings, the Board and its special committees, the Supervisory Committee as well as the management and all functional department of which the general manager is responsible for have clear duties and responsibilities with high effectiveness.



Governance Structure



1^{time}

Convening of general
meeting during
the year

15^{items}

Important issues
considered and
approved

6^{times}

Convening of roadshows and
reverse roadshows
during the year

Governance mechanism

Shareholders and general meeting

General meeting is the highest authority of the Company. Shareholders exercise the functions and duties lawfully through general meetings. The Company convenes general meetings in strict accordance with the Articles of Association, and performs such work as notice and review, voting and information disclosure based on the rules of procedures to adequately safeguard all shareholders to rank pari passu, and effectively exercise their rights to know, to participate, to question and to vote.



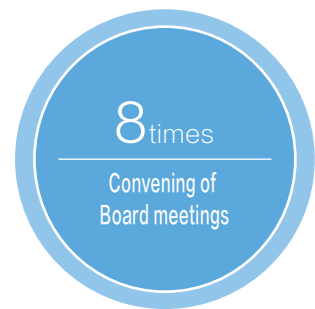
In November 2019, "SSE Company Quality Visit – I am a Shareholder" event of the Shanghai Stock Exchange was held in China Shenhua. Over 30 minority investors visited Shenhua Guohua Beijing Gas Thermal Power Plant, and communicated with the management of the Company.

The Company attaches great importance to the protection of the interests of investors. The Company adequately illustrates the fact of the operation information of the Company to the investors through periodic reports, announcements, roadshow and reverse roadshow, SSE e-interactive internet platform, hotlines, mail and other channels to safeguard the investors' right to know. The Company has formulated separate vote counting and cumulative voting system, not imposing any minimum shareholding limitation for soliciting voting rights, disclosure of the policy of dividend distribution and other regulations to protect the legitimate interest of minority shareholders.

Directors, Board of Directors and relevant special committees

Directors of the Company, who are elected at the general meetings, are responsible to the shareholders with a term of office of three years and are eligible to re-election upon expiry of the term of office. Directors protect the interests of the shareholders as a whole, pursue the principle of being diligent, honest and prudent, and be earnest to perform duties.

The Board of Directors is a standing decision-making body of the Company and is responsible to the general meeting. The Board of Directors established the Strategic Committee, the Audit Committee, the Remuneration Committee, the Nomination Committee and the Safety, Health and Environmental Protection Committee. All special committees leverage their expertise, and carry out pre-consideration and gate keeping of the resolutions of the Board of Directors. In 2019, the Board of Directors considered a total of 77 resolutions regarding the annual report, related party/connected transactions and amendment to regulatory system; commenced ESG theme training titled “performing responsibilities of the Board of Directors to promote the value and image of the Company” and anti-corruption special training.

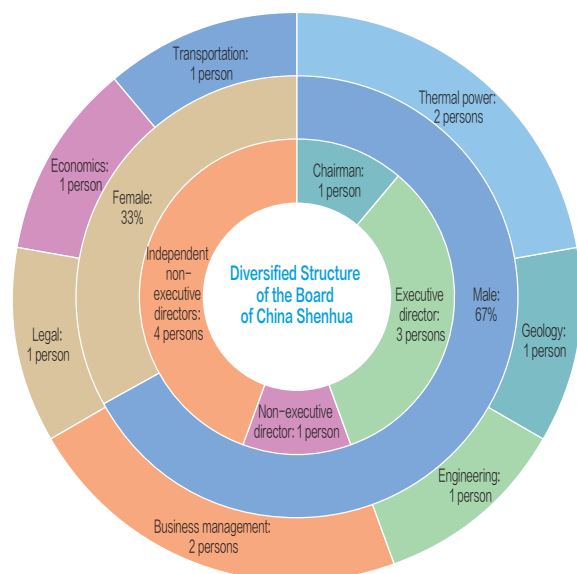


Safety, Health and Environmental Protection Committee comprises 5 Directors, principally regulating the ESG governance of China Shenhua, and reporting to the Board.

Main duties

- Considering the ESG governance strategic direction of the Company, ESG management system and management targets, key and substantive issues, ESG risks and opportunities and annual ESG reports
- Supervising and inspecting the identification, valuation and management process of relevant matters of ESG management and promotion and progress of relevant goals

China Shenhua has formulated the diversity policy of members of the Board of Directors. Election of the members of the Board of Directors is based on diversity, combined with the characteristics and functions of personnel, as well as the actual condition, proprietary business model and work demand of the Company. In 2019, the Directors of the Company were from different industries. Knowledge structure and professional sector of each Director in the overall structure of the Board of Directors are professional and complementary, presenting the characteristics of diversity to safeguard the scientific decision-making of the Board of Directors.



Performance of duties of independent Directors

The Company's independent Directors have faithfully performed and diligently fulfilled their duties pursuant to the Company Law, the listing rules of the place of listing, as well as relevant provisions such as Guiding Opinions on Establishing Independent Director System for Listed Companies, the Articles of Association, the Company's Independent Director System and other regulations of the Company, adhering to be diligent, honest and duties as independent Directors, safeguarding the interests of the Company as a whole, and safeguarding the legitimate rights and interests of all shareholders, especially minority shareholders.



In 2019, the independent Directors of the Company successively visited the top production and construction lines of Huangda Railway, Shouguang Power Plant, Liuzhou Power Plant and Beihai Energy Base for research and investigation. Based on the in-depth understanding of the operation condition and construction of material projects of the Company, together with their professional knowledge and experience, the independent Directors have provided opinions and suggestions on the normative operation and business development of the Company, and have played their roles as independent Directors to maintain the shareholders' interests as a whole to the largest extent.



On-site research of independent Directors of China Shenhua to Liuzhou Power Plant (left) and Guohua Shouguang Power Plant (right)

The Chairman of the Board of Directors and chief executive officer of the Company are two posts with different personnel holding office. Therefore, there is no problem of over-concentration of power. The Company has not adopted the chief independent Director system. In 2019, the independent Directors, in accordance with the actual condition of the Company and the information submitted by the Board of Directors and based on the objective and independent stance, issued independent opinions focusing on the development and operation of the Company, which mainly include:

- Nominating and appointing Directors and senior management personnel of the Company, and delivering independent opinions regarding the 2018 Profit Distribution Plan of the Company
- Concerning the legitimate interests of minority shareholders, and delivering independent opinions regarding significant matters and relevant resolutions affecting the interests of minority shareholders
- Resolving the implementation of the Board of Directors, especially for the implementation of the related party transactions, foreign guarantee, protection of minority shareholders, performance undertakings of large shareholders, remuneration of the management, internal control and information disclosure matters of the Company
- Commencing on-site research and investigation for material investment, operation and construction projects of the Company, and making recommendations on the regulated operation, remuneration appraisal, financial management, internal risk management, safety and environmental protection, future development and others

Supervisors and Supervisory Committee

The Supervisory Committee of the Company honestly and prudently performs the functions of supervision, and actively and effectively commences work in accordance with the Company Law, the Articles of Association and relevant regulations, as well as by virtue of earnest and responsible spirit of the shareholders as a whole, to ensure the Company's compliance with and conforming to the laws and regulations of the PRC, the Listing Rules, the Article of Association and other relevant regulations. The Company fostered the normative operation of the Company, endeavored to maintain the legitimate interests of the Company and shareholders. As of the end of 2019, the Supervisory Committee of the Company comprised 3 Supervisors, including one employee representative Supervisor.



Senior management

Senior management, the executive authority of the Company, is engaged by and responsible to the Board of Directors. According to the requirements of the Company Law and the Articles of Association as well as the authorization of the Board of Directors, executive Directors resolve and organizes production, operation and other business activities of the Company.

Equity incentive mechanism

The Company has not adopted equity incentive mechanism.

For more details of corporate governance, please refer to the announcements and the 2019 Annual Report on the website of the Company.

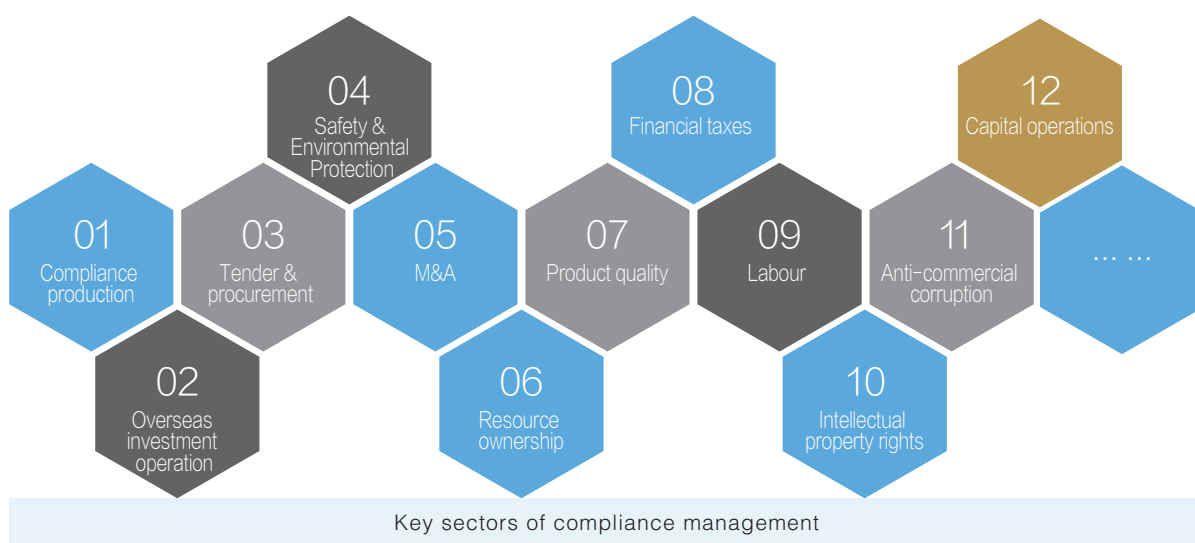
Compliance Operation

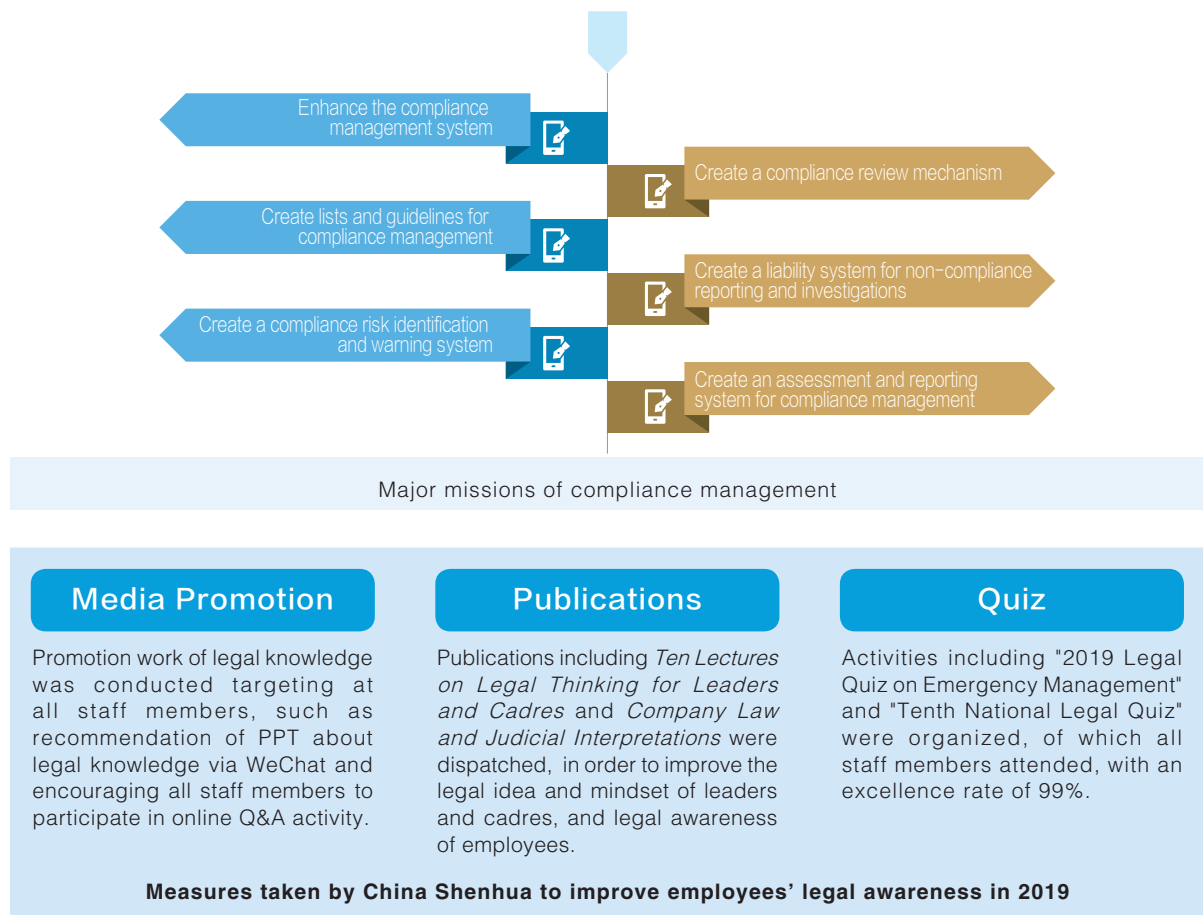
Abiding by the law and operating in good faith are the basic guarantees for enterprises to realize sustainable development. While pursuing high-quality development, China Shenhua adheres to corporate governance, business ethics standards and market best practice, abides by human rights policies in the PRC, and actively carries out compliance management, risk management and control, anti-corruption and other work, to protect the stable development of enterprises.

Compliance in Operation

China Shenhua strictly adheres to the laws and regulations of the PRC and the Listing Rules. According to the principle of “comprehensive coverage, emphasis on key points, clarity of authority and responsibility, efficient coordination”, China Shenhua establishes the compliance management leadership system comprising the decision-making of the Board of Directors, committee coordination, management promotion and general counsel with the compliance management work mechanism of the combination of lead management, specialization and enhanced supervision.

In 2019, China Shenhua formulated *the Requirement on Compliance Management of China Shenhua (Provisional)* and *the Work Plan for the Establishment of Compliance Management System of China Shenhua*. The Company established comprehensive work mechanism for procurement and bidding leading groups, which are specifically responsible for the consideration and approval of procurement methods and results of materials, engineering and services of various companies, and strictly implement the public bidding system. China Shenhua strictly implemented regular meetings for the related party transaction groups and the consideration and approval management system, considered and approved the new quota requirements for 33 related party transactions in 14 branches, maintained the list of related party transactions in a timely manner, and ensured that the daily related party transactions were controlled within the annual cap. China Shenhua carried out special lectures on “compliance management”, strengthened legal publicity, enhanced employees’ legal concept and legal awareness, and initially established a team of corporate lawyers to promote the scientific and standardized internal management of enterprises. In 2019, the Company was not involved in major litigation or arbitration matters.





Code of Ethics

China Shenhua abides by business ethics, defines relevant policies and code of conduct, adheres to strict compliance with code of business conduct, and has been committed to business integrity and fair competition. We also support and carry out the anti-corruption initiative of China Energy, the Controlling Shareholder of the Company, which is a partner to "World Economic Forum in Davos".

Anti-corruption

China Shenhua placed key links, persons and matters under control. China Shenhua continues to organize anti-corruption activities and cultivate integrity culture, and thus constantly improves the pertinence and effectiveness of supervision, and creates a regulated and legal operation environment.

We took the following anti-corruption actions in 2019

01

Anti-corruption defense

We have arranged for the Company's members of the party committee to sign the "One Position with Dual Responsibilities" work responsibility statement reminding to twice implement "One Position with Dual Responsibilities", in an effort to encourage clean practices by leaders. We organised an educational programme designed for our employees, where they "learnt laws and regulations, discussed cases and drew their bottom lines"; held anti-corruption quiz games; arranged a visit to Beijing's comprehensive anti-corruption education base; and formulated and offered 18 issues of "Holiday Integrity Reminder" and electronic brochures for the four typical cases, all for leading cadres and party members to build an ideological defense.

02

Keeping the reporting information confidential

We have drafted the management methods to standardise information transfer, registration, ways of handling and work discipline. We stipulate strict compliance with the confidentiality rules in *the Regulations Governing Disciplinary Work Supervised by Disciplinary Inspection Committee of Communist Party of China* ("中國共產黨紀律檢查機關監督執紀工作規則"), where the complaint hotline and email are managed by dedicated personnel, and relevant individuals leaving their post subject to a post-declassification period, all to ensure the legal rights and interests of whistle-blowers.

03

Internal inspection

We have formulated Provisions on Prohibiting Leaders' Relatives and Other Specific Relevant Persons from Engaging in Economic Activities in China Shenhua's Corporate System (Trial) and have carried out investigative interviews regarding the situation of family members and relatives of leaders of deputy ranks or above at the headquarters conducting economic activities in the corporate system of China Energy Investment Corporation; In respect of the evaluation for outstanding personnel, performance evaluation, overseas departure and election of branch committee of the headquarters of the Company, issue of opinions on Party style and clean government for 232 persons was made.

04

Investigation on misconduct

Strict implementation of the Measures on Non-compliance and Misconduct of Employees (《職工違規違紀處理辦法》), and rectification of violation of rules and regulations by the cadres, 86 employees of the Company and the subsidiaries thereof were imposed disciplinary sanctions in total in 2019.



Headquarters of the Company organized all staff to visit comprehensively Party building education base in Beijing (left), and conduct seminar on integrity education (right)

Anti-Corruption work	2019
Integrity education (<i>sessions</i>)	2,873
Employees attending integrity education activities (<i>person-times</i>)	103,198
Corruption reports received (<i>pieces</i>)	367
Corruption reports verified (<i>pieces</i>)	351
Persons who have received disciplinary or administrative penalties (<i>persons</i>)	86
Losses recovered from anti-bribery, fraud and embezzlement work (<i>RMB10,000</i>)	18.41

Anti-bribery

China Shenhua strictly forbids providing or taking bribes, gifts, hospitality or actions in other forms with an intention to avoid relevant business decisions of China Shenhua for acquiring unusual or improper advantages. In case of breach of laws, cooperation with or employment of the Party will be terminated immediately, and legal actions may be taken when necessary.

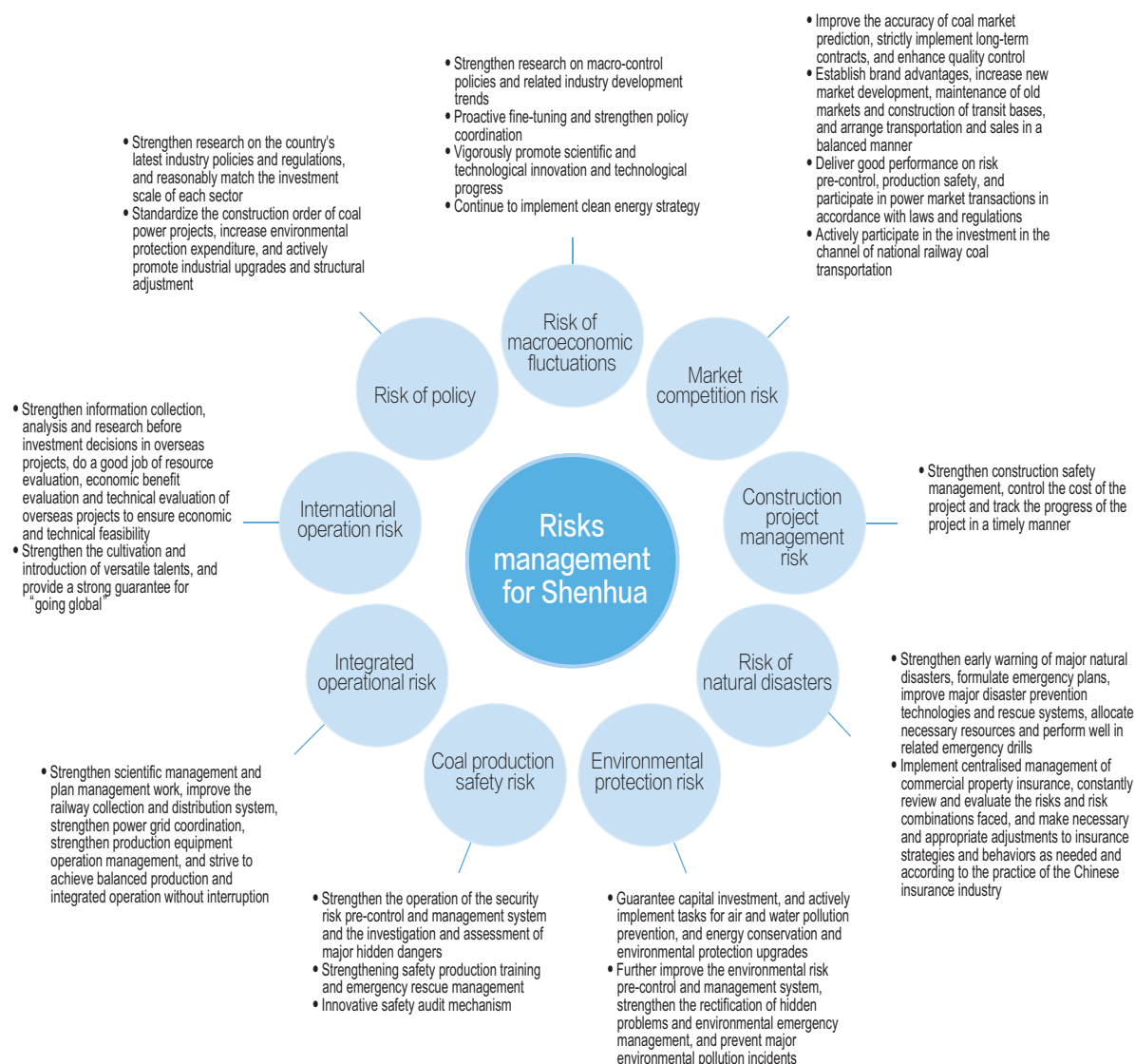
For procurement and sales, the Company formulated strict regulations to create purified business environment. Shenhua Logistics Group formulated “Ten Forbiddances” to Interactions between people of Logistics Group and Suppliers”, strictly forbidding employees from receiving gifts and entertainment provided by suppliers and from contacting suppliers in private, and aiming at improving employees’ anti-corruption awareness in the process of procurement to create a clean and incorruptible procurement environment. Shenhua Sales Group actively carried out the investigation on incorruptible employment risks, made key prompts for key positions, and guided employees to consciously resist commercial bribes and reflect and report relevant events in a timely manner.

Respect for human rights

China Shenhua respects and safeguards human rights in the process of operation and management in accordance with relevant national regulations, including equal employment of minorities and the disabled, workforce diversity, no discrimination, no child labour, preventing the act of violating human rights in production, business operation and supply chain. In addition, the Company has been committed to addressing social problems for the community and the public, including employment, medical care and education by engaging in community development, and significant effects have been obtained.

Risk Management

The Company identifies risks at the beginning of each year, conducts routine monitoring by, among others, quarterly monitoring, special inspection and internal audit of material risks, and performs assessment of control on material risks at the end of each year, in view of promoting decision-making process for improvement, improving internal control system, and constantly optimising risk management level. In 2019, material risks identified by the Company were under effective control, and stable production and operation was achieved as a whole. Meanwhile, with reference to the recommendation of the Task Force on Climate-related Financial Disclosures (TCFD), the Company included climate-related risks in the integrated risk management system of the Company. Risk assessment on climate change was implemented at all business levels, in order to alleviate and respond to the impact of climate change on the Company's business.



Internal Control

In addition to improvement of risk-oriented internal control operation mechanism, China Shenhua also formed a risk management and internal control work organization under the charge of the Board and the Audit Committee, functional departments of the headquarters and subsidiaries and branches at different levels, in order to safeguard effective operation of the system.

Identifying business-related risks In 2019, the Company, in accordance with the requirements on internal control and risk management of listed companies, completed *Integrated Risk Management Report*, quarterly *Material Risk Monitoring Report*, *Report on Implementation of Preventing and Mitigating Material Risks* and *Report on Preventing and Mitigating International Operation and Compliance-related Risks*, and hence further identified business-related risks and took targeted control measures.

Addressing internal control defects The Company took several measures to carry out self-inspection and rectification of the internal control defects (mainly involving procurement management, asset management, financial management, human resources management, etc.) identified last year to promote constant optimization of the internal control system. Through commencement of internal control examination and evaluation, the Company procured its subsidiaries and branches to establish and improve 42 systems, and hence effectively improved risk control capacity.

KPMG Huazhen LLP employed by the Company issued an unqualified audit report titled “Internal Control Audit Report”. According to the Report, China Shenhua maintained effective internal control on financial report in all material aspects in accordance with Basic Standard for Enterprise Internal Control and relevant regulations as at 31 December 2019. Above audit opinions are in line with the opinions of the Directors in self-assessment report.

Protection of Intellectual Property

China Shenhua protects the intellectual properties of the Company and its customers from infringement by establishing effective intellectual property system and procedures, to form system synergy.

Intellectual property management Persons were designated for intellectual property management, by establishing the use of intellectual property data platform, implementing necessary technical index prior to commencement of researches, to prevent repetitive research and infringement.

Intellectual property application The Company normalized intellectual property application process, promoted standardization and normalization of intellectual property management.

Training on intellectual property The Company popularized intellectual property system, patent management and precautions, in order to raise the awareness of employees and the management personnel on intellectual property, and ensure no infringement of trademarks, patents, copyrights or other intellectual properties of companies and individuals in operation.

Case study

Raise awareness and organize training programs on intellectual property

In order to raise employees’ awareness of intellectual property protection, comprehensively improve the quality of preparation of technical clarification of inventors, Shendong Coal actively organized training programs on operation of intellectual property system, basic knowledge of patent, and dispatched patent head to offer lectures on patent system and writing skills of technical clarification at material supply center, power supply center, Cuncata Mine, Bulianta Mine and other units. Through face-to-face exchange and one-on-one explanation, employees’ awareness of intellectual property and capability of intellectual property protection were improved. As of the end of 2019, a total of 528 employees attended training programs.

Party Building

Guided by Xi Jinping Thought on New-Era Chinese Socialism, China Shenhua firmly established “political awareness, overall awareness, core awareness and self-discipline awareness”, consolidated “confidence in road, theory, system and culture”, and strived to resolutely “defend General Secretary Xi Jinping’s core status in the CPC Central Committee and the whole Party and safeguard the authority of CPC Central Committee and its unified and centralized leadership”, implemented work requirements of the CPC Central Committee and the leading Party group of China Energy, established the work orientation of highlighting “towards high quality and development of dual first-class”, earnestly fulfilled its main responsibilities for comprehensive and strict rule over the Party, defined the relationship between Party leaders and corporate governance, and gave full play to the vanguard and exemplary role of Party organization and members, in order to lead the development of first-class enterprise with first-class Party building.



China Shenhua perfects its corporate governance structure, further clarifies the responsibility boundaries and working procedures of its party committees and corporate governance subjects, establishes decision-making and implementation supervision mechanisms with equal rights and responsibilities, coordinated operation, and effective checks and balances, and explores modern state-owned enterprise governance systems with Chinese characteristics.

The table below sets forth members of Party committee and the management members of China Shenhua as at the end of 2019

Name	Position
Yang Jiping	Deputy secretary of Party committee and chief executive officer
Xu Mingjun	Secretary of Party committee and executive vice president
Huang Qing	Member of Party committee and secretary to the Board
Zhang Guangde	Member of Party committee and executive vice president
Wang Xingzhong	Member of Party committee and executive vice president
Zhao Yongfeng	Member of Party committee and executive vice president
Zhang Changyan	Deputy secretary of Party committee, employee supervisor and general counsel
Yang Suping	Member of Party committee and secretary of discipline inspection commission
Xu Shancheng	Member of Party committee and chief financial officer

Note Mr. Zhao Yongfeng has resigned as the executive vice president of the Company on 26 March 2020, and no longer served as member of Party Committee of the Company.

In 2019, the headquarters of China Shenhua principally took the following actions to enhance Party building:

The Company enhanced political construction of the Party The Company organized ten sessions of theme seminars including, “Celebrating the 70th Anniversary of New China” and “Spirit of the Fourth Plenary Session of the 19th CPC Central Committee”, and reading activity titled “emphasize on study, improve quality and set good example”, in order to facilitate institutionalization and normalization of theoretical forces. An education program themed on “stay true to our original aspiration and bear in mind the mission” obtained actual effect, to promote and implement both issue review and rectification.

The Company implemented accountability for Party building The Company formulated 18 rules on Party building, including *the Measures for Implementing Accountability for Party Building* and *the Measures for Assessment on Accountability for Party Building*. Members of the Party committee of the Company entered into and performed the statement of work of “Dual Responsibilities on One Post”. A total of 11 Party branches at the headquarters of the Company entered into the statement of work on the target of Party building, to implement main responsibilities at specific level.

The Company enhanced Party branch building The Company strengthened basic team, by providing comprehensive coverage of training to all secretaries and organizers of Party branches; optimized basic rules, by formulating 14 rules including *the Opinions on Effective Improvement of the Quality and Effect of Party Branch Building*; regulated Party branch management, through promotion of “general meeting of Party branch members, committee of Party branch, meeting of Party group and Party class” and facilitation of study and education of Party members through integrated information management platform for Party building, and by regulating payment and management of Party membership dues by means of e-payment.



Party branches of China Shenhua organized various education activities on revolutionary tradition



China Shenhua organized an activity themed on “forge ahead in a new era after 70 magnificent years” in order to celebrate the 70th Anniversary of New China

ESG Governance

The ESG governance concept of China Shenhua was to adhere to the new strategic idea for energy security highlighting “four reforms and one cooperation”, made strategic deployment for the overall development of China Energy highlighting “One Target, Three Models and Five Strategies, and Seven First-class”, followed the idea of industry leading, innovation-driven development and value creation, enhanced Party building, strived for integrated and coordinated secure development, accelerated intelligence, promoted clean and efficient use of coal along the whole industry chain, provided quality energy products and services, endeavoured to set an excellent role model to global enterprises in terms of the idea of sustainability, performance of social responsibility and development of smart enterprise.



ESG Governance Structure

China Shenhua continued to improve governance structure in strict accordance with regulatory requirements, and promoted effective integration of ESG governance into the corporate governance system.

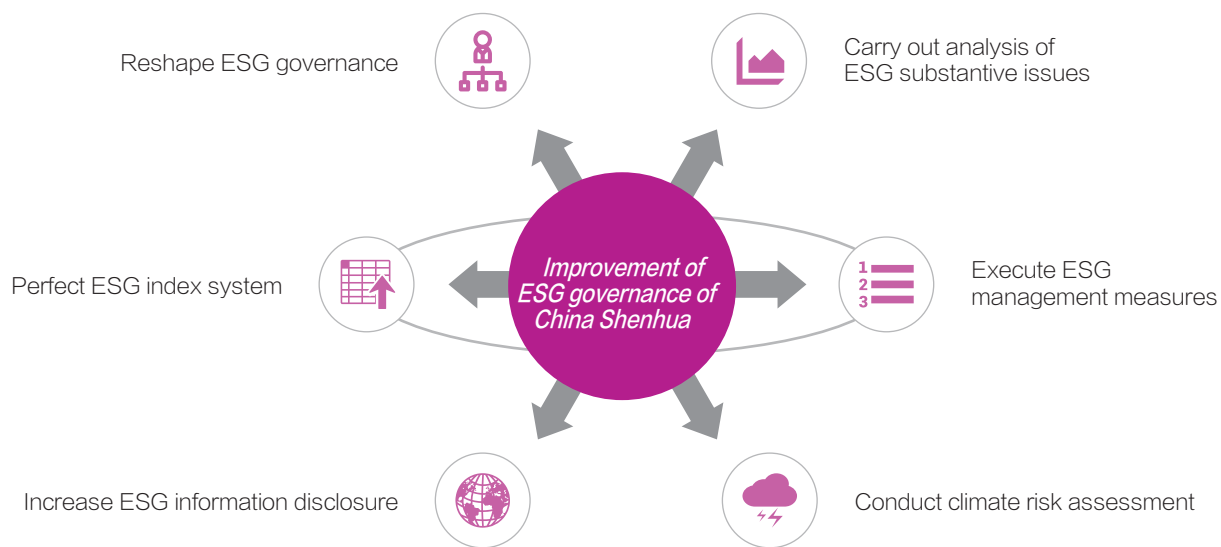
The Board, as the decision-making body for ESG governance, is responsible for overall deployment and promotion of the ESG management of the Company; Safety, Health and Environment Committee of the Board is responsible for supervision over ESG governance; the management of the Company is responsible for organising and promoting ESG governance.

In 2019, the office of ESG Governance was established at the headquarter of China Shenhua. It is responsible for organisation and coordination as well as implementation of ESG related work of the Company. Safety and Environment Group, Social Contribution Group and Corporate Governance Group, which are responsible for management of ESG specific matters, were also established by relevant departments. Each subsidiary of the Company conducted relevant work in accordance with the ESG management system and procedures.



ESG Governance System

On the basis of participation of stakeholders, China Shenhua identified ESG substantive matters and defined management targets, and further incorporated ESG related requirements into management system and routine management flow based on risk management, indicator management, target management, information disclosure management, etc., so as to promote more standardized ESG management system and secure ESG governance targets.



ESG governance improvement and construction project of China Shenhua in 2019

Materiality Analysis

In 2019, China Shenhua carried out the identification of ESG substantive issues in the form of open questionnaire on the basis of the regulatory requirements of the Hong Kong Stock Exchange and the Shanghai Stock Exchange, with reference to the ESG rating standards of MSCI, and in combination with the macro policy orientation and market focus of energy industry, and proposed 54 alternative substantive issues. Compared with previous years, material issues including “carbon emission”, “anti-corruption” were added, and existing issues including environmental protection, safe production, value chain construction were enriched to accurately and comprehensively reflect the concerns of stakeholders for the sustainable development of the Company.

Shenhua’s Substantive Issue Identification Procedure

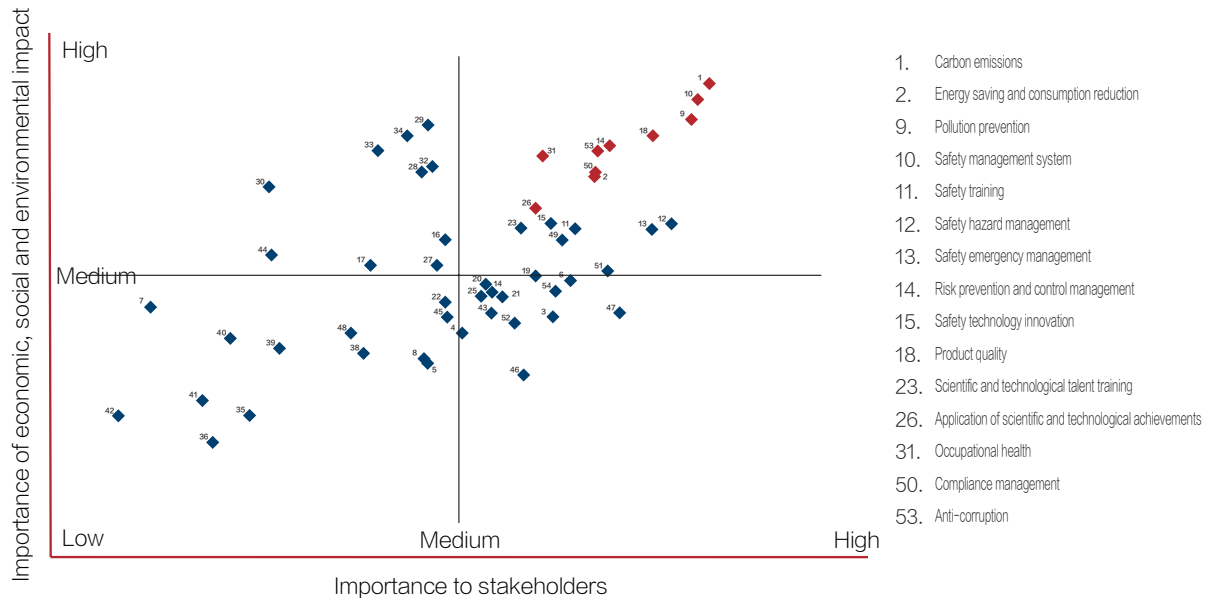


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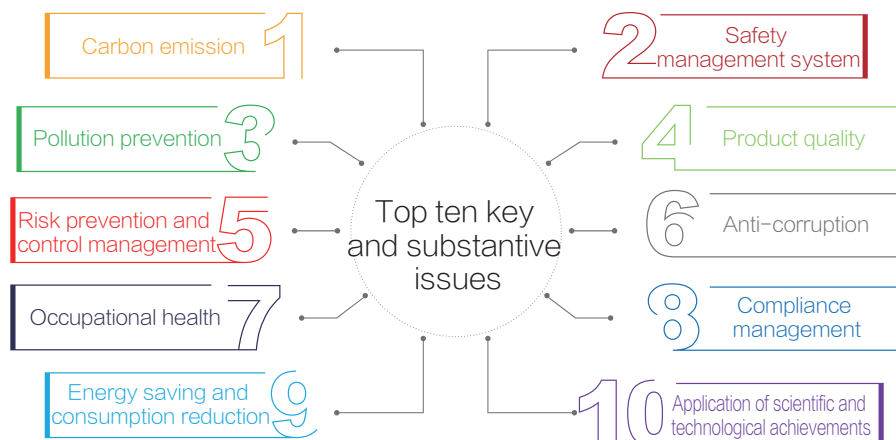
Questionnaire on identifying
ESG issues in 2019 of
China Shenhua

In November 2019, we sent out questionnaires in both open and targeted manners to stakeholders such as governments, regulatory bodies, employees, suppliers, customers, investors and public charitable organisations through channels including Shenhua's Wechat public account, external website and supplier management information system, www.neep.shop and postal mail.



Ranking on issues based on the feedbacks of questionnaire

In respect of the order of issues, China Shenhua listed 15 most important substantive issues on basis of their importance of effect to stakeholders and the economy, society and environment. According to the identification results of substantive issues, we have determined the top ten key substantive issues of China Shenhua in 2019 through review and evaluation:



Materiality Management

In view of the identified key substantive issues, China Shenhua has determined the annual key work contents and direction of ESG management on basis of the development strategies and business operation of the Company, and promoted the management, promotion and disclosure of ESG.



Internal

Improve employees' skills building ability and launch ESG-related training and research to enhance the ESG understanding and knowledge of both the management and employees.

Manage goals, set specific targets and create a related progress tracking mechanism.



External

Strengthen information disclosure and understand stakeholders' requests through means including questionnaires and media platforms.

Communicate with stakeholders, in an effort to achieve sustainable topic management.

Enhancement of capability building

Benchmarking enhancement the Company has studied and drawn lessons from excellent ESG management practice and experience, and carried out the construction projects of the ESG governance enhancement, benchmarking on the world's first-class energy enterprises ranking at the top of MSCI rating.

Training enhancement two ESG trainings were carried out for Board members, senior management personnel and department heads of the headquarter to improve the ESG management awareness of employees and enhance their conscientiousness of implementing ESG practice.







Planning formulation the Company further formulated the "14th Five Year Plan" special plan for ESG governance enhancement, further advanced and constantly improved the ESG governance level by stages.



The launch and training session for ESG governance enhancement project of China Shenhua in October 2019

Prospect for target management

Pursuant to the relevant national policies and the *Three-year-plan for Safe Environmental Protection of China Energy (2019-2021)*, the Company has formulate indicator prospects for safety, pollution prevention and treatment, energy conservation and emission reduction in 2020-2022 in combination with the identification results of substantive issues and its own operation practice. The Safety, Health and Environmental Protection Committee under the Board of the Company shall regularly review and supervise the progress of indicator management and report to the Board.







Content of indicators		Prospect for target management 2020 to 2022 (every year)	Actions in 2019
 Safety	Mortality rate of production of one million tonnes of raw coal (%)	Lower than 0.005	Strictly implemented safety responsibility and strengthened the investigation of accident responsibility Promoted the construction of dual prevention system for hierarchical management and control of safety risks and investigation and treatment of hidden dangers, and conducted in-depth investigation and treatment of safety risks Carried out diversified training to improve the safety quality of employees Organized and implemented emergency drill to improve the emergency response ability
	Liability accident of railway traffic collision (per million running kilometers)	Lower than 0.2	
	Number of unplanned outages of thermal power units (Times)	0.3	
 Waste gas	Sulfur dioxide emission (thousand tonnes)	Lower than 88	Ultra-low emission transformation of coal-fired units Transformation or substitution of coal-fired boiler Completely sealing transformation of coal yard Dust and fly ash treatment
	Nitrogen oxide emission (thousand tonnes)	Lower than 145	
	Smoke emission (thousand tonnes)	Lower than 23	
 Waste water	COD emission (tonne)	Lower than 3,700	Strictly complied with laws and regulations, improved the efficiency of water resources utilization and strengthened sewage treatment Continuously the water intake structure through rainwater collection, desalination, waste water recycling and other ways
 Solid waste	Safe disposal rate of hazardous waste (%)	100	Carried out the comprehensive utilization of solid wastes, and reduced the emission and disposal of wastes Strengthened the legal compliance of solid waste management, and achieved safe transfer, standardized management and effective monitoring
	Comprehensive utilization rate of fly ash (%)	Not lower than 75	
 Resources conservation	Resources conservation Comprehensive energy consumption per 10 thousand yuan output value (tonnes of standard coal/10 thousand yuan)	3	Carried out transformation of energy-saving and transformation of emission reduction technology, including steam turbine flow transformation and heat supply transformation to improve energy utilization efficiency
	Comprehensive water consumption per 10 thousand yuan output value (tonne/10 thousand yuan)	13	
	Average energy consumption of power sales (g/kWh)	308	
	Water utilization rate of mine (pit) (%)	85	
 Carbon emission	Carbon emission intensity (tonnes/10 thousand yuan output value)	14	Strengthened carbon trading performance and carbon asset management Conducted carbon emission inventory

Information disclosure enhancement

The Company determines the key disclosure contents through substantive issues analysis, and publishes ESG reports regularly, publishes ESG related news through channels including the official website and WeChat public account of the Company, and promptly responds to ESG questionnaire including the Carbon Disclosure Project (CDP) and rating authorities, maintains communication with environmental protection advocating associations such as the Climate Action 100+ to enhance ESG information disclosure. The Company responds and listens to investors' questions and opinions through hotline, email and fax to improve the transparency of the Company's operation.

Communication with stakeholders

Stakeholders' communication and engagement form a significant part to promote the management of substantive issues. China Shenhua has attached great importance to the needs of all stakeholders, constantly optimized the management mechanism of stakeholders, and expanded communication coverage to strive for repayment to stakeholders with the development results, and achieve win-win cooperation and harmonious development with all stakeholders.

Stakeholders	Expectations and needs	Communication and feedback
 Government	Compliance with disciplines and laws Energy safety Payment of taxes pursuant to laws Driving the development of local economy	Strengthening operation management in compliance with regulations Optimizing production organization and ensuring energy supply Accepting supervision and assessment Carrying out strategic cooperation
 Shareholders	Stable operation Earnings and returns Unimpeded information flow	Improving competitiveness and profitability Insisting on a high proportion of cash dividend, strengthening market value management Information disclosure in a timely manner and strengthening investor relationship
 Customers	Performance of contracts in good faith Quality assurance Premium services	Guaranteeing the exchange rate of long-term contracts Strengthening the management of coal quality, and securing quasi liner transportation Carrying out satisfaction survey
 Staff	Wages and welfare Career development Health and safety Humanitarian care	Protection of rights and interests, medical insurance, enterprise annuity Education and training, career development platform Health protection and elimination of occupational diseases Caring for staff, and the set up of complaint feedback mailbox
 Environment	Coping with climate change Water resources Pollution prevention and treatment Energy saving and emissions reduction Biodiversity protection	Carbon emission reduction Water resources management Carrying out pollution control Energy saving and consumption reduction Building green mines
 Partners	Business ethics Transparent procurement Mutual benefit and win-win cooperation	Good faith execution of contracts Open procurement, e-procurement Business exchange and cooperation, Symposium

Stakeholders	Expectations and needs	Communication and feedback
 Community	Community development Public welfare activities Jobs creation	Community activities, visits and exchanges, respect for cultural traditions Targeted poverty alleviation, emergency relief and voluntary service Skills training, local employment and procurement
 Creditors	High solvency Due repayment of debts and interest Mutual trust and cooperation	Due repayments Better communication and liaison Win-win cooperation
 Industrial peers and industry organizations	fair competition Facilitating industry progress Promoting the development of industrial chain	Refraining from vicious competition Exchange of experience Technological innovation

Case study

The activity of China Shenhua Energy Journey, 2019

In August 2019, the Company launched the “China Shenhua Energy Journey” activity for the fifth year in a row, and organized 49 teacher representatives from Hong Kong, China to visit key enterprises, receive some insight of the great efforts and achievement of the Company in the aspects of clean development, clean transformation and clean utilization of energy, deeply feel the employees’ spiritual outlook and excellent corporate culture, and enhanced the national recognition and national pride of Hong Kong compatriots.



The visit and inspection of Hong Kong teacher representatives in Shangwan Coal Mine

Safe Production

Guided by the overall idea of “cultural guidance, responsibility implementation, risk pre-control, strong guarantee and solid foundation”, China Shenhua adhered to the principle of “shared responsibility between the Party and government, one post and two responsibilities, joint management, and undertaking liability for negligence of duty” to optimize the safety management system, implement responsibility for safe production, enhance the prevention of safety risks, create a safe cultural atmosphere, closely monitor the implementation of risk management and control and the elimination and control of hidden dangers, and strived to achieve the safe production objective of “intrinsic safety, zero casualties and few accidents” with the focus on optimizing the safety management system,.



Safety Management System

In accordance with the management principle of “headquarters supervision, enterprise performance, joint management and full participation”, China Shenhua has established a hierarchical safe production management mechanism of headquarters, subsidiaries and branches, mines (factories, departments, sections), and built an intrinsic safety management system of “cultural guidance, responsibility implementation, risk pre-control, strong guarantee and solid foundation”.



Headquarter of the Company

Responsible for researching the idea of safe production, target, plan, standards and system, conducting overall plan on construction of intrinsic safety, reviewing guidance as well as assessment and evaluation of safe production work of subsidiaries and branches.

Subsidiaries and branches

Responsible for implementing policies and deployment of safe production direction of the PRC and the Company, deeply promoting the construction of intrinsic safety system, reviewing guidance as well as assessment and evaluation of safe production work of subsidiaries and branches.

Mines (plants, office and section)

Responsible for daily safety management work, focusing on teams and groups, keeping an eye of the mines, strengthening the prevention and control of risks, implementing system, conducting safety basis, education and training, standardized execution and implementation of system.

Three levels of safety management system

Case study

Five “100%” target to build safety management barrier

Aiming at the construction of “ecological, green and clean” open-pit coal mine, Shengli Energy ensured the production safety through five “100%”. Firstly, to achieve “100%” of the hidden danger rectification rate. Secondly, to achieve “100%” of all employees on duty with certificates. Thirdly, to achieve “100%” of the qualified rate of training for all staff. Fourthly, to achieve “100%” of the “three violations” behavior correction rate of by conducting special activities against “three violations”, investigating hidden dangers, attaching focus on reorganization and promoting implementation. Fifthly, to achieve “100%” of the occupational health examination by establishing a leading group for prevention and control of occupational hazards to ensure the safety of production in an all-round way.

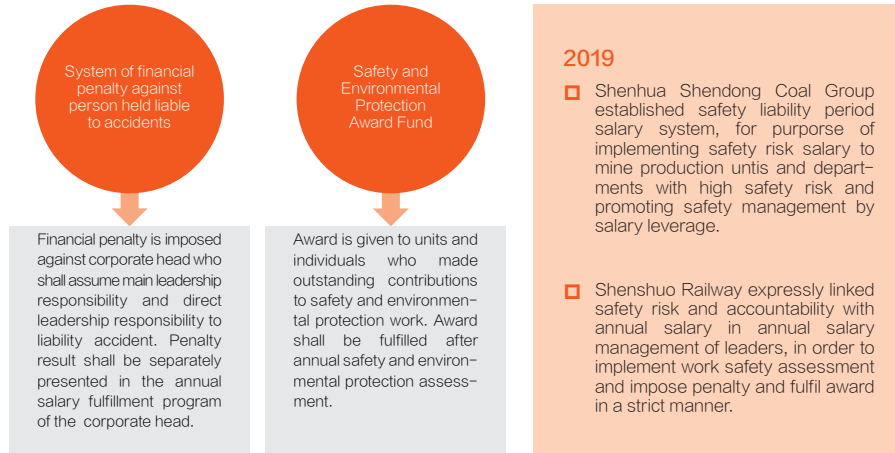
Implementation of Safe Production Responsibility

In accordance with *the Three Year Plan for Safe Environmental Protection of China Energy*, 2019 is the “year of responsibility implementation”. With the responsibility implementation system as the main line, the production units of China Shenhua have conscientiously focused on the leadership responsibility, professional responsibility and overall responsibility of safe production, revised and improved the safe production assessment system, implemented the requirements in relation to performance of safe production, performance evaluation, job promotion, and reward and punishment, and strictly conducted the “one vote veto” system of safe production. We enhanced the punishment on illegal conduction and operation of party members, cadres and the on-site management personnel. The accident report system was strictly implemented, and the concealment, misrepresentation and delayed reporting were prohibited. Each production unit summarized and reported the assessment and self-inspection and self-correction of “year of responsibility implementation” activities on a quarterly basis, and accepted inspection by the Company.



The Notice of Safe Environmental Protection in 2019 strictly implemented by each subsidiary and branch of the Company

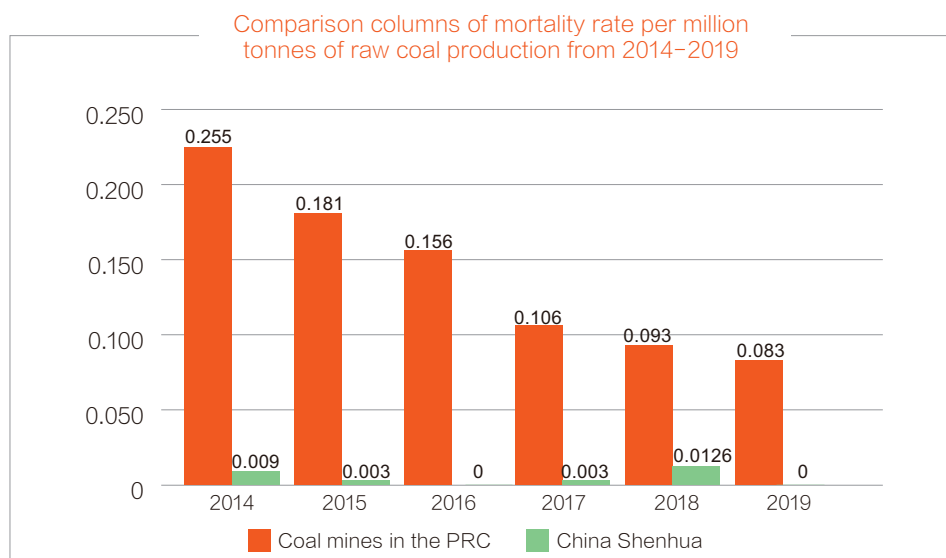
China Shenhua improved security responsibility reward and punishment system



Safety Risk Prevention

Adhering to the concept of “all risks can be controlled and all accidents can be avoided”, China Shenhua has improved the pre-control mechanism for safety risks. The Company comprehensively promoted regional risk assessment, equipment failure risk assessment and task risk assessment, and established and optimized the enterprise safety risk database. Each production unit regularly identified and evaluated the systematic risks and material hazard sources in the production area, and timely re-identified and re-evaluated the changes of the system, environment, equipment, personnel and process to prevent occurrence of production safety accidents caused by the risk evolution and the upgrade of potential risks. In 2019, China Shenhua convened 6 video warning sessions of safe production to analyze the causes of accidents and draw lessons for such accidents.





Prevention and Control of Hidden Dangers

Adhering to the concept of “hidden dangers are accidents”, China Shenhua implemented hierarchical management and control over hidden dangers in accordance with the identification standard of major safety hidden dangers, promoted the investigation and treatment of hidden dangers in key areas. In addition, the Company listed major hidden dangers on supervision and established the reward mechanism for employees engaged in hidden danger investigation to prevent and reduce the damage and impact caused by emergencies, and ensure the safety of equipment and employees.

Supervision over major hidden perils through public announcement

China Shenhua made great progress in prevention and control of major disasters such as flood, fire, toxic or hazardous gas, pressure bump and sources of radiation. China Shenhua specified production units as the subject liable to identification and control of hidden peril; management and relevant leaders will be held liable to inaction in identification, up-reporting and unsatisfactory control of major hidden peril.

Establishment of incentive system for hidden peril identification by employees

China Shenhua summarises and collates the accident perils and problems identified by front-line employees, determines peril rating and timely fulfills awards.

Hidden danger prevention and treatment measures of China Shenhua



Equipment maintenance



Safety inspection of hidden dangers

Case study

Hidden danger prevention of Zhunneng Group gains good results again

In 2019, Zhunneng Group has successively organized safety inspection in special periods such as “Spring Festival”, “two national congress” and the “70th anniversary of the establishment of the People’s Republic of China”, as well as special safety inspection on electromechanical equipment, fire control, contractors and “three preventions” to ensure that hidden dangers are controllable and under control, and achieve safety and “zero accident” throughout the year. As of the end of 2019, Heidaigou Opencast Coal Mine and Ha’erwusu Opencast Coal Mine continued to maintain the national level 1 standardized opencast coal mine for safe production, and Dazhun Railway achieved production safety of over 9,000 days. Ha’erwusu Opencast Coal Mine and Zhunneng Coal Preparation Plant achieved safe production for over 10 years.



Heidaigou Opencast Coal Mine

Emergency Drill

China Shenhua has earnestly implemented *Administrative Measures on Emergency Response Plans for Production Safety Accidents*, continuously improved the emergency rescue mechanism, promoted the standardized development of emergency rescue, and comprehensively improved the emergency response capacity by organising emergency drills to test the practicality and operability of emergency response plans and on-site disposal plans.

Case study

Huanghua Port held the 2019 comprehensive maritime emergency drill

On 20 June 2019, Huanghua Port held the comprehensive maritime emergency drill. The drill is divided into three subjects: maritime search and rescue, firefighting on ships and oil spill emergency. There were a total of 13 boats, 1 helicopter and more than 140 people participating in the drill, comprehensively testing the Company's marine comprehensive emergency response capability, which was of great significance to ensure the safety of life and properties of offshore personnel, protect the marine environment, and promote the sustainable development of Bohai economic belt.



Comprehensive maritime emergency drill

Science and Technology

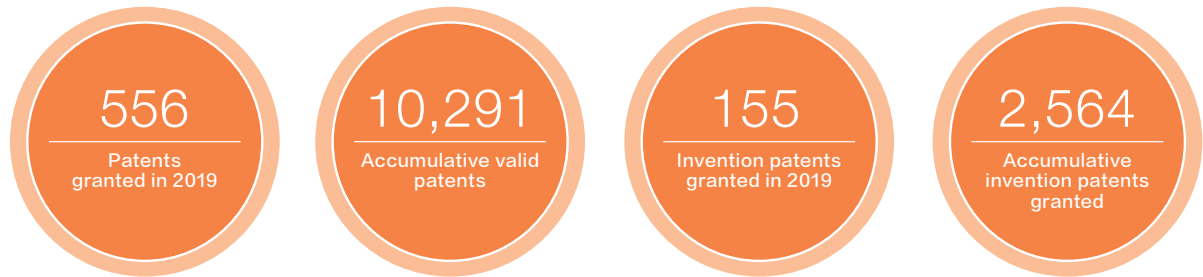
China Shenhua attaches great importance to the development of safety technology, strengthens research and development of core technology, continuously promotes the construction of national key scientific research platform, strengthens the transformation and upgrade of equipment, advances the application of scientific and technological research and information construction, and constantly promotes the improvement of safety assurance capacity with technological innovation.

Innovation management

China Shenhua persists in promoting independent innovation ability as the core, taking the industrial technology demand as the orientation, regarding the development of key and core technology from research and development institutions as the lead, taking the first-line technology breakthrough of grassroots experts and postdoctoral workstations as the foundation, taking "mass entrepreneurship and innovation" as the main body of achievement incubation, and taking the in-depth integration of industry, university, research and application as the support, to constantly build and optimize the modern scientific and technological innovation system. In 2019, the Company carried out *the Guiding Opinions on Strengthening Scientific and Technological Innovation of China Energy*, investing RMB1.245 billion in scientific research and development.

Innovation results

China Shenhua has obtained a number of scientific and technological achievements focusing on safety and protection, quality improvement and efficiency enhancement, transformation and upgrade and other research and development demand. In 2019, China Shenhua won 3 second prizes of National Science and Technology Progress Award, 1 silver prize of Chinese patent, 3 patent excellence awards, and 1 excellence award of appearance design.



Case study

Shendong Coal successfully realized independent intelligent coal cutting

In 2019, Shendong Coal automatic intelligent coal cutting new technology achieved groundbreaking resolution of the long-term problems of identifying coal seams, and realized automatic coal cutting along the coal seam. The main characteristics are “unmanned follow-up, patrol of personnel, prioritizing independent cutting coal, supporting by remote intervention”. At the same time, special robot patrol inspection was developed, preliminarily realized the unmanned work approach, and effectively solved the safety problem of employees in the course of coal cutting, which is of great significance to the construction of safety intelligent mine.



New technology of automatic coal cutting in intelligent fully mechanized face

Case study

First intelligent driving heavy-duty train in China officially started

On 16 October 2019, Shenshuo Railway intelligent driving “3 + 0” ten thousand tonnes heavy-duty train officially operated. Not only did heavy load intelligent driving reduce the operation intensity and difficulty of drivers, but also improved the safety of the trains, realising automatic shunting operation based on obstacle detection and shunting signal protection, symbolising that China has entered a new stage of intelligent control in the field of freight heavy load train, being the leader in terms of the development of railway in the world.



Intelligent driving project of AC drive freight electric locomotive of “Shenhua”

Safety Management of Contractors

In order to achieve the goal of safe production highlighting “intrinsic safety, zero casualties and few accidents”, the cooperation and support of contractors are indispensable in addition to strengthening its own safety management. In 2019, China Shenhua focused on source management, process management and control and assessment management, comprehensively strengthening safety management of contractors.

Contractor source management

China Shenhua improved contractor management measures and defined safety liabilities of contractor, constructor and supervisor. China Shenhua strictly reviewed work safety qualification of contractor, construction scheme, SOP of key positions, setup of safety management bodies, consistency between in-plant personnel and bid commitment and safety qualification certificate of personnel. Special equipment, large construction machinery and safety critical appliances and apparatus must be used on site after approval. China Shenhua enhanced examination and acceptance of key nodes of construction design, and implemented whole-process monitoring of special and high-risk operations.

Contractor process control

China Shenhua included contractor safety management in corporate routine management, and achieved unified arrangement, examination and assessment. China Shenhua resolutely forbidden entering into contract after access, access of unqualified personnel, access of personnel without properly wearing protective equipment, and execution of construction operations not in accordance with the Company's standard rules on work safety and safety risk prevention and control requirements.

Contractor assessment management

All production units implemented integrated assessment on performance capability, safety management and safety performance of contractor, and included contractor safety management in safety performance assessment of production units. China Shenhua developed and improved contractor internal reporting system, so as to promote performance of contractor in good faith. China Shenhua established a unified contractor safety “blacklist”, so as to improve work safety violation cost.

Safety management measures of contractors of China Shenhua

Enhancement of Employee Safety Awareness

China Shenhua has promoted safety laws, and regulations, and carried out various safety trainings such as self-help and mutual rescue to improve the safety awareness of all employees. In 2019, the Company organized “Ankang Cup” competition, “typical case analysis”, “accident demonstration”, “safety skills competition” and other activities to help employees improve safety quality, professional skills and management ability, and establish correct safety values.

Case study

Promoting safety awareness by integral management

Huangyuchuan Coal applies the integral system to the safety production management of coal mine, forming a new mechanism of safety integral management to aim at improving the safety awareness of employees through integral management, realising the transformation from “dare not violate, cannot violate” to “unwilling to violate”, and strive to explore the long-term mechanism of management and control of unsafe behavior, so as to improve the level of mine safety management and control.



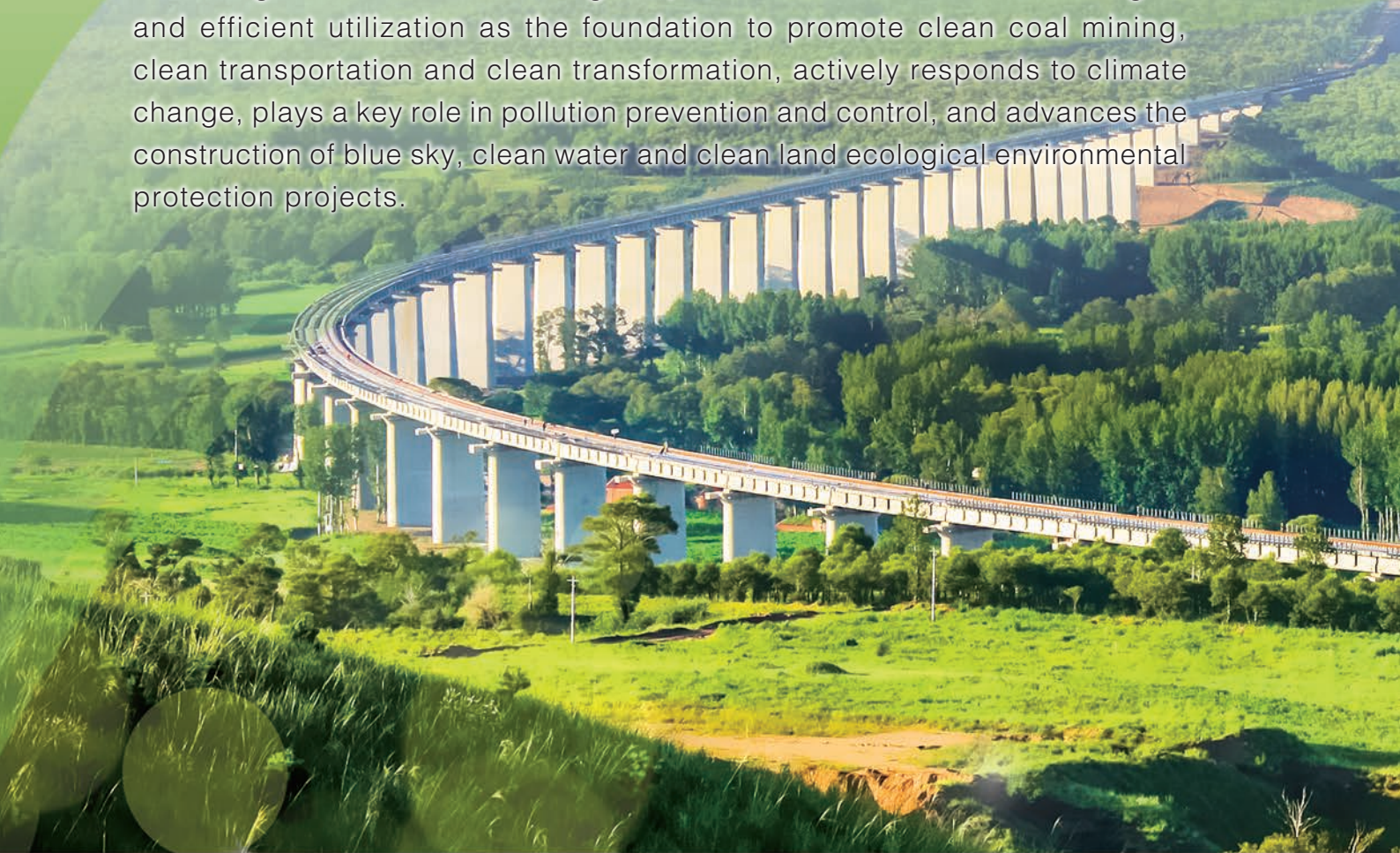
After conducting an unsafe behavior, the party concerned will receive a message of the change of safety score immediately



Railway freight companies carried out safety culture publicity

Environmental Protection

Lucid waters and lush mountains are invaluable assets. China Shenhua strictly complies with the Environmental Protection Law and other laws and regulations, thoroughly implements the concept of green development, takes technological innovation as the guide, resources conservation as the goal and efficient utilization as the foundation to promote clean coal mining, clean transportation and clean transformation, actively responds to climate change, plays a key role in pollution prevention and control, and advances the construction of blue sky, clean water and clean land ecological environmental protection projects.



Response To Climate Change

At present, the challenge of global climate change becomes increasingly serious. The Chinese government supports the Paris Agreement and promotes international cooperation to address climate change. It has set the goal of its own contribution to the response to climate change, such as “peaking carbon emissions in around 2030 and striving to do so as soon as possible”.

China Shenhua actively supports the Chinese government's action goal of response to climate change, improves the system and mechanism of response to climate change, constantly improves the level of management and control of carbon emission, and strengthens the ability to adapt to climate change; actively implements the heat supply transformation of the power generation units, and increases the capability of substitution of the third party with high emission boilers and the use of bulk coal; actively responds to the concerns of investors and the public regarding the problems of carbon emission from coal consumption business, and plans for the long-term development strategy in the future.



Energy and Environment

At present, China has a population of 1.4 billion, with the most complete industrial chain in the world, and is in the stage of industrialization from quantitative change to qualitative change. It is known as the “world factory” and “infrastructure giant”, with substantially high requirements for the stability and sustainability of energy supply by industrial production, construction and people's living.

As the most abundant fossil energy, coal accounts for approximately 97% of the total amount of fossil energy resources in China. Although the proportion of coal in China's total energy consumption has shown a downward trend, the resource endowment characteristics of “rich coal, poor oil and little gas”, limited land resources and the power supply intensity and stability of coal-fired power plants determine that coal is still the main body of China's primary energy supply and the cornerstone of energy safety and protection. At the same time, China has established a new energy security strategy of “four revolutions and one cooperation”, was committed to building clean and efficient utilization of coal, and striving to realize the green, low-carbon and efficient intensive development of coal-based energy.

China new strategy of energy safety – “four revolutions, one cooperation”



Four revolutions

Promoting energy consumption revolution, restraining unreasonable energy consumption;
Promoting energy supply revolution, establishing a multi-supply system;
Promoting energy technology revolution, driving industrial upgrade;
Promoting energy system revolution, opening up fast track of energy development.

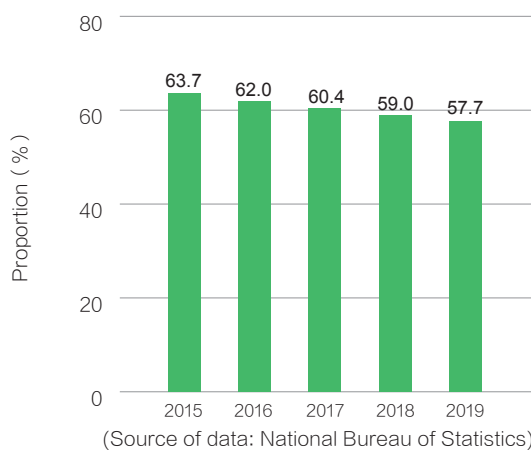
One cooperation

Strengthening international cooperation in an all-round way to achieve energy security under open conditions.

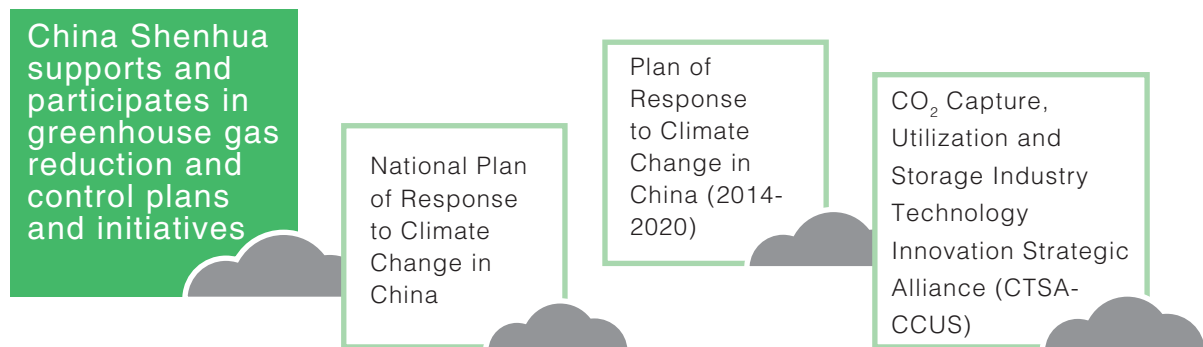
“China is still a developing country. Promoting modernized construction and ensuring energy supply are long-term strategic tasks. According to coal based energy resources endowment in China, the coal development layout was planned scientifically, accelerating the construction of coal transmission and power transmission channels to promote safe and green coal mining and clean and efficient development of coal power, and effectively develop and utilize coalbed methane.”

——National Energy Commission meeting

Proportion of consumption of coal in the PRC to the total energy consumption from 2015 to 2019



In 2019, China's energy consumption structure continued to be improved, and although the proportion of coal consumption decreased by 1.3 percentage points, it still accounted for more than half of the energy consumption volume. China Shenhua, as a enterprise to ensure the safety of national energy, resolutely fulfills its responsibility and mission, actively promotes the safe and green mining of coal and the clean and efficient development of coal power, and marches forward to clean, efficient and sustainable development of coal.



Greenhouse Gas Emission

China Shenhua constantly optimizes the carbon emission management system, adheres to the promotion of the unified carbon emission management system, implements three-level management and control of the headquarters, subsidiaries and grassroots enterprises, and implements carbon emission management responsibility at all levels. At the same time, China Shenhua actively participates in the construction of the national carbon market, carbon quota trial calculation, trading system trial operation, simulated carbon trading and other work.

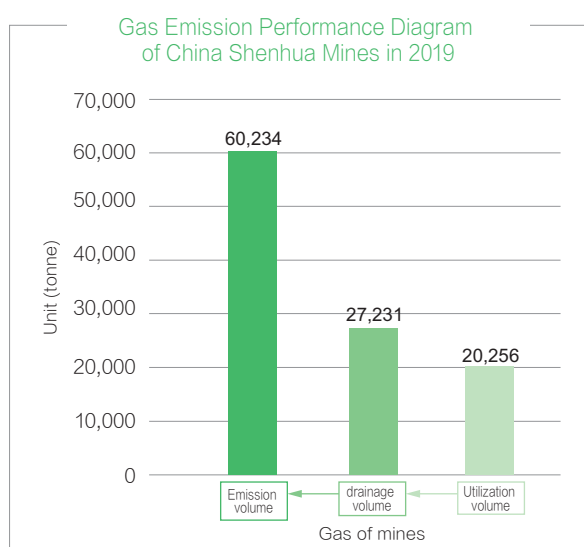
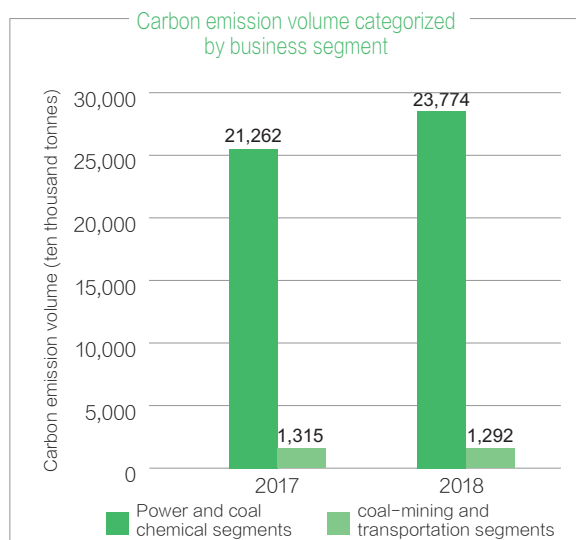
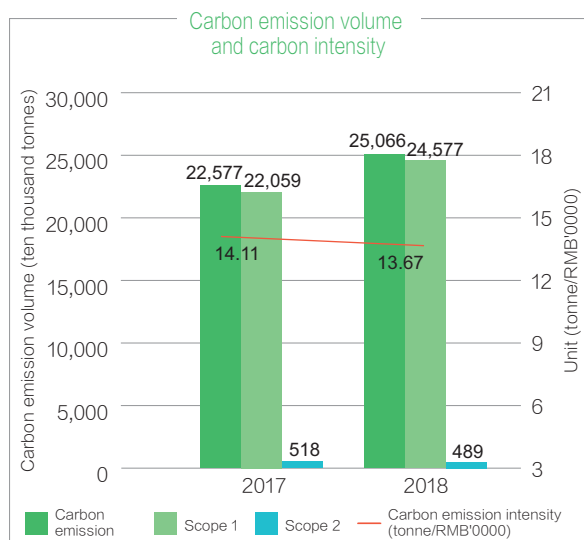
Carbon emission management

In accordance with *the Notice on Annual Carbon Emission Report and Verification and Emission Monitoring Plan* (《關於做好年度碳排放報告與核查及排放監測計劃的通知》) issued by the Ministry of Ecology and Environment, China Shenhua has carried out annual carbon inventory of thermal power and chemical emission control enterprises since 2017, submitted emission report and supplementary data sheet and other documents to the ecological environment department of the government on schedule, and actively cooperated with the third party to complete the verification; each emission control enterprise has formulated annual carbon emission monitoring plan, which shall be strictly implemented. In 2019, the Company carried out carbon emission control and trading management training in batches, and conducted carbon emission audit in coal and transportation enterprises. In the pilot area of carbon trading, the control and emission enterprises carried out transactions in strict accordance with the rules of the pilot market, and the payment performance rate of the control and emission enterprises reached 100%.



China Shenhua actively participated in the Carbon Disclosure Project (CDP), and disclosed greenhouse gas emissions and strategies coping with climate change related investment risks and opportunities through questionnaire, showing the focus of enterprises in relation to carbon emission.

Carbon emission performance of China Shenhua



Measures for carbon emission reduction

Energy conservation

The Company implemented energy saving and emission reduction technologies such as transformation of coal-fired unit steam turbine flow, heat supply and auxiliary machine frequency conversion to reduce coal consumption for power supply, and the power consumption of power plants, improve energy utilization efficiency, and achieve the objective of effective carbon emission reduction.

- Notes:
1. Scope 1 covers the greenhouse gas emissions directly generated from the businesses owned or controlled by the Company, and Scope 2 covers the "Indirect Energy" greenhouse gas emissions caused by the electricity, thermal energy, refrigeration and steam in production as purchased or acquired for internal consumption of the Company.
 2. Pursuant to the requirements of documents of the Ministry of Ecology and Environment, the greenhouse gas emission report prepared by the emission control enterprises after conducting carbon inventory shall be verified by the third-party verification authority designated by the competent government department, which usually ends at the end of May every year (later than the release time of this report). Therefore, China Shenhua will disclose its 2019 carbon emission data in the ESG report of the following year.
 3. In 2018, the gross power generation volume of the Company amounted to approximately 285.32 billion Kwh, representing a year-on-year increase of 8.5%.
 4. Calculation method: carbon intensity(tonne/RMB ten thousand)= carbon emission volume of industrial enterprises/industrial output value

Case study

Achievement of new objective of energy saving and consumption reduction once again by Guohua Power

In 2019, the annual coal consumption ratio for power supply of Guohua Power reached 298.8g/kWh, hitting a new low in history. Mengjin power plant contributed power supply for heating of 219,100 GJ, and reduced the coal consumption ratio for power supply by 1.3g/kWh by transforming the multi-stage heating system and increasing heating supply. After the steam path transformation of No. 4 steam turbine of Taishan power plant, the coal consumption ratio for power supply of the power units decreased by approximately 10g/kWh.

Carbon capture, utilization and storage(CCS/CCUS)

CCS/CCUS technology is one of the most important technologies for low-carbon conversion and utilization of fossil energy to cope with climate change. China Shenhua actively carried out the research on CCS/CCUS technology, and explored the green development path of coal-fired power plants to provide technical support for the national independent contribution of carbon emission reduction objective under the Paris Agreement.

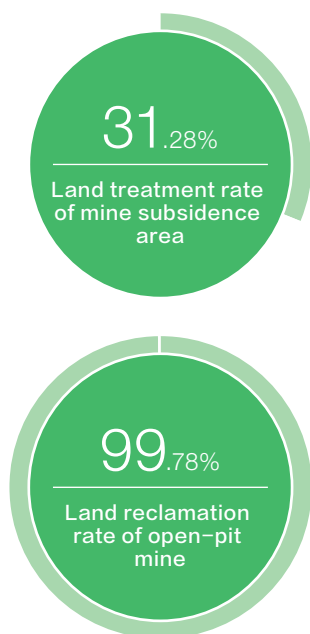
Case study

Official Launch of CCUS Demonstration Project of the Largest Coal-fired Power Station in China

In November 2019, the whole process demonstration project of carbon dioxide capture, utilization and storage (CCUS) after combustion with 150,000 tonnes/year of Jinjie Energy was officially launched. Advanced chemical absorption process was adopted in the project. Upon construction, we would achieve the objective of the CO₂ capture rate of coal-fired flue gas over 90%, CO₂ density over 99%, and the energy consumption of absorbent regeneration less than 2.4GJ/tCO₂, and reach international leading level in overall performance index. The industrial-grade liquid CO₂ separated from the project was stored in spherical tanks, which could be utilized industrial areas including oil displacement in oilfield, salinity aquifer and other areas to promote the simultaneous improvement of environmental and social benefits.

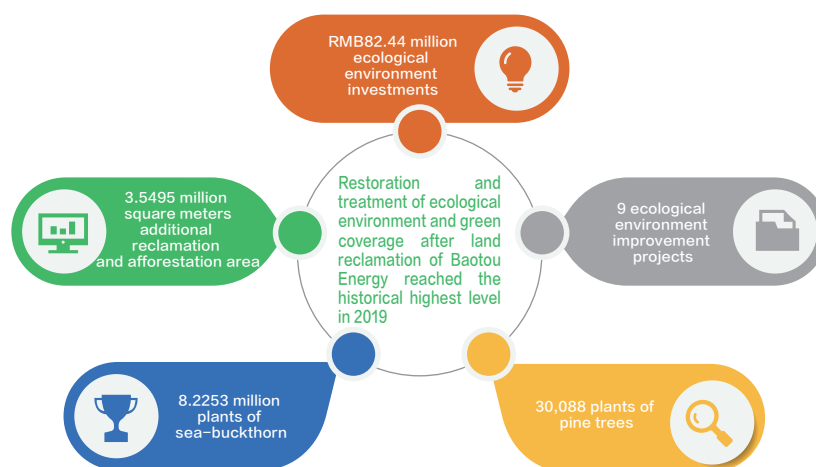


Picture of the CCUS project construction of Jinjie Energy



Increase in carbon sink

China Shenhua has strengthened the construction of green mines, further enhanced projects including the comprehensive treatment of subsidence zones and land reclamation in mining zones, improved the vegetation coverage in mining zones to fully leverage on the function of carbon sink for mitigating the greenhouse effect. By the end of 2019, 14 coal mines of China Shenhua have been recorded in the national green mine list, and 2 coal mines in the provincial/district green mine list, with green mines accounting for up to 70% of its total mines.

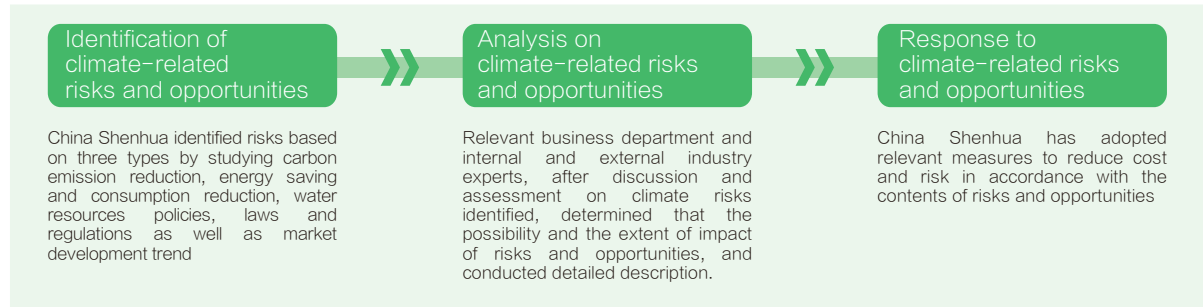


Carbon sink performance of China Shenhua	
Type	2019
Accumulated afforestation area (10 thousand square meters)	99,727
Newly afforested area during the year (10 thousand square meters)	1,472
Including: reclamation area of opencast mine land (10 thousand square meters)	383.70
Land treatment area in mine shaft subsidence area (10 thousand square meters)	1,029.6
Carbon sink conversion volume (10 thousand tonnes)	406.27

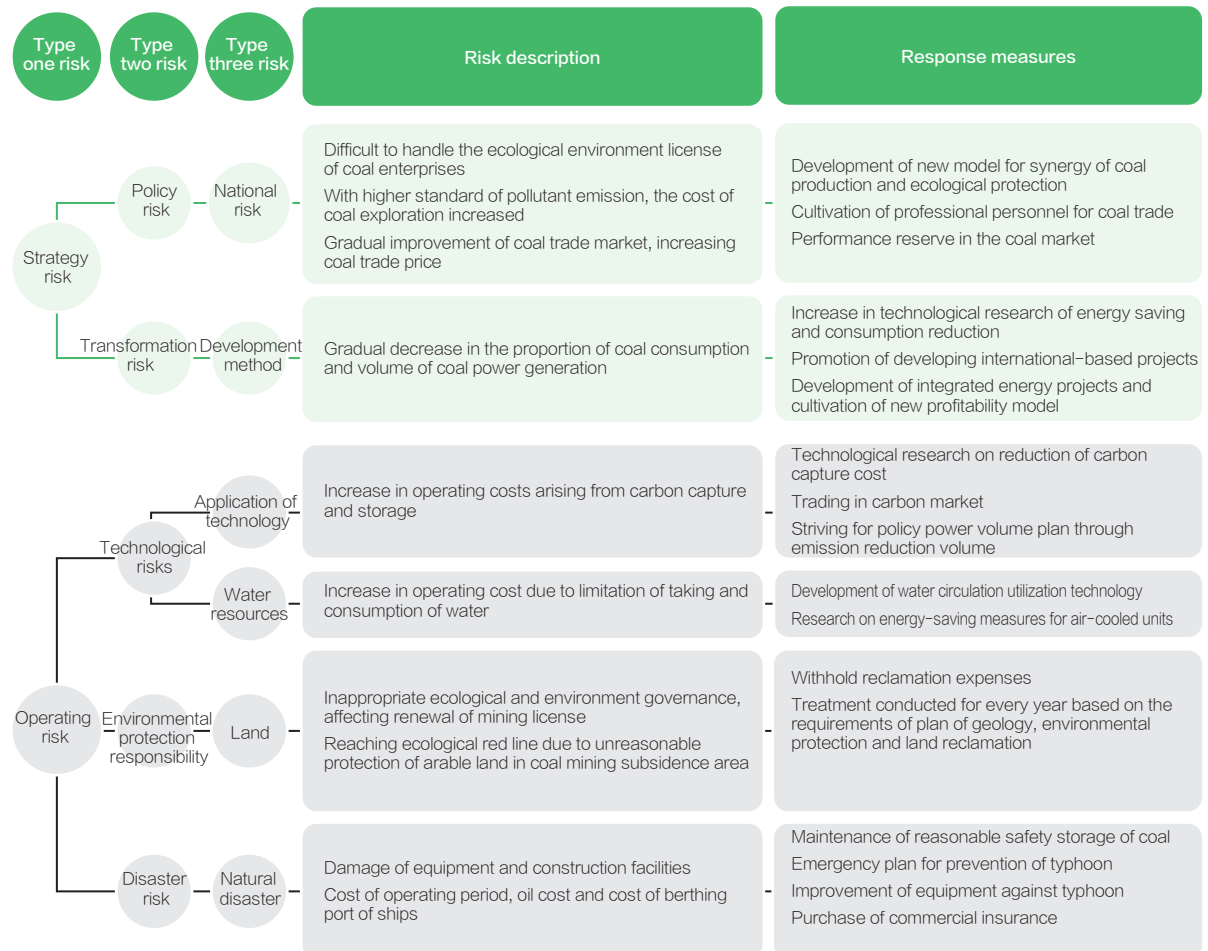
Note: According to the measuring and calculation of the China Carbon Trading Network (<http://www.tanjiaoyi.com/article-4820-1.html>), the planting number for each adult woods per mu (667 square meters) is about 60 to 110 strains, which can absorb about 24.455 tonnes of CO₂ (taking the median of 90 strains). 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, on the calculation of which China Shenhua has completed an accumulated carbon sink in 2019 of $99,727/667 \times 24.455/9 = 4,062.7$ thousand tonnes.

Evaluation of Climate-Related Risks

With reference to the recommendations of the Task Force on Climate-related Financial Disclosure (TCFD), and combining the 2019 Annual Report on Policies and Actions Responding to Climate Change by China and relevant policies, China Shenhua conducted risk assessment on climate for its business sectors, and formulated management policies and strategies for mitigation, adaptation and active action against climate change.



Major climate-related risks identified by China Shenhua

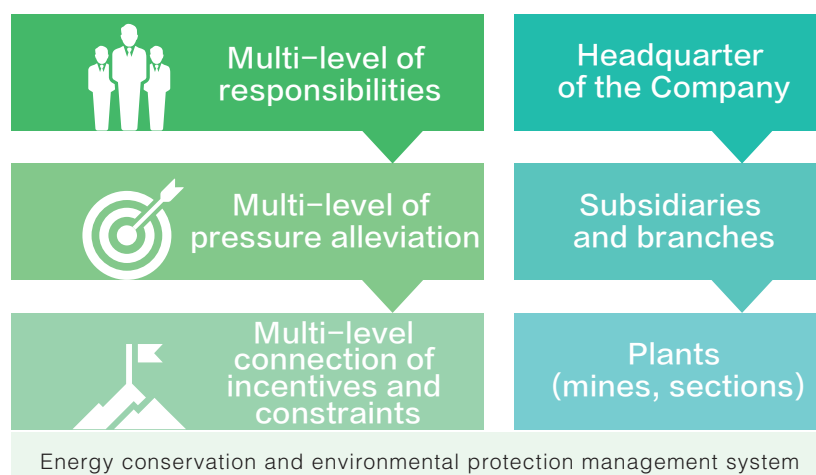


Major climate-related opportunities identified by China Shenhua

Types of opportunities	Description of opportunities	Response measures
Market expansion	Renowned nearly zero emission technology of coal-fire power generating units, bringing more opportunities for development of domestic and overseas projects National policies of "transformation of road transportation to rail" and "co-transportation of freight and rail" brought about increase in goods transportation	Provision of cleaner product and services, attracting consumers and services.
Acquisition of resources	Resolving the water supply problems in the regions with lack of water for as many as 100,000 people, a million mu plants and industries of hundred billions turnover through multi-level integrated usage of water Granted approval of qualification from the national level green mines was conducive to gaining an advantage in the coal resources	Planning for industrial ecology chains to improve the utilization rate of water resources Proactive creation of green mines

Environmental Management System

China Shenhua confirmed the responsibility of energy conservation and environmental protection at each level, and established a three-level environmental management system of decision-making, supervision and inspection and organization for implementation. Under the unified leadership of the headquarter, the energy conservation and environmental protection management committee of each subsidiary is responsible for the decision-making arrangement of environmental protection, while the environmental protection department or environmental protection audit force and other authorities of each subsidiary are responsible for the supervision and inspection of environmental protection, and each production unit is responsible for the implementation and completion of environmental protection schedules and indicators.



In 2019, China Shenhua and its subsidiaries received:



China Shenhua strengthened its capability in environmental risk management and control, and each of its subsidiary established an environmental risk management and control mechanism for the whole process, which consists of environmental protection supervision and monitoring, hidden environmental dangers prevention as well as risk emergency management, to strive for the objective of "zero violation" in environmental protection.

 <p>Environmental protection supervision and monitoring</p>	<p>The Company strictly implemented the discharge permit management system. The Company has formulated and implemented the annual work plan of discharge permit pursuant to laws, and standardized the pollutant discharge under permit, self-monitoring, information reporting and disclosure.</p> <p>The Company strictly implemented the management system of online monitoring of pollutant. The Company has strengthened the implementation of monitoring responsibility, standardized the daily monitoring work, established the monitoring and management account, and enhanced the public management of monitoring results.</p> <p>The Company improved the inspection and maintenance level of network transmission equipment. The Company has optimized the inspection and maintenance system of online monitoring equipment including the CEMS to ensure the continuous monitoring of pollutant discharge and accurate and effective data transmission.</p>
 <p>Hidden environmental dangers prevention</p>	<p>The Company carried out environmental impact assessment. In accordance with relevant laws and regulations including the Methods for Environmental Impact Assessment and Measures for the Administration of Pollutant Discharge Permits (Trial) (《環境影響評價法》《排污許可管理辦法(試行)》), the Company has formulated the environmental risk identification standards for pollution sources, took regular and irregular supervision and inspection actions, and tracked and supervised the rectification plan in combination with the environmental protection inspection of government departments to implement the management and control measures.</p> <p>The Company strengthened the investigation and treatment of hidden environmental protection dangers. The Company has developed the investigation proposal for hidden dangers of environmental protection equipment, comprehensively investigated the hidden dangers of environmental protection equipment system such as desulfurization, denitration, dust precipitation, waste water, hazardous waste to promote the management of <i>List of Material Environmental Risks</i>, and establish the hidden danger management account with regular check and update.</p>
 <p>Environmental emergency management</p>	<p>The Company has strictly followed the filing procedures of emergency proposal for environmental events. The Company has strictly implemented the <i>Administrative Measures of Emergency for Environmental Accidents</i> and other laws and regulations, prepared and revised the emergency proposal for environmental accidents in accordance with relevant laws, and reported to the local environmental protection department for filing.</p> <p>The Company has formulated emergency drill scheme and standardized emergency drills. Through the emergency drill of environmental events with relatively significant impact on the environment, such as "liquid ammonia leakage" and "desulfurization system leakage", the Company has tested its emergency linkage mechanism, and improved its capability in coping with emergencies rapidly and collaboratively.</p>

Case study

Huanghua Port realized intelligent management and control on the ecological environment

Huanghua Port ecological environment management and control center is the first national intelligent management and control platform on ecological environment. Through advanced technologies including the Internet of Things and Big Data, the real-time monitoring over the surrounding environment of the port zone, Huanghua Port has realized comprehensive digital perception of the ecological environment, transparent control over pollution sources, source control and precise control, and provided the data basis and basic guarantee for the intelligent scheduling strategy for ecological water scheduling, greening and irrigation, yard watering and dust precipitation in the port zone.



Management and control center of ecological environment of Huanghua Port

Promotion of Pollution Prevention and Control

China Shenhua has strictly implemented laws and regulations such as the Law on the Prevention and Control of Air Pollution (《大气污染防治法》), the Law of Soil and Water Conservation (《水土保持法》) and the Law on Pollution Prevention and Control of Solid Waste (《固体废物污染环境防治法》) and adhered to the principle of “source control, process management and control and end-treatment” to continuously promote the governance of air pollution discharge, wastewater treatment and utilization, solid waste recycling and disposal and safe transfer, and actively carry out the action plan for pollution prevention and control. In 2019, China Shenhua has invested RMB921 million in pollution governance and paid RMB335 million of environmental protection taxes.

Air pollution prevention and control

In accordance with the requirements of Opinion on Comprehensively Strengthening Ecological and Environmental Protection and Resolutely Preventing and Combating Pollution (《全面加强生态环境保护坚决打好污染防治攻坚战的意见》) formulated by the Central Committee of the Communist Party of China and the State Council, China Shenhua vigorously carried out the air pollution emission reduction and dust control to reduce air pollution.

Type of waste gas	Measures for treatment	Specific measures
Smoke Sulfur dioxide Nitrogen oxide	Transformation of ultra-low emission of coal-fired units, treatment, transformation and replacement of coal-fired boilers	For the power generation sector, the Company has completed the ultra-low emission transformation of conventional coal-fired units in an all-round way; for the coal sector, the Company has accelerated the treatment for small coal-fired boilers, further installed efficient desulfurization and dust precipitation facilities for boilers with capacity above 10t/h, and phased out small boilers with capacity below 10t/h, to reach the objective of replacement by larger boilers green power and ensure the emission of pollutants in accordance with standards.
Coal dust	Full sealing transformation of coal yard and dust treatment	For the coal, transportation and power generation sectors, the Company has comprehensively advanced the sealing project construction of coal yards to control dust pollution during coal storage. The Company has taken measures such as intrinsic long-term dust suppression technology, dry fog dust suppression, dry dust removal, wet deposition and dustfall, solidification, construction of wind and dust precipitation net suppress the generation of coal dust in the process of coal production, loading, unloading and transportation.

Case study

Green developing path of coal-fired power plants

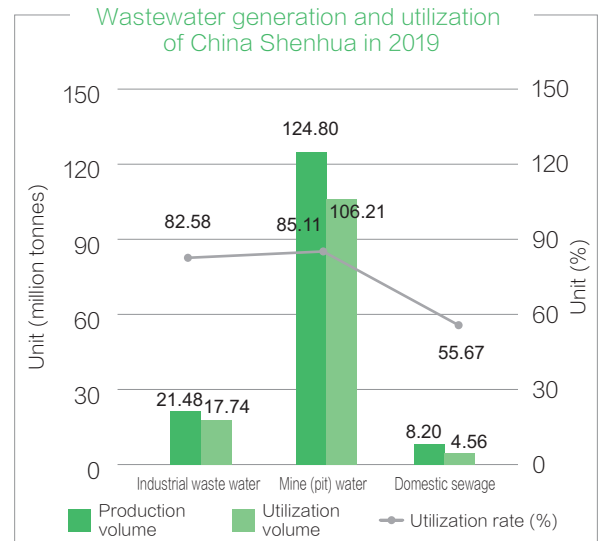
In 2019, Guohua Power won the Excellence Prize of the 10th China Environment Award (Enterprise Environmental Protection), becoming the only thermal power generation enterprise in China to win this award. the “Research and Application of Multi-technology Integration and Fusion for Removal of Pollutants in Flue Gases of Large Coal-fired Power Stations” of Taishan power station won the first prize of Innovation Achievements of Ultra-low Emission and Energy Saving Transformation of Thermal Power Enterprises in 2019 and the third prize of Science And Technology Progress of Power in China, which have made a positive demonstration of the clean and efficient utilization of coal resources in China.



Honorary award certificates of Guohua Power and Taishan power

Waste water treatment

China Shenhua has implemented the Action Plan for Water Pollution Prevention (2015-2020) (《水污染防治行動計劃(2015-2020)》), dedicated same efforts to both water conservation and sewage treatment, carried out the transformation on industrial wastewater system and the adjustment and optimization of water balance operation, and strengthened the treatment and recycling efficiency of industrial wastewater, coal wastewater and domestic sewage.



35

Constructed
underground
reservoirs

65 million m³

Annual supply
of water
exceeding

Case study

“Underground Dragon Palace” in Shendong Coalfield

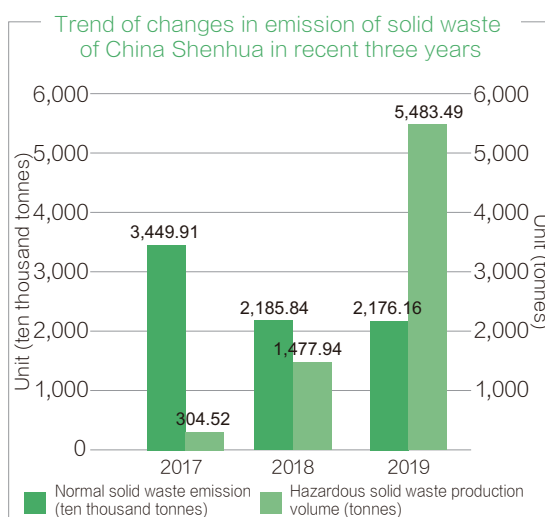
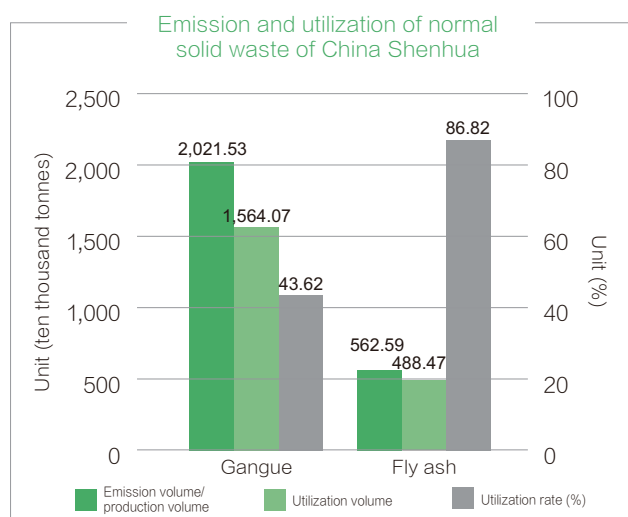
Shendong Coal used the distributed underground reservoir technology to realize the “Six Recycling Functions” of underground water supply, underground drainage, sewage treatment, flood prevention, environmental protection and energy conservation and emission reduction, namely to use the underground goaf to store mine water, and then use the elevation difference relationship of goaf floor and the purification function of gangue to facilitate the flow of mine water in goaf for transfer and purification to realize the benign three-dimensional circulation of water resources in mining area. Such underground reservoir technology could save approximately RMB1 billion every year. At the same time, it could supply water for the surrounding power stations, industrial areas and residence areas and further turn the dry land into a fertile land through ecological irrigation to reach ecological restoration.

Solid waste

China Shenhua actively promoted the resource utilization of harmless solid waste such as coal gangue, coal dust, slag and gypsum, formulated the disposal plan of hazardous waste in accordance with laws and regulations, and implemented the system of temporary storage and standardized disposal of hazardous waste to achieve safe transfer, standardized management and effective monitoring of the solid waste. In 2019, all hazardous solid waste has received compliance disposal.

Disposal of main solid wastes of China Shenhua:

Category of solid waste		Disposal method
Harmless waste	Gangue	Innovating the displacement technology of underground rock-free lane, and reducing the output of gangue from the source;
		Promoting the underground filling technology of gangue, and striving to keep the waste underground;
		Adopting methods including brick making, building materials, power generation and sales for comprehensive utilization of washing gangue
	Coal dust	Comprehensive utilization of landfill, stacking in compliance with regulations and export
	Slag	Comprehensive utilization of stope paving and export
	Desulfurized gypsum	Comprehensive utilization of storage and stacking in compliance with regulations and export
Hazardous waste	Catalyst waste Resin waste Motor oil waste Asbestos waste	Self-recycling for use and entrusting qualified third-party organization for compliance disposal



- Notes:
1. The Company's range of hazardous solid waste in 2019 is based on four statistics, namely waste catalyst, waste resin, waste motor oil and asbestos waste. The data during the year had larger discrepancy due to different direction of research,
 2. The statistics of gangue is based on emission volume, and the statistics of fly ash is based on production volume.

Water Resources Protection

China Shenhua vigorously promoted the construction of water-saving enterprises, and constantly optimized the water intake structure through rainwater collection, desalination, waste water recycling and other ways. In 2019, the water consumption intensity of China Shenhua recorded a decrease of 16.98% compared with that of the same period of the previous year.

Case study

Operation of the Indonesia desalination project

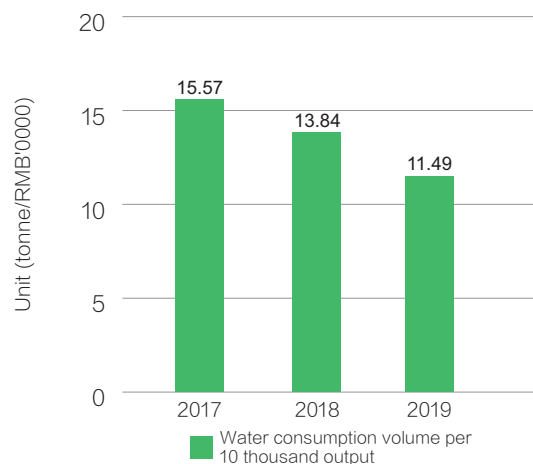
Two 4,000 tonnes/desalination units of Indonesia Java No. 7 project (2 X 1,050MW) of Guohua have been constructed to provide boiler make-up water, industrial water and domestic drinking water for the entire power station, which were also the only source of fresh water for the power station after the project was put into operation.



Desalination units of Java

Water resources protection performance of China Shenhua	
Type	Consumption volume in 2019 (million tonnes)
Fresh water	132.3
Including :	
Land surface water	106.48
Underground water	5.62
Tap water	20.2
Recycled water (reclaimed water)	43.05
Including: mine water (drainage water)	12.89
Industrial sewage	11.74
Domestic sewage	18.42
Other water in total	4.33

Trend of change in water consumption volume per 10 thousand output of China Shenhua in recent three years



Biodiversity

Adhering to the idea of “building an ecological mining area and producing environmentally friendly coal”, and the objective of green mining, clean production and ecological construction, China Shenhua actively maintained biodiversity, conducted comprehensive assessments on the impacts of a new project to the local communities and ecological system before its launch, and strived to create a harmonious mining area with coordinated development of resource development and ecological protection with measure of prompting the construction of green mines, strengthening water and soil conservation and the protection of endangered species.

Case study

The construction of “green mines” has achieved significant achievement

On 26 December 2019, Shendong coal won the “Green Environmental Protection Award” at the 2019 Public Welfare Ceremony of China Social Responsibility cum the 12th China Corporate Social Responsibility Summit. Shendong mining zone located in the border area of Shanxi, Shaanxi and Inner Mongolia, which was under key supervision and control of soil erosion in China. For the protection of the local ecology, Shendong Coal stuck to the principle of putting equal efforts on development and control, and has allocated RMB2.8 billion for ecological construction with the coverage of 309 square kilometers. In addition, the vegetation coverage increased from 3~11% at the beginning of development to 64% by now, the sandstorm days in the mining area have decreased from over 25 days to 3~5 days, and plant species has increased from the original 16 to approximately 100. All such improvement has effectively reversed the degradation direction of the original fragile ecological environment, and built an active green mine path for coordinated management of coal mining and ecological environment.

Zhunneng Group adhered to “mining while reclaiming” to vigorously promote the construction of green mines, and has initially formed a synergetic development model of “mining and reclamation farm” that organically integrates the mining process with ecological development and facilitates harmonious coexistence of human and nature. As of the end of 2019, a total of RMB1.52 billion has been invested to completed a total reclamation area of 3,040 hectares and reach 100% in reclamation rate of the mining areas. The vegetation coverage has increased from 25% of the original surface to above 80%, and the control rate of soil erosion has reached 80%. Heidaigou and Ha’erwusu opencast coal mines were both rated as “National Green Mines” and the qualification of “Zhungeer National Mine Park” has gained approval from the Ministry of Natural Resources.



Aerial photo of the construction of green mines of Zhunneng Group

Case study

Sweet “Koala Corridor” guarding Australia's national treasure

Since Gunida County, New South Wales, Australia, where the watermark coal mine project of China Shenhua is located, is known as the “Capital of Koala”, Australia subsidiary remembered to take into consideration of the protection of koalas’ habitat while developing coal mines.

In October 2019, the Interim Koala Habitat Plan prompted by Shenhua Holdings Australia has obtained approval from the state government. In accordance with the plan, Shenhua Holdings Australia will build a lush vegetation corridor (“Koala Corridor No. 8”) by 4.5 kilometers long and 300 meters wide, and it is covered by trees, shrubs and grasslands for koalas to travel between their habitats. Shenhua Holdings Australia has started the first stage of vegetation planting during November to December 2019 to plant approximately 2,500 saplings, and intended to implement the second stage of planting during March to April 2020. Upon completion of planting, the accumulated number of trees planted will exceed 20,000.



Koala Corridor under construction

Full text of the Interim Koala Habitat Plan is set out at the company website of Shenhua Australia Holdings Pty Limited on www.shenhuawatermark.com.

Employee Development

China Shenhua has always adhered to the talent idea of “people-oriented and making the most of talents”, promoted the innovation and reform of talent management system and mechanism to maintain and safeguard the legitimate rights and interests of employees. China Shenhua also optimized the working environment, promoted the craftsman spirit and model worker spirit to stimulate the innovation vitality of employees and strived to build a knowledge-based, skilled and innovative workforce for reaching the unity of company value and employee value as a whole, enhancing employees’ sense of security, participation and gains, and creating a better future work together with employees.



Protection of Rights and Interests of Employees

China Shenhua constantly improved the employment management mechanism, to maintain and safeguard the legitimate rights and interests of employees by strict compliance with the Labor Law, the Labor Contract Law and other laws and regulations. It provided equal employment opportunities and competitive wage and welfare system for employees to incentivize their enthusiasm of participation in democratic management. It also paid social insurance and housing provident fund in accordance with the laws on schedule for employees to safeguards their occupational health and safety. In order to build a harmonious and stable labor relationship, the company has guaranteed reasonable working hours and paid leave of employees.



Equal Employment

The Company strictly complied with relevant laws and regulations, adhered to the principle of equal employment and equal remuneration for equal work to prevent any form of employment discrimination and conducted employment under the principle of being open, fair and just by attaching equal importance to employees of different nationality, race, sex, religious belief and cultural background. The Company provided employment opportunity for the disabled, minority nationality and veterans to ensure equal remuneration for equal work and for both man and woman, and strictly implemented requirements on maternity and lactation leave for women employees to ensure their rights.

7.16%

Proportion of females in senior management team

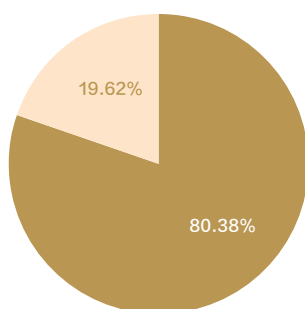
5.23%

Proportion of ethnic minority employees



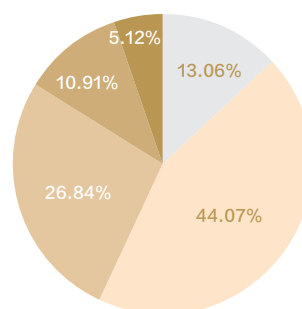
Indonesia power station of Guohua Power built “worship hall” for employees to pay respect to local religious belief

The Company forbade the employment of child labor and rejected any form of forced employment and compulsory employment. The Company carried out irregular inspections on the execution of labor employment through implementing labor employment supervision and inspection system to ensure legal employment. There were no employment of child labor, forced labor and employment dispute in 2019 and no occurrence of stoppage or strike events for the last three years.



Composition of sex of employees

Male
Female



Composition of age of employees

Aged 55 or above
Aged 50-54
Aged 40-49
Aged 30-39
Aged 29 and below

Distribution of employees as categorized by regions

Composition of region of employees	North China	Northeast China	East China	South Central China	Southwest China	Northwest China	Others
Number of people	35,379	553	1,366	2,382	1,881	33,785	274
Proportion (%)	46.78	0.73	1.81	3.15	2.49	44.68	0.36

Structure of employee turnover

Proportion of employee turnover as categorized by gender

Composition of gender of employees	Turnover (person)	Proportion of employees to such category (%)
Male	683	1.12
Female	173	1.17

Proportion of employee turnover as categorized by age

Composition of age of employees	Aged 29 and below	Aged 30–39	Aged 40–49	Aged 50–54	Aged 55 or above
Turnover (<i>person</i>)	255	370	128	61	42
Proportion of employees to such category (%)	2.58	1.11	0.63	0.74	1.08

Proportion of employee turnover as categorized by regions

Composition of region of employees	North China	Northeast China	East China	South Central China	Southwest China	Northwest China	Others
Turnover (<i>person</i>)	475	8	71	108	18	168	8
Proportion of employees to such category (%)	1.34	1.45	5.20	4.53	0.96	0.50	2.92

Remuneration and Benefits

China Shenhua provided a competitive salary and welfare system for employees, which mainly consisted of fixed salary, floating salary, various allowances, social insurance and other welfares. The total salary and the increase of employee salary were in match with the economic performance and labor productivity of the Company with reference to the principle of labor marketization to achieve linkage between employee salary and business performance of the Company. The internal salary distribution of the Company inclined to key posts, front-line production posts and high-level and high skilled talents in urgent need to reasonably expand the salary distribution gap. It strengthened the internal performance assessment of all employees, and linked the employee's salary with the work performance and actual contribution of employees to give full play to the incentive and guiding role of salary.



Paying various social insurance and housing provident fund for employees, on schedule and in full amount with the coverage of social insurance of 100%

Ensuring the legal rights of paid leave, maternity leave, paternity leave and other statutory leave of employees

Providing work meal, annual health examination, enterprise annuity, medical expense reimbursement and other welfares for employees

Democratic Communication

China Shenhua wholeheartedly followed the principle of relying on employees to run an enterprise, attached great importance to employees' opinions and suggestions on enterprise development and management, progressively improved the democratic management system of the Company with the workers' congress as the basic form, and provided clear information exchange and communication channels to create opportunities of getting the superior orders around for employees. China Shenhua prompted measures for the publicity of matters of the Company, announced and published the concerns of employees relating to cadre selection, evaluation and selection of excellent employees pursuant to relevant regulations, solicited opinions extensively in the process of system formulation to ensure employees' rights of democratic participation, information and supervision in the decision-making process of the Company. In 2019, the Company has strictly carried out democratic procedures in elect and appointment of new employee supervisors.

Assistance to Employee Growth

By upholding the employment concept of employing talents with both capability and moral integrity and considering moral integrity as the priority, China Shenhua established standardized procedures for talent selection and appointment, and focused on training strategic operation and management talents, compound cadre talents, innovative scientific and technological talents, expert skilled talents and pioneering international talents to ensure sufficient talents, reasonable hierarchy and optimized structure of the Company.

Career Development

China Shenhua attached great importance to the career planning of employees, constantly improved and deepened the talent training mechanism, established a multi-level and multi-channel training system based on its headquarters and subsidiaries, constructed a career development channel with parallel administrative management, professional technology and skill operation, and achieved the talent promotion mechanism covering all posts. The entire system of the Company actively carried out the evaluation of "Chief Engineer" to guide employees to inherit the spirit of craftsman, and enhance post skills.

Case study

Baoshen Railway improved the system of "Chief Engineer" to facilitate career development channel for its employees

Baoshen Railway Group has formulated the implementation method of "Chief Engineer" establishment with reference to its own actual situation. Through the establishment of the "Chief Engineer" incentive mechanism, and in combination with improved evaluation mechanism of "Chief Engineer" during the employment period, Baoshen Railway Group signed the target responsibility letter during the employment period, and fully facilitated the production skills channel for employees' career development to provide special allowance for employees on basis of annual performance, professional achievements during the employment period, and personal reporting, and make the most of the positive incentive effect and skill leading function of "Chief Engineer" by setting examples.

Employee Training

China Shenhua has fully applied the training concept of modern enterprises, and constantly improved the training base and training network construction by conducting knowledge training, professional training and post training concurrently, combining off-duty training with amateur training, and implementing diversified and differentiated training to strive for the synchronization of employee growth and enterprise development. On the basis of promoting the training for all staff, the Company focused on training four types of talents with business management, professional technology, internationalization and operation skills.

Classification Standard	Category of Employees	Proportion of total persons received training (%)	Training Hours per capita (hours)
Categorized by functions	Management	16.63	198.29
	Appointed professional technicians	17.91	86.24
	Technicians	60.72	209.54
	Others	4.74	30.19
Categorized by sex	Male employees	80.68	174.1
	Female employees	19.32	170.75

1.3236million times

Employee training

13.1155million hours

Accumulate training hours

95.86%

Proportion of training of Company's employees in 2019

Case study

“Three Lectures” were successfully held to accurately improve the quality of employees

In 2019, Shengli Energy continued to operate the “Three Lecture Halls”, i.e. to invite professional or popular professors (lecturers) to hold “Celebrity Lectures” seminars. It comprised the “Featured Lectures of Shengli Energy” of the “1 + 1 + 1 Lectures of the Management”, “Shengli Energy Lectures for You to Stand Out” and the “Interim Report of the Management at Emerging Science Team Level”. It took the “Boutique Small Lectures” composed of the business lectures of the “Guidance Lecture of Professional Lecturers” and the “Round-way Guidance and Linkage” and the professional (featured) training classes to constantly improve the coverage, accuracy and systematization of staff training.

Occupational Health

China Shenhua has put the health of employees in the strategic position of priority development, and has built a relatively perfect management system for occupational safety and health by improving the management system, and prompting the occupational disease prevention and control plan and other measures. In 2019, the Company continued to advance the construction of occupational disease prevention and control capacity, published documents including the Special Action Plan for the Prevention and Control of Occupational Diseases in Coal Industry, and the Notice on Further Strengthening the Prevention and Control of Occupational Diseases in Coal Industry, and kept improving the working environment for employees to ensure their physical and mental health. The annual special fund for occupational diseases reached RMB652.18 million.

Safe Occupational Environment

China Shenhua attached great importance to the labor protection of employees, constantly strengthened the management and control of on-site occupational hazards, and strived to provide a good and safe working environment for employees. Some coal mining enterprises of the Company have adopted intelligent mining technology to reduce the number of on-site operators to ensure the health of employees. In 2019, it has completed the governance on 553 workplaces with serious occupational hazards.

Major measures for building a safe occupational environment

Provide personal protection equipment regulated by the PRC for employees and encourage them to use such equipment

Fit up with professional medical equipment and rescue facilities under the mines

Update the dust removal measures at the workplace

Conduct comprehensive treatment of dust, noise and hazardous subjects

Strengthen monitoring and evaluation of the working environment

Guarantee the nutritional health of employees, provide cooling supplies and avoid over tiredness of employees

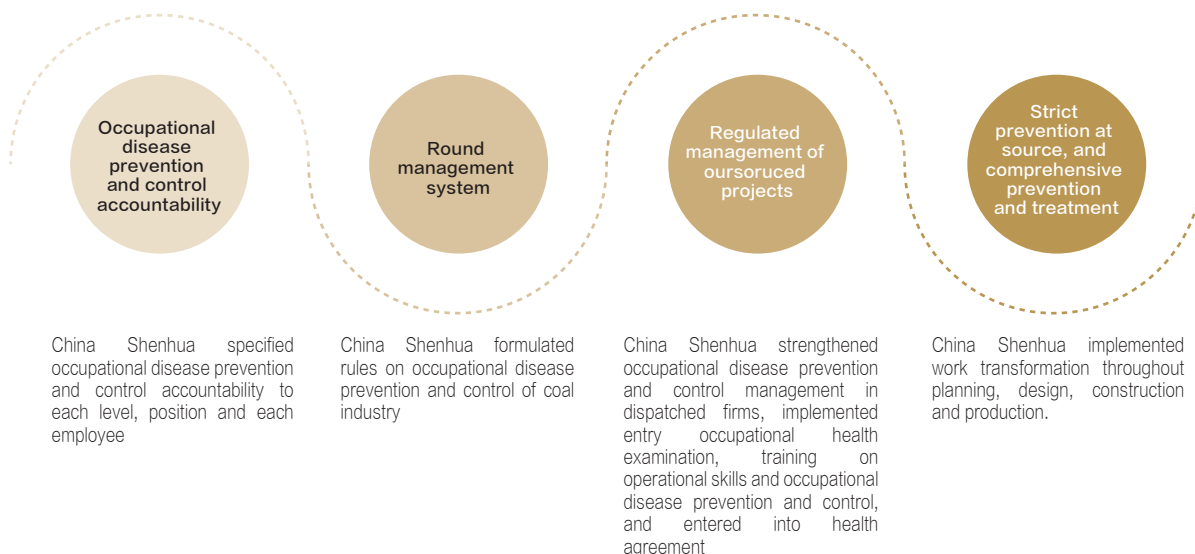
Case study

Shendong Coal strengthened the management of occupational health and improved working environment for employees

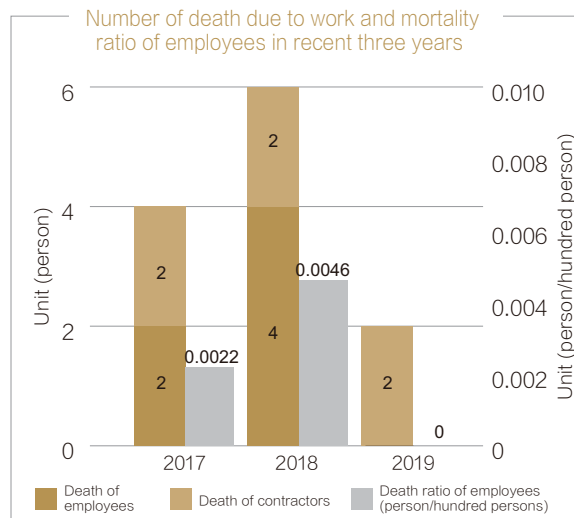
Shendong Coal has established management offices for the prevention and control of occupational hazards, arranged full-time occupation health management personnel, and established and improved *the Administrative Measures for Prevention and Control of Occupational Hazards in Workplace of Shendong Coal*. Shendong Coal has also formulated the 2019 work plan for the prevention and control of occupational disease, created control indicators of incidence rate of new pneumoconiosis patients per thousand employees, strengthened regular examination and routine monitoring on occupational hazards, standardized the choice and arrangement of monitoring places, optimized the prevention facilities for occupational disease in the workplace and improved the working environment for employees.

Employees' Physical Health

China Shenhua has set up working groups for prevention and control of occupational hazards, included occupational hazards into the intrinsic safety management system, carried out physical examination of occupational hazards for fresh, on duty or resigned employees exposed to occupational hazards and established management files of occupational health and safety to carry out special screening of "pneumoconiosis" for the employees of coal enterprises, and gave proper rehabilitation treatment and arrangement to employees suffering from occupational diseases to promote the construction of "healthy Shenhua". In 2019, the total number of work-related injuries was 76, and the number of working days lost caused thereof was 5,797.



Major measures for strengthening the prevention and control of occupational disease of China Shenhua



Case study

Professional rehabilitation services brought care to the ground

In 2019, Shendong Coal has strengthened the prevention and control of pneumoconiosis, and organized the rehabilitation treatment of pneumoconiosis. In June, 99 on-duty employees suffering from pneumoconiosis insured in Yulin were rehabilitated in Yulin High-tech Hospital; in December, 24 on-duty employees suffering from pneumoconiosis insured in Ordos were rehabilitated in Ordos TMC Rehabilitation Hospital, and such actions have effectively safeguarded the legitimate rights and interests of employees' occupational health.



On-duty employees suffering from pneumoconiosis were rehabilitated in Ordos TMC Rehabilitation Hospital

Case study

Baotou Chemical has achieved remarkable results in reducing occupational hazards

Baotou Chemical Co., Ltd. has taken a set of measures, including ensuring the normal operation of occupational disease prevention facilities, strengthening the cleaning of the on-site working environment, improving the equipment in workplaces with over exposure to occupational hazards, and controlling the time of exposure to hazards to reduce occupational hazards, and it has achieved remarkable results. In 2019, the qualification rate of dust detection of the Company has increased by 8% and the qualification rate of noise increased by 9.3% on a year on year basis.

Employees' Mental Health

Caring for employees' mental health and attached great importance to the mental fluctuations of front line employees, China Shenhua has provided diversified events for delivering mental health knowledge and mental health consultation service to relieve the pressure of employees and instruct them to build a positive and healthy mentality.

Case study

Warm and sweet actions to care for employee mentality

The facility maintenance center of Shendong Coal has established a mental health association to conduct face-to-face and heart-to-heart communication with employees of the workshop and work teams. In 2019, Shendong Coal has conducted 21 trainings of "Improving Employees' Happiness", 89 person-times of person-to-person mental consultation, representing an increase of 25 person-times as compared with the corresponding period of 2018. Such new model to care for employees through mental counseling has been helping more and more employees out.



Mental health association of Shendong Coal conducted face-to-face communication with employees

Focusing on Employees' Happiness

China Shenhua attached great importance to the well-being of its employees, paid close attention to their work and life by providing support for female employees, solving their practical problems and helping them out of difficulties. China Shenhua held a variety of recreational activities to provide a platform for employees to show themselves and communicate with each other and enhance their sense of belonging and cohesion of the Company.

Cultural and Recreational Activities

The Company organized lively recreational activities to enrich employees' spare time and enable them to cultivate their hobbies, relieve work pressure, and display the optimistic and positive spirit of Shenhua employees.



"Lugang Cup", ping-pong match of staff of China Shenhua was held in Tianjin to celebrate the 70th anniversary of the founding of China in July 2019



Activity of "literary women and happy life" was launched on the Women's Day of 2019

Caring for Employees in Need

China Shenhua was eager to help families of the poor employees at the grassroots level, and has done well in the relief of severe diseases and the assistance of students. In 2019, the Company helped 2,815 poor employees, rescued 147 families of employees suffering from severe disease with the payment of RMB5,451.5 thousand of major disease relief aid, and provided the minimum living security benefit for 324 families of extremely poor employees and their family survivors with a total amount of RMB12.0279 million of consolation fund, aid fund and minimum living security benefit, all of which have put into practice of measures of people-oriented and caring for employees.

Harmonious Society

China Shenhua has deeply implemented its corporate mission of “Contributing Clean Energy and Building a Beautiful China”, and constantly improved the quality of products and service to provide safer, more stable and reliable supply of coal and power for the economic society. China Shenhua strengthened the entire process management of suppliers to jointly build a responsibility supply chain and actively participated in community affairs and shared development achievements with local community to make contribution to the healthy development of society.



Adhering to Quality Service

China Shenhua was dedicated to providing high-quality products and services on the standard of customer satisfaction by striving for perfection and pursuing excellence, strictly complied with national laws and industry quality standards in the process of production and operation, implemented the action implementation plan for China Energy Group in quality improvement, and constantly improved the quality management system to protect the basic rights and interests of customers.

Remarkable Quality

China Shenhua has improved the management system of coal quality at all levels, improved the quality of coal products and promoted the clean development of coal industry through slime reduction, the construction of green, efficient and intelligent coal preparation plants, customized production of coal, and the increase in production of special coal with high added value.



The Company strictly carried out quality control over all phases of coal production, transportation and sales to ensure the quality of commercial coal.

Production phase the Company conducted coal quality control over the entire process of coal source selection, washing and processing and transportation and stacking. The Company also improved the transformation of coal preparation plants and transformed a total of 6 coal preparation plants in 2019 to increase the raw coal washing rate and the output of special coal.

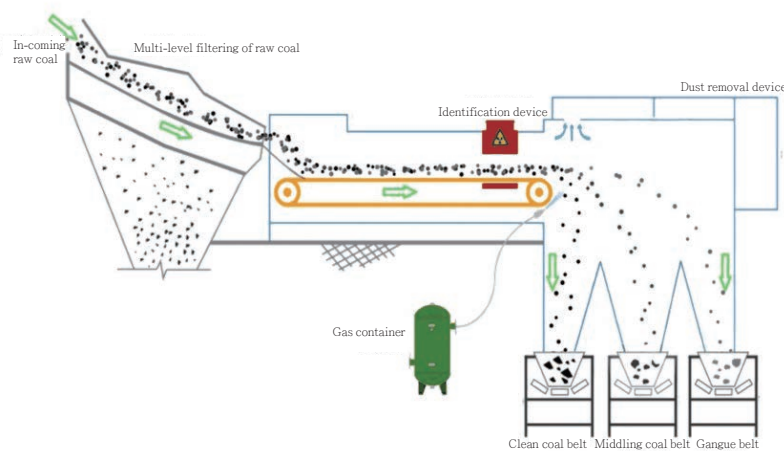
Transportation phase the Company refined the pre-ship prediction, and formulated the truck and ship loading plan scientifically. The Company also strengthened the management of coal quality qualification rate of truck and ship loading, conducted test, rectification and precise control over the coal quality on the purchasing side, coordinated the port company to refine coal blending, and implemented “one ship, one plan, one approval” to effectively satisfy the quality requirements of users.

Sales phase Based on the international acceptance, national and local codes and practice of quality inspection, the Company has formulated 10 management system, including *the Measures for Coal Quality Management of Shenhua Trading Group Limited*, pursuant to which the Company strictly conducted control over coal quality, and scientifically optimized the proposing conditions and tackling methods of quality disagreement in the sale and purchase contracts to become more reasonable and transparent.

Case study

The improvement in quality and efficiency to promote the construction of green, efficient and intelligent coal preparation plant

In March 2019, Zhungeer Energy held an exchange conference of coal preparation technology in Ha'erwus coal preparation plant, which summarized the experience of TDS intelligent dry separation technology and high-efficiency screening technology, confirmed the construction objectives and policies of the intelligent coal preparation plant, and promoted the construction of the intelligent coal preparation plant in an orderly manner.



TDS intelligent dry separator is able to produce three products of clean coal, middling coal and gangue at the same time while ensuring the purity of clean coal and gangue, and recovering middling coal and improving the product output rate.

Quality Service

Targeting at customer satisfaction, China Shenhua has constantly innovated its service mode, enriched its service connotation, improved its service ability to realize win-win development of the company and customers.

Customer Satisfaction

China Shenhua has established a customer manager system to conduct multi-level and high-frequency communication and exchange with customers in terms of product quality and service, and constantly improved its product service quality in reference to customer feedback. In 2019, China Shenhua has reached a customer satisfaction rate of 97.06% in seaborne sale and that of 94.5% in direct sales.

Customer Privacy Protection

China Shenhua adhered to the principle of "Not to publish a secret unless it shall be published", defined the scope of customer privacy and information to ensure no disclosure of customer information. Shenhua Trading Group has set up a committee of trade secret protection to be fully responsible for the confidentiality of customer privacy and information. The committee has adopted hierarchical and strict management over the customer information by adhering to the principles of "approaching and using as work demands" and "sectional approaching and special personnel mastering of core trade secrets". In 2019, there was no disclosure of customer privacy and information in China Shenhua.

Creating a Responsibility Supply Chain

China Shenhua constantly strengthened the supplier management, cooperated closely with industry peers and suppliers, and promoted the exchange of advanced technology and management concepts, to build an open, fair, transparent and honest responsibility supply chain.

Management of Suppliers

China Shenhua has established a strict contractor and supplier management system to manage the entire process of access, selection, use, evaluation and assessment of contractors and suppliers. The Company carries out regular supplier performance assessment, and commended the suppliers with excellent performance while punishing the suppliers with breach of faith.



Support of Suppliers

Through discussion and exchange with suppliers, on-the-spot investigation and other ways, China Shenhua has known the measures and methods of key suppliers in safety production and environmental protection production as the evaluation factors of performance appraisal. In the process of material procurement, it gave priority to purchasing "green products or green manufacturing products" to strengthen the safety and environmental protection concept of suppliers. In engineering construction projects, it clearly defined the safety and environmental protection requirements to promote contractors to perform social responsibilities.

Case study

Guohua Power convened the 2019 supplier meeting

On 26 March 2019, Guohua Power organized and convened the 2019 supplier meeting to commend the excellent suppliers of equipment of infrastructure projects, production materials and production business in 2018, and organized the exchange of management and technical experience to promote mutual learning and progress between Guohua Power and excellent suppliers in various industries.



As at the end of 2019, China Shenhua had 93,232 compliance suppliers.

Supplier distribution of China Shenhua

Region	North China	Northeast China	East China	South Central China	Southwest China	Northwest China	Others
Number	31,191	6,184	22,451	8,703	6,864	17,283	556

By region: North China (Beijing, Tianjin, Hebei, Shanxi, Inner Mongolia; Northeast China (Heilongjiang, Jilin, Liaoning); East China (Shanghai, Shandong, Jiangsu, Anhui, Jiangxi, Zhejiang, Fujian); South central China (Henan, Hubei, Hunan, Guangdong, Guangxi, Hainan); Southwest China (Chongqing, Sichuan, Guizhou, Yunnan, Tibet); Northwest China (Shaanxi, Gansu, Ningxia, Xinjiang, Qinghai); others (Hongkong, Macau, Taiwan, overseas)

Creating a Beautiful Community Together

Making return to the society is the responsibility of enterprises. China Shenhua actively cared about people's livelihood and social progress, handled social development difficulties and promoted the harmonious development between enterprises and the society by materials donations, charitable activities and voluntary actions in fields of targeted poverty alleviation, social assistance, disaster relief and the construction of overseas community.

Fighting the novel coronavirus pneumonia epidemic together

While implementing the important directive spirit of the general secretary Xi Jinping, China Shenhua acted promptly and mobilized all of its employees to fully support the fight of prevention and control of the epidemic by focusing on the "One Prevention and Three Guarantees", namely preventing and controlling of the epidemic, guaranteeing safety production, guaranteeing employee health and guaranteeing energy supply.

Establish a liaison mechanism for the epidemic prevention and control The Company's party committee established the daily report, zero report, and daily notification mechanisms to timely grasp the epidemic information and situation of its subsidiaries, and form an epidemic prevention and control network covering the entire company. All units cooperated with the local government to carry out comprehensive epidemic investigation and resolutely implemented early detection, early reporting, early isolation, and early treatment to effectively prevent and control the spread of the epidemic.

Ensure the life safety and physical health of its employees The Company arranged employee attendance roll in a reasonable manner, and implemented separation between operating units by shifts. It strengthened disinfection, ventilation and environmental improvement of factories, mines, workshops and other densely populated places, carried out the 10 measures of caring for employees, and purchased protective equipment in a timely manner. The Shenhua Trading Group Huazhong Branch formulated 18 specific measures to strictly implement the "One Prevention, Three Guarantees" in terms of prevention and control measures, personnel management, personal protection, logistics management, and production and operation.

Actively perform the social responsibility of central enterprises It strengthened the connection between safety production and transportation demands to guarantee energy supply for the country, especially for Hubei, and power and heat supply for key hospitals and key anti-epidemic materials manufacturing enterprises. China Energy donated a total of RMB62 million to Hubei Province for the epidemic prevention and control; Baotou Coal Chemical Company adjusted its production arrangements to convert to emergent production of S2040 polypropylene resin.

Targeted Poverty Alleviation

China Shenhua has exerted itself to improve the level of education, culture, hygiene and other public services in the poverty-stricken areas, strengthened the construction of infrastructure and production facilities, and ensured the realization of "Two No-Worries and Three Guarantee" for rural poor population by adhering to the basic strategy of targeted poverty alleviation, focusing on the seriously poverty-stricken areas and the old revolutionary base areas of "Three Areas and Three Prefectures", adopting the assistance measures of helping people's livelihood, intelligence, and industry. In 2019, Mizhi and Wubu counties in Yulin City, Shaanxi Province and Nierong County in Tibet Autonomous Region, all of which were targeted poverty alleviation places by Shenhua, have successfully lifted their hats from poverty. Shendong Coal was awarded the title of "Advanced Collective of Social Poverty Alleviation" by Mizhi County. The case of "Developing Education to Facilitate Medical Development and Developing Both Ambition and Wisdom" of Sichuan Energy was selected in the Top 50 Cases of Targeted Poverty Alleviation by Chinese Enterprises.



Major directions of the targeted poverty alleviation of China Shenhua

Poverty alleviation through education	Poverty alleviation through industry	Poverty alleviation through medical treatment	Infrastructure
<p>Assisting in the construction of the nine-year system school projects and solving enrollment issues for over 900 poor families in Mixi district, Mizhi county</p> <p>Offering help for 545 needy students having finished their compulsory education in Mizhi county and Wubu county</p> <p>Granting a bonus of RMB937,800 to teachers and students at rural elementary and middle schools in Butuo county, Sichuan</p> <p>Helping construct Waji Primary School and Diluoxiang No. 2 Primary School Project in Butuo County to provide 3,100 position for study</p>	<p>"Making an capital donation of RMB1.8 million to the construction project of the picking garden in Yangjiagou, Mizhi county</p> <p>Making an capital donation of RMB1.2 million to the fresh milk collection vehicles of the pasture in Nierong county</p> <p>Making an capital donation of RMB0.4 million to the land leveling and farmland reconstruction project in Laozhuang village, Wubu county</p>	<p>Providing medical treatment equipment for the health center in Songjiachuan town, Wubu county and eliminating the difficulties in medical treatment for approximately 1,000 poor villagers</p> <p>Making an capital donation of RMB3.5 million to the project of purchasing CT equipment for the people's hospital of Nierong county</p> <p>The China Energy Group Foundation has helped 1,338 children of poor families with leukemia and congenital heart disease aged 0 to 18 across the country</p>	<p>Making an capital donation of RMB10.8 million to the construction of roads within the entire village of Bozuo village, Butuo county</p> <p>Making an capital donation of RMB2 million for the implementation of the water carrying project in sangwayuze village, Nierong county</p> <p>Making an capital donation of RMB26 million to the project of constructing a well-off demonstration village of Cuba village, Nierong county</p>

Case study

Zhunneng Group promoted consumption to alleviate poverty jointly with its employees

In order to put “Poverty Alleviation Through Consumption” into practice, Zhunneng Group organized and mobilized employees to purchase products on the “Poverty Alleviation Public Welfare Platform of China Energy”, and encouraged all departments to take the purchasing of poverty alleviation products as activity supplies and consolation products into first consideration. As of the end of 2019, 20,000 catty of unsalable hand-made noodles were purchased in Wubu County, Shaanxi province, and over 1,000 catty of fungus in Yong'an village with a total of more than RMB240,000.



Zhunneng Group carried out “poverty alleviation through consumption” to purchase auricularia of Yong'an Village

Case study

Sichuan Energy actively explored new ways of Party building and poverty alleviation

Sichuan Energy actively explored new ways of Party building and poverty alleviation. It not only assisted Juesha Village and Bozuo Village of Butuo County, Sichuan Province to carry out the establishment of “Demonstration Party Committee” and “Red Flag Branch” respectively, but also organized the activity of “Pairing up for Construction to Promote Poverty Alleviation and Innovating with Creativity to Fight for Advancement”. In 2019, Sichuan Energy has established three new activity centers and cultural rooms for the Party masses, which effectively promoted the construction of grass-roots Party organization and laid a solid foundation for improving the organizational capacity of Party organizations in poor villages and the combat capacity to win the battle of poverty alleviation.



Sichuan Energy carried out the activity of branch pairing up for construction

Volunteer Service

China Shenhua has actively put into practice the voluntary service spirit of “Dedication, Fraternity, Mutual Assistance and Progress” to satisfy the needs of local people and consistently carried out public welfare activities to concentrate love, serve the society and inherit civilization. In 2019, 7,613 employees participated in voluntary activities, and their volunteering time reached up 65,697 hours.

Case study

Be able to sort garbage and be the first in green life

On 28 August 2019, the volunteer service team of Fujian Energy organized the volunteer service activity of “Be Able to Sort Garbage and Be the First in Green Life” for promoting the garbage sorting knowledge, which further improved the residents’ understanding of garbage sorting knowledge, and took practical actions to realize the core socialist value, in order to contribute to the construction of “A Blessed State and a Happy City”.



Volunteers of Fujian Energy are teaching garbage classification knowledge to residents

Emergency Rescue and Disaster Relief

When facing disasters, China Shenhua has never fallen back and has always been battling at the front to protect people's lives and express hope by regarding protecting people's lives and properties as a target.

Case study

Achieving "no delay" in disaster relief

In 2019, the emergency rescue team of Shendong Coal has handled 105 accidents of various kinds, including 5 underground accidents. 21 victims were successfully found and transported out of the well in the major coal dust explosion accident of Lijiagou coal mine of Baiji Mining Company on "1.12" in Shaanxi Province. 100 ground accidents has been handled, including 15 traffic accidents, 13 car fires, 20 residential fires, 40 grassland and tree fires and 12 other accidents, during which 27 people in distress were rescued, making positive contributions to the protection of life and property safety of the surrounding people.



The emergency rescue team of Shendong Coal is conducting rescue at Lijiagou coal mine

Development of Overseas Community

Actively implementing the national Belt and Road initiative and adhering to the concept of internationalized enterprise and localized operation, China Shenhua has deepened its awareness in the demands of local communities and focused on aspects including environmental protection, talent training, local employment and community assistance to make return to the local citizen while promoting the development of the local economy and ensuring the supply of energy at the same time.

Case study

Guohua Power implements the social responsibilities by “Going abroad”

The subsidiaries of Guohua Power in Indonesia adhered to the cultural concept of “Country, Honor and Responsibility”, promoted integration to ensure stability internally, undertook responsibility to build a good image externally, and performed social responsibilities in a positive attitude, resulting in all environmental indicators over to Indonesian standards, zero sewage discharge, and the establishment of a green and environmental corporate image.



Aerial view of the power station of Guohua Power in Java, Indonesia

Local employment

Contractor of operations in EMM, Indonesia employed only villagers from surrounding villages, amounting to more than 700 persons in total, benefiting the development of local industries including transport and labour services.

Environmental protection

Java company in Indonesia and operation and maintenance company actively promoted ecological protection works during construction of Java No. 7 project. Mangrove coverage along the coast of seas where maritime works were carried out was improved by more than 30% during infrastructure construction period.

Talent development

Guohua Power and University of Indonesia entered into a Memorandum of Cooperation, and built “Power Simulation and Research and Education Cooperation Center”, and also established the first university simulator lab of million KW ultra-supercritical coal-fired power generation in Indonesia, in order to develop power talents for Indonesia.

Community support

China Shenhua sponsored public welfare activities in local communities, assessed livelihood issues, repaired mosques, dredged water channels, reinforced bridges, mended roads and drilled wells and other activities, sent gifts to needy residents and disadvantaged groups in surrounding villages and towns during traditional festivals of Indonesia, which was highly appraised by local residents, government and relevant departments.



In October 2019, Boundless Love, a movie adapted from a true story about employees at EMM, Indonesia, was officially released. The movie told stakeholders about the efforts made by Guohua Power to fulfill its responsibilities abroad.

Future Outlook in 2020

2020 is a crucial year for building a moderately prosperous society in all respects upon the completion of 13th Five-Year Plan. It is also an important year for China Shenhua to achieve sustainable development. China Shenhua will further enhance its sense of responsibility and mission, resolutely fight three major battles with due responsibility, strict attitude, precise strategies and effective measures to build a world-class listed energy company.

We will activate the strong intrinsic development momentum of the Company by optimizing the corporate system, governance system, management model, enhancing the organic integration, and advancing the operation system of pilot reform and marketization.

We will further carry out the activity of the Year of Risk Management and Control to prevent general accidents effectively and absolutely stop major and above accidents, and practically improve the safety management level of the company and safeguard the life safety and health of its employees by strictly controlling the incidence of occupation diseases.

We will cherish resources, save energy and reduce consumption, prevent and control pollution, protect water resources and decrease the discharge intensity, cope with climate change proactively, and integrate the concept of green development deeply into the entire daily operation of the company to achieve harmonious development between the Company and the natural environment.

We will ensure various rights and interests of employees by regarding talents as precious wealth for the enterprise development. We will reform the talent development mechanism of talent selection, training and employment and activate the innovation and creativity of talents to peruse mutual development shoulder by shoulder with employees.

We will make efforts to make return to the society, actively participate in poverty alleviation, voluntary public welfare services and other activities to convey more goodwill and warmth to the society, and share the development achievements of the Company with the society.

The mission urges people to work hard and practices make brilliant achievements. In the new year, China Shenhua will make every effort to promote the high-quality and high-efficiency development of the Company with the enterprising consciousness of striving for the first place and the active spirit of active actions, and satisfy people's yearning and expectations for a better life in the future with more outstanding achievements, green energy and more responsible actions.

Appendix I: Table of Key Performance

First-level Indicators	Second-level Indicators	2018	2019
Waste gas	Total emission of SO ₂ from thermal power generation (10 thousand tonnes)	1.85	1.04
	Performance of SO ₂ emission from thermal power generation (g/kWh)	0.07	0.07
	Total emission of NO _x from thermal power generation (10 thousand tonnes)	3.82	2.02
	Performance of NO _x emission from thermal power generation (g/kWh)	0.14	0.14
	Total emission of soot from thermal power generation (10 thousand tonnes)	0.289	0.179
	Performance of soot emission from thermal power generation (g/kWh)	0.0104	0.0121
Waste water	Chemical oxygen demand (10 thousand tonnes)	0.083	0.09
	Sewage and wastewater generation volume (million tonnes)	170.85	154.48
	Utilization volume of sewage and wastewater(million tonnes)	135.7	128.52
	Integrated utilization rate of sewage water (%)	79.43	83.20
	Utilization rate of industrial wastewater (%)	85.56	82.58
	Recycling rate of underground mine water (%)	83.22	85.11
General solid waste	Emission volume of harmless solid wastes(10 thousand tonnes)	2,185.84	2,176.16
	Harmless solid wastes emissions per RMB10,000 output value (tonne/RMB10,000)	1.2	1.5
	Including : emission of coal gangue (10 thousand tonnes)	2,242.29	2,021.53
	Integrated utilization of coal gangue (10 thousand tonnes)	1,163.02	1,564.07
Hazardous solid waste	Total emission of hazardous wastes (tonne)	1,477.94	5,483.49
	Hazardous wastes emissions per RMB10,000 output value (kg/RMB10,000)	0.081	0.3324

First-level Indicators	Second-level Indicators	2018	2019
Energy consumption	Comprehensive energy consumption (10 thousand tonnes of standard coal)	4,958.44	4,394.49
	Comprehensive energy consumption per RMB10 thousand output value	2.72	2.96
	Total electricity consumption(100 million Kwh)	226.61	173.04
	Total oil consumption (10 thousand tonnes)	35.91	38.32
	Total natural gas consumption (100 million m ³)	11.79	8.44
Water resource	Total water consumption (million tonnes)	252.3	179.68
	Water consumption per RMB10 thousand output value (tonne/RMB10,000)	13.84	11.49
	Total fresh water (million tonnes)	169.31	132.3
Environmental protection investment	Investment in environmental protection (RMB100 million)	14.22	14.24
	Including: investment on ecological construction (RMB100 million)	4.7	5.01
Ecological protection	New afforestation area (10 thousand m ²)	3,133	1,472
Employee development	Total number of employees (persons)	86,856	75,620
	Additional employees with occupational disease (cases)	19	54
	Capital investment in occupational health (RMB100 million)	3.06	6.52
Community contribution	Social contributions per share (RMB/share) (Chinese Accounting Standards)	6.648	5.95
	Social contributions per share (RMB/share) (International Financial Reporting Standards)	6.661	5.87
	Accumulated cash dividend(RMB million)	239,975	265,036
	Donations to society (RMB million)	460	279

First-level Indicators	Second-level Indicators	2018	2019
Technological innovation	Mechanization rate of coal mining and excavation (%)	99.34	100
	Number of super-safe and efficient mines	17	20
	Number of scientific projects approved by the headquarter	134	69
	Capital investment in research and development (RMB100 million)	8.6	12.45
	Number of patents obtained	581	556
	Number of invention patents obtained	113	155
Safety production	Investment in safety production (RMB100 million)	54.46	42.89
	Number of serious accidents and above	1	0
	First-level compliance units in safety production	14	18
Supply chain management	Total suppliers(ten thousand ones)	6.4	9.3
Corporate governance	Number of members of the Board concurrently serving as CEO of other companies(personnel)	1	0
	Number of financial experts in Audit Committee(personnel)	2	2
	Number of directors against voting(vote)	0	0
	External auditing expenses(RMB million)	10.5	8.55
	Number of information disclosure documents released	222	211
	Shareholding proportion of controlling shareholders at the end of the period(%)	73.06	69.45
	Number of shares of the Company held by directors, supervisors and the senior management at the end of the period(share)	0	0

DESCRIPTION OF ESG UNDISCLOSED INDICATORS

Number and contents of indicators	Reasons for nondisclosure
A1.2 Direct (range 1) and indirect (range 2) energy greenhouse gas emissions in total (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	The Company is mobilizing all the relevant production enterprises to carry out audit on carbon footprint data for 2019 in accordance with <i>the Notice on Formulation of the Carbon Emission Reports for 2019 and Reporting of Key Emission Enterprise List in the Power Generation Industry</i> (Huan Ban Qihou Han[2019] No.943) 《關於做好2019年度碳排放報告與核查及發電行業重點排放單位名單報送相關工作的通知》(環辦氣候函[2019]943號) issued by the Ministry of Ecology and Environment and the audited data shall be reviewed and confirmed by the government organizations of all levels. The data relating to greenhouse gas emissions for 2019 is expected to be finalized after May 2020.
A2.5 Total packaging materials used for finished products (in tonnes) and, if applicable,	N/A

Appendix II: Indicator Index

Contents		ESG Guidelines of HKEx	Recommendations of disclosure of the SSE ¹	GRI Standards
About the Report				
Chairman's Statement		A1.6、A3.1、2.3、B8.1		102-14、102-15
ESG Governance Statement from the Board				
Journey to China Shenhua				
Corporate Governance	Governance system		Guidelines Article 34,36: Paragraph 1,4; Article37,38,39:Paragraph1,2,3;Articles 40,41:Paragraph1,2	102-18、102-19、102-22、102-24、102-26、405-1
	Compliance Operation	B4.1、B6.3、B7、B7.1、B7.2、B7.3	Notice Articles 1,2	102-12、102-15、102-17、102-30、103-2、205-2、205-3、412-2、415-1
	Party Building			
ESG Governance	ESG Governance Structure			102-20、102-32
	ESG Governance System	A1.5、A1.6、A2.3、A2.4		102-12、102-21、102-29、102-31、102-33、102-34、102-40、102-42、102-43、102-44、102-46、102-17
Safe Production	Safety Management System	B2	Notice Articles 1,2,5: Paragraph1;Preparation Guidelines Article 4: Paragraph1	403-4
	Implementation of Safe Production Responsibility	B2.3	Notice Articles 1,2,5: Paragraph1;Preparation Guidelines Article 4: Paragraph1	403-4
	Safety Risk Prevention	B2.1	Notice Articles 1,2,5: Paragraph1;Preparation Guidelines Article 4: Paragraph1	416-1
	Safety Management of Contractors	B2.3	Notice Articles 1,2,5: Paragraph1;Preparation Guidelines Article 4: Paragraph1	416-1
	Enhancement of Employee Safety Awareness	B2.3	Notice Articles 1,2,5: Paragraph1;Preparation Guidelines Article 4: Paragraph1	403-4

Contents		ESG Guidelines of HKEx	Recommendations of disclosure of the SSE ¹	GRI Standards
Environmental Protection	Response to Climate Change	A1、A1.1、A1.2、A1.5、A4、A4.1、	Notice Articles 1,2; Guidelines Article 3: Paragraph1,2,3,5,9; Guidelines Article 4: Paragraph1	305-1、305-2、305-3、305-4、305-5
	Environmental Protection Management System	A1、A1.1、A1.3、A1.4、A1.5、A1.6、A2、A2.1、A2.3、A3、A3.1	Notice Articles 1,2,3,5: Paragraph2; Guidelines Article 3: Paragraph1,3,4,5,6; Preparation Guidelines Article 4: Paragraph2	302-1、302-3、302-4、302-5、305-7、306-1、306-2
	Water Resources Protection	A2、A2.2、A2.4、A3、A3.1	Notice Articles 3,5: Paragraph2; Guidelines Article 4: Paragraph2	303-1、303-2、303-3
	Biodiversity	A2、A2.3、A3、A3.1	Notice Articles 3,5: Paragraph2; Guidelines Article 3: Paragraph1,3; Preparation Guidelines Article 4: Paragraph2	304-1、304-2、304-3、304-4、
Employee Development	Protection of Rights and Interests of Employees	B1、B1.1、B1.2、B4、B4.1、B4.2	Guidelines Article 25: Paragraph1,4,5	102-8、102-41、401-1、401-2、401-3、
	Assistance to Employee Growth	B3、B3.1、B3.2	Notice Articles 2,5: Paragraph3; Guidelines Article 25: Paragraph3; Preparation Guidelines Article 4: Paragraph3	404-1、404-2、405-1
	Occupational Health	B2、B2.1、B2.2、B2.3	Notice Articles 2,5: Paragraph1; Guidelines Article 25: Paragraph2; Preparation Guidelines Article 4: Paragraph1	403-2、403-3、403-4
	Focusing on Employees' Happiness	B8、B8.1、B8.2		
Harmonious Society	Adhering to Quality Service	B6、B6.2、B6.5		
	Creating a Responsibility Supply Chain	B5、B5.1、B5.2、B5.3、B5.4		102-9、308-1、308-2、414-1、414-2
	Creating a Beautiful Community Together	B8、B8.1、B8.2	Notice Articles 28, 29:	413-1
Future Outlook in 2020				

Contents		ESG Guidelines of HKEx	Recommendations of disclosure of the SSE ¹	GRI Standards
Appendix	Table of Key Performance		Guidelines Article 25: Paragraph5	102-8
	Indicator Index			102-55
	Independent Assurance Report			102-56
	MSCI-ESG SELF-EVALUATION TABLE			
	Definition			
	Feedback			

1 “Notice on Strengthening Listed Companies’ Efforts in Undertaking Social Responsibilities and Issuance of ‘Guidelines on Environmental Information Disclosure by Companies Listed on the Shanghai Stock Exchange’” is referred to as the “Notice”
“Guidelines on Environmental Information Disclosure by Companies Listed on the Shanghai Stock Exchange” is referred to as the “Guidelines”
“Guidelines on Preparation of ‘Corporate Report on Performance of Social Responsibilities’” is referred to as the “Preparation Guidelines”
“Notice of Information Disclosure in Relation to Further Optimizing Poverty Alleviation Work of Listed Company” is referred to as the “Poverty Notice”

Appendix III: MSCI-ESG Self-evaluation Table

MSCI ESG Rating Description		Self-evaluation scores in 2019
Environmental Pillar Score		3.5
Carbon Emissions Key Issue Score		2.0
Exposure Score		8.7
Business Segment Exposure Score		8.0
Geographic Exposure Score		5.9
Management Score		3.5
Practices Score		3.0
Target	Aggressiveness of the company's reduction target in the context of its current performance	Mid
	Demonstrated track record of achieving its carbon reduction targets	Mid
Programs or actions to reduce the emissions intensity of core operations	Use of cleaner sources of energy	Mid
	Capture GHG emissions	Mid
	Energy consumption management and operational efficiency enhancements	Mid
	CDP disclosure	Mid
	Other initiatives (e.g. carbon offsets)	Top
Performance Score		2.0

MSCI ESG Rating Description		Self-evaluation scores in 2019
GHG : GHG Emissions and GHG emissions intensity Scope 1, Scope 2, Scope 3 Carbon emissions performance relative to peers		
Energy consumption : Total energy consumption and total energy consumption intensity		
Water Stress Key Issue Score		4.0
Exposure Score		8.8
Business Segment Exposure Score		7.3
Geographic Exposure Score		7.0
Management Score		5.5
Practices Score		5.5
Governance and Strategy	Implementation of water efficient production processes	Top
	Percentage of water consumption from alternative water sources (i.e. grey water, rainwater, sewage)	Mid
	Evidence of using alternative water sources	Top
	Water recirculation/recycling rate	Top
Executive body responsible for water management strategy and performance:	CEO is responsible for water management strategy and performance	Top
	Senior Executive or Executive Committee are responsible for water management strategy and performance	Top
	CSR or Sustainability Committees are responsible for water management strategy and performance	Top
Performance Score		6.0

MSCI ESG Rating Description		Self-evaluation scores in 2019
Water Withdrawal : Water withdrawal and water intensity Water intensity trends Water Intensity Relative to Peers		
Biodiversity & Land Use Key Issue Score		4.5
Exposure Score		6.6
Business Segment Exposure Score		5.6
Geographic Exposure Score		6.8
Management Score		3.4
Practices Score		5.5
Clear policy on	Policy includes provisions on sustainably managing natural resources and raw materials	Top
	Minimizing disturbance from operations	Top
	Reclaiming habitat, disturbed land	Top
	Policy includes provisions on protecting human rights	Mid
	Policy includes provisions on respecting indigenous peoples and minimizing community impacts	Top
Programs & Structures	Restoration or rehabilitation of disturbed areas with continuous operation	Top
	Programs to protect natural ecosystems	Top
Biodiversity and community impact assessment	Company conducts community impact assessment prior to settling in new areas	Top
	Company conducts biodiversity impact assessment prior to settling in new areas	Top

MSCI ESG Rating Description		Self-evaluation scores in 2019
Toxic Emissions & Waste Key Issue Score		5.5
Exposure Score		7.4
Business Segment Exposure Score		7.4
Management Score		5.8
Practices Score		5.0
Targets	Aggressiveness of Toxic Emissions Reduction Target	Mid
	Demonstrated track record of achieving its toxic emissions targets	Mid
Governance and Strategy	Existence of Environmental Management System (EMS)	Top
	Disclosure around the number or percentage of sites with HAZWOPER or ISO 14001 certification	Mid
	Evidence of regular environmental impact audits	Top
	Evidence of audits across all locations of operations	Mid
	Evidence of annual compliance audits	Mid
Performance Score		7.5
Toxic Emissions & Waste : Toxic Releases Performance Relative to Peers Toxic Emissions & Waste performance and trends Mainly including: NO _x 、SO _x 、Particulate matter 、Non-hazardous Waste 、Hazardous Waste		
Social Pillar Score		3.5
Health & Safety Key Issue Score		1.8
Exposure Score		9.9
Business Segment Exposure Score		7.2
Geographic Exposure Score		8.9
Management Score		4.7
Practices Score		4.2

MSCI ESG Rating Description		Self-evaluation scores in 2019
Targets	Target to improve H&S performance	Mid
Governance and Strategy	Evidence of Recognized Certification	Low
	H&S strategy and performance is managed by Sustainability Committee, H&S task force or risk officer	Top
	H&S policy is group-wide	Top
	H&S policy applies to contractors	Top
	Other initiatives	Top
Performance Score		6.0
Fatalities : fatality rate per million tonnes of raw coal production Employee Fatalities Contractor Fatalities Performance on Health & Safety Metrics Relative to Peers		
Labor Management Key Issue Score		5.0

MSCI ESG Rating Description		Self-evaluation scores in 2019
Exposure Score		7.9
Business Segment Exposure Score		6.5
Geographic Exposure Score		6.2
Company-Specific Exposure Score		7.6
Management Score		5.5
Practices Score		5.5
Strategy	Percentage of workforce covered by trade unions/collective agreements	Top
	Evidence of collective agreements	Top
	Employee stock ownership plan (ESOP) or employee stock purchase plan (ESPP)	Low
	Variable performance-based component to pay	Mid
	Non-compensation benefits including pension and retirement	Top
Performance Score		2.0
External recognition , e.g. Employer of choice Company witnessed strikes/lock-outs Employee turnover Employee Productivity		
Governance Pillar Score		3.5
Corruption & Instability Key Issue Score		0.2
Exposure Score		10.0
Business Segment Exposure Score		7.4
Geographic Exposure Score		5.8
Company-Specific Exposure Score		10.0
Management Score		3.5
Practices Score		4.0

MSCI ESG Rating Description		Self-evaluation scores in 2019
Policies & Commitments	Executive body responsible for managing business ethics and corruption issues	Top
	Company's bribery and anti-corruption policy	Top
	Scope of anti-corruption policy for suppliers	Top
	Business ethics policy covers facilitation payments	Mid
	Business ethics policy covers subsidiaries	Mid
Commitment to external standards for ethics/anti-corruption	World Economic Forum's Partnering Against Corruption Initiative (PACI)	Mid
	Membership in other external anti-corruption initiatives	Mid
Programs & Structures	Scope of employee training on ethical standards	Mid
	Internal assurance of compliance with ethical standards	Top
	External assurance of compliance with ethical standards	Mid
	Provision of whistleblower protection	Top

MSCI ESG Rating Description		Self-evaluation scores in 2019
	Discloses value of political donations/ lobbying expenditure	Mid
	Disclosure of government contracts value	Mid
	Disclosure of facilitation payments value	Mid
	Disclosure of taxes/royalties paid to governments	Top
Human Rights – Policies and Programs	Company's policy indicating support for human rights	Mid
Support local economic development \ Job creation – local hiring		Top
Corporate Governance Key Issue Score		2.7
Board		5.8
Pay		6.8
Ownership & Control		6.0
Accounting		9.2

Note: The data in Appendix III is an internal self-assessment and is not an actual score of MSCI-ESG. Investors should be aware that improper trust or use of such information may result in investment risks.

Appendix IV: Independent Assurance Report

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 2019 Environmental, Social and Governance Report of CSEC for the year ended 31 December 2019 ("the ESG Report").

1. Responsibilities of the Board of Directors

The Board of Directors of CSEC is solely responsible for the preparation and presentation of the 2019 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 :

- Notice on Strengthening Listed Companies' Undertaking of Social Responsibilities and issuance of 'Guidelines on Environmental Information Disclosure by Companies Listed on the Shanghai Stock Exchange'
- Guidelines on Environmental Information Disclosure by Companies Listed on the Shanghai Stock Exchange
- 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.

2. Responsibilities of KPMG

Our responsibility is to carry out a limited assurance engagement and to express a conclusion based on the work performed on whether the ESG report is prepared according to SSE Guidelines and HKEX Guidelines and whether there are significant misstatements in the key ESG related performance indicators disclosed in the ESG report. 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 any third party other than CSEC for our work, for this independent limited assurance report, or for the conclusions we have reached.

3. KPMG's 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.

4. 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;
- 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.

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.

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.

5. Conclusions

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

We believe that the evidence we have obtained is sufficient and appropriate, which provides the basis for issuing the assurance conclusion.

Based on the procedures performed and the evidence obtained, nothing has come to our attention that causes us to believe:

- that the ESG Report of CSEC for the year ended 31 December 2019 is not presented fairly, in all material respects, in accordance with the disclosure recommendations of the SSE Guidelines and HKEX Guidelines; and
- that significant misstatements of key performance indicators related to ESG disclosed in your 2019 ESG Report.

Appendix V : Definitions

Abbreviation	Full Name
China Shenhua or the Company	China Shenhua Energy Company Limited
Group	the Company and its subsidiaries
China Energy	China Energy Investment Corporation Limited (國家能源投資集團有限責任公司)
China Energy Group	China Energy and its subsidiaries (excluding the Group)
Shendong Coal	Shendong Coal Group Co., Ltd.
Guohua Power	Guohua Power Branch of the Company
Shendong Power	Shenhua Shendong Power Co., Ltd.
Zhunneng Group	Shenhua Zhunneng Group Co., Ltd.
Baoshen Railway	Shenhua Baoshen Railway Group Co., Ltd.
Shenshuo Railway	Shenshuo Railway Branch of Shenhua Baoshen Railway Group Co., Ltd.
Sales Group	Shenhua Sales Group Co., Ltd.
Huanghua Harbour Administration	Shenhua Huanghua Harbour Administration Co., Ltd.
Logistics Group	Shenhua Logistics Group Corporation Limited
Baotou Energy	Shenhua Baotou Energy Co., Ltd.
Shengli Energy	Shenhua Beidian Shengli Energy Co., Ltd.
Baotou Coal Chemical	Shenhua Baotou Coal Chemical Co., Ltd.
Shenbao Energy	Shenhua Baorixile Energy Co., Ltd.
Zhuhai Coal Dock	Shenhua Yudean Zhuhai Port Coal Dock Co., Ltd.
Fujian Energy	Shenhua Fujian Energy Co., Ltd.
Sichuan Energy	Shenhua Sichuan Energy Co., Ltd.
Jinjie Energy	Shaanxi Guohua Jinjie Energy Co., Ltd.
Mengjin Power Plant	Shenhua Guohua Mengjin Power Generation Co., Ltd.
Taishan Power Plant	Guangdong Guohua Yudean Taishan Power Co., Ltd.
EMM Indonesia	PT.GH EMM INDONESIA
Jawa Company	Shenhua Guohua (Indonesia) Jawa Power Generation Co., Ltd.
Shouguang Power Plant	Shenhua Guohua Shouguang Power Generation Company Limited
Liuzhou Power Plant	Shenhua Guohua Guangtou (Liuzhou) Power Generation Co., Ltd.
Australia Company	Shenhua Australia Holdings Pty Limited
Shanghai Stock Exchange	Shanghai Stock Exchange
Hong Kong Stock Exchange	the Stock Exchange of Hong Kong Limited

Abbreviation	Full Name
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
A Share (s)	Ordinary shares that are issued to domestic investors with the approval of CSRC and listed on the domestic stock exchanges, and denominated, subscribed and transacted in RMB
H Share (s)	Ordinary shares that are issued to foreign investors with the approval of CSRC and listed on the Hong Kong Stock Exchange, and denominated, subscribed and transacted in Hong Kong dollar
Articles of Association	Articles of Association of China Shenhua Energy Company Limited
Company Law	Company Law of the People's Republic of China
Securities Law	Securities Law of the People's Republic of China
Labour Law	Labour Law of the People's Republic of China
Environmental Protection Law	Environmental Protection Law of the People's Republic of China
Atmospheric Pollution Prevention Law	Atmospheric Pollution Prevention Law of the People's Republic of China

Feedback

China Shenhua values your opinions on the Company's endeavors 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 +86-10-5813-1814 or email it to 1088@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: _____ Organization: _____

Telephone: _____ Fax: _____

Email: _____ Postal code: _____

Contact address: _____

The Board of Directors, Supervisory Committee and Investor Relations Department
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Postal Code 100011

Affix
stamp
here

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2018 ESG REPORT



2017 CSR REPORT



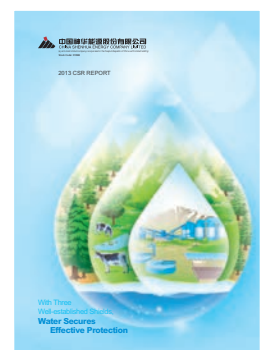
2016 CSR REPORT



2015 CSR REPORT



2014 CSR REPORT



2013 CSR REPORT



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