



中国中煤能源股份有限公司
CHINA COAL ENERGY COMPANY LIMITED



中煤能源社会责任报告 CHINA COAL ENERGY CSR Report

2014

Description for the Preparation of the Report

Summary of the report

China Coal Energy CSR Report 2014 is the sixth yearly CSR report published consecutively by China Coal Energy Company Limited. It focuses on the corporate mission which is to “supply quality energy and lead industrial development for a prosperous life”, systematically reviews the development opportunities and challenges faced by the Company during 2014 and fully discloses the Company’s philosophy of sustainable development, practices and results in performing its responsibilities on economy, safety, environment, innovation and community.

Range of period

From 1 January 2014 to 31 December 2014. To increase the comparability of the report, certain content may date back to previous years when appropriate.

Scope of reporting

This report covers China Coal Energy Company Limited and its subsidiaries (branches).

Basis of preparation

“Guidelines on Fulfilling Social Responsibility by Central Enterprises” of the State-owned Assets Supervision and Administration Commission of the State Council;
“Guidelines on Preparation of Corporate Social Responsibility Report for Corporations in China” (CASS-CSR3.0) of the Chinese Academy of Social Sciences;
“Sustainable Development Reporting Guidelines” (GRI G4) of Global Reporting Initiative;
“Guidelines on Environmental Information Disclosure of Listed Companies” of the Shanghai Stock Exchange
“Environmental, Social and Governance Reporting Guide” of The Stock Exchange of Hong Kong Limited.

Sources of information

The financial data in the report were extracted from the audited Annual Report of China Coal Energy Company Limited (in accordance with the PRC Accounting Standards), whilst other data came from internal data of the Company and other relevant statistics. China Coal Energy guarantees that the information set out in this report does not contain any false representations, misleading statements or material omissions.

Description of references

For easy reference and reading, China Coal Energy Company Limited is also referred to as “China Coal Energy”, “The Company” and “We” in this report.

Frequency of publication

This report is a yearly report.

Inspection of the report

This report is prepared in Chinese and English. The electronic version of this report may be downloaded at the website of China Coal Energy Company Limited, <http://www.chinacoalenergy.com>

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Chairman's Statement



The coal enterprises were faced with daunting challenges in 2014 due to the significant drop in coal prices resulting from the slowdown in China's economic growth, the oversupply of coal market and tightening standards on environmental protection. Focusing on the sustainable development of the Company, China Coal Energy proactively addressed difficulties and challenges, further enhanced its sense of social responsibility and its capability of performing responsibilities and duties, and endeavoured to alleviate or avoid any adverse impacts on the contribution of corporate social responsibility arising from the downturn in market conditions, so as to maximize the economic, social and environmental benefits as a whole.

Addressing the challenges in environmental protection proactively to provide quality energy.

In 2014, a series of supporting policies and measures against air pollution in the energy sector were formulated in China to control haze, ensure the clean energy supply in certain key areas, place a cap on coal consumption and raise higher threshold and more stringent control on coal quality. The Company exerted itself to meet the coal quality standards and comprehensively strengthened coal quality management pursuant to the requirements for air pollution control issued by the government, resulting in a year-on-year decrease of 1.2% in the ash content, a year-on-year decrease of 0.1% in the sulfur content and a year-on-year increase of 96 Kcal/Kg in the calorific value of Pingshuo commercial coal. To enhance coal quality, the



Company proactively carried out coal blending and sulfur reduction, and recorded a coal blending volume of more than 12,000 thousand tonnes. Adhering to a market-oriented approach, the Company rationally arranged its production plan, unleashed the advantage of its high-quality mines and reduced the production volume of mines with inferior coal quality to enhance its capability of quality products supply. Attributable to its commitment to safe and highly efficient production, the raw coal production efficiency of open pit mines and underground mines reached 161.1 tonnes/worker-shift and 21.5 tonnes/work-shift respectively. All the power plants under the Company have carried out desulphurization and denitration renovation to reduce coal consumption in power generation and emission of pollutants and to enhance the efficiency of energy utilization. To advance the construction of “Green China Coal Energy”, four mines were designated by the Ministry of Land and Resources as the fourth batch of pilot green mines at the state level, and the overall energy consumption of raw coal production as well as the utilization of mine water and coal gangue were in the leading position within the industry.

Accelerating the adjustment of industrial structure to take the lead in the transformation and development of the industry. As the proportion of coal consumption declined, the clean and efficient utilization of coal was highly valued with particular attention to clean coal-fired power generation and modern coal chemical. Amidst its adjustment of industrial structure, China Coal Energy focused on the transformation of a modern coal chemical segment by accelerating projects construction. Significant staged progress was made and several coal chemical projects were put into production. China Coal Shaanxi Company Methanol Acetic Acid Deep Processing and Comprehensive Utilization Project achieved success in its first commissioning test run, setting multiple new domestic operational and administrative records for the same type

of projects in the country and producing an accumulative total of 174 thousand tonnes of polyolefin. The Coal-based Methanol Project of China Coal Mengda Company continued to optimize its technological parameters and steadily enhanced its production load, and the accumulated production volume of methanol amounted to 450 thousand tonnes. The Tuke Fertilizer Project of China Coal Ordos Energy Chemical Company maintained stable operation and the accumulated production volume of urea amounted to 828 thousand tonnes. On one hand, the operation of coal chemical projects satisfied the requirements of coal resources allocation made by local government and strengthened the coal resources reserve and the capability of sustainable development of the Company. On the other hand, by expanding the scale of coal conversion, it offset the impact of the downturn in the industry and relieved the pressure on coal sales, creating new economic growth points and strengthening risk resistance capability. In the meantime, the experience accumulated from the construction and operation of coal chemical projects of China Coal Energy was conducive to the transformation and upgrading of the industry.

Strengthening operations management of the Company to enhance value return. With its insistence on operating in accordance with laws and regulations, regulating corporate governance, improving operation transparency and deepening its efforts on anti-corruption, the healthy operation of the Company was well ensured. Faced with unprecedented operating pressure, the Company adhered to the estimation of minimum cost with method of backflush costing in line with the market, and further cut costs and increased efficiency through refined management and technological innovation, resulting in a significant reduction in administrative expenses. The Company insisted on paying tax in compliance with laws and contributed tax payment of RMB10.402 billion during 2014. Upholding the concept of win-win collaboration, the Company recruited and procured locally to support local economic contribution and facilitate the local economic and social development.



Developing along with stakeholders to create a prosperous life. Adhering to the concept of “safety is of paramount importance, life is the most valuable”, the Company carried forward the three tasks of environment, quality and responsibility, thus creating a safe and healthy production environment for employees. Focusing on building a safety-assured enterprise, the Company pushed forward the establishment of safety quality standards to consolidate the foundation of safety management, tightened process control by strengthening the identification of potential hazards and improving the prevention and control of safety risk, and reinforced regulatory supervision by emphasizing accountability and strengthening assessments of safety responsibilities. Being a leading player in the coal industry in terms of safe production, the Company recorded a fatality rate of raw coal production per million tonnes of 0.013 in 2014, and the safety situation of the coal chemical segment remained stable. Committed to a harmonious labour relationship, the Company established a platform for the development of employees, strengthened protection for occupational health, and endeavoured to share the results of business development with all employees, constantly improving quality of life of employees. To facilitate a better performance of social responsibilities of coal enterprises, the Company actively participated in the formulation of industrial standards for social responsibilities.

Reviewing the performance of 2014, we would like to extend our gratitude to the Board, the management of all levels and all the employees for their strenuous efforts in performing social responsibilities, as well as governments of all levels, customers, suppliers and financial institutions for their strong support for the Company.

Taking the initiative in performing social responsibilities is not only the corporate mission of the Company, but also a necessary choice for the achievement of sustainable development. By ensuring the sustainable development of the Company, China Coal Energy will adapt to China’s economic development under the new normal in a proactive manner, seize the new opportunities brought by the new normal, and endeavour to address the daunting challenges brought by the downturn in market conditions, accelerate the adjustment of industrial structure and product mix and facilitate coal production and consumer revolution, so as to improve its responsible competitiveness and achieve sustainable, stable and healthy development of the Company.

Wang An
March 20, 2015

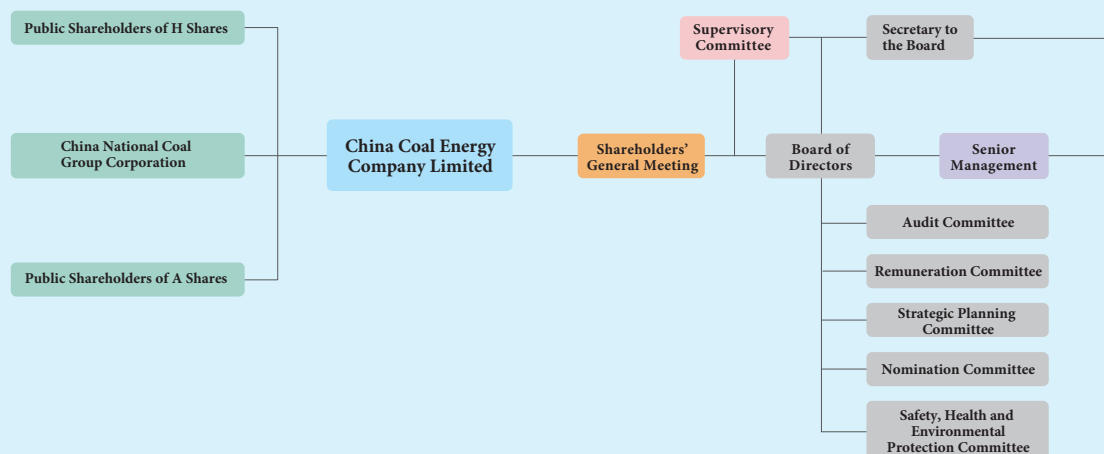
Company Overview

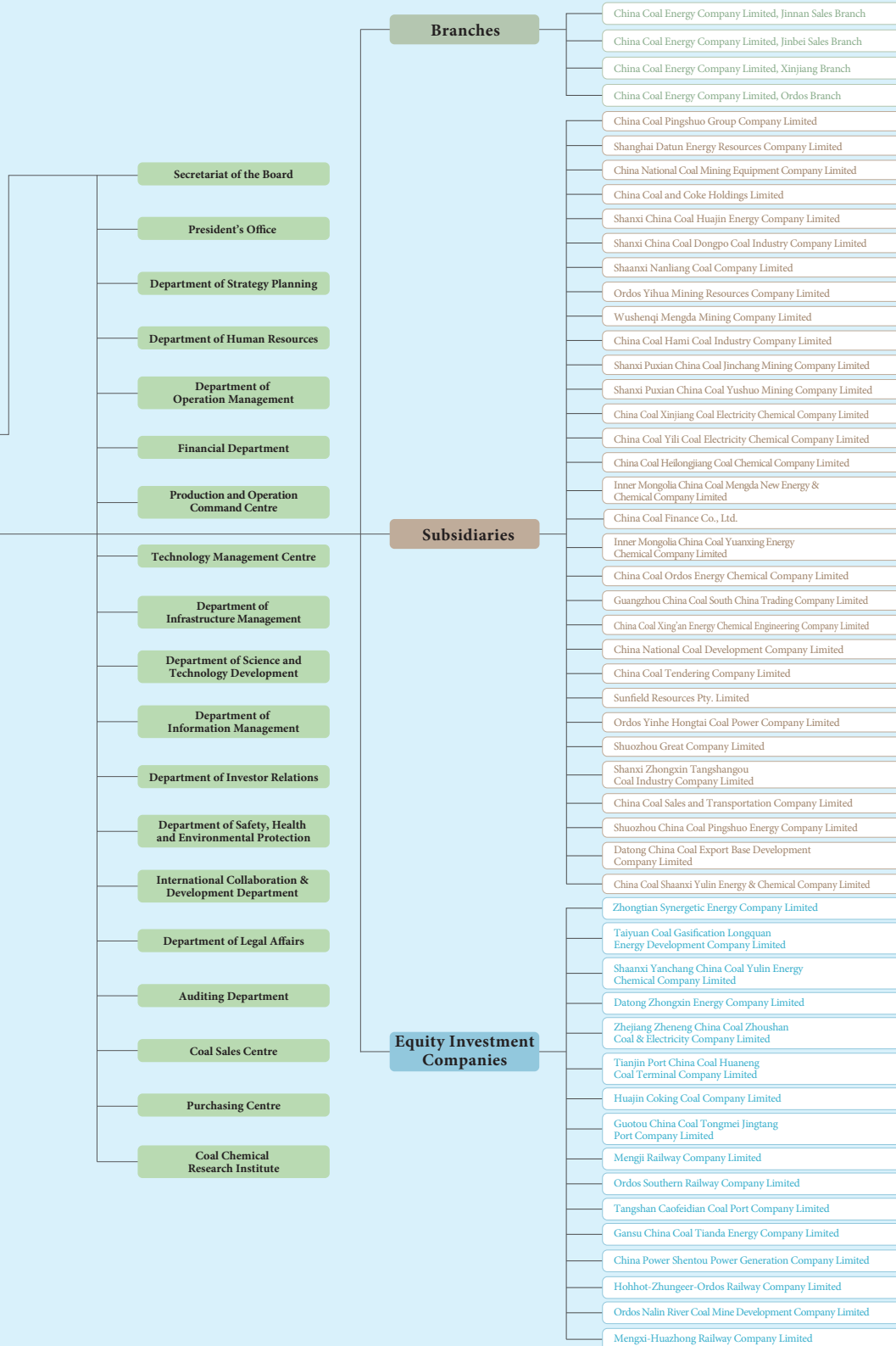
China Coal Energy Company Limited was solely established as a joint stock company by China National Coal Group Corporation on 22 August 2006. The shares of the Company have been successfully listed in Hong Kong since December 2006, while its A shares were issued in February 2008. The headquarters of the Company is located in Beijing, the PRC.

The Company is a large energy company with four core businesses including coal production and trading, coal chemical engineering, power generation and coal mining equipment manufacturing, the second largest coal producer and supplier, and the largest manufacturer of mining machinery in the PRC.

The Company boasts abundant coal resources and diversified coal products as well as modern technologies and techniques in mining, coal washing and blending. Mining areas in Pingshuo, Shanxi and Hujierte, Odors of Inner Mongolia, primarily developed by the Company, are the most important thermal coal production bases in the PRC. The coking coal in the mining area in Xiangning, Shanxi, is of high quality with low sulphur and extra low phosphorus content. The major coal production bases of the Company are equipped with easily accessible transportation channels which are connected with coal ports, creating favourable conditions for the Company to bolster competitive edges and achieve sustainable development.

Company Organisation Chart of CHINA COAL ENERGY COMPANY LIMITED







Corporate Culture



China Coal Energy's Vision: to Build itself into a World-Class Energy Company

Be stronger and excellent, ranking among the world's top energy companies.

China Coal Energy's Mission: to Supply Quality Energy and Lead Industrial Development for a Prosperous Life

To unleash industrial advantages, increase productivity, promote clean conversion and utilisation of coal; supply quality, abundant energy; and boost economic and social development.

Be dedicated to "large-scale production, modernisation of technology and equipment, specialisation of workforce and informatisation of management" as well as the "five-high" standards which are the standards for high starting point, high target, high quality, high efficiency and high benefits. To strengthen integrated innovation, enhance the core competitiveness of the Company, be a leading player in the industrial development and to contribute to the building of a new system for the coal industry.

To enhance corporate strength, build harmonious mining areas, protect the ecological environment for the benefit of staff and the public, serve for the building of a well-off society and promote human well-being.

China Coal Energy's Spirit: Dedication, Integrity, Innovation and Forerunner

Dedication – being dedicated to duties, being courageous to undertake responsibilities, being passionate for work and being loyal to the Company.

Integrity – being realistic and pragmatic, having a down-to-earth working style, being industrious and thrifty, being honest, doing practical work and seeking practical results.

Innovation – freeing the mind, being courageous to explore, being committed to scientific thinking, enhancing innovation capability and building an innovative enterprise.

Forerunner – being pioneering and aggressive, being courageous to scale new heights, benchmarking against excellent enterprises, excelling ourselves, establishing the China Coal Energy brand and striving to be a role model in the industry.

China Coal Energy's Core Values: Scientific Development, Safety and Efficiency as well as Harmony and Win-Win Situation

Scientific development: be people-oriented and to make overall planning and consideration to achieve comprehensive, balanced and sustainable development of the Company.

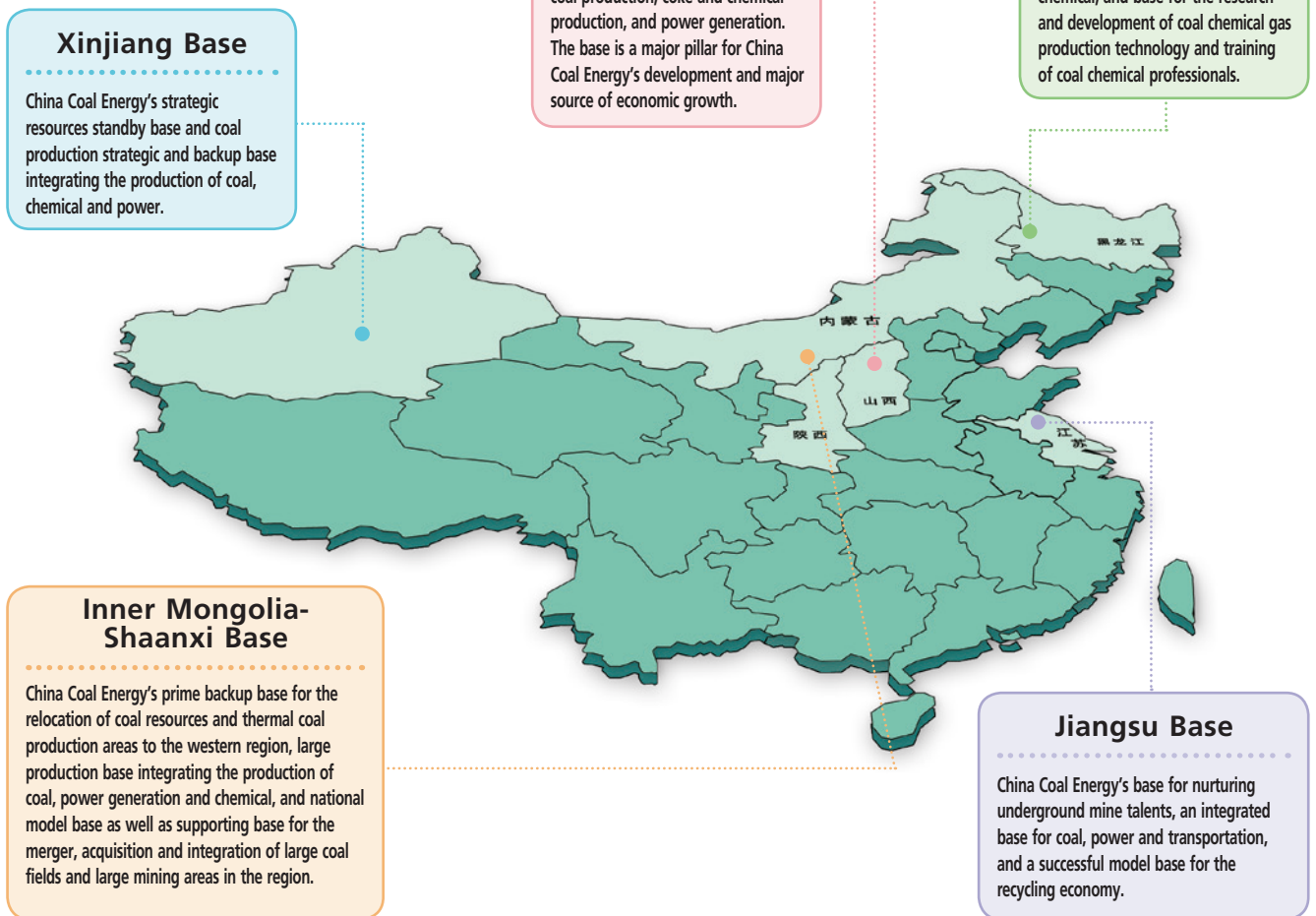
Safety and efficiency: be committed to safe development and to improving efficiency and effectiveness.

Harmony and win-win situation: be honest and trustworthy, and to achieve mutual benefit and win-win situation as well as harmonious coexistence and joint development between employees and the Company, between the Company and other enterprises and between the Company and society.



Strategies of the Company

Map of the Five Major Bases of China Coal Energy



During the period of the “Twelfth Five-Year Plan”, the Company will uphold its market-oriented and customer-centred business philosophy, and follow the development directions towards large-scale production and operation, modernisation of technology and equipment, specialisation of workforce and informatisation of management. The Company will build up working standards for high starting point, high target, high quality, high efficiency and high benefits, The Company will prioritise the development of core coal business, significantly develop coal chemical and power-related strategically extended businesses while optimising the coal mining equipment business. The Company will accelerate the construction of five major coal

production and conversion bases, namely Shanxi, Inner Mongolia-Shaanxi, Jiangsu, Heilongjiang and Xinjiang Bases for creating an industrial structure comprising the coal, coal chemical, power generation and coal mining equipment industries as the four major pillar industries as well as a regional layout supported by the five major coal production and transformation bases. The Company will place special emphasis on the circular economy demonstration zone in Pingshuo Mining Area and 100-million-tonne production base in Inner Mongolia and Shaanxi, focus on core coal business and derived businesses from coal chemical and power operations, as well as economy of scale, intensification and modernisation.



Corporate Governance

Regulated Operation

Governance Structure. The Company has set up a corporate governance structure comprising the general meeting, Board of Directors, Supervisory Committee and the management in accordance with requirements of the Company Law, Securities Law and other relevant laws and regulations, forming a mechanism with well-defined rights and responsibilities, regulated operation, inter-coordination and check-and-balance among the organs of power, decision-making bodies, supervisory bodies and the management. The Company has formulated various rules and systems, such as the Articles of Association, Rules and Procedures for General Meetings, Rules and Procedures for Board Meetings. In 2014, the Company amended the Articles of Association and other rules and systems in accordance with the latest laws and regulations, listing rules and regulatory requirements of the places where the Company is listed.

Standardised Operation. Independent directors of the Board of China Coal Energy account for more than one third of the membership of the Board, which is higher than the requirements of regulatory authorities. A modern corporate structure with well-defined collaborative supervision and coordinated operation is in place among the Board, shareholders' meetings, Supervisory Committee and the management. The Company's major business matters are required to be submitted to a shareholders' meeting for voting after being discussed and voted by the Board. This institutional arrangement enables the Board to play a core role. The Board has overall responsibility for the remuneration and performance evaluation of senior management staff, and helps the Supervisory Committee play a key role as supervisors during the process of shareholders' meetings and in major issues. Under the



China Coal Energy's Board meeting



Board, five specialised committees are established, namely audit committee, remuneration committee, strategic planning committee, safety, health and environmental protection committee and nomination committee. Focus is placed on the role played by the specialised committees so that major decisions will be discussed first by the specialised committees before they are submitted to the Board for consideration. A work mechanism has been established for independent directors to conduct fieldwork research. The Board co-ordinates the arrangement of a yearly plan for Board meetings, and makes innovative methods for meeting arrangements to ensure that independent directors can attend meetings timely and fully express their views.

In 2014, the Company organised and convened two shareholders' meetings, seven Board meetings and four Supervisory Committee meetings. The Board of China Coal Energy steps up scientific decision-making and supervision of the Company's major matters such as development strategies, investment plans, financial management and production operations, as well as guides and promotes corporate reform and development, thus having effectively enhanced the Company's core competitiveness and sustainability.

Rule of law. Adhering to the principle of "managing according to law and operating in compliance with regulations", the Company comprehensively established its corporate image as a legal person under the rule of law, a business entity of integrity and law-abidingness and a market entity with fair competition, and strictly observed national laws and regulations and government regulatory requirements to protect the credibility of the Company. A Three-year Plan for Appraisal of Legal System Construction was formulated to set up an assessment index system in terms of promoting the rule of law, and random inspections were conducted on the subsidiaries to ensure the completion of tasks in relation to the legal system construction. By formulating the Management Measures on Legal Counsel, the Company strengthened the

establishment of general legal counsel system and improved the general legal counsel's capabilities of performing their duties, resulting in the completion of general legal counsel system in all the major subsidiaries of the Company with a 80% full-time rate of general legal counsel, thus ensuring the corporate operations in compliance with applicable regulations.

Internal Control

Taking into account its actual conditions of business operations, China Coal Energy strengthened the liaison procedure and the identification of significant risks and pushed forward the construction of comprehensive risk management system and internal control system, thus improving risk resistance capability of the Company.

Internal control system. Backed by the system construction, the Company managed to continually improve its internal control and optimise its internal control system in 2014. The Company carried out the Basic Internal Control Rules for Enterprises and the supporting guidelines issued by the five ministries and commissions including the Ministry of Finance, establishing the well-regulated corporate governance and control structure and forming the internal control mechanism featuring proper assumption of responsibilities and duties as well as the checks and balances. In addition, the Company formulated and optimised the Internal Control Manual and Internal Control Assessment Manual, and set up internal control regulations including the Implementation Rules on Tender Management Regarding Materials, the Implementation Rules on Contract Management Regarding Infrastructure Projects, the Management Measures for Contracts and the Management Measures for Materials Procurement. By optimizing the systems and procedures and strengthening internal control management, the Company ensured its operations and management in compliance with laws and regulations, and improved its operations management efficiency and risk resistance capability.



Budget management. The Company conducted in-depth research on the macroeconomic and industrial situations, established a comprehensive budget management model of “budget preparation – target management – process control – performance appraisal”, and strengthened budget implementation under the direction of budget proposal through budget refinement, vigorous control and strict assessment. The Company timely reported and resolved the issues in budget implementation by conducting monthly operations analysis and the specialised analysis on cost control, product profitability, cash flow management, loss reduction and turnaround and infrastructure investment, strengthened the assessment of budget execution, and effectively facilitated and regulated the budget implementation by means of salary and performance.

Risk management. Focusing on “target, risk and control”, the Company adopted the approach of “centralised planning and separate implementation” and strengthened risk assessment and self-assessment of internal control. Through the update and optimization of risk event database in 2014, 5 major risk categories, 55 risk sub-categories and 465 risk events that the Company was exposed to during 2014 were identified. Addressing significant risks, the Company defined risk preferences and risk tolerance, developed risk management strategies and solutions and formulated risk management reports so as to facilitate the identification of management duty and liability subject regarding significant risks, decompose countermeasures into details and improve risk resistance level and capability, ensuring the sustainable, stable and healthy development of the Company.

Boosting efficiency by cutting cost. Refined management was further improved by sharpening competitive advantage of low cost, and the capability of boosting efficiency through cutting cost was further enhanced by optimizing production processing and reducing unit consumption through technological innovation. The Company significantly reduced controllable expenses by adhering to target management and strengthening budget constraint, rationally controlled investment scale and schedule to

strictly curb production expenditure, and expanded centralised procurement of materials and consignment scale to lower procurement cost. By making full use of the capital centralization and financing platform of the Finance Company, the Company increased capital utilization rate and revitalised existing assets to accelerate the clearance of inefficient and ineffective assets and improve asset quality.

Anti-corruption

As anti-corruption was an integral part of its business management, the Company focused on supervision, implementation and accountability to comprehensively reinforce responsibilities and duties, regulate occupational behaviour and use of authority, and pass on the positive energy of entrepreneurship, thus creating a clean and sound corporate environment.

Consolidating anti-corruption awareness. Constantly promoting anti-corruption education, the Company emphasised the education on convictions, principles and superior culture while adapting to the changing situation, organised educational activities under the theme of “three strictnesses and three realities”, held specialised lectures on anti-corruption and fostered the probity culture to consolidate employees’ awareness of resisting corruption and degeneration. Shanghai Energy Company and China Coal Shaanxi Company established anti-corruption education bases; Ordos Branch, Xinjiang Branch and Zhongtian Synergetic Company held lectures on prevention of occupational crimes. In 2014, the Company organised 935 educational activities on anti-corruption with approximately 30,000 attendees in total.

Formulating long-term mechanism. To push forward the establishment of the system of punishment and prevention for corruption, the Company formulated the Plan on System of Punishment and Prevention for 2013-2017 and the Solution on Division of Work and held related meetings thereafter to carry out the implementation of the above; as a result, 13 subsidiaries of the Company formulated their own Rules for the Implementation of Punishment and



Prevention System and Solution on Division of Work. The Company further improved the establishment of its relevant anti-corruption system so as to clarify the responsibilities of the subject divisions accountable for anti-corruption work and further decompose the responsibilities into details, and required employees at all levels to sign a responsibility pledge to ensure successful execution throughout the corporate hierarchy.

Strengthening supervision over power. To carry forward supervision through auditing, the Company insisted on “departure audit and construction project audit” and facilitated the regulation of decision-making procedures, the compliance with regulations and the

prevention of operational risks. In 2014, the Company and its subsidiaries completed audit of 81 projects with 567 pieces of audit opinions proposed, and were honoured “2011-2013 National Advanced Team in Internal Audit” by China Institute of Internal Audit. With the aim to strengthen performance monitoring, the Company formulated Quarterly Report on Performance Monitoring to effectively push forward the implementation of performance monitoring projects of its subsidiaries, conducted performance monitoring with a particular focus on procurement tender management and construction project management, paralleled its inspection and rectifications efforts and made full use of performance monitoring to regulate and improve management.



Warning education session on anti-corruption



Management of Social Responsibilities

Work System

China Coal Energy has established a sound social responsibility work organisation. A leading team for social responsibility work led by Chairman with functional and business unit chiefs as members has been set up and is responsible for leadership and decision-making of social responsibility work, under which an office of social responsibility work is established for handling specific matters of social responsibilities. Respective working teams have also been set up in each of the secondary enterprises, which are responsible for implementing and accomplishing the social responsibility work.

A social responsibility system comprising 5 types of indicators namely economic performance, safe production, technology innovation, energy conservation and social contribution has been preliminarily set up by the Company, and almost 100 specific indicators have been established. The above system has generated extensive historical data of social responsibility work, and secured the comparativeness of the indicators set out in the CSR report, laying an assessment foundation for incorporating social responsibilities into corporate management and operations.

A Model of “Three Initiatives”

China Coal Energy is committed to in-depth implementation of the harmonious development strategy, with a focus on incorporating the concepts of social responsibilities into the current management system. In continuously pushing forward social responsibility management, the Company has developed three initiatives in the model of social responsibility, namely: integration of industry chain responsibility, communication with stakeholders, and integration of sustainable development.

Integration of industry chain responsibility. By ensuring the effective implementation of social responsibility, China Coal Energy is building a path of social responsibility for the whole industry chain, bringing the concept of social responsibility into every step of the sustainable development and integrated utilisation of coal resources. By enhancing responsibility management of the supply chain, the Company sincerely fulfils the responsibility of fostering a win-win relationship with our partners, improving supplier management, building a sustainable supply chain, and achieving the goal of responsible mutual development with our business partners.



Communication with stakeholders. By strengthening the mechanism of preparation, publication and dissemination of the Social Responsibility Report, China Coal Energy is improving the response to topics that concern all stakeholders. The Company continues to upgrade the levels of communication by building a sound participation mechanism for internal and external stakeholders, organising forums with major clients, enhancing media communication, consulting with externally experts in social responsibility, and listening to the opinions of staff and their representatives.

Integration of sustainable development. With the corporate mission of “supply quality energy and lead industrial development for a prosperous life”, China Coal Energy is proactively striving for the organic unification of self-development of the enterprise and fulfilling social responsibility. We adhere to safe development and ensure safe production. We adhere to scientific development and create economic value. We adhere to green development and build ecological mines. We adhere to innovative development and lead industrial improvement. We adhere to harmonious development and share the fruits of its success.

“Diamond” Model

Although diamond and coal are two materials composed of the same element, the arrangement of carbon determines their respective qualities and worth. The above phenomenon demonstrates our concept of social responsibility on that – “Instead of doing new work, we work in a newer way”.

Through social responsibility management, China Coal Energy optimises work methods, innovates new management perspectives, and changes the images of high-pollution, high-risk, extensive management, and intensive labour that have long been associated with the coal industry, fully exploring and increasing the enterprise’s worth. The Company also promotes the most optimal integrated value in the economy, society and the environment, and creating “prosperous life” that is pure, crystal clear and precious, just like diamond.

Five major responsibilities of the “Diamond” model.

China Coal Energy adopts the relevant documented guidelines released by research organisations on social responsibility, as well as international standards (e.g.: GRI4, CASS3.0). The model also combines the requirements set out by SASAC and other regulatory authorities, and performs a practical analysis of the topics in the Company’s social responsibility management. It sets out “five major responsibilities”, namely: economic, safety, environmental, innovation, and community responsibilities.

Two major driving forces of the “Diamond” model.

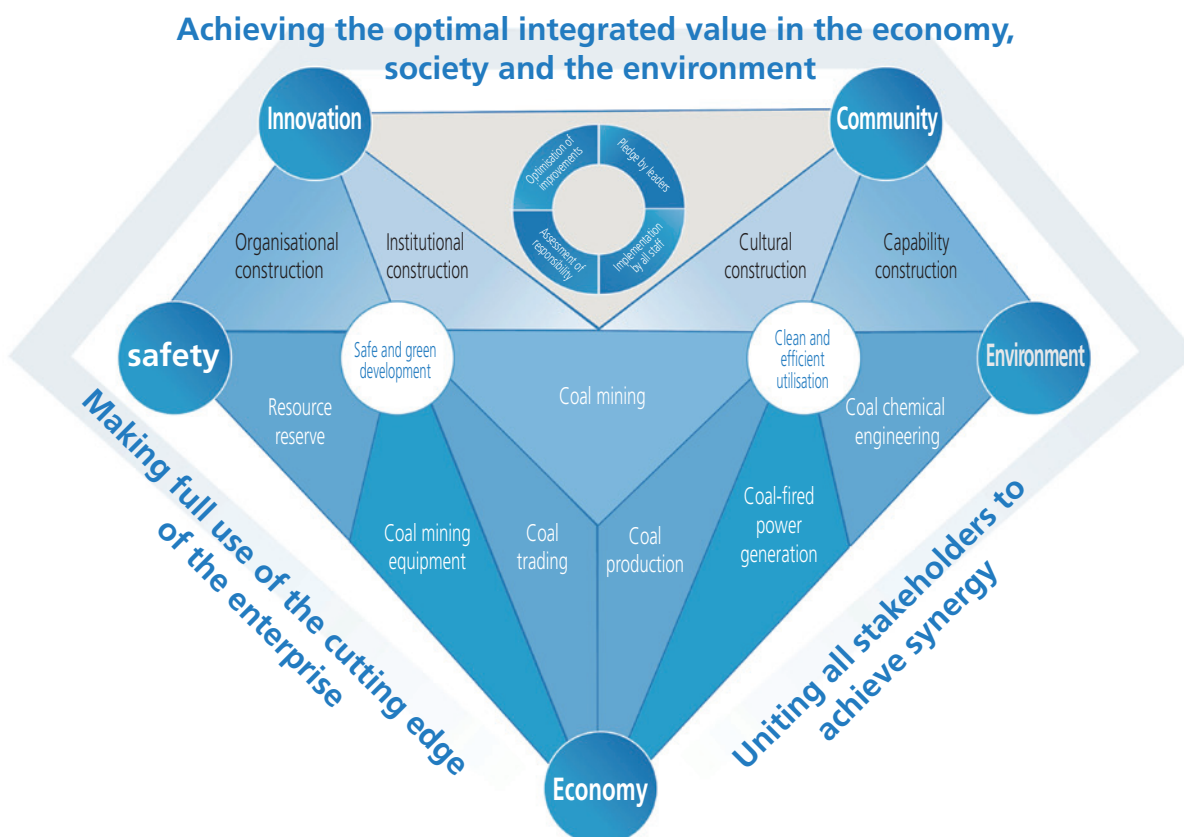
China Coal Energy adheres to “uniting all stakeholders” as the driving force for fulfilling its responsibility, and “making full use of the cutting edge of the corporation” as its support for fulfilling responsibility. In the pursuit of the sustainable development goal of “realisation of the most optimal integrated value of economy, society and the environment”, the Company makes full use of the cutting edge of its main business, and resolves external societal issues.

Internal elements of the “Diamond” model. Through its current management situation, China Coal Energy clearly determines the core contents, safeguarding mechanisms and operational requirements of its social responsibility management. This ensures that the concept of social responsibility management is actually implanted into corporate actions.

Four constructions – organisational, institutional, cultural, capability, for ensuring the incorporation of social responsibility into management.

Four actions – pledge by leaders, implementation by all staff, assessment of responsibility, optimisation of improvements, for facilitating the instillation of social responsibility into all staff.

Two main themes – safe and green development, clean and efficient utilisation, for promoting the incorporation of social responsibility into operation.





Management of Investor Relations

Strengthening interaction and exchange with investors.

In 2014, China Coal Energy continued to exchange and communicate with domestic and foreign investors through various means by adhering to the philosophy of “active contact, enhancing feedback, caring for shareholders”. The Company’s management attended 2013 annual and 2014 interim results presentation activities, and answered questions from investors, and the management’s serious and responsible attitude was highly recognised by investors. The Company attended various investors’ forums,

and scheduled investor receptions every Tuesday and Thursday as a regular mechanism to ensure timely investor communication. In 2014, the Company held 156 investor meetings, with 768 attendees in total. These activities included 39 annual results presentations and roadshow meetings with 415 attendees, 93 day-to-day receptions of investor visits and telephone conferences with 232 attendees, as well as 24 investment forums and meetings organised by 9 domestic and overseas securities firms with 121 attendees.



China Coal Energy’s 2014 first extraordinary general meeting

Responding to shareholders’ comments and suggestions.

The Company attached great importance to responding and giving feedback to the major concerns from the capital market. Giving full play to the advantage of possessing the database of analysts and institutional investors, the Company immediately sent letters of notification to domestic and foreign coal industry analysts and institutional investors upon releasing the annual results, and conducted investor survey by phone. The Company also offered detailed, elaborate explanations to major domestic and foreign shareholders, as well as coal industry analysts on important topics such as drivers of the results, new areas for future increase in profits, and development in the field of coal chemical engineering of the Company.

Strengthening awareness of service quality. In genuinely implementing the requirements of regulatory authorities, China Coal Energy worked to improve the protection of investors’ rights. By benchmarking against excellent listed enterprises, the Company launched a full-scale revamp and upgrade of its website to optimise the website’s interface design. Information such as Dividend Distribution History, Investor FAQs, Results Presentation PPT Materials and Investor Calendar were introduced to provide investors with easy access to information. To improve service quality, the Company formulated the “Management Measures on Maintenance of Investor Hotline”, under which dedicated staff members were appointed to answer investors’ telephone calls, handle mails and faxes and provide small and medium investors with detailed answers to their enquiries.



Economic Responsibilities

Addressing Challenges and Seeking Progress while Maintaining Stability

- Prelude: Playing a Demonstrating and Leading Role, and Promoting the Healthy Development of the Industry
- Providing High-quality Products
- Increasing Value Contribution
- Accelerating Transformation and Upgrades





[Prelude]

Playing a Demonstrating and Leading Role, and Promoting the Healthy Development of the Industry

In 2014, due to factors such as adjustments to the economic structure, increasing pressure arising from environmental protection, and overcapacity in coal mining, there was an imbalance in the supply and demand of China's coal market. The profitability of the coal industry decreased, while deficits aggravated. Finding a solution was an industry-wide challenge. In making necessary contribution to ensure orderly and steady market development of the industry, China Coal Energy proactively responded to the call of the Government, fully performed its function as a backbone, and adopted various measures in the interest of the industry's development.

Facilitating production restriction and price protection.

China Coal Energy implemented seriously the policies and measures set out by government bodies such as the NDRC and the National Energy Administration on total output control, capacity publication, control of low-grade coal, and elimination of out-dated capacity. In promoting a market balance in supply and demand, the Company joined hands with other large-scale coal enterprises in self-regulating production activities. Integrating production technologies of the mines of various coal production enterprises, comprehensively considering factors like mine quality, cost, sustainability and safe production, and efficiency as the priority, the Company decreased production from mines with high sulphur, ash content, and high safety risk as well.

Accelerating structural adjustment. China Coal Energy, upholding the philosophy of "establishing a foothold on coal, extending from coal and going beyond coal", proactively extended the production chain, with coal chemical engineering becoming the new area of growth, and increased the Company's resilience to market risks. The Tuke fertiliser project of China Coal Ordos Energy Chemical Company achieved continuous and stable operation. With products sold to countries in the Americas and Southeast Asia, the brand of "China Coal Urea" gained awareness. The Methanol Project of China Coal Mengda Company basically operated at full load since trial operation and achieved good returns. The Methanol Acetic Acid Deep Processing and Comprehensive Utilisation Project of China Coal Shaanxi Company produced qualified products, and its technological improvements received verification. China Coal and Coke's Project with annual production capacity of 180,000 tonnes synthetic ammonia and 300,000 tonnes urea demonstrated obvious advantages of joint production.

Controlling investment risk. In line with the market changes and its own circumstances, China Coal Energy made timely investments, optimised investment stock, strictly controlled investments, accelerated the pace of projects, and orderly proceeded with key projects. Projects like Menkeqing and Hulusu Coal Mines of Zhongtian Synergetic Company, as well as No. 3 Coal Mine of China Coal Heilongjiang Coal Chemical Company received approval, and the construction of the projects progressed steadily. Construction of the Wangjialing Coal Mine Project of China Coal Huajin Energy Company received completion acceptance. Huaning Coal Mine entered joint trial operation. The main construction of Xiaohuigou Coal Mine of Pingshuo Company progressed smoothly.

Stabilising production and operations. In proactively responding to various difficulties and challenges, China Coal Energy scientifically organised coal production, strengthened coal sales, ensured the stable operations of chemical engineering projects, deeply promoted lower cost and higher efficiency, as well as maintained the overall stability of the production and operations. The Company strengthened complete budget management, imposed more rigid budgetary restrictions, and strengthened cost control, in particular non-operating costs. The Company also strengthened monitoring and improved the quality of its operations, optimised asset structure, concentrated its resources towards its main businesses and more competitive enterprises. With various measures taken simultaneously in 2014, the unit cost of sales of self-produced commercial coal decreased by 11.4% year-on-year, and profit totalled RMB1.521 billion, thereby further increasing efficiency, decreasing consumption, and controlling costs.

"Facing unprecedented pressures in operations, China Coal Energy strengthened controls, adjusted structures, emphasised production, improved quality, expanded markets, controlled costs, fostered innovations in its efforts to maintain stable production and operations and promote transformation and upgrades. It has done much remarkable work."

— Dong Shukui, Chairman of the Supervisory Committee for Key State-owned Large-scaled Enterprises



Providing High-quality Products

Adhering to its market-oriented and customer-centred marketing philosophy, China Coal Energy continuously made improvements to its modern production model. With efficient and scientific production organisation, the Company achieved steady improvements on its product quality, and strived to provide high-quality products.

Organisation of efficient production

Being market driven, China Coal Energy strengthened production organisation, and reasonably arranged coal production plans. The Company fully utilised the production capability of major mines such as Open Pit Mines of Pingshuo Company, Wangjialing Mine of China Coal Huajin Energy Company, and coal production maintained high-productivity and high-efficiency. In 2014, China Coal Energy's raw coal efficiency in its open pit mines

and underground mines reached 161.1 tonnes/worker-shift and 21.5 tonnes/worker-shift respectively, which was at the leading position of the industry. In line with the changes in the market, the Company proactively decreased planned production in the latter half of 2014, resulting in the production of 150 million tonnes of raw coal, and 110 million tonnes of commercial coal for 2014, thereby ensuring production and operations stable and orderly.

The Company strengthened production organisation and management, improved technology and technique, and enhanced support capability for equipment. In 2014, new projects such as the Coal-based Methanol Project of China Coal Mengda Company, the Tuke Fertiliser Project of China Coal Ordos Energy Chemical Company, and the Methanol Acetic Acid Deep Processing and Comprehensive Utilisation Project of China Coal Shaanxi Company entered the trial production stage, and achieved steady operation.



Case Study



A new source of profit for the Company

Facing the increasing pressure of a downward market, China Coal Huajin Energy Company adopted the goals of "consolidating the foundation of management, completing an overhaul in infrastructure production, fully implementing cost reduction and efficiency enhancement measures, putting the technological renovation and greenfield projects into trial operation as originally scheduled", and did solid work in many areas. In 2014, the Wangjialing Coal Mine Project received overall completion acceptance from the NDRC as scheduled, and completed relevant ancillary works. The Huaning Coal Mine also began joint trial operation. China Coal Huajin Energy Company actively applied for railway transportation plan after railway connection was completed for coal transportation, with transportation volume of over 1 million tonnes for 2014. During 2014, many indicators of China Coal Huajin Energy Company, such as volume of raw-coal washing and volume of outbound railway transportation reached historic highs, with annual production of commercial coal reaching 6.97 million tonnes and net profits attributable to shareholders of China Coal Huajin Energy Company totalling RMB0.977 billion, thus becoming important pillars for the profit of the Company.



Panorama of China Coal Huajin Energy Company's Wangjialing mining area



Case Study



“Eight Most Notable Achievements” of China Coal Shaanxi Company’s Methanol Acetic Acid Deep Processing and Comprehensive Utilisation Project

China Coal Shaanxi Company’s successful trial run of the Methanol Acetic Acid Deep Processing and Comprehensive Utilisation Project attained “Eight Most Notable Achievements”, namely shortest time of construction cycle, lowest cost of investment, safest, best in quality, smoothest in trial operation, best in management, most efficient, and most harmonious construction among projects of the same scale and similar equipment.

The project employed the construction management model of “owner-centred IPMT+EPC General Contractor + Supervision”. Taking measures such as optimising the techniques of the major equipment and strengthening investment responsibility led to savings of over RMB1 billion as compared to budget estimates. It took only 35

months from construction to producing qualified products, a year or two shorter than the construction timetables of plants of the same scale and type. The project construction quality passing rate was 100%, and non-destructive testing passing rate was over 98% for the first attempt. It achieved 4,980 hours of safe work, three times the levels of similar plants. It took 7 days from igniting the first gasifier to the production of MTO-standard methanol produced by the methanol equipment, and 50 days to complete the entire coal-to-olefin process, four months faster than similar plants. Thus, the goals of having commissioning test run and economic returns in the same year were achieved.



Improving product quality

In accordance with national requirements on air pollution control, China Coal Energy strived to cater to clients' standards on coal quality, fully strengthened coal quality management, and steadily improved the quality of commercial coal. In 2014, the Company furthered its coal quality management, continuously adjusted its coal-mining technology, vigorously developed coal washing and processing, and improved the coal cleaning, storing, and transporting system. The Company's ash content of commercial coal decreased by 1.61% year-on-year. In addition, the sulphur content decreased by 0.07% year-on-year. The quality of coal products of Pingshuo Company witnessed continuous improvement. The stability rate of rail-transported commercial coal increased to about 90%. The delivery pass rate of refined coal products of coal-producing enterprises producing coking coal reached 100%. Certain coal products of Shanghai Energy Company were rated inspection-free by clients. Shanghai Energy

Company's "Datun Brand" 6th Grade Refined Coal and Pingshuo Company's Pingshuo No.1 and Pingshuo No.2 Coal were rated as quality trustworthy coal products.

In coal sales process, the Company increased the coal quality by implementing blending, and volume of blended coal exceeded 12 million tonnes. The Company also further improved coal quality by intensifying its coal blending efforts at transit ports, and began blending at source and at the unloading ports. Furthermore, the Company adjusted its external coal purchasing business, going from mainly profit-driven management to optimising high-sulphur coal resources, expanding the scale of procurement of stable sources of low-sulphur coal, standardising the operating procedures for coal blending, and safeguarding the sale business of self-produced high-sulphur blended coal, thereby upgrading the quality of commercial coal.



Case Study



Shanghai Energy Company's innovative model on coal quality management

Shanghai Energy Company brought forth innovative model on coal quality management and proposed general requirements of "securing price with quality, adding value with quality, raising efficiency with quality". After conducting research, Shanghai Energy Company formulated a series of measures in an effort to change and innovate coal quality management. With a change in concept, it emphasised beliefs such as holding onto production is holding onto quality, upstream procedures should serve downstream procedures, and enhancing coal quality is creating value. With a change in model, Shanghai Energy Company formed a coal quality management model led by

the coal trading department, with coal preparation centre as a platform and four coal mines as production lines. With a change in mechanism, Shanghai Energy Company implemented the "internal simulated market" management mechanism, and achieved the same price change in the tendency of calorific value in the internal market and the external market. The company's refined coal delivery pass rate calculated in batches was 100%. It also completely passed third-party inspections for commercial coal going through transit ports. It has made positive contributions in cutting costs, improving efficiency with quality, and responding to risks in the coal market.



Increasing Value Contribution

Adhering to fulfilling the responsibility under a mutually beneficial and cooperative partnership, the Company has strengthened the cooperation between upstream and downstream industries, improved the standard and quality of services, and strengthened the management of the value chain, thereby proactively furthering value contribution.

Satisfying Customer Needs

Upholding its market-oriented and customer-centred business philosophy, China Coal Energy continued to improve product services and accurately cater to customer

needs. The Company established a multi-level customer service management system, and improved product quality control in the supply chain, thereby satisfying the demands on the quality of coal products from different customers of various regions. In ensuring the efficiency and stability of coal supply, the Company launched “quasi-liner” cooperation with major customers and relevant shipping companies, and strengthened the effective linkage between coal, electricity, and transportation. With an innovative business model, China Coal Energy’s e-commerce platform came into operation, thereby enhancing the Company’s capabilities in providing customers with prompt responses and value-added services.



Case Study



China Coal Energy’s innovative business model

In 2014, China Coal Energy actively explored innovation in business model, and expanded its e-commerce platform and promoted its application, as well as built the China Coal Energy e-commerce platform based on the O2O model. Currently, the platform meets demands like performing electronic transactions, placing product orders, making online enquiries, and providing supply chain financial services and third-party logistics services. This not only lowered cost, but also enhanced the Company’s capabilities in providing customers with prompt responses and value-added services. Spot business for China East Company and Shandong Company, as well as the seaborne and rail direct arrival coal business of Jinnan Company, could realise online operation. Auction trading entered the testing stage before going online operation. Electronic delivery for the year exceeded 5 million tonnes.



The launch of China Coal Energy’s e-commerce platform



In 2014, China Coal Energy improved and revised the “Coal Products Handbook” and “Management Measures for After-sales Service in relation to Coal Product Quality”. The Company launched the “Quality Month” campaign, with the theme of “brand building, quality securing, sales promotion, service enhancement”, and improved and strengthened publicity and education on service quality. Adhering to the service philosophy of “creating value for customers”, China Coal Equipment Company established a “three-in-one” sales service system by formulating the “Proposal on Sales Service System and Network” and “Sale Service Handbook”, and setting up an after-sales service hotline. The company also launched exchanges on equipment operation technology, and scheduled regular equipment inspection and checking, providing one-stop service for incidents analysis, incidents warning, and incidents elimination and satisfying customer aspirations.

Strengthening Supply Chain Responsibility Management

China Coal Energy paid particular attention to supply chain responsibility management, and continued to raise the awareness and capability of suppliers on responsibility in its pursuit for mutually beneficial cooperation and prosperity of the industry, so as to foster a sustainable supply chain and a win-win development with partners in the supply chain. The Company continued to improve its supplier management mechanism and promoted the establishment of lifecycle management mechanism comprising the admittance, certification, evaluation, and withdrawal of suppliers, and featuring unified management with tiered accountability. Adhering to the policy of responsible procurement, the Company improved its tendering and procuring systems, and established an integrated platform for procurement information management. The Company’s centralised procurement in 2014 was approximately RMB14 billion, representing more than 85% of the total procurement. To promote fair competition, the Company implemented a transparent procurement policy by formulating the Implementation Rules for Materials Procurement Management, so as to combat corruption and commercial bribery. In 2014, the e-commerce supply chain management (eSCM) project of China Coal received the “National Integrated e-Commerce Innovation Award” from the China e-Business Innovation Promotion Alliance.



Accelerating Transformation and Upgrades

In the process of building a large-scale energy company with international competitive strength, China Coal Energy vigorously implemented strategic transformation upgrades, adjusted and optimised the Company's layout and industry structure, consolidated the foundations of coal as its principal business, as well as focused on the development of two coal conversion industries of coal chemical engineering and power generation. The Company built new strategic industry pillars, innovatively developed the equipment manufacturing industry, and increased the value added level of the industrial chain.

Steadily advancing the principal business of coal

China Coal Energy actively cooperated with regional governments of areas with abundant resources so as to obtain quality resources. At the end of 2014, the coal resources reserve in which the Company had mining rights reached 18.97 billion tonnes, thus providing solid assurances for sustainable development.

The Company also accelerated the construction of large-scale, modern mines, and developed coal-based basic industries. In 2014, projects like Menkeqing and Hulusu Coal Mines of Zhongtian Synergetic Company, as well as No. 3 Coal Mine of China Coal Heilongjiang Coal Chemical Company received approval, and the construction of the projects progressed steadily. Construction of the Wangjialing Coal Mine Project of China Coal Huajin Energy Company received completion acceptance. Huaning Coal Mine entered joint trial operation. The main construction of Xiaohuigou Coal Mine of Pingshuo Company progressed smoothly.

Accelerated development of coal conversion sector

Adhering to the path of low-carbon economic and green development, China Coal Energy steadily accelerated the diversified conversion of coal, promoted the construction and integrated operation of coal, coal chemical engineering and power bases, thereby boosting the overall economic benefits and further improving resilience to withstand market risks.

In 2014, China Coal Energy proactively accelerated construction of its chemical engineering projects and productions. Projects such as Tuke Fertiliser Project of China Coal Ordos Energy Chemical Company, Coal-Based Methanol Project of China Coal Mengda Company, and Methanol Acetic Acid Deep Processing and Comprehensive Utilisation Project of China Coal Shaanxi Company successfully completed trial runs, and produced qualified products. Output of coal chemical products increased rapidly, with the production of 1.056 million tonnes of urea, 577,000 tonnes of methanol, 97,000 tonnes of polyethylene, and 77,000 tonnes of polypropylene. Apart from trial production, the coal chemical enterprises also focused on market development, basically established the mechanism for pricing chemical engineering products, and steadily improved the sales system. With granular urea products sold to South America, polyolefin products recognised by the market, good momentum in the sales of methanol, new economic growth poles for the Company have emerged.

Adhering to its focus on integrated use of resources in coal mining areas and developing recycling economy, China Coal Energy accorded priority to the development of large-scale pit mouth coal-fired power plants consuming washed middling coal, coal slurry and coal gangue as fuel. Power plants fuelled by comprehensive resources will be constructed to support coalbed methane exploitation, utilisation of coke oven gas and coal chemical projects. In 2014, the co-generation project of Shanghai Energy Company was approved, while the preliminary work for the low calorific value coal power generation project of Pingshuo Company and the Xinjiang Zhundong Power Plant Project achieved positive progress.



Case Study



China Coal Ordos Energy Chemical Company creating high-standard export product

The Tuke Fertiliser Project of China Coal Ordos Energy Chemical Company completed all processes on 1 February 2014, and produced qualified granular urea. During 2014, the operation of the fertiliser equipment was stable, and quality products were produced with 96.5% of the products rated as excellent products meeting export standards. Urea production amounted to 828,000 tonnes, 80% of which were exported. With South America as the major market, the first order of the product was exported to Chile. The reputation and influence of the China Coal Urea brand continued to rise, receiving broad recognition from the market for its quality products.



Tuke fertiliser project of China Coal Ordos Energy Chemical Company

Innovative development in the coal service sector

Adhering to the strategic target of “No.1 in China and leading in the World” for its coal mining equipment business, China Coal Energy built green coal mining equipment production bases in its efforts to provide the industry with green, reliable, and efficient coal mining equipment. In 2014, China Coal Equipment Company steadily promoted the development of new equipment, rapidly expanded market development, with production value reaching RMB5.56 billion. Zhangjiakou Coal Machinery Equipment Industrial Park passed the completion acceptance, and became the world’s largest coal machinery industrial park.

China Coal Energy has stepped up its efforts in localisation of equipment, and took up the mission of National Energy research and development on coal mining equipment. Localisation of imported equipment progressed smoothly. Some products completed research and development and trial production and were put into operation. By adapting to changes in the coal machinery market and actively pushing forward service transformation, the Company is continuously making breakthroughs in its professional services and equipment lease financing business.



Case Study



Hydraulic roof support of Beijing Coal Mining Machinery Company exported to as far as Australia

In 2012, Beijing Coal Mining Machinery Company and Australia's Caledon Pty Limited reached an intention of cooperation on the production of hydraulic roof support. The "dream project" has been accomplished in just over two years, with all products accepted and delivered in May 2014. The roof support employed many new technologies, and application for invention patents and new practical patents for over 10 of them were filed. The number

of testing for the support set a new world record of 172,000 times. Export of the roof support to developed countries marked a major step in the localisation in the manufacturing of coal machinery in China, signifying that the company's research and development on and manufacturing of hydraulic roof support have reached internationally advanced standards.

Performance in Economic Responsibilities

Name of Indicator	2012	2013	2014
Production volume of raw coal (10 thousand tonnes)	14,537	15,660	15,024
Sales volume of commercial coal (10 thousand tonnes)	14,954	16,101	15,689
Production volume of coke (10 thousand tonnes)	170	191	194.4
Production volume of polyethylene (10 thousand tonnes)	☆	☆	9.7
Production volume of polypropylene (10 thousand tonnes)	☆	☆	7.7
Production volume of urea (10 thousand tonnes)	☆	16.2	105.6
Production volume of methanol (10 thousand tonnes)	13.4	12.4	57.7
Production value of coal mining equipment (RMB100 million)	85.0	64.8	55.6
Total assets (RMB100 million)	1,838.75	2,149.43	2,427.06
Net assets attributable to equity holders of the listing company (RMB100 million)	861.12	874.27	867.18
Revenue (RMB100 million)	872.92	823.16	706.64
Total profit (RMB100 million)	134.12	60.22	15.21

- Notes: 1. ☆: N/A for the period (same as below).
 2. The Company is concurrently responsible for the sales of all methanol products produced by Heilongjiang Coal Chemical Group, a subsidiary of China Coal Group.



Safety Responsibilities

Safety is of Vital Importance, Life is the Most Valuable

- Prelude: Focusing on Safety Quality Standardisation to Lay a Solid Cornerstone for Safe Production
- Reinforcing Safe Production Fundamentals
- Creating a Safe Production Environment
- Implementing Safety Capability Construction





[Prelude]

Focusing on Safety Quality Standardisation to Lay a Solid Cornerstone for Safe Production

Safety quality standardisation, an unchanged priority of our safety work, is taken as the ultimate solution to reinforce safety fundamentals and enhance management performance. To advance its safety quality standardisation, China Coal Energy continued to introduce innovative models and approaches in 2014, leading to a new level for its standardisation work.

Optimised the standard system. In 2014, the Company promulgated the three-year rolling development plan and annual implementation plan on safety quality standardisation, and circulated the company-wide annual standardisation target programme. The Company amended coal chemical safety and quality standardisation criteria with reference to trial project operations, so as to facilitate newly established coal chemical enterprises in improving their standardisation systems. Onsite meetings were held to promote safety and quality standardisation, together with benchmarking tutoring arranged for and 6S management conception introduced to new coal chemical projects. Currently, the Company has established a safety and quality standardisation system covering 7 segments namely coal production, infrastructure construction of mines, coal chemical, coal mining equipment, coal processing, mine mouth power generation and coal sales.

Expanded the scope of assessment. In 2014, the In 2014, the Company further improved the management measures on safety quality standardisation, and included corporate standardisation into the safety pre-award system. By performing assessments on both the building units and constructing units of internal construction projects, the Company further expanded the scope of assessment and further clarified the safety responsibilities of the two units. The Company further advanced the schedule of assessment that the initial working faces of coal mines under construction were included in the scope of assessment on safety and quality standardization once they were put into operation, so as to ensure the coal mines under construction were qualified for acceptance inspection. The coal chemical projects were required to be included in the scope of assessment on safety and quality standardization once they were put into trial operation, so as to ensure the due implementation of safety responsibilities.

Carried out dynamic assessment. In 2014, the Company elaborated on dynamic and all-around assessment, a major revision to its safety quality standardisation assessment system. While combining the dynamic and static approaches, the weight of dynamic assessment was increased to above 60%. The Company set up 5 inspection teams to carry out irregular dynamic standardisation assessment by conducting dynamic standardisation review through random checks with no prior notice or warnings given and with no fixed schedule. Mining enterprises, coal

chemical enterprises and coal mining equipment enterprises conducted comprehensive review on their mines, coal chemical plants and coal mining equipment manufacturing plants on a quarterly basis. During the assessment cycle, both dynamic and static assessment rates for coal mines (plants) reached 100%.

Emphasised intrinsic fulfilment of standards. The Company integrated standardisation assessment with safety inspection and identification of potential hazards to upgrade the assessment approach from a point-line-plane targeting basis to a whole process and all-around dynamic basis. Respective standardisation priorities were defined, such as in-depth implementation for operating mines, enhancement for surface enterprises and planning for mines in infrastructure construction and coal chemical enterprises, in order to enhance the overall standardisation level. During the process of standardisation, the Company upheld the stringent control over planning and investment and over assessment and realisation and performed the design, production and construction tasks in strict compliance with the industrial standards, so as to achieve the standardisation of management, the standardisation of quality and the standardisation of training.

In 2014, the Company's 5 subsidiaries met the standards on safety-assured enterprises and superior safety quality standardised enterprises; 27 mines and plants met the company-wide first-class standards; and 12 mines were named the "National First-class Safety and Quality Standardised Coal Mines".

12 National First-class Safety Quality Standardised Coal Mines

National First-class Safety Quality Standardised Coal Mines			
Anjialing Open Pit Mine	Antaibao Open Pit Mine	No. 1 underground mine	No. 2 underground mine
No. 3 underground mine	Yaoqiao Mine	Kongzhuang Mine	Xuzhuang Mine
Longdong Mine	Wangjialing Mine	Nanliang Mine	Dongpo Mine

"Standardisation is a strategic campaign. Ongoing in-depth standardisation is a strategic initiative to reinforce safety fundamentals and establish a long-standing effective safety mechanism for a long-term environment for production safety."

– Wang An, Chairman of China Coal Energy Company Limited

Reinforcing Safe Production Fundamentals

Safe production is the most inherent benefit for employees as well as the greatest corporate responsibility. Upholding the principle of "Safety is of vital importance, life is the most valuable" with an aim at "zero fatality rate", the Company seeks to establish a safety management platform based on the management atmosphere featuring "well-established regulations, rational reward and punishment" to build up a safe and sound China Coal Energy.

Improving rules and regulations

The Company attaches great importance to the establishment of its safety rules and systems. In 2014, the Company formulated the Safety Management Regulations to guide and standardise the company-wide safety management practices. A series of rules were formulated to further standardise safety management behaviours, such as the Safety Management Measures on External Contractors for Mines (Coal Chemical Enterprises), the Construction Management Measures on Integrated Operation Projects, the Management Rules on Underground (Field) Inspections by Responsible Persons in Charge of Enterprise, and the Rules on Headcount of Mining Shaft Operation in Infrastructure Construction. To ensure safety accountability, the Company revised the Measures for Awards and Penalties to Responsible Persons in Charge of Enterprise for Production Safety of Enterprises, as well as the Assessment Measures on Safety-assured Enterprises and Safety Quality Standardised Enterprises. Regarding coal mine flood control, the Company has established the basic work system and procedures under a well-established special technology management system comprising three levels namely headquarters, subsidiaries and mines. In 2014, 10 additional safety management units and 233 safety officers were introduced by our subsidiaries, and 1,578 rules and 654 procedures of production safety management were established or revised.

Implementing the safety accountability

Production safety responsibility pledges were entered into at various levels to help implement safety accountability across the Company. In 2014, the Company formulated safety management assessment standards including detailed checklists for enterprises in mining, coal chemical and equipment manufacturing segments, and included the assessment scope into the production safety responsibility



An onsite meeting to promote safety quality standardisation

pledges. Shanghai Energy Company entered into safety responsibility pledges with 23 subsidiaries, improved 48 safety management rules and streamlined 14 key safety workflows in aggregate to ensure clearly-defined duties in alignment with authorities for each node and person liable. China Coal Ordos Energy Chemical Company formulated the Safety Management Assessment Rules on Liquid Ammonia Tanks including 211 standards of conduct, to ensure effective assessment on safety standards, process indicators, equipment operation and maintenance.

In 2014, based on its Safety Circular No. 1, the Company set 59 detailed tasks which were assigned to business units and departments, and followed up and supervised their implementation monthly. Quarterly routine meetings of directors for safety supervision were held to accomplish work priorities. The Company formulated and issued safety management red lines for its mining, coal chemical and equipment manufacturing segments and further streamlined and improved post-specific red lines for employees, thus establishing a full-participation, whole-process and all-dimensional safety red line network. More stringent punishment was exercised against breach of red lines to strengthen employee management and operation at the grassroots level.



Exercising strict safety management assessment

Addressing the inefficiency in the establishment of strict safety regulations and the incompetency in its implementation, the Company strengthened safety assessment by shifting from purely objective assessment to safety-process assessment as well as enhancing assessment both on targets and safety management in 2014. Responsible officers of enterprises were subject to a safety pre-award assessment system where responsibility objectives and management objectives accounted for 60% and 40% respectively. To refine assessment criteria, the Company promulgated 39 standards on 10 aspects including identification and treatment of potential hazards, safety duty fulfilment, management of external contractors and safety training.

Creating a Safe Production Environment

The Company combined advanced technical standards and facilities and equipment to create a safe and reliable system environment. By strengthening technical support, on-site execution and safety supervision system, the Company established an assurance mechanism featuring positive and complementary interaction among technology, production and safety, thus strengthening fundamental safety assurance capability for coal mines.

Enhancing technical support

China Coal Energy promulgated and implemented the Technology Standards for Safe and Efficient Modern Mines, which was stricter than those of the industrial and national standards. The Company set forth the standardised model for mine construction featuring centralised production, simplified system, automated equipment and intelligent management, seeking to shore up safety assurance capability from the source. Coal enterprises carried out technical improvement campaigns, such as formulating and implementing technical optimisation proposals and engaging experts to comprehensively diagnose the anti-disaster capabilities of systems and equipment of certain mines in infrastructure construction to arrange targeted technical improvements accordingly. Through an accumulated safety investment amounting to RMB1.72 billion in 2014, the Company recovered dilapidated tunnels totalling 30,650 metres, and accomplished 129 system upgrade projects for “ventilation and three preventions”, mechanical and electrical and transportation systems. Fully-mechanised mining ratio reached 98.96% and fully-mechanised roadheading ratio was 89.58%, indicating a further enhancement in safety fundamental assurance.

Adhering to the safety concept of “implementing automation” for realising safety upon technology, the Company strengthened safety technology research and application to upgrade the level of safety technologies, and improved information technology in safety supervision and inspection. “Six Safety Refuge Systems” were set up to upgrade the safety refuge capability at various levels of the Company.



Case Study



Shanghai Energy Company strengthened the establishment of safety technical system

With a focus on the source of design and rigorous preparation and approval of technical measures, Shanghai Energy Company reviewed, streamlined and improved a total of 1,035 safety technical measures of various kinds and prepared 670 special technical measures. The rock burst control system was improved, and a mine microseismic monitoring system was installed and

put into operation in Xuzhuang Mine. The rock burst potential hazard treatment at Xuzhuang Mine was basically completed, and passed the acceptance inspection by Jiangsu Provincial Safety Supervision Bureau. With aggregate safety expenditure of RMB180 million, the company completed 49 projects in “ventilation and three preventions”, mechanical and electrical, transportation, and power supply and distribution system upgrades.



Case Study



China Coal Huajin Energy Company achieved vertical rescue through innovative life-saving measures in disasters

Through conducting research and analysis, theoretical calculations, field experiments and numerical simulation, China Coal Huajin Energy Company established a systematic drilling escape system against mine disasters. In case of a disaster, underground workers shall be able to promptly retreat to a refuge, and then be directly elevated to surface through an escape and rescue tunnel.

In 2014, Wangjialing Coal Mine of China Coal Huajin Energy Company successfully put its drilling escape system into operation, thus achieving vertical rescue for coal mine. Combining the refuge function of the existing "Six Safety Refuge Systems" and emergency rescue, the system could greatly enhance the safety protection and emergency rescue capability of mines and minimise casualties and property loss from accidents, thus generating significant social benefits.



A drill of vertical rescue

Strengthening process control

China Coal Energy continued to promote its safety risk prevention and control management. In 2014, the Company organised its subsidiaries to compile safety risk reports and identified over 700 medium and high safety risks which were analysed for confirmation at monthly safety work meetings, so as to define responsible officers and departments and formulate preventive measures. Emphasis was placed on high risks in routine safety control, supervision and inspection, and major risk control progress was tracked and publicised in weekly safety magazines. Coal chemical enterprises actively promoted the application of the HAZOP (hazard and operability analysis) methods, focusing on HAZOP analysis on key equipment and parts.



Case Study



Pingshuo Company strengthened safety risk control in full swing

In 2014, Pingshuo Company convened 5 risk assessment meetings, and rectified 6 class-B risks. Environmental emergency response plan was incorporated into the company-wide plan, together with 26 revised special emergency response plans and on-site handling schemes, 1 comprehensive plan and 15 emergency drills at company level. The emergency rescue training and drill base has completed 88% of equipment and facilities purchase plan; the complex of the multiple-use building has been put in use; and 70% work has been completed for infrastructure facilities such as plastic track and field, oxygen filling maintenance room and ground simulation training room. The 120 units (sets) of rescue equipment funded by the State have passed the review by the State Administration of Work Safety, and procurement procedures have started for emergency vehicles and ancillary rescue equipment financed by corporate supporting funds.



China Coal Energy standardised identification and treatment of potential hazards to eliminate potential safety hazards in time. In 2014, the Company compiled manuals for its mining, coal chemical and equipment manufacturing enterprises and guidelines for coal chemical enterprises, to set out detailed standards and procedures on identification of potential hazards. During 2014, the Company identified 35,628 potential hazards and issued 3,804 rectification notices. Rectification progress of each subsidiary of the Company was tracked monthly and publicised in quarterly circular of rectification notice in order to improve the closed-loop management on the treatment of potential hazards.

Pressing ahead with safety supervision

Through incessant and frequent safety inspections, China Coal Energy enhanced on-site prevention and made persons in charge at all levels stay vigilant. In 2014, the Company focused its safety inspection on “ventilation and three preventions”, flood control, major event periods including the Spring Festival and the NPC and CPPCC Sessions, as well as the 4-month special rectification campaign against “three aspects of non-compliance”. The subsidiaries conducted 3,544 safety inspections, imposed production suspension rectifications on 64 operation points to sustain the high priority given to safety. Through two special inspections on “ventilation and three preventions”, the Company identified 88 issues and the rectification ratios reached 95.2%, leading to higher safety assurance capability of coal mines in terms of “ventilation and three preventions”.

Implementing Safety Capability Construction

Building up “proven qualities and unified and competent teams” is an unchanged priority within China Coal Energy, with a commitment to “environment, quality and responsibility”. Through all-dimensional safety education and training, the Company improved safety execution capability and expedited the shift of staff awareness from “required safety” to “I want safety”.

Fostering a safety culture

To effectively improve the safety awareness of all employees, the Company staged a string of unique activities including “March Safety Warnings”, “Production Safety Month” and “100-day Safety”, and leveraged on radio, television, website, newspaper and bulletin board to step up its advocacy and guidance efforts. Case warning education sessions were provided at work group level, including safety lectures by leading officials for regional teams and work groups as well as organising all employees to watch the video of “Cases of Coal Mine Safety Accident with Over a Hundred Casualties”.



Case Study



China Coal Mengda Company secured project construction under its safety strategy

In the “Production Safety Month” campaign, China Coal Mengda Company held the “6-in-1” activities namely “one special safety work meeting, one open day for production safety advocacy, one safety knowledge contest, one round of identification and rectification of potential hazards, one seminar of accident case warning education, and one drill of emergency plan”. Through workgroup safety activities, safety

skills training and testing were carried out. All employees were organised to watch the commentary video of typical safety accidents. Concepts were broadly advocated such as “the head of production shall also be accountable for safety”, “Take the charge and undertake the responsibility” and “Never develop at the expense of death”, to earnestly uplift the safety consciousness of employees.

Laying stress on youth safety work

China Coal Energy had 26,374 employees aged below 35, accounting for 48.7% of all staff, most of whom have been assigned to key posts of production fronts that are closely related to production safety. In 2014, taking the in-depth implementation of youth safety work as the foundation for the Company’s overall development and for value creation, the Company formulated the Implementation Opinions on Further Strengthening Youth Safety Work, so as to further push forward youth safety work. The fully-mechanised

team of No. 1 underground mine of Pingshuo Company was named the “National Model Post of Youth Production Safety” by the Central Communist Youth League. At Shanghai Energy Company, 216 youth safety officers completed more than 20,000 work shifts in total, collected over 30,000 feedback items on potential safety hazards, conducted more than 300 safety inspections on youth posts, and identified over 4,000 potential hazards on-site which were all rectified.



Case Study



China Coal Shaanxi Company launched youth safety campaigns

At China Coal Shaanxi Company, the Communist Youth League committee formulated the Implementation Opinions on Youth Safety Work, and guided its grassroots units to work out the implementation plans on two campaigns namely "Model Post of Youth Production Safety" and "Supervisory Post of Youth Production Safety". A "100-day Safety" speech team was set up to publicise safety knowledge and establish safety models at grassroots level. The Communist Youth League committee of coal chemical projects established youth shock brigades comprising 7 selected captains and 244 youth members, to tackle the urgent, difficult, dangerous and onerous tasks in the project commissioning period. The Communist Youth League units at grassroots level organised the workshops themed "Youth mini-classroom: My opinion on safety" lectured by youth business and technical professionals, which combined study and discussion to encourage participation of young employees with positive classroom atmosphere and learning outcomes.



A workshop of "Youth mini-classroom: My opinion on safety"

Enhancing safety quality

Laying emphasis on safety training, the Company provided all-dimensional, broad and in-depth safety trainings and education programmes to raise employees' safety quality and business skills. To establish professional teams, the Company included external contractors into its own system based on the enhanced internal teambuilding, promoting the "5 unified" management model namely unified system construction, unified production scheduling, unified safety training, unified supervision and inspection, and unified assessment, incentive and punishment for overall enhancement in safety capability. In 2014, the Company organised 2,104 safety training courses, providing training in rotation for all frontline workers totalling 65,000 attendees. Meanwhile, 249 knowledge and skill contests were held with participation of 31,000 attendees. China Coal Huajin Energy Company performed emergency rescue skill contests earnestly, and won a teamwork excellence prize in the 10th national mine rescue competition.



A rescue drill for safety



Case Study



China Coal Huajin Energy Company took a combination of initiatives to enhance safety quality

Firstly, the company introduced a coal mine safety technology visual simulation training system, including educational software for 22 commonly used posts such as mine safety inspector and gas inspector, to enrich teaching methods. Secondly, the question bank was expanded by introducing over 70 posts to the existing 44 posts, thus basically covering all posts and types of work in coal mine. Thirdly, diversified safety education and training were conducted on an ongoing basis, including 27 sessions of training classes respectively in “three posts”, excellent team leader, manager quality enhancement, mine rescue and prevention

of occupational hazards with 2,479 attendees participation and 2,286 attendees passing the exams, representing a passing rate of over 92%. Fourthly, the company took great efforts in the quality training campaign including safety knowledge contest, safety consulting, first aid and safety discussion, and set up an aid classroom for “three aspects of non-compliance” where female coordinators provided kind assistance, education, persuasion and guidance to the liable persons to clarify their misconduct in production safety from six aspects.

Strengthening the accountability process

In 2014, the Company committed tremendous efforts in production safety and certain progress was made, including a sound momentum of production safety in coal mining and coal chemical segments. Fatality rate of raw coal production per million tonnes was 0.013, maintaining the leading position in the industry. However, the Company was faced with grim safety situation given 1 serious accident and 1 major accident occurred in coal mines in infrastructure construction. Conscientiously analysing the accidents to learn from the lessons, the Company immediately launched a safety inspection campaign to

eliminate potential safety hazards promptly. Meanwhile, the Company issued 6 relevant safety management rules to eliminate the weaknesses in safety management. A 4-month special rectification activity was carried out to combat the “three aspects of non-compliance”. A survey was made on all mines (plants), thereby identifying potential causes of disasters related to old goaf area, burning area, subsided column, oil and gas wells, etc. Accountability of the liable persons for accidents was investigated seriously based on accident investigation reports and the Company’s internal rules on accountability, and severe punishment was imposed on those persons with liability.

Performance in Safety Responsibilities

Name of Indicator	2012	2013	2014
Safe production expenditure (RMB100 million)	26.0	18.8	17.2
Fatality rate of raw coal production per million tonnes	0	0	0.013



Environmental Responsibilities

Building a Green China Coal Energy with Low-Carbon Development

- Prelude: “Three Keys to Water Preservation” for Zero Sewage Discharge
- Implementing the Green Strategy
- Constructing Green Mines
- Implementing Low-Carbon Activities





[Prelude]

“Three Keys to Water Preservation” for Zero Sewage Discharge

A responsible “zero discharge” target

The Tuke Fertiliser Project of China Coal Ordos Energy Chemical Company is a trial project within the strategic transformation of China Coal Energy. Located at the interior of Maowusu Desert with scarce water resources and extremely weak ecological environment, the Project has pinpointed the challenge of “zero discharge” of coal chemical waste water as one of its primary targets since its establishment in a bid to provide maximum protection for the local ecological environment and develop itself into a first-class worldwide coal chemical enterprise.

Three keys to achieve “zero discharge”

First Key: Reducing water wastage from the source. Waste water containing organic phenol produced during the process of gasification is the focal and difficult point in the treatment of coal chemical waste water. Since the beginning of the project and taking into account the quality of local coal in Ordos, the Tuke Fertiliser Project of China Coal Ordos Energy Chemical Company has approached this challenge at the selection of phenolic waste water-producing gasification device models from the source by adopting the BGL Gasifier. Not only does the BGL Gasifier comprehensively convert coal thoroughly, but also represents the most advanced gasification technology in the world, producing only 1/4 to 1/3 waste water of the traditional gasifiers.

Second Key: Establishing a complete waste water treatment device. The Tuke Fertiliser Project of China Coal Ordos Energy Chemical Company produced over 5 million tonnes of industrial waste water and domestic sewage each year. In order to completely and effectively reuse such waste water, the Company invested RMB700 million for the construction of a complete waste water treatment and recycle system. Waste water from production, domestic sewage and phenolic ammonia waste water from gasifier of the entire plant passes through sewage bio-treatment and then use comprehensively through greywater reuse device and strong brine treatment device. China Coal Energy is the first company in China to successfully adopt the techniques of high-efficiency reverse osmosis and

falling film evaporation to recycle strong brine, eventually bringing the volume of strong brine to only below 1% of the total water inflow of the entire plant. The Company also constructed 42 hectares of evaporation pond, serving as a barrier for strong brine treatment.

Third Key: Implementing evaporated crystallization device. Practically, waste water that has gone through the above treatment has already reached the standard of “regional zero discharge”. However, theoretically, 20% of the strong brine after treatment could be further evaporated, eventually leading to solid-liquid separation and forming crystalline salt solids. Determined to be the frontrunner of coal chemical waste water treatment and through technical exchanges with multiple corporations both domestically and globally, the Tuke Fertiliser Project of China Coal Ordos Energy Chemical Company experimentally implemented an additional set of crystallization device and achieved successful trial run in one attempt.

Demonstration project of green development in the coal chemical industry

The above-mentioned device has been formally put into operation since November 2014 and is now in smooth operation, having produced 1,000 tonnes of crystalline salt in total. The waste water treatment of the project has fulfilled the actual target of “zero sewage discharge” and has become the demonstration project of green development in the coal chemical industry, obtaining universal recognition from the environmental protection department of the Inner Mongolia Autonomous Region and the China Nitrogen Fertiliser Industry Association, as well as the label of benchmark environment corporation recognised by the government of the Inner Mongolia Autonomous Region.

Never has one drop of waste water been discharged out of the plant from construction to trial production, the project has indeed implemented the social responsibility of coal chemical corporations.

– Environmental Protection Bureau, Wushenqi, Ordos, Inner Mongolia Autonomous Region



Implementing the Green Strategy

China Coal Energy proposed the core concept of “building a green China Coal Energy to sustain the ecological balance in nature” and the prospect of building the five main bases into top green development demonstration bases in the country by 2020, while achieving the strategic goal of green development of the four main industries. The concepts of promoting green development and ecological civilization have gradually been assimilated into different layers and aspects of corporate production and operation. The development target of “Green China Coal Energy” has received extensive consensus and “green development” has become a common goal to the workforce.

Strategic management system

China Coal Energy implemented the policy of energy conservation and emission reduction of the PRC, made steady progress in the establishment of a “Green China Coal Energy” standards system and promoted regularisation and standardisation of energy conservation and environmental protection management. Adhering to the concepts of “highlighting the focus, tackling easier parts before the difficult ones and implementing step by step”, the Company organised to compile 4 sets of green standards and evaluation systems covering two core businesses of coal mining and washing, and coal mining equipment manufacturing. The Company published the 2014 green standards for coal mining equipment manufacturing and evaluation system for trial operation, and issued the “Guiding Opinions on Enhancing Energy Conservation and Environmental Protection”, in which, the targets, missions and measures to be achieved and adopted by the end of the 12th Five-Year Plan were determined.

Energy conservation and environmental protection assessment

China Coal Energy strengthened the assessment of environmental protection performance and continuously improved the assessment system by incorporating the annual indicators for energy conservation and environmental production into the responsibility pledges for operational performance of the persons in charge of the enterprises, which were devolved to various subsidiaries to ensure accomplishment of environmental management goals. The Company carried out quantitative grading assessment on annual energy conservation and environmental protection tasks of various enterprises, which would be taken into account during the assessment for operational performance of the persons in charge of various enterprises. The Company also performed tracking investigation on the energy conservation and environmental production tasks of the coal, electricity and coal chemical sectors, with emphasis on monitoring, analysing and evaluation of the primary issues.

Monitoring environmental risks

In order to adapt to the newly amended “Environmental Protection Law” of the PRC and the increasingly stringent environmental protection standards, proactively respond to various environmental protection risks and continuously promote pollution prevention and control, China Coal Energy organised the identification and rectification of potential environmental protection risks by its subsidiaries. The environmental risks were sorted out in a systematic manner based on 43 items in the three areas of compliance of construction projects, pollution prevention and control and production, operation and management. After verification and classification, followed by communications with subsidiaries, the timeframes for rectification and the persons in charge have all been confirmed. China Coal Energy compiled “Documents on Environmental Protection Facilities”, “Documents on Industrial Boilers” and “Documents on Energy Conservation and Environmental Protection Procedures of Construction Projects”, and carried out dynamic supervision to strengthen management and monitoring of the operation of environmental protection facilities and energy conservation and environmental protection procedures of construction projects, allowing early discovery of problems and adoption of targeted measures to prevent environmental risks.



Constructing Green Mines

China Coal Energy put into practice the concept of “environmental-friendly mining and revegetation of mines” by constructing green mines in harmony with the ecological environment and actively developing green mining, and carrying out land subsidence treatment and rehabilitation and greening. Oases were formed while modern coal mines and factories were constructed.

Green mining

China Coal Energy introduced the requirement for green mining from the source in mining areas based on the core businesses and development goals right from the start of project construction through adopting innovative technology and making full use of its advantages in scale as a leader in the industry, as well as its edge in integrated supply chain, which sped up the establishment of systems that would benefit safe and green mining, such as systems for handling resources management, standardisation and equipment support. By focusing on “technological improvement for achieving environmental protection and high efficiency”, specific mining technology

optimisation activities were developed; and examination on technological optimisation and implementation proposals for 11 secondary units and 35 coal production and infrastructure mines were carried out, resulting in 152 items of constructive suggestions in 5 key areas. This ensured intensive and meticulous procedures and resources conservation by further refining working face parameters to improve recovery rates in mining and reduce roadheading ratio for every 10 thousand tonnes. In 2014, China Coal Energy achieved a recovery rate of 88.9% in its mining area of coal mines.

Clean and Efficient Use

China Coal Energy complies with the principle of “cleanliness, efficiency, and recycled use” to formulate arrangement for circular economy, construct new systems for integrated utilization of resources, promote structural upgrades within the industry so as to realise the coordinate development among the regional economy, social environment and natural ecological environment.

The Company complies with the principles of “resources recycling, waste reusing” to conduct cascade utilisation of waste water, waste gas and solid wastes during the production process, so as to strengthen the treatment of the “three wastes” with determination, promote the use of clean production technology vigorously, enhance innovative processes continuously and reduce the resources and energy consumption.



Case Study



Circular economic development for China Coal Heilongjiang Coal Chemical Company

China Coal Heilongjiang Coal Chemical Company adopted the circular economy model of “mining – washing – coal gas generating – gas purifying – methanol and natural gas producing” as the primary model. Through combinations of using low calorie fuels in power generation, recycling of phenol, ammonia and oil products, natural gas extraction from blow-out gas during methanol synthesis, acid production from hydrogen sulphide, phenolic waste water treatment, cascade utilization of high, mid and low pressure steam, multi-product association and coupling, high efficiency circular utilization of resources and clean and cascade utilization of energy have been achieved, systematically resolving the issues of sustainable development of the coal chemical industry and treatment and utilisation of the “three wastes” of the industry, while providing society with clean energy of natural gas, and supplying water and heating to residents in the neighbourhood of the enterprise. In 2014, the project “China Coal Heilongjiang Coal Chemical Circular Economy Development Model and Key Technological Research” received the Technological Advancement First Class Award from the China National Coal Association.



Case Study



Effective utilization of residual heat resources from power plants by China Coal Huajin Energy Company

China Coal Huajin Energy Company effectively used residual heat from comprehensive utilisation power plant for providing offices, dormitories, canteen and recreation center of the company with heating and supplying hot water for bathing in the bathrooms of mines and coal preparation plants, thus conserving energy and improving efficiency. Residual heat and steam from comprehensive utilisation power plant was also used for supplying heating to railway loadout station and steam to canteen. Renovations to the composite building and emergency relief centre of Wangjialing Coal Mine were carried out for cooling using residual heat from power plant. Using residual heat from power plant for heating conserved 11,500 tonnes of standard coal in 2014.

Ecological restoration in mining areas

With the goal of being an environmental-friendly corporation, China Coal Energy took into consideration the ecological and environmental characteristics of the regions where its enterprises are located in conducting ecological restoration, protection and improvement work such as emphasizing on properly managing subsided mining areas and refuse dumps of open pit mines as well as enhancing land reclamation in mining areas. In 2014, No. 3 underground mine of Pingshuo Company was included in the list of the fourth batch of national green mines. 5 mines, Antaibao and Anjialing open pit mines of Pingshuo

Company and Yaoqiao, Xuzhuang and Longdong mines of Shanghai Energy Company, which were included in the third batch of national green mine pilot units completed the preparation of high quality construction plans for green mines, which were filed with the Ministry of Land and Resources. As a model enterprise in green mining, the Company introduced its practice and experience in building a green low-carbon enterprise in the green mining sub-forum of the Eco Forum Global Annual Conference Guiyang 2014.



Case Study



Ecological reconstruction and returning land to the people by Pingshuo Company

Open pit mining of Pingshuo Company adopted a revolutionised method for mining sites by using the integrated technology of “stripping – mining – backfilling – reclamation” to transform topography features and fill gullies, forming farmlands that would benefit automation in agriculture for developing modern farming, thus establishing a strong foundation for returning land to the people.



The environmental-friendly Pingshuo mining area

On the basis of proper ecological restoration, land reclamation was the core to build up an ecological industry chain. The construction of high standard ecological farming bases and ecological facility bases as well as the national Antaibao mining geopark attracted original inhabitants to move back, work and reside, thus building a new ecological and harmonious community. The Company had begun to launch multiple breeding experiments and had to date constructed 300 daylight greenhouses, intelligent greenhouses with an area of 16,000 square metres, a breeding field that can produce more than 4,000 lambs per year; and developed the capability to annually produce more than 6 million jin of vegetables and cultivate more than 300,000 Phalaenopsis. Tourist facilities such as ecology walkways, artificial lakes and ecology halls had been completed basically, and more than 80 farmers who lost their land had been resettled. As building projects in the ecological industry continued to expand, the ecological park, which integrated ecology restoration, modern agriculture and ecological tourism, would grow in size. The park had been determined by the Pinglu regional government to be a modern incubator for agricultural technology.



Implementing Low-Carbon Activities

China Coal Energy continued to strengthen data monitoring on energy conservation and emission reduction. A sophisticated energy management system was built to enhance awareness of low-carbon and implement low-carbon measures, making positive efforts to address climate change.



Case Study



Strict control on energy consumption by China Coal Equipment Company

China Coal Equipment Company strived to improve its energy structure by actively using clean energy, by dismantling most of the coal-fired boilers and replacing them with natural gas boilers, and by upgrading all steam powered forge hammers to modern and more environmental-friendly electro-hydraulic hammers, reducing the proportion raw coal energy consumption from 36.9% in 2013 to 14.1% and realizing the transformation in energy structure from primarily coal-powered electricity to the co-existence of heat, electricity and natural gas. China Coal Equipment Company carried out environmental-friendly technological enhancement to conserve energy and protect environment by investing RMB34.57 million in 2014 to actively replace outdated and high energy consumption equipment. It now owns 47 sets of waste gas treatment equipment with an hourly treatment capacity of 880,000 cubic metres, representing an increase of 144% compared to that of 2013.

Prevention and control of air pollution

Determined to implement the "Action Plan on Prevention and Control of Air Pollution", the Company strengthened air pollutant emission management, launched centralised heat provision projects in mining and living areas, formulated plans for renovation of industrial boilers so that air pollutant emission could meet standards, implemented denitrification and desulphurization renovation works for boilers of power plants, and ensured that all treatment facilities were under normal operation and pollutant emissions meet the required standards. The standards for data monitoring through digital means have been enhanced, so that subsidiaries can submit energy conservation and emission reduction data online, allowing regular data analysis on energy consumption and reporting of energy conservation and emission reduction. In 2014, China Coal Energy recorded comprehensive energy consumption of 0.453 tonnes of standard coal, representing a year-on-year decrease of 2.2%, with chemical oxygen demands (COD), emission of 719 tonnes and sulphur dioxide, emission of 10,693 tonnes.



Case Study



Detailed planning for prevention and control of air pollution by Pingshuo Company

In 2014, Pingshuo Company completed the operation shutdown of heating boilers in living areas, annually reducing the emission of SO₂ by nearly 640 tonnes, NO_x by nearly 600 tonnes and dusts by nearly 200 tonnes. To comply with the "Air pollutant emission standards for boilers" recently introduced in 2014, the company completed the commission of the renovation design for precipitator of 930E boilers. An investment of RMB153 million was made to implement co-generation of heat and electricity at coal gangue power plants, replacing 7 scattered boilers with a total capacity of 140 T/h and reducing annual emission of sulphur dioxide by 698 tonnes.



Energy conservation management

China Coal Energy continued to strengthen energy conservation management and technological improvement, obsoleted backward capacity, encouraged conservation and intensified utilization of energy resources on a concentration-and-conservation base. The Company launched pilot tasks on energy management system construction, implemented contractual energy management, formulated and published catalogues for promoting energy conservation technologies of the coal and power segments of the Company, and promoted the establishment of a sound energy management system. In 2014, an investment of RMB500 million was made for 82 energy conservation and environmental protection projects, including

implementation of energy conservation in electrical motor systems, optimisation of energy systems, renovation of coal-fired industrial boilers, as well as management of the “three wastes” and ecological constructions. The Company also strengthened monitoring of the energy efficiency of energy-consuming equipment of energy conservation technological improvement projects and conducted assessment after project launch to ensure achieving energy conservation targets. All 8 subsidiaries under the Energy Conservation and Carbon Reduction Programme for 10,000 Enterprises initiative achieved the regional and national targets for 2014 in assessing energy conservation progress.



Case Study



Beijing Coal Mining Machinery Company carries out carbon emission trading

Carbon emission trading is a vital part in carbon emission reduction and a necessary method for improving overall allocation of resources. Beijing Coal Mining Machinery Company has been a pilot enterprise in carbon emission in Beijing with an annual carbon dioxide emission of over 50,000 tonnes. In 2014, it utilised the unused carbon emission quota in 2013 to carry out transactions amounting

to 28,500 tonnes, with an average price of RMB53.57/tonne, creating a direct income of RMB1.51 million. Beijing Coal Mining Machinery Company had a carbon transaction quota of 64,100 tonnes in 2014, which would amount to a surplus of over 30,000 tonnes in expectation; it is currently looking for transactions in batches according to the market values, so that the benefits to society can be maximized.

Implementation of environmental protection activities

With the theme of "Conserving energy and reducing carbon emission jointly for creating a blue ocean and an azure sky", China Coal Energy has dedicated itself in promoting energy conservation and low carbon emission through a conducive atmosphere and collective efforts, thoroughly implementing the spirit of building up an ecological civilization, promoting the concept of "Green China Coal Energy", sharing experience and practical advanced technologies on energy conservation and popularizing education on energy conservation and low carbon emission, all with the goal to aid the green development of the Company. In 2014, Zhangjiakou Coal Mining Machinery Company of the China Coal Equipment Company was honoured as the "Demonstration enterprise for green forging in China" by the China Foundry

Association, becoming the first enterprise in mining equipment industry to have passed the assessment for using the three-star design logo and operation logo for green industrial construction.

Events such as conserving every unit of electricity, every drop of water and every piece of paper are promoted for establishing the "energy-saving organization". Low-carbon production, living style and consumption pattern are actively encouraged. China Coal Heilongjiang Coal Chemical Company implemented the "microcomputer lighting timer controls", saving lighting electricity effectively. Ordos Branch launched voluntary activities of tree planting and afforestation for all employees, planting sand willows in about 200 mu of sandy land adjacent to the company to achieve sand dune fixation and greening.



Case Study



World leading technology in coal gasification waste water and highly concentrated phenol ammonia recycling and treatment

In 2014, "coal gasification waste water and highly concentrated phenol ammonia recycling and treatment technology" from China Coal Heilongjiang Coal Chemical Company was listed as a National High-Tech Research and Development Programme (an "863" programme) by the Ministry of Science and Technology and received the honour of "Songhuajiang cross-border major environmental pollution risk prevention and response technology system demonstration project" from the Ministry of Science and Technology.

The technology belongs to the field of chemical environmental protection. The procedure involves dephenolisation upon the process of deacidification and deamination. The extraction condition is altered after deacidification and deamination by the single tower integration technology, the extraction effect on polyphenol is enhanced through usage of extracts and filler extraction tower with high efficiency. Comparing with similar technologies domestic and abroad, this key technology and its major technological parameters are in the leading position within international standards, and have already been widely promoting amongst large-scale coal chemical corporations.



Waste water treatment project



Case Study



Electric energy conservation in China Coal Shaanxi Company Hecaogou Mine

Hecaogou Mine of China Coal Shaanxi Company took the site conditions into consideration, properly analysed the electricity usage in each process, and adopted multiple measures to conserve electric energy and reduce consumption. Firstly, variable frequency technology was actively promoted to save energy and reduce consumption through automatic regulation in height adjustment for

belts. Secondly, LED lighting equipment with better lighting effects and less electricity consumption was used in underground central pumping rooms and central substations. Thirdly, monthly inspections were carried out on ground water-saving and electricity-saving activities, heavy penalty would be imposed on relevant parties for identified wastage cases to curb wastage of water and electricity.

Performance in Environmental Responsibilities

Name of Indicator	2012	2013	2014
Integrated energy consumption per RMB10,000 production output (standard coal)	0.468	0.463	0.453
Recovery rate of mining area of coal mine (%)	87.6	88.8	88.9
Utilisation rate of gangue (%)	97.7	96.3	98.8
Utilisation rate of mine water (%)	75.6	82.4	84.4
Emission volume of sulphur dioxide (tonne)	10,926	10,660	10,693
Emission volume of chemical oxygen demand (tonne)	1,079	817	719



Innovation Responsibilities

Innovation-driven Development to Take the Lead in the Industry

- Prelude: From “Made in China” to “Created in China”
- Optimising Innovation Platform
- Making Technological Breakthroughs
- Raising the Level of Development





[Prelude]

From “Made in China” to “Created in China”

The project for the construction of the “National Energy Coal Mining Machinery and Equipment Research and Development (Experiment) Centre” undertaken by China Coal Equipment Company has been inspected and accepted upon completion by the National Energy Administration. As the only national energy R&D centre in China’s coal industry, the project integrates major innovation achievements and takes the leading position in carrying out comprehensive, independent innovation in coal mining equipment and technology, which are of great significance in enhancing the technological innovation capability in China’s coal mining machinery and equipment.

Advanced concept. Research and analysis of a full set of comprehensive mechanised mining equipment has been carried out, covering the test process for the mechanical properties of certain equipment such as shearers, armoured face conveyor and hydraulic roof support as well as sensors and data acquisition. A simulated coal wall on underground recovery working face, an unmanned automated mining comprehensive testing system and a fully functional linkage laboratory with a full set of mining equipment and the most state-of-the-art testing techniques in China have been built.

Leading technology. The world’s first simulated underground actual working scene has been constructed and is equipped with a platform with international advanced level for verifying and testing coal machinery and equipment, which is capable of carrying out experiments on the mechanical property and automated control of a full set of mining equipment to facilitate the development of automated and intelligent mining equipment.

Upgraded industry. The world’s largest 45,000kN powerful hydraulic roof support testing platform has been built, with R&D and experimental capability for high-end, large-scale hydraulic roof support; It possesses R&D and manufacturing capability high-end intelligent armoured face conveyers (with an installed power of over 3,600kW), high power AC hauled shearers (with an installed power of over 2,500kW), intelligent tunnelling machines and fully automatic sliding coal ploughs.

Pioneering history. The establishment of the centre helps solve major scientific and technological issues in the coal mining area, providing support for China’s major science and technology projects; acting as a platform for carrying out experiment, testing and technology inspection services in the field of coal mining equipment; providing support for the industry’s cooperation in production, learning, research and practice application as well as product R&D and enhancement of industry standards; and promoting the transformation for manufacturing high-end coal machines in order to switch from “Made in China” to “Created in China”.

“The completion of the R&D experimental centre has provided an excellent platform and technical support for the technical development of enterprises and the technical services of the industry, and as having undertaken a major task for the R&D of China’s coal mining.”

– Sui Yongbin, Chief Engineer, China Machinery Industry Federation





Optimising Innovation Platform

Considering innovation as the core competence for enterprise development, China Coal Energy makes great efforts in establishing a technological innovation mechanism, optimises the allocation of technology resources, continuously explores new inspiration for technological innovation, and dedicated to promoting technological progress in enterprises and the industry.

Perfecting the technological innovation system

China Coal Energy continues to implement the integrated, leading technology innovation strategy by having systematically established three-tier technological innovation mechanisms – safety technology, economic technology and development technology – to improve the Company's independent innovation operating mechanism and promote the construction of production front-line technological innovation system to play an active role, by means of technological innovation, in assuring safety, enhancing cost efficiency and leading development. In 2014, the Company commenced the preparation of the "Thirteenth Five-year" scientific and technological development plan by organising and conducting system research on various topics such as low-cost technology, three-tier technological innovation system and reorganising of core technology for industry clusters, effectively enhanced innovation capability.

Enhancing the building of the R&D team

China Coal Energy strengthens the building of the R&D team by continuing to explore, foster and introduce high-level R&D and technical personnel of high calibre from various industries, and especially professionals in coal chemical industry. In 2014, Pingshuo Company appointed top-notch personnel excelling at solving technical problems as chief experts, experts, engineers and technicians for paving a career path for leading technical personnel and highly skilled top-notch personnel who have been working in professional technical positions and production front-line skilled positions for a long time.

China Coal Energy places emphasis on cultivating self-initiated innovation among its technical workforce, makes efforts in organising and launching innovation activities for production front-line employees and creates a sound environment that respects science, advocates technological skills and encourages innovation. In 2014, the Company's production subsidiaries accomplished more than 2,200 achievements in technological innovation and on-site research projects; implemented more than 5,600 "five smalls" scientific and technological innovation and rationalisation proposals, continuously strengthening the capability in innovation and efficiency enhancement. The two achievements in the "proposal on emission of tail gas from the diesel engines of MH-40 multi-purpose underground carrier" and the "making and application of vertical shaft hoisting system model by means of independent R&D" won the technological innovation achievement awards for outstanding employees within the national energy and chemical industries for 2014. Qifeng Innovation Studio of Zhangjiakou Coal Mining Machinery Company won the title of exemplary model workers innovation studio within the national energy and chemical industries; three skilled master studios of Pingshuo Company were named "Skilled Master Studio in the National Coal Industry"; and the technology centre of Zhangjiakou Coal Mining Machinery Company won the title of innovative and entrepreneurial team for the "Giant Project" in Hebei Province.



Case Study



Pingshuo Company's innovation studio made small inventions with great efficiency

The Innovation Studio of No.1 Underground Mine of Pingshuo Company has researched and designed a "Remote Hydraulic Automatic Coal Pusher" which was processed and made into a finished product on external commission and put into use, not only having minimised the manpower intensity for the existing manual cleaning of float coal, and

also having matched the cycle of working face operations to improve production efficiency and eliminate potential safety risks. The facility can increase the average daily output by more than 1,000 tonnes and the monthly output by more than 30,000 tonnes, generating better economic benefits.



Making breakthroughs in construction of science R&D institution

China Coal Energy deepens the construction of a science and technology R&D institution and proactively cultivates industrial transformation and upgrade innovation. As of the end of 2014, the Company possessed one national energy mining machinery R&D centre, two national energy technology and equipment assessment centres, three national technology centres, six provincial technology centres, three provincial engineering research centres, eight state-certified laboratories and three post-doctoral research centres, bringing further improvement to its R&D system and continuous enhancement to its capability of self-initiated innovation.

Deepening collaborative innovation strategy

China Coal Energy focuses on multi-channel strategic cooperation and alliance for technological innovation by enhancing production-academy-research cooperation with R&D institutions as well as carrying out domestic and overseas technological communications and exchanges to strive to optimise the deployment of technological resources and boost collaborative innovation capabilities continuously.

In 2014, China Coal Energy entered into a strategic cooperation agreement with the State Key Laboratory for Geomechanics and Deep Underground Engineering of China University of Mining and Technology on co-establishment of the Deep Mining Institute. Research and development were conducted in the coal mines owned by the Company so as to promote the gob-side entry retaining formed by roof cut and pressure releasing technology. Joint efforts on the breakthrough in other advanced and practical technologies were made by both parties with respect to deep mine heat hazard control, rock burst prevention, slope treatment for open pit mines so as to further reduce the costs of coal mining and production.



Entering into a strategic cooperation agreement with the State Key Laboratory for Geomechanics and Deep Underground Engineering

To proactively carry forward strategic technology cooperation and exchanges between China Coal Energy and GE, both parties entered into the Strategic Cooperation Agreement between GE Mining and China National Coal Mining Equipment Company Limited for carrying out cooperation and communication in coal mine auxiliary transportation equipment, asynchronous motor upgrade, automation and fast roadheading technologies to further develop high-end equipment market.

Making Technological Breakthroughs

China Coal Energy highlights the real needs of an enterprise to “assure safety, enhance cost efficiency and carry out transformation and development”, steps up the progress in national science and technology projects and strengthens key technology research, having made new contributions to the support of production safety, the enhancement of economic benefits and the leading of technological development for the industry. In 2014, China Coal Energy’s science and technology input amounted to RMB1.492 billion, representing a technical input ratio of 2.11%.

Undertaking national technology projects

Under the direction for technological development, China Coal Energy pairs up major technological research and development of the Company with the great demand for technology in the country. The Company undertakes the responsibility to make national technological breakthroughs and vigorously proceed with the technological advancement and industrial development of China’s coal energy.

In 2014, China Coal Energy organised and carried out 8 national science and technology projects, such as the “Key Technologies on Construction of the 100-million-tonne Coal Base in Hinterland of Inner Mongolia-Shaanxi” and the “Model Project for 10-million-tonne Efficient Fully-mechanised Key Technological Innovations and Industrialisation”, taking the lead in all-round technological innovation of the industry to scale new heights. 4 projects undertaken by the Company, such as “SGZ1350/3×1500 (1600) armoured face conveyor for fully-mechanised working face”, were included by the Ministry of Science and Technology into the 2014 National Key New Product Programme and the National Torch Plan and obtained certificates of national key new products, which was of great significance for accelerating the industry’s transformation of high-tech achievements. Under a national security technology “four-in-one” project named the “research and application of comprehensive dust proof systematised technical equipment for mines” specifically for the features of the Company’s Longdong coal mine, a sound, comprehensive dust proof technology was created after research as well as inspected and accepted by the State Administration of Coal Mine Safety on-site.



Case Study



Demonstration project for the innovation and industrialisation of key technology in ten-million-tonnes efficient, fully mechanised mining proceeded smoothly

Various sub-projects under the “demonstration project for the innovation and industrialisation of key technology in ten-million-tonnes efficient”, fully mechanised mining, a national low-carbon technology project undertaken by Pingshuo Company, progressed smoothly. The frequency conversion centre in Pingshuo was inspected and accepted upon completion of an underground industrial test, enabling a direct control of a 10KV high voltage on the frequency conversion of electric motors at a control power of 1,200KW. The quantity of coal conveyed in total was over 4.7 million tonnes. It was an international pioneering technology.

Implementing key technological projects of the enterprise

China Coal Energy fully expands the complete advantages in the industry chain and focuses on tackling major technological difficulties hindering enterprise development. In 2014, the Company organised and implemented 16 key technological projects and gradually created core technological advantages in the technology for fully-mechanised top coal caving for extra-thick coal seam with large mining height and high-precision three-dimensional dynamic Geological modelling in coal mines, offering support to the transformation and upgrade of the principal business. Upon successful completion of R&D, integrated promotion and application of a batch of major scientific and technological achievements were made. In 2014, a total of 19 technological achievements obtained technology progress awards at province/ministry level or above. The Research of Complete Technologies and Equipment for Fully-mechanised Top Coal Caving for Extra-

thick Coal Seam with Large Mining Height undertaken by the Company won the first prize of National Technology Progress Award for 2014. Three achievements including the Research and Application of Key Technologies on High-precision Three-dimensional Dynamic Geological Modelling and Engineering Optimisation Research Project on Mining, Transportation and Waste Discharge across Anticline Structure in Anjialing Open Pit Mine won the first prize of Coal Industry Technology Progress for 2014.

In 2014, China Coal Energy had a total of 286 patented applications accepted, of which 92 were patents for invention; and the Company had obtained 186 licensed patents, of which 33 were patents for invention. The total number of valid patents was 963, including 136 patents for inventions which records new high in terms of the number of patents.



Case Study



China Coal Equipment Company won the first prize in National Science and Technology Progress for the first time

The mining technology for super thick coal seams of more than 14 meters thick has long been an unresolved problem in coal mining in China, and no precedent safe and efficient mining techniques are available at home and abroad. In seeking solutions to this problem, China Coal Equipment Company in conjunction with China Coal Technology & Engineering Group, Datong Coal Mine Group, other research institutes and equipment manufacturers jointly undertook the “research on a full set of technology and equipment for large-volume, fully-mechanised mining in super thick coal seams”, a major project under the “Eleventh Five-Year” national technology support programme.

Fully-mechanised top coal caving for extra-thick coal seam with large mining height mining technology for 14-20 meters super thick coal seams and the world’s first set of large-volume, high-strength and fully-mechanised equipment with an annual output of ten million tonnes for super thick coal seams first developed by China Coal Equipment Company as well as the rear armoured face conveyor with an installed power of $2 \times 1,000\text{KW}$, a transmission capacity of 3,000t/h and a transport distance of 300 meters developed by it have met the requirements of high power, large capacity and high reliability of equipment for large-volume, high-strength and fully-mechanised coal face on super thick coal seams. ZF15000/25/52 Hydraulic roof support for top caving coal is a four-pillar top caving hydraulic roof support currently with the maximum resistance, the maximum support height and the highest technical and quality requirements for fully-mechanised face for top caving coal in China, with a designed life of up to 50,000 times of compound loading durability under European test standards.

With the research finalized, an industrial test was accomplished with great success regarding the coal face of Tashan Mine 8105 of Datong Coal Group, and was carried out promotion and application at 32 coal mines in 13 mining areas such as Datong, Pingshuo, Shendong and Xinjiang, with a maximum output of 12.870 million tonnes from a single pit with a single working face. Compared with slicing mining, from 2011 to 2013 only, the increase of raw coal output already amounted to 80.299 million tonnes, the increase of output value was RMB25.1 billion and the increase of profit tax were RMB7 billion, while RMB650 million of equipment investment and RMB1.296 billion of project investment were saved.

The research has effectively solved the high yield, high efficiency and safe mining technical problems for super thick coal seams and won the first prize in National Science and Technology Progress for 2014. This was the first time for China Coal Energy to receive such award.



China Coal Equipment Company’s complete equipment for extra-thick coal seam with large mining height



Promoting major science and technology projects

China Coal Energy focuses its efforts on the implementation of four major science and technology projects which include the localisation of imported equipment, promotion and development of gob-side entry retaining, application, quality upgrade and value addition of relief measures for high-sulphur coal, as well as R&D of new catalysts to support cost efficiency, stabilise the market and raise efficiency.

In 2014, the Company systematically promoted localisation through the system with high starting level and organized the compilation of the "Localisation Outline for 2014-2016". Pingshuo Company and China Coal Equipment Company conducted cooperative R&D which saved RMB71 million of expenses on imported equipment and spare parts. China Coal Equipment Company's localisation achievements such as reducers were put into on-site trial use. Focusing on promoting the gob-side entry retaining technology to reduce the cost of coal production, a roof cut and pressure releasing automatic tunnelling test was conducted at the coal mine in Tangshangou to strive to carry out pillarless mining method. To tackle the prominent issue surrounding the severe impact of high-sulphur coal on business efficiency, the Company conducted technology exchanges on topics such as microwave desulphurisation as well as research programmes on solutions to high-sulphur coal. The Company developed more new MTO catalysts by completing the overall technical programme on new MTO catalyst engineering development with the use of China Coal Shaanxi Company Methanol Acetic Acid Deep Processing and Comprehensive Utilization Project as an engineering platform to strive to reduce the cost of coal chemical industry.

Raising the Level of Development

China Coal Energy makes great effort to enhance core competitiveness with innovation as the source of survival and development in line with the actual needs of enterprise's production and operation, and is of practical significance in leading industry progress.

Strengthening the effects of science and technology

China Coal Energy emphasises that science and technology are primary productive forces. Together with the business needs to weather the economic downturn of the industry, the Company firmly grasps the core of "low cost" and highlights the role of technology projects in reducing costs and increasing economic value by combining major technical problems with cost reduction to make arguments and approve projects in strict compliance with rules, regulate management, refine process, strengthen inspection and acceptance, focus on promotion as well as highlight value and creativity in line with the needs for cost efficiency and industrial development.



Case Study



The “Engineering Optimisation Research on Mining, Transportation and Waste Discharge across Anticline Structure in Anjialing Open Pit Mine” proved to be substantially cost efficient

Under Pingshuo Company’s “Engineering Optimisation Research on Mining, Transportation and Waste Discharge across Anticline Structure in Anjialing Open Pit Mine”, a technology for steady and rapid advance of combined work line of developed “Z-L” to turn direction of panel, and a balance control method was proposed for the collaborative mining and stripping ratios for double pits so that expenses amounting to RMB150 million for steering technology in mining areas were saved. A technology for large grade base overburden crisscrossed with false inclination and internal discharge was developed; a platform was built for a stripped logistics dynamic planning system to optimise the timing of stripping and rowing; consideration was given to the convenience and economics of the amount of road works, transport distance, safety and liaison between the end-slope transportation trunk roads and slope working berm; and the ditch level and end-slope road for Anjialing mine were determined such that an integrated transport distance of 0.57km and a total of RMB350 million transportation costs were saved.

Taking the lead in the industry

Taking the responsibility to lead industrial development, China Coal Energy focused on tackling technological difficulties in key fields such as coal mining and coal mining equipment. The Company was pioneering, innovative and practical, and carried out progress and development of both the enterprise and the industry. The Company actively took part in the formulation of industry standards. The “Safe, Efficient and Modern Mine Technology Standards” implemented by the Company are higher than those of the industry and national standards, and conducive to

improving mine safety assurance standards of the whole industry. China Coal Energy’s Zhangjiakou Coal Mining Machinery, China Coal Beijing Coal Mining Machinery, Xi’an Coal Mining Machinery and Shijiazhuang Coal Mining Machinery are all members of various professional committees of standardisation in the coal industry and are involved in the formulation of the three national standards for shearer, armoured face conveyor, hydraulic roof support and roadheader as well as 16 industry standards and industry standards for related components.

In 2014, the Company hosted the 23rd Sun Yueqi Energy Technology Award in recognition and rewarding of 218 persons who received energy awards, outstanding young scientist awards, outstanding student awards and hometown education awards. The Company supported

the evaluation of China Occupational Safety and Health Association Science and Technology Award named "China Coal Energy Cup", took the initiative to fulfil and promote the social responsibility of the industry for technological innovation, created strong social impact on national science and technology of production safety.



The 23rd Award Presentation Ceremony of Sun Yueqi Science and Technology Education Foundation



Significant technological breakthroughs of China Coal Energy and the pioneering significance for the industry

No.	Technological innovation projects	Pioneering significance for the industry
1	Model Project for 10-million-tonne Efficient Fully-mechanised Key Technological Innovations and Industrialisation	Helps streamline the mine production system, reduce the amount of excavation and increase the recovery rate, and enables safe, efficient and low-carbon mining by means of frequency conversion technology, automation and application of information technology, with a major pioneering significance in maintaining the sustainability of the coal industry.
2	R&D and Application of Mining Technologies and Complete Set of Equipment for Thin Coal Seam	Has a major significance in increasing the recovery rate of thin seam resources, enables safe and efficient mining on thin coal seams as well as enhances the international competitiveness of China's coal mining equipment.
3	Research of Complete Technologies and Equipment for Fully-mechanised Top Coal Caving for Extra-thick Coal Seam with Large Mining Height	Effective in solving the technical problems regarding high-yield, efficient and safe mining on super thick coal seams to promote a leap of the technology in fully-mechanised top caving coal mining and the quality of equipment manufacturing in China.
4	Research and Application of Key Technologies on High-precision Three-dimensional Dynamic Geological Modelling	Offers a visible, visual representation of an underground geological structure, mine goaf, water-accumulated section and subsided column, and enables real-time updates on geological data during the production process and real-time online warning regarding a variety of known sources of geological hazards to provide major technical support for coal mine production safety.
5	Technology and Equipment for the Comprehensive Dust Proof System for Mines	Solves the key technical problems regarding each subsystem of the dust proof system on working face, reduces the all-time high dust concentration of working-face staff in the operation area, worth of promotion and application in comprehensive dust proof for domestic coal mines.

Performance in Innovation Responsibilities

Name of Indicator	2012	2013	2014
Technological investment (RMB100 million)	19.4	18.2	14.92
Number of technological advancement awards for industrial enterprises above the designated size (items)	15	18	19
Number of patents authorised (items)	186	224	186



Community Responsibilities

Sharing Fruits and Achieving Win-win Situation in Harmony

- Prelude: Shanghai Energy Company's Construction of Dustless Mines for a Safe and Healthy Environment
- Protecting Employees' Rights
- Supporting Staff Development
- Bolstering the Sense of Contentment of Employees
- Supporting Local Economic Development
- Passion for Charity Causes





[Prelude]

Shanghai Energy Company's Construction of Dustless Mines for a Safe and Healthy Environment

In recent years, Shanghai Energy Company placed heavy emphasis on comprehensive dust control measures, with an aim to create dustless mines. By insisting on innovation in concepts, systems, technologies, management and supervision, the company established an all-inclusive and three-dimensional comprehensive dust control system, effectively controlling dust in underground mines to create a favourable environment for the safe production of coal and protection of the lives and health of workers.

Insisting on innovation in concepts, affirming the concept that dust is controllable and must be controlled. Shanghai Energy Company firmly adheres to the concepts that "health of staff is the greatest asset of an enterprise, dust is a hazard, dust control promotes good health, and dust is controllable and must be controlled". All members of the Company regard dust control as a livelihood project that keeps workers safe and healthy, and a means to achieving decent work. The company carried out safety projects unrelentingly.

Insisting on innovation in systems, establishing a sound dust management system. Shanghai Energy Company established and refined 12 comprehensive dust control mechanism and assessment criteria, including "Management Standards on Construction of Dustless Mines", "Implementation Plan for Construction of Dustless Mine", and "Management Rules on Dust Monitoring". The Company implemented an information signage management system for comprehensive dust control.

Insisting on innovation in management, strengthening on-site implementation and control at source. The company enhanced control at source by establishing dust control and cleansing measures, effectively controlling dust and ashes from forming and flying within various processes such as production, transportation and ventilation. The company improved control of the coal production processes, adopting full-scale dust suppression measures in fully-mechanised mining, fully-mechanised roadheading and coal flowing systems. The Company strengthened on-site implementation of control at source by increasing on-site inspection and strengthening implementation.

Insisting on innovation in technologies, promoting the application of advanced technologies and equipment. The company increased its investment in the construction of dustless mines and stepped up its research effort with an aim to achieve technological breakthroughs, with annual investment exceeding RMB16 million. The company proactively promoted the application of new technologies, new equipment and new processes, so as to enhance its comprehensive dust control quality.

Insisting on innovation in supervision and inspection, adopting closed-loop management in the construction of coal mines. Shanghai Energy Company continued to improve its supervision and assessment systems, elaborated inspection, and acceptance standards, established comprehensive dust control management ledgers and records, carried out simultaneous planning, inspection and assessment for dust control management and safe production. Shanghai Energy Company also established a special comprehensive dust control award fund, ensuring closed-loop management in the construction of dustless mines.

By adopting the above measures, underground mining conditions were substantially improved. The data captured by the underground mine dust surveillance stations indicated that over 90% of the dust surveillance stations recorded dust concentration levels below the permitted value, and Longdong mine's working face and fully-mechanised roadheading face achieved dust suppression ratios of at least 93.3% and 95.7% respectively, creating a clean and comfortable working environment for workers.

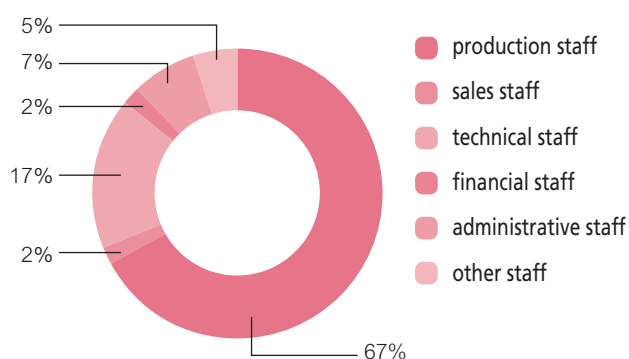
"What I have seen and heard and what has been done on the spot during my inspection of the underground mine align perfectly with the concept of dustless mining. Evidently, the essence of coal industry safety standardisation has been captured by Shanghai Energy Company and, in particular, Longdong mine."

— Yang Fu, Deputy Director of State Administration of Coal Mine Safety

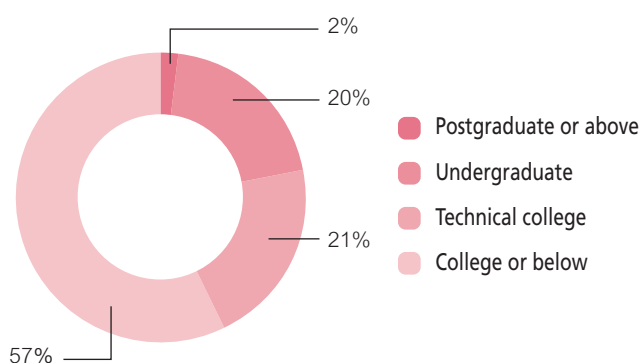
Protecting Employees' Rights

China Coal Energy adheres to a people-oriented philosophy and is committed to providing a safe and healthy working environment for its employees, developing transparent and open communication channels, providing favourable remuneration packages, defending the legitimate rights of employees and actively pursuing a harmonious and stable labour relationship. At the end of 2014, China Coal Energy had 54,150 serving employees, of whom 19% were female, representing a more reasonable employee structure.

Composition of employees by profession



Composition of employees by education level



Regulating employment management

The Company strictly abides by the Labour Law of the PRC, the Labour Contract Law of the PRC and other relevant laws, regulations and policies. The Company insists on equal opportunities in employment and has established a selection and employment mechanism that is fair, democratic and competition-based for picking the best talents. Announcements are made when candidates are selected to ensure visibility in information disclosure, recruitment process and result notification. The Company forbids all forms of workplace discrimination, and there are no instances of child labour and forced labour. The Company protects the rights of female employees by remunerating staff who hold the same position equally,

regardless of gender, as well as by forbidding the recruitment of female employees to work in underground mines. In 2014, the Company entered into employment contracts with 100% of its employees.

The Company increased the use of competitive recruiting, proactively adopting a market-oriented approach in talent-hiring and promoting competition-based employment. In 2014, 4 regional sales companies publicly recruited their deputy general managers. East China Company adopted competition-based employment for every position offered while China Coal Huajin Energy Company Limited used competitive recruiting for 78 positions.



Case Study



China Coal Shaanxi Company expanding new channels to recruit talents

In 2014, China Coal Shaanxi Company opened new doors to talents through online recruitment, employee recommendation and targeted recruitment. China Coal Shaanxi Company recruited talents in a planned, step-by-step and pragmatic manner, in line with its production, operational and project needs. A total of 3,219 resumes

were downloaded from Shaanxi Company partner's website, of which 468 resumes matching requirements were selected. Shaanxi Company organised 19 mass recruitments and 9 individual recruitments; 534 candidates were assessed, and 152 production and technical personnel were employed after passing the assessment.



Strengthening social security

China Coal Energy cares for the personal interests of its employees. The Company makes timely and full contributions to “five insurances and one fund” for its staff in strict compliance with relevant state regulations, realising total social insurance coverage for the entirety of its workforce. The Company actively pushes forward the establishment of supplementary medical insurance system, promotes the development of corporate annuity in a steady pace and encourages employees to take paid leave. Great efforts have been made by the Company to address the most pressing and practical concerns of employees, such as medical care, retirement plan and maternity leave.

Ensuring benefits and remuneration

China Coal Energy has taken the concept of “total labour cost” to the next level, highlighting the guiding effect salary has in boosting corporate efficiency and effectiveness. The Company has established an interactive mechanism that pegs the total salary paid with the total profit made. The Company improved its performance assessment system that was based on economic value added, consistently refining its remuneration system, and incorporating outsourcing staff, dispatched staff and staff from other segments into its regular management system. The Company continued to innovate on its internal incentive and restrictive mechanism, optimised its remuneration structure with a focus on favouring key posts, essential talents and talents in short supply. In 2014, China Coal Energy revolutionised its remuneration system and commenced a trial at Zhangjiakou Coal Mining Machinery’s mining chain factory, so as to establish a differentiated and market-oriented remuneration model.

Strong Emphasis on Occupational Health

China Coal Energy places high importance on occupational health as well as the prevention and control of occupational diseases. The Company strengthened occupational health management and safeguarded workers’ healthcare rights. Adhering to the occupational disease prevention and control principles of “prevention as a priority, integration

of prevention and control, management by classification, and comprehensive treatment”, the Company improved its occupational hazard prevention and control institutions and management systems, hired full-time and part-time staff and established a comprehensive occupational disease prevention and control system. The Company strictly complies with the Law of the People’s Republic of China on the Prevention and Control of Occupational Diseases by strengthening the early prevention of occupational diseases for all new construction, renovation and expansion projects through controlling and avoiding hazards leading to occupational diseases at source. The Company stringently enforces the government’s laws and regulations on occupational health by performing, within the prescribed timeframe, health examination on personnel exposed to occupational health hazards and establishing health surveillance files.

Pingshuo Company, seizing the opportunity of the promotional week of Law of Prevention and Control of Occupational Diseases, strengthened the promotion on prevention and control of occupational diseases by organising thematic seminars, publishing 25,000 promotion brochures and preparing 128 publicity boards as well as warning notices. Shanghai Energy Company prepared “Standardised Grading Criteria regarding Safety of Mining Occupational Health”, further specifying and quantifying the working quality standards and strengthening the appraisal system and the implementation of the standards. Shanghai Energy Company has been recognised as the “Advanced Unit in Occupational Disease Prevention” by the Centre for Disease Control and Prevention of Jiangsu Province for seven consecutive years. China Coal Huajin Energy Company has promoted the construction of dustless mining sites. Wangjialing Coal Mine, attached to Huajin Company, has effectively reduced the dust concentration level in mining working faces for better dust control through the introduction of the advanced wet spraying machine for mining use and the optimisation of reasonable technical support. The newly-commissioned coal chemical enterprises have established complete management systems of occupational health and strengthened the protection and supervision of individuals, thus fostering occupational health control in an orderly manner.



Case Study



Provision of purified water to workers of Antaibao Open Pit Mine of Pingshuo Company

Regarding the complaint from the workers relating to the yellowish drinking water with abnormal odours and incrustation, Antaibao Open Pit Mine of Pingshuo Company addressed the need and request of the workers immediately by installing central processing water dispensers in relieving

rooms of various production teams in November 2014, which completely solved the workers’ concern of impure water over the years and ensured the safety of drinking water for front-line production workers.

Realising democratic management

The Company continues to optimise the democratic corporate management system in the basic form of staff representative committee. In 2014, China Coal Energy established the "Measures for Implementation of Democratic Corporate Management of China Coal Energy", continuously extended access to and enhanced the scope of democracy for its staff and coordinated its staff to elections, decision-making procedures, management and supervision in a democratic manner pursuant to the laws. By holding staff representative meetings, democratic

forums, open days for leaders and installing suggestion boxes, China Coal Energy keeps smooth communication and exchange of information with the staff to ensure their basic rights. To establish an open and democratic system in factories, in 2014, three newly established enterprises built corporate democratic management system in a timely basis, eight enterprises adjusted and optimised their relevant systems and nine enterprises enlarged the scope of participation for the staff representatives, ensuring the staff to enjoy more concrete democratic rights.



Case Study



"Activities Month for Staff Representatives" initiated by Zhangjiakou Coal Mining Machinery Company Limited

With the emphasis on the promotion of democratic corporate management and on the basis of the full exercise of functions of the staff representative committee, Zhangjiakou Coal Mining Machinery Company Limited initiated the "Activities Month for Staff Representatives", allowing the staff representative committee to participate in formulating long term policies instead of conducting short term discussions. Meanwhile, Zhangjiakou Coal Mining Machinery Company held several thematic activities in view of reasonable recommendation, technological innovation and increase in production and revenue and reduction of costs and expenses,

including "Ownership Program of a Hundred Objects", "Compliments to National Party Congress", "Week for Effective and Reasonable Recommendations", "My Suggestion to the enterprise" and "My Opinion on Quality and Efficiency". The reasonable recommendations alone resulted in the economic benefits of over RMB2 million for 2014. For the disclosure of factory affairs, the company adheres to the quarterly disclosure system, and effectively guarantees the rights to information, participation, expression and supervision of employees. It is recognised as the advanced unit of disclosure of factory affairs in China.

Supporting Staff Development

China Coal Energy implements the strategy of strengthening the enterprise with talents and highly emphasises staff cultivation and development. By establishing a vibrant mechanism with characteristics of China Coal Energy for talent cultivation, selection, assessment and incentive and creating an encouraging working environment, the Company adopts diversified talent development measures and launches a smooth career path development system in order to provide ample room for the development of employees.

Strengthening staff training

China Coal Energy attaches great importance to staff education and training and insists on the enhancement of staff quality to facilitate the production and management efficiency. To strengthen the training system and integrate the training resources, the Company has constructed two coal training bases comprising China Coal Energy Vocational and Technical College and Pingshuo Company Education and Training Centre for the training of professional technicians and operational staff for the mining production of the Company so as to continuously enhance the quality of the front-line

production workers. The Company provides training to staff of different levels according to the centralised management and classification principle. In 2014, over 130,000 attendees participated in the training programmes.



The picture of the safe operation training of high- and low-pressure substations of China Coal Energy Vocational and Technical College



Planning Career Development

China Coal Energy is committed to the establishment of a reasonable internal promotion system, and adheres to the working principle of "coordinated planning, pilot trial, progressive implementation, and steady promotion". The Company continues to optimise the diversified talent appraisal system and coordinates the process of talent appraisal and career development. In 2014, 2,682 professional technicians gained the qualifications of technician and 4,781 skilled experts were awarded

occupational certifications. The Company has recognised ten master technicians in mining industry and five master technician working studies. The Company also continues to optimise and regulate the talent appraisal management system. The occupation skill appraisal station of coal industry of Pingshuo Company has been successfully certified by the Ministry of Human Resources and Social Security, marking the 16th evaluation station in coal industry certified by the Ministry of Human Resources and Social Security.



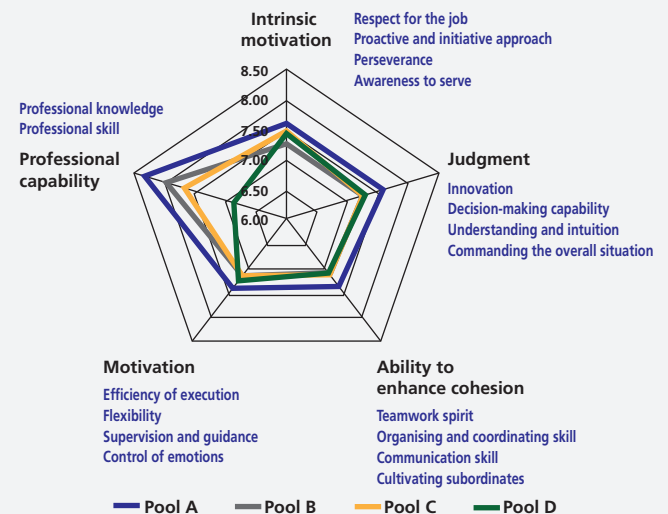
Case Study



Facilitating the establishment of talent pool of China Coal Shaanxi Company

China Coal Shaanxi Company commenced the establishment of talent pool and promoted the dynamic management of talents, providing detailed and accurate information for selection and employment as well as a reserve of talents for key positions of the company. Based on the competence model of the staff, the company has established a talent pool of four categories, namely A, B, C and D which classify the staff from management, professional, technical and production sectors into the relevant talent pools according to their levels. With reference to the normal situation of the organisation and the integrated abilities of the staff, the company further classified the staff in each talent pool into excellent, good and satisfactory levels based on a certain proportion. Regarding to the characteristics of the talents in A, B, C and D categories and the job nature, together with the analysis of the integrated abilities of the talents, the company has established a targeted talent cultivation programme and developed a consistent training system.

According to the development progress of the talent pool, China Coal Shaanxi Company gradually opened up the developing path for employees and has classified all positions into three categories of management, professional technology and operation, each divided in several levels. The vertical internal development path includes nine levels of management, seven levels of professional technology and six levels of operation, and staff in each level may be promoted based on the hierarchy of their positions. If the employee encounters the ceiling phenomenon, he may develop his career path to a horizontal direction.



Competence quality model



Nurturing youth employees

China Coal Energy takes more efforts on the nurturing of talent teams, especially the growth and development of the youth employees. The Company continues to provide two-way training opportunities for staff in headquarters and second-tier enterprises through job rotations to enhance their comprehensive quality and capabilities, offering them a platform to give full play to their talents. In recent years, the new enterprises have attracted a large number of

youth staff, and based on their characteristics, a "Youth Shock Brigade" has been formed to launch "teach, assist and guide" activities with a view to cultivating young new blood and facilitating their rapid development. In 2014, grassroot units provided diversified outward development for the youth employees and organised various featured activities including "The Most Virtuous Youth Employee" and "The Safety Swearing-in Ceremony for Youth Employees", strengthening the solidarity of youth employees.



Case Study



The enhancing reputation of youth employee team in Tuote Plant of Shanghai Energy Company

Tuote Plant of Shanghai Energy Company has initiated the initiative of "One Team One Brand", in other words, each youth league branch is responsible for a special brand-building task, resulting in the "apprenticeship programme" in the final assembly workshop, "multi-skill professionalism" in the metalwork workshop, "teammates as classmates" in the welding workshop and "cost reduction by efficiency enhancement" in the support workshop in order to maximise brand influence. This initiative allows the youth employees to identify their learning direction and set objectives in the broader context of different characteristic brands for various youth league branches, serving as a new power engine for youth employees.

Bolstering the Sense of Contentment of Employees

Considering employees as the most valuable asset of the Company, China Coal Energy cares about the work and life of each employee, and strives to provide them with support and care in all aspects. The Company constantly improves the working environment and life quality of employees by addressing various issues of concern to bolster the sense of contentment of the employees and ensure that the fruitful results of the development of the enterprise will be shared with them.

Support for needy employees

China Coal Energy organises activities to provide "face-to-face, heart-to-heart, pragmatic services to elementary employees", actively seeks new ways to support needy employees and strives to form a new platform for the labour union for safeguarding rights, as well as addressing the practical difficulties of needy employees. The grassroots enterprises have established a charity fund for supporting needy employees, and arrange social visits to them on festive occasions, showing our care and concern to employees. In 2014, the Company donated RMB15.45 million from the charity fund to support 5,822 needy employees.



Caring about retired staff

China Coal Energy attaches great importance to the management of retired staff, and treats it as an important piece of work for creating a harmonious enterprise and facilitating its stable development. The Company has established a database for retired staff and provides a long term and dynamic support mechanism for retired staff with difficulties in their livelihood, physical disability and who are singleton elderly to actively address their issues and difficulties. In addition, the Company regularly arranges retired staff to attend universities for the elderly, organises a wide range of cultural and entertainment activities and conducts annual medical inspection for them. On festive occasions, a team led by leaders will pay social visits to retired staff. The above measures give retired staff a sense of security in terms of retirement protection, medical care, learning opportunity and entertainment activity.



The entertaining game held for retired staff of China Coal Energy

Organising cultural and entertainment activities

China Coal Energy cares about the mental health of its staff and organises a wide range of colourful cultural and entertainment activities. These diversified activities with rich content and highlighted themes enrich the life of employees during their leisure time and give them a greater sense of contentment while cultivating an enterprise culture with distinctive characteristics of China Coal Energy and building a strong sense of belonging and loyalty of the employees.



Volunteers of China Federation of Literary and Art Circles performing during their visit to the Pingshuo Mining Area



The "Solidarity Cup" basketball competition in Inner Mongolia-Shaanxi base



Youth outreach activity of "Unity for a Win-win Future"

Supporting Local Economic Development

Through its business growth, China Coal Energy promotes local economic and social development and actively assumes social responsibilities. While making positive contribution to local employment and economic development, the Company thrives with the local community, endeavouring to realise mutual benefits with the locality.

Boosting the Local Economy

Leveraging on its manufacturing and operating activities, China Coal Energy boosts regional economic development, bringing wealth to the places where the enterprises operate. Through formulating an integrated development plan for the locality and the enterprise, the Company proactively underpins local projects construction, accords priority to local products in the course of procurement, and extensively boosts related industries through its coal operations in the areas of production, sales and comprehensive utilisation. The total tax paid by the Company to the various governments in 2014 amounted to RMB10.402 billion.

In 2014, China Coal Energy entered into a strategic cooperation framework agreement with the government of Hubei Province, Hubei Energy Group Co., Ltd., Huainan Mining Industry (Group) Co., Ltd. and Xinxing Cathay International Group to further cooperation in various aspects including construction of coal reserve and blending base, establishment of a cooperation platform in Central China for selling coal and the promotion of deeper cooperation of power facilities in local areas.



Signing of the strategic cooperation agreement with the government of Hubei Province



Case Study



China Coal Shaanxi Company strengthened collaboration and cooperation in the locality and promoted local procurement

China Coal Shaanxi Company strengthened cooperation in the locality and boosted the development of various industries such as transportation and service industries, significantly contributing to economic growth and social stability. When inviting tenders for mass procurement of materials and resources, provided that the quality and prices are the same, the company will accord priority to enterprises and products of Yulin City and Shaanxi Province. In 2014, local procurement amounted to approximately RMB43 million, and the company signed various local procurement contracts relating to fuel coal, raw coal, quicklime, limestone, office equipment, transporters, construction materials, hardware and tools, workers' protective gear, furniture, kitchen equipment, diesel fuel, electrical and mechanical products, methanol and chemical products.



Creating employment opportunities

China Coal Energy creates many job opportunities through its business growth and insists on attracting local workers to fill its positions by open recruitment and labour dispatch, which alleviates employment problem by absorbing surplus labour in rural areas and recruiting local college and technical secondary school graduates. In addition, the Company has constructed training bases to provide local veterans with vocation training.



Case Study



Offering job opportunities in Ordos base

Ordos base, a new base of China Coal Energy, has offered many additional job opportunities through construction and production of new projects, as well as new industries.

The Ordos Branch actively assisted the local government in addressing the employment problem by recruiting 60 local university graduates, and training 156 local people by other entities, and hiring local labour for supporting and logistic services as many as possible, which raised the annual income per capita in peripheral regions by approaching RMB8,000. The Muduchaideng Coal Mine solved the employment problem in Wushenqi by recruiting 295 people (with 69 coming from Tuke town), and the Nalin River No. 2 Coal Mine hired 406 college and technical secondary school graduates with registered residence in Wushenqi.

Since its establishment, China Coal Ordos Energy Chemical Company has been boosting local employment by appropriately favouring the employment of labour in Inner Mongolia provided that the requirements of the positions can be satisfied. To date, it has recruited 340 people with registered residence in Inner Mongolia, accounting for about 42% of the total number of staff.

Inner Mongolia China Coal Mengda New Energy and Chemical Company also accords priority to employing the children of local farmers and herdsmen under the same condition, promoting a harmonious development of the company and the local area. In 2014, the company recruited 47 children of local farmers and herdsmen, and engaged local enterprises for supporting industries such as logistic services as far as possible.

Improving the infrastructure in the community

China Coal Energy is showing great concern about the impacts of its construction on the neighbourhood. Leveraging on its business advantages, the Company assists the local government in improving the infrastructure and supports construction of social facilities with an aim to achieve a win-win development and maintain a good relationship with the local community.



Case Study



Supporting construction of new rural villages by Shanghai Energy Company

Based on the requirements for the construction of new socialist rural villages, Shanghai Energy Company basically completed the construction of public facilities in the new town area of Yangtun Town in 2014, including piping network, roads, bridges and greening zones, and constructed the foundation works for the academic buildings of Yangtun Secondary School and five primary schools including Yangtun Primary School and Jianghai Primary School. In addition, Shanghai Energy Company actively constructs the emergency rescue base in Jiangsu Province by successive construction of large equipment

storages, vehicle depots and training venues for simulated disaster drills. An investment of RMB1.85 million was made for renovation of the heating system for the central area and maintenance of roads totalling 4,710 metres in communities, as well as re-planning of parking space to provide an additional 235 parking spaces. An investment of RMB50 million was made for the construction of the second-tier piping network in the New City Garden community, and the installation of water mixing stations in B, C, and D zones was also completed.

Passion for Charity Causes

China Coal Energy is committed to sharing its development achievements with society. Taking the initiative to fulfil its corporate social responsibility, China Coal Energy contributes to society with its human, physical and financial resources and promotes charity undertakings to contribute concern and love to society.

Supporting poverty alleviation in selected areas

China Coal Energy is devoted to the economic and social development in impoverished regions through hematopoiesis methods including science and education, and provides selected areas with guidance on developing industries for poverty alleviation based on local circumstances. In 2014, the Company continued to support the three selected areas requiring assistance, namely Yu County and Zhaojiapeng District of Zhuolu County, Zhangjiakou City, Hebei Province, as well as Yinjiang County, Guizhou Province.



Case Study



Assisting in poverty alleviation and supporting construction in impoverished regions

Under the support of China Coal Energy, the planting base of the antique walnut tree stock in Nanjiangshi Village, Zhaojiapeng District, Zhangjiakou City, Hebei Province currently occupies an area of 22.47 mu with 113,460 tree stock and eight professionals responsible for daily management. The Company assisted in the construction of the strawberry yard in Zhangnanbao Village, Yu County, Zhangjiakou City, Hebei Province with over 150 growers benefited from increased revenue. A vineyard with four new greenhouses was built in Tianzhaotuan Village, Baile Town, Yu County, creating a new planting model with integrated functions for sightseeing, picking and direct

selling, recording an average increase in revenue per household of RMB3,000. In addition, 1,000 mu of land has been newly developed for planting chrysanthemum vegetable in Baile Town, Yu County, involving participation by over 300 impoverished households. The Company continues to support the construction of the "Renowned Wuling Village" in Fengyi Village, Muhuang Town, Yinjiang County, Tongren City, Guizhou Province, gradually optimising the infrastructure construction of the village, and building a new cultural activity centre at village-level which benefits the development of rural tourism in the local area.



Supporting construction in frontier areas

China Coal Energy promotes the local economic development and social charity causes in Xinjiang. In 2014, the Company invested RMB337 million in projects in Xinjiang Uyghur Autonomous Region and donated over RMB300,000 for supporting various social construction projects. Our efforts are highly appraised by the local government and people in Xinjiang.



Case Study



Initiatives of the Working Group on "Gauging Needs, Benefiting Livelihood and Enhancing Solidarity" in Southern Xinjiang

The working group of China Coal Energy for the initiative of "Gauging Needs, Benefiting Livelihood and Enhancing Solidarity" was officially stationed in Tuowanke'ailaimukuduke Village, Ayibage Township on 5 March 2014. While staying in the village, the working group genuinely served various racial groups and assists grassroot organisations, promoting solidarity and harmony among various racial groups for stability. The village was acknowledged as the only "Excellent Village with State-owned Enterprise Working Group Stationed in Xinjiang" in the Aksu region, and the working group was recognised as an "Outstanding Working Group Stationed in Village" by the local government.

"Three-in-one" Working Mechanism. The working group established various systems on visiting, dissemination of information, learning and filing, and formed a "Three-in-one" working mechanism comprising daily briefings, weekly meetings and monthly sum-ups.

Working model of "having friendly communication with villagers during on-site visits and explaining our

belief". The working group proactively visited 6 teams with 420 households in the village in a comprehensive manner in order to visit every household and every villager and meet them personally. Through on-site visits, the working group identified and streamlined over 20 issues and gathered first-hand information in the village.

Carrying out the work sincerely and pragmatically. The working group resolved issues in production and livelihood of citizens through coordination. In 2014, an investment of approximately RMB370,000 was made to complete the renovation of the local water piping network, construction of a cultural activity room for villagers and a green internet cafe in the village. It also harmonized the local government to install 15 new streetlights and repair roads of 2.5 km. Two caring houses for nine teams were constructed for the singleton elderly to prevent them from hunger and homelessness, and a public latrine for the small village bazaar was also built. The working team lent support to villagers, visited the elderly party members and underprivileged families, and raised funds of RMB8,000 during the period of Children's Day and celebrated with village primary school teachers and students.



The working group visited the citizens in southern Xinjiang



Organising volunteer activities

China Coal Energy is devoted to public welfare and encourages its employees to participate in volunteer services, and organises diversified volunteer activities to contribute to building a harmonious community and supporting disadvantaged groups. The Company gives full play to the functions of “Guo Mingyi Caring Team” and the outstanding youth volunteer service projects of state-owned enterprises, delivering about a positive attitude in society.



Case Study



Endeavours by elementary units in support of education

In 2014, Pinshuo Company organised youth volunteers to participate in the activity of “Learning from Lei Feng” and launched education supporting activities for the children of peasant labourers by donating items for educational and daily use with a worth of RMB12,000. Shanghai Energy Company initiated “Project Hope – Joining Hands for Caring” with an aim to provide 32 impoverished children in Feng County targeted with subsidies. China Coal Huajin Energy Company organised a series of activities for Youth Day by conducting flag award ceremony for youth volunteers of elementary organisations, and visiting orphans and disabled children and singleton elderly in welfare institutions in Wenxi County. The Xinjiang Branch organised the youths to donate 289 pieces of clothing and books to the impoverished villagers in Tuowanke’ailaimukuduke Village and orphans in SOS Children’s Village in Urumqi.



Guo Mingyi Caring Team cares about the children of the farmers and workers

Performance of Social Responsibilities

Name of Indicator	2012	2013	2014
Taxes paid (RMB100 million)	157.9	126.64	104.02
Amount of donation (RMB10 thousand)	1,564	796	198.84
Social contribution per share (RMB)	2.51	2.09	1.74



2015 Outlook

As 2015 is the very last year in China's "Twelfth Five-year" plan, 2015 marks an important year in the reform and development of China Coal Energy. The new conflicts and issues arising from the new normal as a result of the "overlapping of three periods" in China's economy will cast a shadow of uncertainty over the rebounding of the coal industry. The opportunities brought by the new normal and the challenges posed by the new development cycle of the coal industry will place new requests for the businesses in every aspect of the Company. In an effort to achieve sustainable development in 2015, the Company will adhere to the overarching principle of "forging through unfavourable conditions and progressing while maintaining stability" and pay more attention to steady growth through cost cutting and efficiency increase, reform and innovation, safety and environmental protection as well as its cultural advantage.

Maintaining the overall interest of the industry in building a responsible China Coal Energy. By proactively addressing the challenges in the coal market and responding to the calls of the government and industry associations, the Company, taking into consideration the overall interest of the industry, will take the initiative to assume its social responsibility, stabilise coal production volume and resist market risks by joining hands with the industry as well as maintain a stable coal market. The Company will shift its business focus from scale and acceleration towards quality and efficiency, from production volume increase and capacity expansion towards optimisation of existing capacity, and create comparative advantages in all aspects including scale, technology, system, investment and form, endeavouring to enhance its core competency.

Creating economic value in building an efficient China Coal. To vitalise its existing capacity through capacity increment, the Company will organise its production in a scientific and efficient manner, optimise its product structure and ensure product quality. The Company will increase the production load of coal chemical and unleash production capacity of its equipment manufacturing, laying a solid foundation for stable growth. Meanwhile, the Company will promote the business innovation model, strengthen marketing activities, expand market space and enhance efficacy capability. With comprehensive implementation of its budget, the Company will adhere to target management and reinforce cost control, aiming to maximise overall efficiency and create value for investors.

Ensuring safe production in building a safe China Coal. Bearing in mind that safe production is the greatest responsibility of China Coal Energy, and that the safety and health of employees are the most valuable assets, the Company will aim to achieve "zero fatality" by firmly establishing the concept of red line and bottom line, properly handling the relationships between safety and production, safety and efficiency as well as safety and development, and ranking safety the uppermost priority among all. By creating a long-term mechanism underpinned by the establishment of a safety-assured enterprise and safety quality standards, the Company will resolutely eradicate major or serious accidents, control sporadic accidents and prevent environmental incidents to achieve overall stability in safe production.

Pushing forward transformation and upgrading in building a green China Coal. In line with the measures taken by the government to reduce pollutant emissions, the Company will address air pollution in a concerted way, facilitate structural adjustment as well as transformation and upgrading with a focus on the clean and efficient production and utilisation of coal, and expand and optimise the integrated operation of China Coal in the course of promoting reform on the mode of production and consumption of coal so as to improve its core competency. The Company will carry out model projects featuring high efficiency, energy conservation and environmental friendliness to develop circular economy in mining areas, foster ecological culture and reduce the adverse impact on the environment, and ensure the accomplishment of the evaluation indicators on energy saving and environmental protection under the "Twelfth Five-year" plan and the fourth term by further developing energy saving and consumption reduction and taking measures to build green mines.

Carrying forward reform and innovation in building an innovative China Coal. Focusing on its actual needs, the Company will optimise its technology management system, implement an innovation driven strategy and promote the integrations of informatisation with industrialisation and informatisation with management to create a sound environment for innovation for effectively supporting the development of its principal business as well as cost cutting and efficiency increasing. Upholding the market-oriented philosophy, the Company will facilitate the reform on corporate management system and the innovation of operation mechanism to further enhance the vitality of corporate development, promote technology innovation in aiming for the most advanced industrial technology, and make revolutionary technological breakthrough that will change the approach and mode of industrial development to improve the self-innovation capability of the Company.



Sharing the achievements of reform in building a harmonious China Coal.

The Company will carry forward corporate governance in compliance with the law, promote integrity operations, and protect the legitimate rights of investors, consumers and employees to achieve win-win development with all stakeholders. The Company will further deepen internal reforms, improve the overall capability of the management team, optimise the structure of its human resources and establish a platform for employee development to keep all staff engaged, devoted and motivated. While focusing on its own development, the Company will support and facilitate local and social economic development and intensify its support to charity causes to create an environment for harmonious development.

Committed to its corporate mission of “supplying quality energy and leading industrial development for a prosperous life”, China Coal Energy will incorporate the social responsibility and sustainable development requirements into its corporate development strategy and daily productions and operations to enhance thoroughly its capability in creating comprehensive value for the economy, society and the environment, and achieve harmonious development with stakeholders including customers, staff, the government, and communities in order to be an excellent corporate citizen.



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请联系我们

公司名称: 中国中煤能源股份有限公司
总部地址: 北京市朝阳区黄寺大街1号
邮政编码: 100120
联系部门: 公司办公室
联系电话: (010) 82256468
传真电话: (010) 82236008
电子邮箱: bgs@chinacoal.com
公司网站: www.chinacoalenergy.com

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China Coal Energy welcomes your suggestions and opinions on this report
Please contact us

Company's name: China Coal Energy Company Limited
Address of Head Office: No. 1 Huangsidajie, Chaoyang District, Beijing, China
Postal Code: 100120
Department for contact: The office of the Company
Telephone number: (010) 82256468
Fax number: (010) 82236008
Email address: bgs@chinacoal.com
Company's website: www.chinacoalenergy.com

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