

Innovation and Practice on Human Resource Management System and Mechanism of New Energy Enterprises

Li Hongyan, Xiao Hong, and Yang Xianchao

Xiong'an, Hebei Province, China

yangxianchao.xxsy@sinopec.com

Keywords: Talent Team, Employment and “Three Determinations” Program

ABSTRACT

Since the “11th Five-Year Plan”, with sustained and rapid development of China's economy and society, Sinopec Green Energy Geothermal Development Co., Ltd. has gradually developed from a little-known company into a the world's largest geothermal heating company and China's largest company specializing in middle and deep layer geothermal development. Standing at a new historical starting point, for the purpose of inheritance, showcasing and dissemination, this paper has summarized the successful management experiences of SGE to provide a model case for the talent team management and “Three Determinations” program of new energy industry, and contribute to the high-quality and sustainable development of the new energy industry.

1. INTRODUCTION

Established in 2006, Sinopec Green Energy Geothermal Development Co., Ltd. (hereinafter referred to as “SGE”) is a “Geothermal Development and Utilization Showcase Unit” approved by the Ministry of Land and Resources, and a “Geothermal Research and Experiment Showcasing Base” approved by the Chinese Academy of Sciences. SGE adheres to the principle of “overall planning, phased implementation, unified utilization, and sound development” and the concept of “resources first, technology advancement and environmental protection”. With the combination of deep and shallow geothermal resources, combination of heating and cooling services, comprehensive utilization and integrated development, SGE has vigorously expanded urban clean energy integration business characterized by geothermal and waste heat, and realized rapid development in terms of business scale and R&D. The geothermal heating “Xiong'an Model”, developed by SGE, has led and promoted the rapid development of China's geothermal sector during the “12th Five-Year Plan” and “13th Five-Year Plan” periods. SGE was listed by the National Development and Reform Commission as a pilot enterprise for the 3rd mixed ownership reform in December, 2018, and started such reform in October, 2019. At present, it has conducted geothermal (waste heat) clean heating (cooling) business in provinces (cities) of Hebei, Shaanxi, Shandong, Shanxi, Suzhou, Tianjin, and Zhejiang, signed strategic cooperation agreements with over 40 cities (counties or districts), and provided geothermal district heating for 25 cities. As of now, SGE has established a total heating capacity of around 57 million m², which is capable of replacing 930,000 tons of standard coal and reducing 2.44 million tons of carbon dioxide emission annually, and has a total asset value of near RMB 5 billion with 795 geothermal wells (435 for production and 360 for reinjection), 742 HCs and 1,385 kilometers of pipelines. SGE has developed 7 “smoke-free cities” including Xiong'an, Rongcheng, Xianxian, Boye, Wugong, Gucheng and Taiyuan Economic Development Zone, and has become the largest middle and deep layer geothermal development and utilization enterprise both in China and abroad.

Looking forward to the “14th Five-Year Plan” period and future, geothermal sector still faces an important development opportunity. SGE will, on the basis of focusing on the main business of clean energy integration characterized by “Geothermal +”, strengthen core technology R&D, improve core competitiveness, strive to grow into a world-class clean energy enterprise and make contribution to the society. By the end of “14th Five-Year” period, efforts will be made to achieve a total heating (cooling) area of 120 million m², replicate the projects' successful experiences to countries along the “Belt and Road Initiative” counties, and become a green and clean energy enterprise specializing in geothermal development that is “world-renowned and best in China”.

2. BACKGROUND

The innovation of management system and mechanism is not only the essence of Sinopec Group's efforts to deepen corporate reform and build the strategic pattern of “One Base, Two Wings and Three Innovations”, the development need of SGE to speed up transformation and upgrading as well as enhance endogenous power, but also the realistic requirement of SGE to fully mobilize the initiative and enthusiasm of cadres and employees, and enhance the company's competitiveness in the market. SGE focuses on breaking the constraints of traditional systems and mechanisms and cracking critical bottleneck problems restricting the company's development, unswervingly promotes the innovation of human resources management systems and mechanisms, and firmly enhances the implementation of various reform measures.

2.1 The necessity to actively adapt to the new normal of industry competition

By the end of 2018, total heating (cooling) area in China has reached about 530 million m², completing 47.3% of the “13th Five-Year Plan” target. The annual growth rate of heating (cooling) area was 10%. During the “13th Five-Year Plan” period, a series of state-level geothermal special plans and policies were continuously released, and various Ministries and Commissions began to pay attention to geothermal development. This trend will continue to be strengthened during the “14th Five-Year Plan” period, and the application of geothermal heating and cooling will grow steadily. Based on the current growth trend, it is estimated that by 2035, total geothermal heating and cooling area in China will be close to 5 billion m². The “14th Five-Year Plan” period will be a critical time for the transformation of SGE’s development from “gathering talents with geothermal business” to “gathering talents with geothermal + industry” and the transformation from old development pattern to a new one. SGE will accelerate the establishment of “geothermal +” industrial system, and create a national highland that gathers innovative talents of geothermal technological R&D and innovative resources.

This indicates that not only the scale, structure and level of talent demand will undergo major changes, but also the talent system, quality, and environment needs to be improved. Besides, the industrial transformation and upgrading will face serious pains, and the industry competition will be extremely high. If the competitors make breakthroughs earlier than SGE and generate comparative advantages, the outstanding talents of SGE will be easily “siphoned”, and the company will face the dual pressure of maintaining core competitiveness and reducing brain drain. There is still room for SGE’s improvement in terms of talent “flow” attraction, innovation and entrepreneurship ecology building, talent mechanism innovation and efficiency enhancement, and building a comprehensive environment for talents.

2.2 The realistic need to implement the “Three Systems Reform”

2022 is the year of comprehensively deepening and closing the “Three System Reforms” of Sinopec Group, which requires all of the group’s subsidiaries to strengthen the fixed-term appointment assessment and contractual management of managerial staff, and smooth the growth channel for talents; to improve the optimal allocation of personnel, strengthen contractual management of employment, and establish a market-oriented withdrawal mechanism; to build a differentiated assessment and remuneration system based on the labor market price. Under such requirements, SGE needs to focus on the “14th Five-Year Plan” targets, benchmark world-class standards, promote the “Three Systems Reform”, improve the “market-based staff management, standardized employment management, and differentiated remuneration distribution”, give full play to the leading and supporting role of the “Three Systems Reform”, enhance in-depth integration among performance evaluation, staff selection, employment management, and remuneration distribution, to create a system where “cadre can get promoted and demoted, employees can enter and withdraw, and salary can be increased and decreased” and significantly improve the employees’ cohesion and fighting power.

2.3 The inner requirement to fully realize a high-quality, efficient and sustainable development

According to the strategic deployment of Sinopec Group to build a world-leading clean energy chemical company and the its overall plan to build a “One Base, Two Wings and Three Innovations” industrial layout, SGE has embarked on a new journey towards establishing a geothermal enterprise that is “world-renowned and best in China”. By the end of the “14th Five-Year Plan”, SGE will strive to achieve such targets as leading market share, excellent asset quality, healthy financial viability, substantial improvement of total factor productivity, and doubled scale and efficiency, all of which shall have a leading position among the industry. To achieve high-quality development, it must be clearly pointed out that there still exist weaknesses and shortcomings in the current talent work: First, structure of the talent team needs to be optimized. There is still a shortage of top talents with industry influence, leading talents specializing in scientific research & application, leading innovation teams, high-level engineering and technical talents and high-skilled talents. Second, the talent policy system needs to be improved. The problems of insufficient investment and unreasonably structured investment in talents still exist, the problem of fragmented resources is existing, power decentralization is not in place, and the vitality of the talent team remains to be further released. Third, the role of talent platform needs to be enhanced. The area, depth, scope and accuracy of cooperation with respect to university-enterprise strategic cooperation, the “Geothermal Energy Research and Experiment Showcase Base” of the Chinese Academy of Sciences, the China-Iceland Geothermal Laboratory and other innovative application-oriented platforms need to be further enhanced. Fourth, the service quality for talents needs to be improved. The supply of talent services does not match the growing demand for high-quality services of the talents, the issues of off-site working, children's education, housing, etc. still exist, and the level of individualization and integration of talent services needs to be improved. Fifth, the talent work system integration needs to be improved. The digital reform of talent work is not yet in place, and basic work such as data collection, statistical analysis, and performance assessment is not fast or efficient enough. The phenomenon of fragmentation, overlapping and internal resource consumption of talent work exists to different degrees. In response, efforts must be taken to further deepen reform and innovation and solve such problems.

3. PRACTICAL ESSENCE

SGE adheres to the concept that “talent is the first resource”. In order to implement the various strategic deployments and achieve high-quality development, attention must be paid to fully executing the project of strengthening the enterprise with talents, with cultivating three groups of talented people as the key and improving the effectiveness of talents as target. Taking the “Three Persistences” (see Figure 1) as guidance, SGE will direct and promote the innovation and practice of management systems and mechanisms: adhere to market-based recruitment and contractual management to facilitate the promotion and demotion of cadres; stick to “determination of management level, position duties and staffing standard” (Three Determinations) and labor control to strengthen the entry and withdrawal of staff; uphold full coverage and differentiation to facilitate the growth and reduction of salary. Efforts will made in various works of “selection, employment, nurturing and retaining”, and solidly promote the expansion of talent work into deeper fields, higher-level promotion, and more effective result transformation, and strive to build a loyal, clear, responsible, innovative and creative talent team that will provide talent and intellectual support for building a geothermal enterprise that is “world-renowned and best in China”.



Figure 1 System and Mechanism Innovation and Practice Model

4. MAJOR MEASURES

4.1 Market-based recruitment and contractual management to facilitate the promotion and demotion of cadres

SGE focuses on building a geothermal development enterprise that “integrates design, key process construction, core equipment R&D, manufacturing and operation, and combines deep and shallow layers geothermal resources, heating and cooling business and clean energy integration”, fully execute market-based recruitment and contractual management of cadres, and has built up a talent teams that not only dare to fight, but also fight well.

4.1.1 Clear responsibility at different levels

The Board of Directors of the company “plans and formulates strategies”, the Party Committee “controls the direction, manages the whole picture, and supervise the implementation”, and discusses the “major issues, major personnel appointments and dismissals, investments in major projects and use of large sums of money” before the Board’s decision-making, and the management team “strengthens management and focus on implementation”, to secure the advancement of the company’s overall development and strategy. SGE head office and tier-2 subsidiaries have given full play to the advantages of centralized decision-making and decentralized operation and management. The functional departments of the head office work on six major functions, including strategic planning, investment decision-making, resource coordination, risk control, supervision and assessment, and guidance and services. The tier-2 subsidiaries, as the main body of cost and profit, autonomously exercise power over their business operations. Such organizational structure has ensured segregation of duty, clear rights and responsibilities, as well as smooth, orderly and efficient operation, which has strongly supported the implementation of the company’s various business strategies and goals

4.1.2 Market-oriented staff management

Over the years, SGE has always been focusing on the market-oriented staff management, and adhering to the “Five Strictness” principle in employment management, including strict management of employment authority, strict management of position number, strict employment standards, strict recruitment procedures and strict withdrawal mechanism. It has standardized market-oriented recruitment procedures, formulated measures for recruitment management, and conducted strict management of talent-introducing procedures including information release, CV screening, test, interview, approval and employment.

Selection and appointment of the management team, project manager and employees of tier-2 subsidiaries adopt a market-based approach. Their “appointment or dismissal” is jointly determined by business requirements, position qualification and personal performances; there are three growth channels including managerial, technical and operational where employees can select their own path according to the company's business development and personal capabilities. They can be vertically promoted following the rank of the same position, or horizontally to other positions in accordance with the selection requirements and procedures. SGE has conducted strict performance assessment according to the contract. When the contract has expired, the company and the employee will re-negotiate and sign the labor contract to achieve two-way selection; for employees who are incompetent for job requirements or who have failed in performance assessment within the contract period, the company will make relevant adjustment pursuant to laws and regulations to truly realize contractual management and institutionalized withdrawal. For years, SGE has always stuck to the concept of “openness, fairness, competition, and priority for the best”, increased cooperation with industry associations, universities, scientific research institutes and other social institutions, broadened the channels for talent recruitment, and increased the introduction of mature talents. A series of measures, such building corporate culture, nurturing spirits, and improving the working & living environment have been taken to hold talents with career, culture and spirits. It has attracted more than 400 talents from all walks of life to join the geothermal industry. The attractiveness to middle and high-end talents has been significantly enhanced. SGE was awarded as Extraordinary Employer in 2020 and 2021 by third-party head hunters. At the end of 2021 heating season, more than 1,000 market-based operators at the primary-level stations went back to labor market. 4% of employees who are not suitable for enterprise development will be trained for re-allocation of positions. Those who are still disqualified after training will be dismissed pursuant to laws and regulations.

4.1.3 Contractual responsibility and assessment

By improving the assessment, incentive and restriction mechanism, SGE has carried out assessments of different levels and classifications, defined the assessment management authority and responsibilities of the head office and tier-2 subsidiaries, standardized assessment management procedures, and executed monthly, semi-annual, annual and managerial fixed-term assessments at different levels. Every year, SGE will sign an economic target undertaking with the management team of tier-2 subsidiaries to define the assessment target value and weight business operation, production and other special targets. It has required tier-2 subsidiaries to break down assessment targets and accurately allocate to the primary-level stations or natural stations to achieve “source control, process supervision, and result assessment” and form a strict top-down assessment system. During the comprehensive target assessment, leaders of the head office are designated to provide point-to-point assistance to the subsidiaries with low economic effectiveness, and the management team that cannot pass the annual assessment will be changed. Through a series of reform and measures, the leading role of assessment has been brought into full play, the growth quality and efficiency have been promoted, and the vitality and impetus of reform and innovation have been enhanced. As a result, SGE has obtained profits in successive years, and the enthusiasm and energy of the employees have been boosted.

4.2 Three Determinations and labor employment are enhanced to promote entry and withdrawal of staff

Guided by economic effectiveness and efficiency, SGE has optimized organizational structure, strictly controlled total number of staff, formulated the “Three Determinations” targets based on historical data, achieved streamlined and efficient organizations, scientific and rational positions, advanced labor employment levels, and promoted the continuous improvement of the overall quality, productivity and core competitiveness of the staff.

4.2.1 Improves employee quality through “1-2-2” management

“1 platform” of skill contest has been held every two years to promote training and improve the operation capability of the operators in the primary-level stations. “2 channels”, including holding and promoting, have been smoothed for talents selection. Selection and holding of technical operators are determined in accordance with their performance, and those who are capable and hard-working will be promoted. In the past 3 years, more than 30 operators have been promoted as primary-level station managers, providing an upward channel for those with outstanding performance in the skill contest. “2 targets” of salary control and cost control have been upheld as the core criteria for team building. Total salary and cost of skilled operators are reviewed, subsidiaries encouraged to reduce labor number, and the cost saved by reduced employment has been distributed as performance incentives with purpose of optimizing the structure of operators team.

4.2.2 Determine the employment target with economic effectiveness and efficiency

On the basis of thorough internal and external research and the benchmarking of historical data, and guided by economic effectiveness and efficiency, core targets such as revenue, full-collection area, heating area, etc. have been selected and studied to formulate the “Three Determinations” standard that suits the development characteristics of “geothermal +” industry and business (Figure 2), which has further defined the level of management, position duties and staffing standards of the head office and tier-2 subsidiaries. Specific measures are as follows.

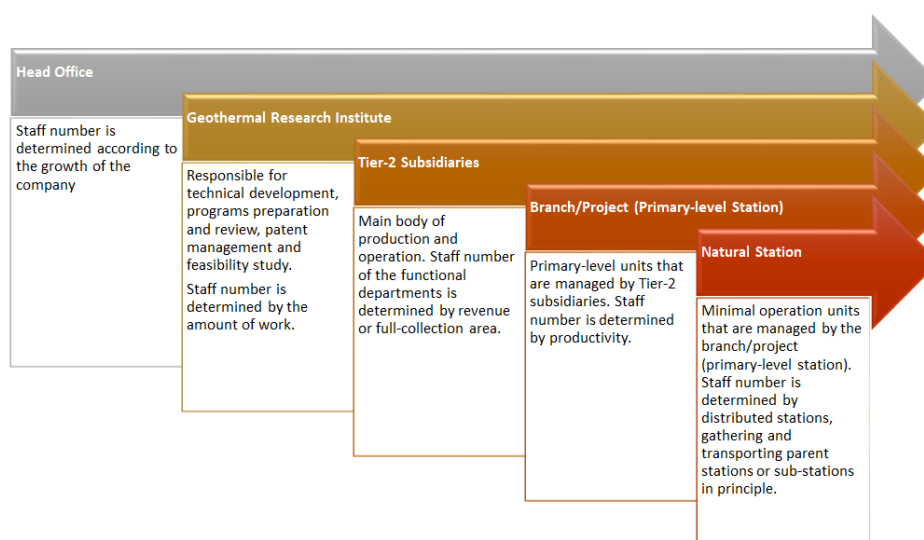


Figure 2 “Three Determinations” Standard

First, management levels have been defined. Structures of the head office (Group) and tier-2 subsidiaries are generally designed in accordance with the top-level structure of group governance that combines strategic control and operational control, with segregation of duties, clear rights and responsibilities, smooth operation, efficiency and orderliness. In general, three levels of management including head office (Group), tier-2 subsidiaries and branches/ projects (primary-level stations) and one operation unit (natural station) have been established.

Second, position duties have been determined. Following the principles of streamlining organizations and building a giant department, positions have been established in accordance with actual needs, optimized procedures, minimum position numbers and the requirement that the special positions could not be held by the same person, and position descriptions have been formulated specifying names, duties and qualifications.

Third, staffing standard has been determined. Staff number of the head office (Group) is determined in accordance with the company’s growth; the Geothermal Research Institute, which is under direct management of the head office, undertakes the works of technical development, program preparation and review, patent management and feasibility study, and shall determine the number of staff based on actual work amount; tier-2 subsidiaries are the main body of production and operation, and the staff number of its functional departments is determined in line with revenue or full-collection area; the branches/projects (primary-level station) are responsible for local market development, project construction, operation and management, earnings accounting, Three Basic Works, primary-level Party organization development and the relationship between the enterprise and local community, and are fully managed by the tier-2 subsidiaries. Staff number of the branches/projects (primary-level station) is determined on the basis of full productivity; the natural stations under the primary-level stations the minimal unit for operation and maintenance, cash cost, establishment and management of users database, equipment and facility ledger, and accounting. Staff number is determined by distributed stations, gathering and transporting parent stations and substations; newly established units have a three-year development period, and labor allocation is determined according to project execution progress.

Through the implementation of Three Determinations, the organization, team and staff structure have been effectively optimized, the management level and position responsibility are clearer, and the staffing standards are more practical. There has been a great improvement in organizational efficiency, position establishment, labor employment, productivity and core competitiveness, and per capita heating area has increased from 89,700 m² in 2019 to 101,500 m² in 2021.

4.2.3 Train the cadres with “mobilized and localized” approach

Considering the rapid development of geothermal business, SGE adopts the approach of “cross-regional mobilization of key staff + localized training of cadres”, and vigorously appoint mature cadres and train local cadres. It has established managerial, technical and operational positions of five levels including basic technical position, primary-level cadres positions, primary-level technical positions, head office leading talents positions, and head office business cadres positions, and accelerated the training and promotion of young cadres to key positions. .

First, focus on cadre system building. Over the years, SGE has given full play to the shareholders’ advantages, and continuously optimized the “Five Systems” for cadre management (Figure 3). There are channels for cadres to be promoted and measures to be demoted. The principle of “primary level orientation, performance orientation and future orientation” has been followed to determine the promotion and demotion, which has fully stimulated the

enthusiasm of cadres of all ages and enhanced the overall vitality of the cadre team. The principle of “capability and integrity combination, integrity first, and emphasis on political quality” has been upheld to strictly select politically reliable and capable cadres through key tasks and major tests. SGE has always carried out optimal adjustment and allocation of cadre resources with focus on the “key minority”, sped up the training of qualified “top leaders” as an urgent task, and accelerated the building of teams with good political quality, high expertise, strong market awareness, cooperation willingness, find work style, sound structure, scientific levels, international vision, and pioneering spirits. The majority of cadres have full displayed “wild goose queue effect” in leading the development of geothermal + industry, and provided strong talent and organizational guarantee for SGE’s strategic implementation, reform and development.



Figure 3: “Five Systems” for Cadre Management

Second, focus on young cadre teams building. Over the years, SGE has always stuck to the selection principle of “best among the best”, and gradually established and improved a normalized discovery, dynamic reserve, and collaborative training mechanism for young cadres. Social recruitment, contractual management, refined assessment, market-based remuneration, and institutionalized withdrawal mechanism have been continuously optimized. Taking the “Five Systems” for cadre management as the fundament, SGE has focused on optimization, quality improvement, normalized reserve, training, appointment and supervision of outstanding young cadres, expanded reserve tank and resource pool for young cadres and talents, and fully implemented the “1234” cadre training plan of Sinopec Group and Sinopec Star. Based on actual development of geothermal + business, SGE has fully mobilized internal and external lecturers, regularly conducted professional and technical talent defense contests, and vigorously carried out training and development of young talents. Relying on key projects, SGE has sped up training and selection of young cadres with outstanding performance in the “key tasks”, built a “fast track” for their growth, secured the orderly succession of talent teams, and helped young cadres “go through the wind and rain, see the world, enhance the capability, and grow the talents”.

Third, focus on cadres’ capability and quality improvement. Over the years, SGE has firmly established new development concept among cadres at all levels, and carried out job-specific trainings, job rotation exchanges, and mentor-apprentice trainings to improve the political capability, investigation and research capability, scientific decision-making capability, reform and hardship-tackling capability, emergency response capability, mass work capability, and implementation capability of the cadres. In the past two years, the average training numbers have reached 2,000 person-times annually, which has provided substantial outstanding cadres with political quality, business capability, fine work style and growth potential for market expansion, project construction, emergency tackling and management & reform, and promoted the overall improvement of the talent teams in terms of quality and capability.

4.3 Full coverage and differentiation to achieve the increase and decrease of salary

In response to issues such as “everybody eating from the same big pot and egalitarianism” in salary distribution, SGE, benchmarking Huawei and other enterprises, has established a full-coverage assessment and incentive mechanism with strict assessment as a focus and salary distribution as a lever (Figure 4).



Figure 4: Full-Coverage of Assessment

4.3.1 Standardize the remuneration system

Over the years, SGE has constantly deepened the linkage between salary and performance, performance has become the lever of salary distribution, and it has become a consensus among employees that the salary can be increased or decreased. SGE has timely formulated policies for employee position levels and salary structure adjustment, and standardized position levels of the head office and tier-2 subsidiaries. Performance of primary-level employees focuses on the quality of daily work, labor discipline compliance, and pays less attention to year-end business performance; performance of senior employees focuses on annual business performance which is closely related to their salaries to show fair distribution, respect to history, reward to the good and punishment to the bad. Those with greater contribution shall have a higher salary, those with less contribution shall have a lower salary, and those who have no contribution shall be eliminated. Employees are encouraged to strive for excellence. Since the implementation of “mixed-ownership reform” in 2019, SGE has determined the position levels and position salary standard according to corresponding values, and regulated that performance bonus of the head office is distributed in accordance with position level and performance contribution. Bonus distribution of tier-2 subsidiaries is based on their economic target performances and actual conditions. The ratio between pre-paid monthly bonus and year-end assessment ranges from 40:60 to 80:20, subject to position levels (high to low). The incentive and restraint mechanism for internal salary distribution has been improved, and a salary management system closely related to labor market price, position value, and employee value creation has been built with emphasis on economic effectiveness, value and contribution, so as to obtain economic effectiveness from the market and obtain salary from economic effectiveness. In 2021, SGE’s profit rate of labor cost increased by 6% compared with the year before, which fully reflects the role of the salary system in stimulating the enthusiasm and creativity of employees.

4.3.2 Improve the three-level assessment management system

Over the years, SGE has always focused on the market-oriented system and mechanism, with value creation as the assessment orientation, performance contribution as the evaluation standard, and differentiated bonus distribution as incentive to constantly improve the performance incentive mechanism. A three-level assessment management system covering head office, tier-2 subsidiaries and primary-level stations (natural stations) has been established. The head office sets the assessment coefficient range according to the business scale and operation difficulty of different units, with reasonable gaps in between. The coefficient for Type-1 unit is 1.1, 1.05 for Type-2 unit and below, and 1 for the head office. The assessment results are closely related to cadre appointment, bonus distribution and employee career development, which has fully mobilized and stimulated the enthusiasm of cadres and employees. Since the execution of the performance assessment policy, the company's heating area has grown at a compound annual growth rate of 50.05%. Revenue and profit have increased from RMB 613 million and RMB 90 million in 2019 to RMB 932 million and RMB 107 million in 2021 respectively.

4.3.3 Ensure the differentiation of incentive bonus

Over the years, SGE has successively formulated such regulations as the *Market Expansion Special Incentive Measures*, *Interim Measures for Incentive Mechanism Management*, *Annual Incentive Bonus Implementation Plan*,

and the *Administrative Measures for the Advanced Selection and Commendation*, established general manager incentive mechanism, rewarded innovation and efficiency in a timely and accurate manner, and driven bonus distribution towards efficiency-creating units, positions, and individuals. The bonus distribution gap of the same level of positions between different units has been significantly widened by 30% to 50%, which has fully exhibited precise incentive with bonus distributed according to work amount, stimulated the enthusiasm and creativity of all employees, and promoted the high growth of the company's performance. Meanwhile, through the special incentive mechanism, talents have been selected and promoted during difficulty-tackling and breakthrough-making. Totally 47 advanced collectives, 14 model workers, and 86 advanced workers have been recommended. SGE has explored a practical path for Three System Reform that reflects joint venture features and meets the requirements of the Sinopec Group, and has developed a sustainable development path to be more efficient, larger-scale and more effective.

5. IMPLEMENTATION RESULT

SGE is committed to building a geothermal enterprise that is “world-renowned and best in China”, implementing the new development concept, striving for success, promoting the high-quality development of the geothermal industry in an all-round way, and contributing to development of Sinopec Group into a green energy showcase enterprise.

5.1 Production and operation have been stable and improving

SGE has created an “heirloom” for the talent team management of new energy enterprises and formed a unique talent management ideology system and development model for the selection, appointment, training, assessment and incentive, and management innovation of talent teams. It has actively integrated itself into the fulfillment of “Dual Carbon” strategic target and the building of Sinopec Star’s new energy industry system featuring “geothermal, hydrogen, wind and solar”, constantly expanded the existing market, and strived for breakthroughs in new areas. In 2021, the incremental contracted area reached 13.81 million m², fulfilling 125% of the target set for the year, 18 strategic cooperation framework agreements were signed, heating businesses covered totally 3 counties of Xiong’an New Area, and incremental heating capacity reached 8.22 million m², accounting for 102% of the year’s target. In 2021, revenue of the company amounted to RMB 932 million, up by RMB 199 million compared with 2020; total profit reached RMB 107 million, with net profit of RMB 88.77 million, up by RMB 2.08 million compared with the year before.

5.2 Development vitality has been enhanced

SGE has created a “wind vane” for the “Three Systems” reform of new energy industry employment, and accumulated excellent talent development concepts, scientific talent management methods, and successful talent management experience, forming a showcase effect for the industry development. It adheres to the new development concept, implements the requirements of high-quality development, strives to strengthen reform and innovation, and constantly improves the company's management level. The experiences and achievements of the company have been replicated and promoted throughout the Sinopec Group. It has established an assessment and incentive mechanism on the basis of value creation, and fully implemented the fixed-term appointment and contractual management for managerial staff; it has conducted improvement programs benchmarking world-class standards, solidly implemented the requirements of “Primary-level Development Improvement Year”, and developed a number of model primary-level stations and projects. Hebei Qinghe sewage heat pump heating project was listed by the National Energy Administration in “National Renewable Energy Heating Model Cases”, and the company was listed as national “geothermal energy system integration” top 20 enterprises.

5.3 Basis of corporate governance has been consolidated

SGE has deeply promoted the integration of risk control and the company's operation and management, and conducted legal research, due diligence, and decision-making review related to production and operation; constantly deepened systems building, improved system effectiveness evaluation, and improved the basic bylaws and regulatory guidance documents; continuously carried out comprehensive risk assessment and investigation in key areas, so that major risks can be controllable and rectifiable in a timely manner, and the company can operate in compliance with laws and regulations; systems building has been improved, project operation standardized, the basis of corporate governance by law deepened, which has laid a firm foundation for the high-quality, efficient and sustainable development of the company.