

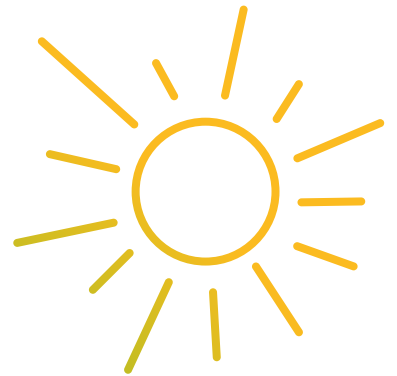


中國地能產業集團有限公司

CHINA GROUND SOURCE ENERGY INDUSTRY GROUP LIMITED

(Incorporated in the Cayman Islands with limited liability)

Stock Code: 8128



**ENVIRONMENTAL,
SOCIAL &
GOVERNANCE**
Report 2016

2016 Environmental, Social and Governance Report

THIS REPORT

China Ground Source Energy Industry Group Limited (the “Company”) is pleased to present this report pursuant to the disclosure requirements of the Environmental, Social and Governance Reporting Guide set out in Appendix 20 to the Rules Governing the Listing of Securities on the Growth Enterprise Market of The Stock Exchange of Hong Kong Limited to disclose the performance in environmental, social and governance aspects of the Company and its subsidiaries (collectively, the “Group”) during the period from 1 January 2016 to 31 December 2016 (the “Year”). Policies, statements and information set forth in this report cover the Company’s Hong Kong headquarter and its major operating subsidiaries.

ABOUT THE COMPANY

The Group has been dedicating to the scientific research, development and promotion of using shallow ground source energy as alternative energy to provide heating for buildings and is committed to the industrialization development of the original technology which can accelerate the all-around upgrade and transformation of the traditional heating industry with combustion, emissions and pollution to an emerging industry of combustion-free integrated heating and cooling system with shallow ground source energy.

Our Mission

Pragmatism and Innovation

Our Pursue

Harmonious Coexistence of Human and Nature

Our Dedication

Improve comfort level of the people’s livelihood

Our vision

Work for greater industrialized development of the original technology for shallow ground source energy collection, while promoting the use of shallow ground source energy as the substitute energy of heating for buildings; furthering scientific utilization of energies by grades; propelling combustion-free intelligent heating (cooling) for buildings with ground source energy; and forcefully boosting the new industry of integrated heating and cooling with ground source energy.



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SUGGESTION AND FEEDBACK

We welcome all our stakeholders to raise suggestions on the Company's strategies and performance on the environmental, social and governance via email at info@cgsenergy.com.hk.

COMMUNICATION WITH STAKEHOLDERS

Internal stakeholders	External stakeholders
<ul style="list-style-type: none">• Board of directors• Management• Executive officers• Staff	<ul style="list-style-type: none">• Customers• Suppliers• Government/regulatory authorities• Contractors• Partners
Means of communication	
Interviews, emails, regular meetings, hotline/telephone enquiry, suggestion box	

The Company strongly believes that fulfilling and promoting the sustainable development of the environment, social and governance will greatly depend on the active cooperation and participation of all stakeholders. In the future, the Group will continuously strengthen the communication with stakeholders and extensively collect their views by different means in order to improving the environment, social and governance sustainability development as well as obtaining better efficiency.

A. ENVIRONMENTAL

The Company is mainly engaged in development and promotion of using ground source energy as the substitute energy in providing heating for buildings. Ground source energy is the thermal ground with the temperature of less than 25°C in a certain depth range (generally from the zone of constant temperature to the depth of 200m) in the Earth. Ground source energy is stored in the shallow ground and not subject to geographical restrictions. It is everywhere at any time. Due to its non-burning and zero emissions, it is a renewable clean energy. Combined with products using heat pump technology, it converts low-grade ground source energy (less than 25°C) into substitute energy in providing heating for buildings. The Company's proprietary ground source energy collection and heat exchange technology that is original in the PRC can greatly reduce the area for collection of ground source energy to avoid waste, pollution and reduction of underground water and to solve the problem of damage by collection of ground source energy to the environment. Therefore, the Company's original "Single Well Circulation Heat Exchange Geothermal Energy Collection Technology" can achieve safe, efficient, land-saving and economical use of ground source energy as the substitute energy in providing heating for buildings.

During the year, the Group actively proceeds the construction of urban and rural clean, intelligent heating infrastructures (power grid supports renewable energy heat supply network) substituting coal with high efficient use of electricity, with renewable air-sourced energy and ground source energy complementary to each other; and the most reasonable energy use industry chain of clean heating in Northern China: power generation near the energy origin (energy localization and security are guaranteed), the lowest cost of environmental governance, and efficient, mature and reliable power transmission mode. In the heating areas in Northern China, using 1 portion of cleanest electric energy to drive the heat pump to carry the costless recyclable ground source energy can obtain heat equivalent to that directly converted from 3 portions of electric energy, achieving heating through substituting coal with high efficient use of electricity without enhancement of power distribution standard for buildings (the system improves the power generation efficiency by more than three times and reduces users' electricity consumption by 70% and the costs for the corresponding period).

The reasonable way of graded utilization of energies can achieve large scale replacement of coal with high efficient electricity and the shortest time of burning and emission. The use of ground source energy, a low-grade energy, can achieve the room temperature of 18-26°C, and the region is free of combustion and emission. There is no need to burn coal to achieve 700-800°C, and it is not necessary to use the high temperature of 1100°C generated by burning natural gas for heating buildings, resulting in reduced environmental pollution and effects of haze and significant improvement of environmental quality.

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Emissions

The use of the Group's "Single Well Circulation Heat Exchange Geothermal Energy Collection Technology" for heating can reduce the consumption of coal in the traditional way of heating. In 2016, the "Single Well Circulation Heat Exchange Geothermal Energy Collection Technology" has been used for more than 995,000 square meters nationwide, and can save approximately 9,701,000 kWh of electricity as compared with electric heating, equivalent to the annual generating capacity of a 57.7 MW thermal power plant, reduction of emission of 30,500 tonnes of standard coal for power generation and 75,000 tonnes of CO₂; or save 28,500 tonnes of standard coal and reduce emission of 63,000 tonnes of CO₂ as compared with the traditional boiler heating.

The Group entrusted professional institutions to make assessment report on the environmental effect of the project at the preliminary stage of the construction in accordance with relevant requirements and make a comprehensive analysis on the up-to-standard discharge and total quantity control, source of pollution and effect on environment, with an aim to formulate effective pollution prevention measures to enable the construction of the project meet all the applicable regulation requirements.



The environmental management system applied by the business headquarters of the Group in Beijing is in compliance with ISO 14001: 2004, and has passed the ISO14001 certification for consecutive 16 years since 2001, and extended externally the awareness of environmental protection.

Smart Heating with Ground Source Energy - Meaning

Smart heating makes ground source energy as alternative energy for heating which is a renewable energy source

Smart heating makes ground source energy as alternative energy for heating which is a renewable energy source



Combining reasonable production site selection and rational use of energy to ensure low-cost development and utilization of ground source energy as well as to achieve the most effective protection of the ecological environment

Smart heating is the third energy revolution of heating energy for buildings

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Use of resources

The Group has installed the “HYY Ground Energy Heat Pump Environmental System” and the “HYY Ground Source Heating Device” in offices in Northern China as the office cooling and heating system, which greatly reduces office electricity consumption and indirectly reduces emission of greenhouse gases. In addition, monitoring system is installed to make real-time monitoring of electricity consumption for units and positive measures are taken to prevent electricity consumption caused by abnormal operation of units. The Group also pursues the principle of conservation in the course of its operation. It has always encouraged employees to develop energy-saving habits in the office and create low-carbon offices with prompt labels, publicity and inspection. The measures include:

- Turn off the power when electric appliances are not in use
- Offices use energy-efficient lighting systems
- Use modern communication systems to convene meetings to avoid unnecessary travel arrangements
- Reuse single-sided paper for printing or writing
- Encourage double-sided printing
- Documents and notifications are circulated and distributed in the form of scanned copies through WeChat groups to greatly reduce the number of copies
- Reduce the use of paper by applying computer technology
- Reuse stationery (e.g. used envelopes and binder)
- Installation of an electronic application system for attendance and leave

We can achieve indirect reduction of emissions and disposal of harmless wastes and pollutants through energy consumption and reducing use and waste of resources.

B. SOCIAL

Employment and labour practices

The Group's employees are mainly located in the PRC and Hong Kong. The Group strictly abides by the applicable labour laws, including the PRC Labour Law, the Labour Contract Law and the Hong Kong Employment Ordinance, and enters into a written employment contract with each employee in accordance with the relevant laws to guarantee employees' legal rights. In addition, for employees in the PRC, we have participated in welfare schemes including endowment insurance, unemployment insurance, maternity insurance, work injury insurance and medical insurance in accordance with local laws and regulations including the PRC Social Insurance Law and the Housing Provident Fund Management Regulations. For the employees in Hong Kong, we provide medical insurance to all employees. All employees in Hong Kong are required to participate in a Mandatory Provident Fund Scheme under the Mandatory Provident Fund Schemes Ordinance. In addition to the relevant statutory holidays, the Group also offers marital leave, maternity leave and compassionate leave.

As the Group regards talents as its important assets, the success of the Company depends on the contribution of employees. The principles strictly followed in respect of recruitment policy: recruitment of those meeting work requirements in terms of personal strengths and capacity as employees, opposition to discrimination, prohibition of child labour, opposition to forced labour, equal pay for equal work, fair employment opportunities, and standard employment. We have also developed an employee handbook that describes work ethics of employees, benefits and interests available to employees, etc. based on the actual conditions of the Company, and a human resources management system and human resources database to implement sound human resources management.

The remuneration of employees is determined with reference to the market salary level. The Company conducts annual performance assessment to measure employees' performance and achievement of corporate goals as a whole. We believe that, by virtue of a comprehensive performance assessment system, we can develop a corporate culture that emphasizes performance, enhance employees' performance and productivity, and gradually cultivate and develop employees' personal abilities.

The Group provides the opportunity for promotion of outstanding employees, and provides guidance and training through the comprehensive assessment of employees' performance, personal ability and expertise based on the demands of the Company, so as to allow employees develop at a higher level in respect of management or technology and help employees achieve personal career goal.

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In order to deeply practice the core values of socialism, guide and motivate our staffs to be dedicated and responsible, to foster a good corporate image and show the spirit of the Group's cadre staff, spread positive energy, play a typical and model guide, the staff union carried out a Group-wide "Dedicated Staff" assessment activities during the year. After the weekly nomination from each department for the discussion and approval by the President' Office, one "Dedicated Staff" will be selected every week.

As of 31 December 2016, the Group had 651 employees, mainly located in the PRC, of which 490 are male and 161 are female. The age structure of the overall staff is as follows: 131 below 25 ages, 133 between 25 to 35 ages, 186 between 35 to 45 ages, and 201 above 45 ages.

During the reporting period, the Group did not find any violation of laws or regulations in respect of employment and labour practices.

Health and safety

The Group has developed an occupational health and safety philosophy:

- Safety first, prevention foremost;
- Full participation, common benefit;
- Compliance with disciplines and laws, civilized construction;
- Our tenet: people-oriented, cherish life.

As an employer who cares about employees, the Group has high requirement on occupational safety and health. In particular, as we are engaged in construction projects, we particularly concern about the safety of employees. We are committed to providing employees with a good working environment, to ensure that employees have occupational safety and health awareness, concern about their physical and mental health, while improving the Company's operating efficiency.

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The Company provides training on operation and safety education to project construction workers. For the personnel engaged in a specific specialty, the Company engages those with relevant qualifications for construction in accordance with relevant provisions to ensure project safety and compliance of standards. The major subsidiaries of the Group have established a QEO management system with reference to the OHSAS 18001 Occupational Health and Safety System, to effectively fulfill the occupational safety responsibilities. Under the strong supervision of the Group, the subordinate production enterprise passed the OHSAS18001 certification for consecutive 3 years and extended externally the awareness of occupational health and safety. The Company has also published the “Education Manual on Engineering Construction Safety” for reference by employees, and the manual sets out guidance on construction safety, including earthworks, aerial work, electricity safety, operation safety of construction machinery, environmental health and fire protection to enhance employees’ awareness of occupational safety and health. We organise annual seminars and invite industry experts to share the latest construction schemes and safety knowledge. In order to promote a safe working environment, we particularly hold a weekly regular meeting on production schedule to study and discuss the progress of project and site construction.



Throughout the Year, the Company organised a total of 121 inspections for sites and departments and 8 times of safety hazard supervision and rectification, with the review rate 100%. We performed examination and routine inspection on safe production for no less than 5 projects in progress a week, to ensure project progress and satisfactory construction quality.

The Group continues to promote safety culture to its employees and contractors and the safety performance remains ideal. Over the years, the accident rate of workers recorded was significantly lower than the average level of the industry. In 2016, the Group did not have any death due to work and recorded no lost working days due to work-related injuries. Besides, there was no significant prosecution in relation to occupational safety and health.

In the year, the Company conducted fire safety education by 2 times, 2 firefighting drills, and 2 security checks throughout the Company to ensure smooth operation of the Company without accidents.

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To ensure the physical and mental health of employees, the Group has set up table tennis rooms, reading rooms and other venues to enable employee to relieve stress in their spare time, which will also facilitate enhancement of the relationship and communication among employees. In addition, there is a mommy room to create a friendly environment for parenting in order to enable mothers to implement the breastfeeding policy.

We also have a monthly birthday party for employees whose birthday is in the current month. The Company also sets up a Labor Union, allowing employees to legally safeguard their rights and interests. The Labor Union of the Company regularly organise recreational activities to let employees participate in different relaxing activities.

In order to strengthen the team cohesion and teamwork ability, and alleviate the work fatigue of employees through leisure and entertainment, during the year, the staff union of the Group organized staff to carry out training activities on weekend, such as the tug of war, “bead relay (珠行萬里)”, “straw transport (吸管運輸)”, “hold the stick (不倒森林)” and other expansion projects, which not only stimulated the potential of staff, but also made them deeply aware the significance of teamwork.

To encourage employees to take annual leave, the Group provided all staff with an internal special travel package and the staff union arranged staff to travel to the Jialebi Hotel (嘉樂比酒店) for vacation in 2016.

Development and training

The Group attaches importance to the cultivation of employees and provides on-the-job training opportunities according to different working scopes. It regularly holds symposiums and invites experts in the industry to transmit the latest information to the relevant employees on new knowledge, technology and national policies of the industry in which the Company is engaged in. The Group also conducts internal training on a regular basis to enable employees to gain safe working knowledge and skills. In particular, new construction workers must first accept safety education and training and are only allowed to conduct operation after passing exams. The Group also provides financial support to encourage employees to continue their studies and self-enhancement.



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Operating practices

The Group's operating policy:

- Build quality projects with a realistic style, meet customer demands with high quality services and continuous improvement, Highlight technological innovation, be the most competitive enterprise engaged in development and utilisation of ground source energy.

Supply chain management

The Company has prepared and implemented the Procurement Control Procedures to ensure that the purchased products meet the specified purchase requirements. The purchased products are classified according to their effects on the Company's product realisation or final products and importance, based on which the way and extent of control and selection and evaluation standards for the purchased products are determined. In purchase requirements, the Group has relevant provisions on the quality standards or acceptance specification for the products provided by suppliers. One of the preferred conditions on the products provided by suppliers is energy conservation and environmental protection.

Product responsibility

The Group' product quality management is in line with ISO 9001: 2008 quality management system certification. The Company provides that products can only be delivered to customers after passing all monitoring and measurement in all stages and meeting the specified requirements. The Company implements the "three-inspection system" for the process of product realisation, i.e. "self-inspection, mutual inspection and special inspection", and accept the inspection by customers and national quality and environmental protection authorities.



Anti-corruption

The Group is committed to preventing corruption and market misconduct as defined in all relevant laws and regulations. As a result, the Group has strictly implemented different operating procedures and codes of conduct to monitor the conduct of senior management and general employees of the Group. The business contracts stipulate anti-corruption terms, and the Company proactively promotes the honest, fair and impartial business culture and adopts the "zero tolerance" policy against bribery.

The Group is not aware of any material non-compliance with the relevant laws and regulations that have significant impact on the Group relating to bribery, extortion, fraud and money laundering during the Year.

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Community investment

The Group believes that it is the responsibility of an enterprise to care for the community, thus it actively encourages each staff to make contribution to the society and to the local community development and needs. During the year, the Group has encouraged our staff to participate in the voluntary activities held by the Love-home Volunteer Union (愛心家園義工聯) in Xiangshan Senior Housing (香山老年公寓), such as accompanying the aged people at home and art performance. In the past, the Company has made donations to the community or the country when special needs arose to support those in need of help. The Company will continue to carry out its corporate responsibility in respect of public welfare, poverty alleviation, caring for the disadvantaged community and other aspects, and promote the sustainable development of the community.

