



2013

Sustainable Development Report

SINOPEC ENGINEERING (GROUP) CO., LTD.



Introduction

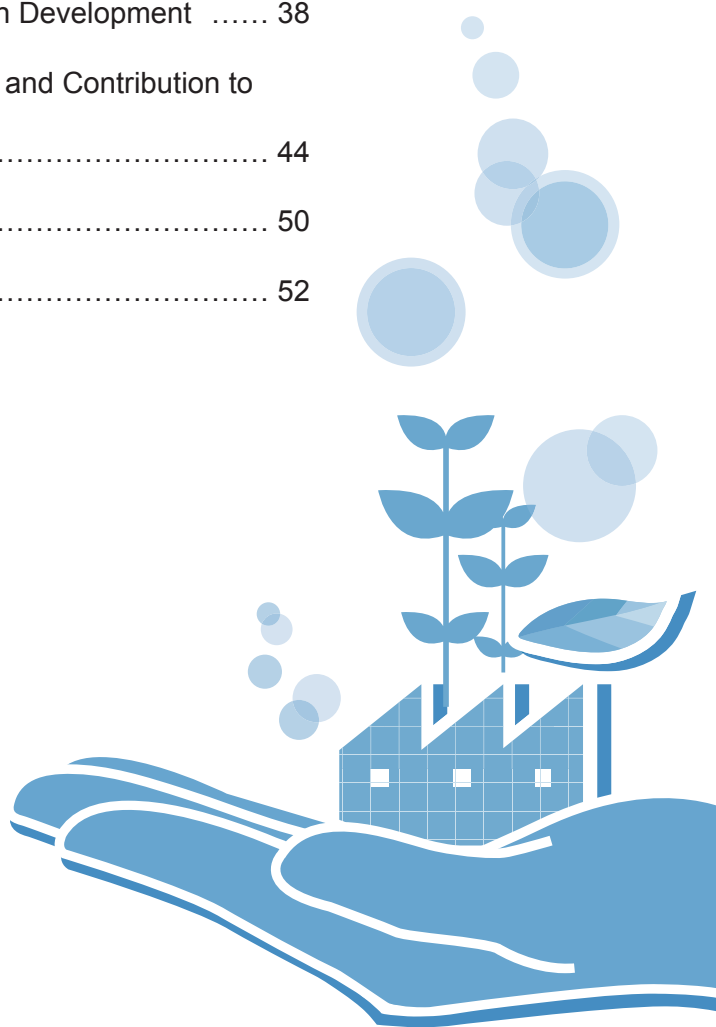
Dear readers,

This report is the first sustainable development report issued by SINOPEC Engineering (Group) Co., Ltd. ("SEG" or the "Company") after the listing of its H shares on the Main Board of The Stock Exchange of Hong Kong Limited ("HKSE"). The objective of this report is building a world-class refining and chemical engineering company and focusing on the main tasks of the Company regarding development model, technical innovation strategy and Corporate Social Responsibility ("CSR"). This report elaborates on the concept of sustainable development of SEG and its subsidiaries ("SEG Group") and its practices in fulfilling CSR in 2013 in five parts, including "Technical Innovation and Low Carbon Development", "Design and Construction of Green Plants", "Quality First and Safe Operation", "Care for Employees to Promote Common Development", and "Participation in Public Welfare Programs and Contribution to Social Development".

By actively promoting the technical innovation strategy, insisting on technology-driven development and leadership, and pursuing the goal of designing and building a greener and more efficient plant, SEG Group has actively undertaken their responsibilities in upgrading oil quality, promoting the exploitation and utilization of natural gas resources, and developing new coal-chemical technology. Meanwhile, the Company has been making greater efforts to provide more returns for shareholders, serve customers, show care for staff, cooperate with partners, and make contributions to society, fulfilling its economic responsibility for promoting sustainable and healthy economic growth along with the CSR we actively implement for green and low-carbon development.

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Chairman's speech

Chairman Cai Xiyu

Dear Friends,

The year 2013 is one where SEG was listed on the Main Board for its H shares. Let me begin by extending, on behalf of the Board of Directors and all employees of the Company, our heartfelt thanks to all our supporters to those from various walks of the society who have been caring about and rendering support to development of SEG for so long!

In 2013, the Company accomplished a turnover of RMB43.572 billion, up 13.1% year-on-year. According to the international standard for financial statements, net profits attributable to SEG Group's shareholders hit RMB3.657 billion, up 10.2% year-on-year. The Board of Directors recommended paying final dividend of RMB0.190 per share, which, combined with the paid interim dividend of RMB0.134 per share, resulted in an all-year recommended dividend of RMB0.324 per share. In addition, the value of new contracts signed in 2013 totaled RMB81.989 billion, and the total value of all contracts by the end of 2013 reached RMB103.968 billion, laying a solid foundation for the development in 2014.

While striving to create more values, our responsibilities for society are always foremost in our minds. Following our listing, we continue to conduct our business in good faith, keep improving the corporate governance structure, and enhance our compliance. The Company is devoted to creating fine products for customers, opportunities for employees, benefits for shareholders and good fortune to society. The Company conducts its business in the interest of its shareholders, customers, employees, suppliers, communities, watchdogs and all other relevant stakeholders, and has incorporated the concept of sustainable development in all links of enterprise development.

As a responsible energy engineering company, we respond positively to the global topic of sustainable development for resources, energy and environment. In response to the voices calling for inhibiting excessive consumption of resources, we emphasize the efficient and clean use of every drop of oil by optimizing our process flow and relying upon our strong technical force. To cope with the unbalanced energy mix in China, we have taken active steps in R&D for new coal-chemical technology and construction of projects and explored such new energy businesses as bio-aviation kerosene. To answer to the call for green and low-carbon development, we have accelerated our development of clean energy business such as natural gas and made outstanding

contributions to programs on energy conservation, emission reduction and treatment for "Three Wastes". We actively uphold, design and build "Green Plants" so as to promote common development of enterprise, society and environment in a safer, more environmentally friendly and efficient way.

As a large enterprise group mainly engaged in engineering design and construction, we are customer centric and put engineering quality and safety first. We have continuously promoted the establishment of QHSE management system to safeguard earnestly engineering safety and employees' health. In 2013, we have accumulated our 303 million safe man-hours without any reportable quality or safety incidents.

As a company taking HR rather than assets as the core of value creation, we regard our employees as the most valuable resources and fortune. Being human-centric, we fulfill our obligations to our employees earnestly and spare no efforts in improving their working environment. We provide our employees with a platform of career development and emphasize the enhancement of their competence. We care for their mental health, advocate hiring local employees in overseas markets and the integration of diversified cultures, striving to realize common development of employees and the enterprise.

As an enterprise engaged in project construction for more than 60 years, we have grown with and helped develop the national petrochemical industry. Our progress benefited from economic development of the state and from the support of all sectors of society, hence we feel grateful to them. In fulfillment of our CSR, we try to create more jobs for people at our major job sites to help develop the local economy. For our overseas investment and cooperation in the energy sector, we try to work as an international "Corporate Citizen". Besides, we are also involved in various public welfare programs by raising funds for earthquake stricken victims and making donations to schools etc. to repay the society generously.

My friends, we are fully confident looking into the year of 2014. We will continue to contribute to the national economic development and fulfill as always our CSR and work harder to maximize our economic, social and environmental value. Let's work hand in hand to create a good future!

Chairman

CEO's speech



CEO Yan Shaochun

The year of 2013 is one in which SEG Group went public and continued its reform and development. In this year, centering on the goal of "resource optimization, efficiency improvement and benefit guarantee", the Company stressed on coordinating production and operation management, optimizing resource allocation, and adjusting internal structure, and pushed forward its tasks steadily. Meanwhile, the Company also spared no efforts in improving corporate governance and CSR management. The Company garnered close attention from its customers and partners, the media and all circles of the society both at home and abroad.

As a large-scale engineering design and construction group controlled by Sinopec, SEG Group has kept in step with Sinopec in terms of the CSR's long-standing strategy for a responsible management system. Aiming to become a world-class refining and chemical engineering company, SEG adheres to the strategy of "integration, internationalization, differentiation, continuous innovation and low carbon development", and positions itself as an integrated project contractor and technology licensor for domestic and overseas refining and chemical engineering market. While mainly engaged in energy and chemical engineering businesses (i.e. refining, petrochemicals, coal-

chemical and natural gas chemical), the Company will reach into other related sectors, improve its core competitiveness, establish a high-end industrial chain, and take the path of differentiated development. Following the development mode of "integrated management, differentiated competition, standard governance and high-end business operations", the Company pays special attention to the impacts caused by its operations upon economy, society, environment, resources and culture and continuously enhances our ability of value creation and core competitiveness, in a bid to fulfill CSR across the board.

In the year to come, SEG Group will continue as the industry leader in the petrochemical sector, strive to benefit the society and its employees, conduct its business in good faith and serve our domestic and overseas customers, and contribute to national development and social harmony.

CEO



About us



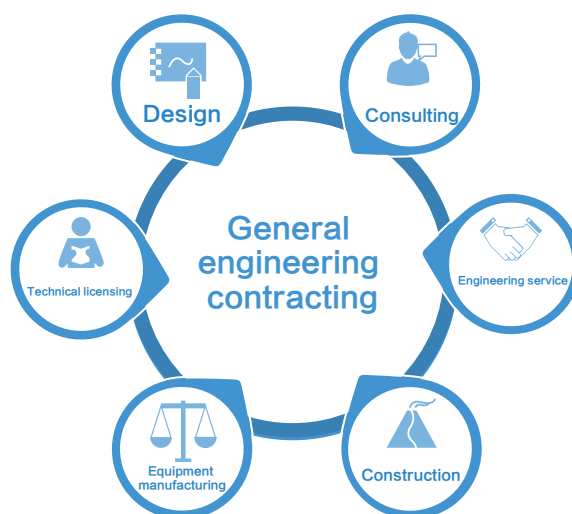
We are a leading engineering company in refinery, petrochemicals and new coal-chemical industry in China. We are highly capable in the design and construction of complicated and mega-size refining, petrochemical and new coal-chemical projects, which led us to excellent business performance and put us in a very competitive position in the international engineering market.



1.1 Company Profile

Leveraged on our high-caliber and talented team of expert, complete technology and extensive experience in refining and chemical engineering, we provide our customers with engineering services including technology licensing, design, consultancy, EPC, construction and equipment manufacturing in multiple sectors, such as refining, petrochemical, new coal-chemical, inorganic chemical, pharmaceutical chemical, clean energy, logistic engineering, environmental engineering and public utilities. In the new century, we were involved in the construction of major state-level energy and chemical industry bases in Yangtze River Delta, Pearl River Delta, around-Bohai area, Beibu Gulf and central and western China. We completed numerous landmark projects, including the first 10 million ton class (single train) refinery project, the first one million ton ethylene project, the first direct coal-to-liquid plant in China and the first commercialized coal-to-methanol and methanol-to-olefin project in the world. We were also engaged in several highly influential projects overseas. Thanks to our proprietary technologies and remarkable track record, we have accumulated a broad and stable customer base.

In 2013, Moody assigned an A2 rating to SEG for the first time with a “Stable” outlook, which is one of the highest rating for engineering companies in the world.



Engineering services covering extensive industries

1.2 Development Strategy, Objective, Orientation and Vision

- **Development Strategy**

Integration, Internationalization, Differentiation, Continuous Innovation, Low-carbon Development

- **Strategic Objective**

Strive to become a first-class global engineering company



Strategic objective

Strive to become a first-class global engineering company



- **Development Orientation**

A professional operation entity mainly engaged in engineering, construction and technical service for refining and chemical projects; an integrated project contractor and technology licensor targeting at the energy and chemical engineering market both at home and abroad; a service provider for the development of national petrochemical industry and world energy and chemical engineering projects.

- **Development Vision**

Industry pace-maker and quality project builder.

1.3 Management System for CSR

Since our establishment, SEG Group targeted “Sustainable Innovation, Green and Low Carbon” as a critical component to our development. We care about our impact upon the economy, society, environment, resources and culture in our operations and we aim to build a sustainable mode of enterprise development.

In 2013, based upon in-depth investigation and close communications, we established our CSR objective management policy and paid special attention to five core aspects of CSR - technical innovation, green plant, quality and safety, employee development and public welfare.



SEG established a dedicated CSR lead team, hired a professional CSR expert to be our advisor, and kept in close touch with Sinopec's CSR department. The lead team and advisors are responsible for studying CSR policy, governance, strategy and plans, providing suggestions to the Board of Directors, formulating the Company's annual CSR plan (including safety, environmental protection, green and low-carbon development, and donation). They are also responsible for reporting to the Board of Directors, summarizing and instructing subsidiaries to execute their CSR, formulating annual sustainable development report (CSR report), and submitting proposals to the Board for review. Our management approach ensures that the CSR and sustainable development is implemented in our day-to-day processes.



1.4 Main Corporate Data

Operating revenue: RMB **43.572** billion

Total assets as of December 31, 2013: RMB **47.365** billion

Net profits attributable to shareholders: RMB **3.657** billion

Dividends to be allocated for the year as advised by the Board of Directors: RMB **0.324**/share

External donations in 2013: RMB **1,917,900**

Basic earnings per share: RMB **0.93**



1.5 Stakeholders

Communications with our stakeholders are a high priority of us. We listen attentively to their voice through open and transparent communications and take into account their opinions when formulating and executing strategy, policy and plan of the Company. We convey our understanding of sustainable development through visits, discussions and other means of effective communication. The trust and support from our stakeholders has become an inexhaustible force to drive our sustainable development. Our stakeholders include government, employees, shareholders, customers, business partners, suppliers and subcontractors, financial institutions, media, communities as well as the public and non-governmental organizations. We hope to continue to improve our communication and cooperation with our stakeholders to jointly support the the harmonious development of economy, environment and the society.



SEG Group pays close attention to information disclosure as well as communication with investors. It will further widen the channels of communication with its investors and improve transparency, continue to place great importance on investor returns and safeguard their interests.



Mid-term Performance Release Conference



Media communication



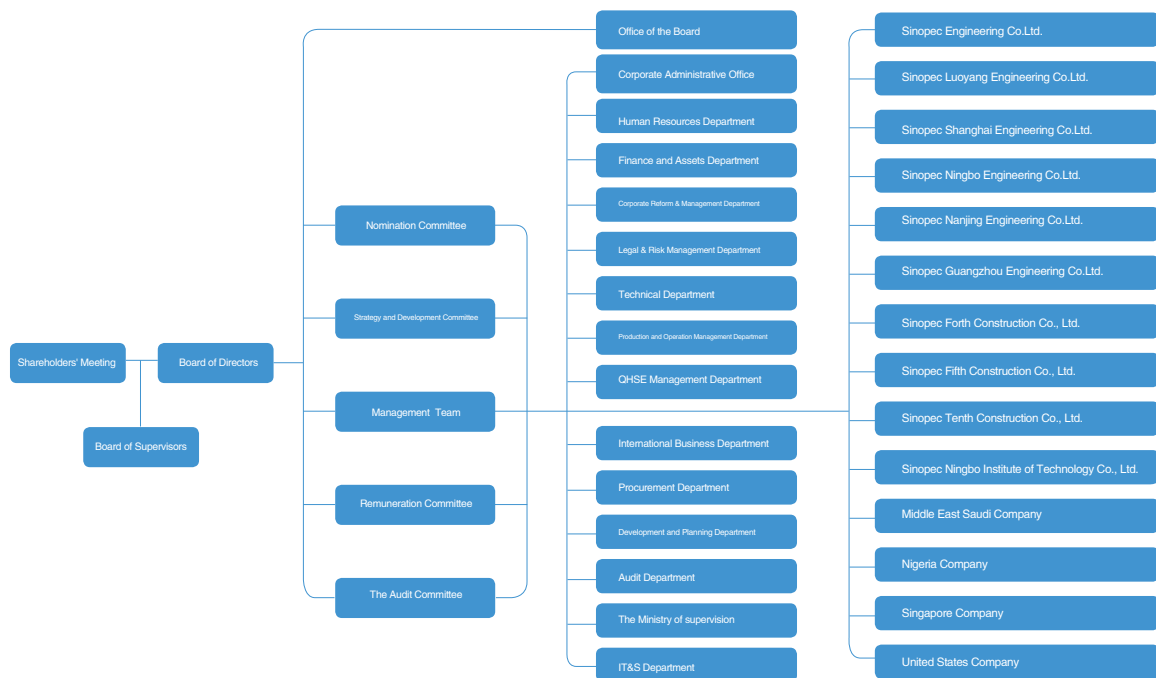
Investor communication

In 2013, to ensure continuity and stability of the corporate policy governing dividend distribution and protect interests of shareholders in a down-to-earth way, the Company made amendments to its Articles of Association aiming to further optimize its policy on dividend distribution. To balance shareholder's returns and future development of the Company, the Board of Directors planned to pay RMB1.435 billion dividend in cash in 2013 (final dividend shall not be paid until approved by the 2013 shareholders' meeting). Based on the total number of shares (4,428,000,000) on December 31, 2013, the Company plans to pay dividend of RMB0.324 per share (including applicable tax) to all shareholders.



1.6 Corporate Governance

We devote ourselves to building SEG Group into a world-class refining and chemical engineering company, for which sound corporate governance is a significant cornerstone. The sustained improvement of corporate governance structure will enable us to reach our target. We will continuously upgrade our level of corporate governance; regulate our operations; intensify internal control, and improve our corporate capability of scientific decision-making and risk mitigation.



Organizational structure

Based upon the actual conditions of the Company and relevant domestic and foreign laws and regulations, we perform corporate governance in strict accordance with the Rules of Procedure of the General Meetings of Shareholders, the Rules of Procedure of the Board of Directors and the Rules of Procedure of the Board of Supervisors and other regulations. The general meetings of shareholders, the Board of Directors and the special commissions, board of supervisors and executive commission under the Board of Directors perform their duties diligently, operate orderly and submit consciously to supervision of parties in the capital market and the public. The corporate directors, supervisors and relevant senior executives actively attend in the trainings and follow-up programs arranged for their positions. The independent directors take an active part in enterprise management and have intensified their communication with the president, the management, external auditors and internal auditing department. They also go to the subsidiaries for investigation and advise on corporate development. In 2013, the Company convened two general meetings of shareholders, five meetings of the



Board of Directors, one meeting for the Nomination Committee, one meeting for the Audit Commission under the Board of Directors, one meeting for Strategy and Development Committee and one meeting for the Remuneration Committee respectively.

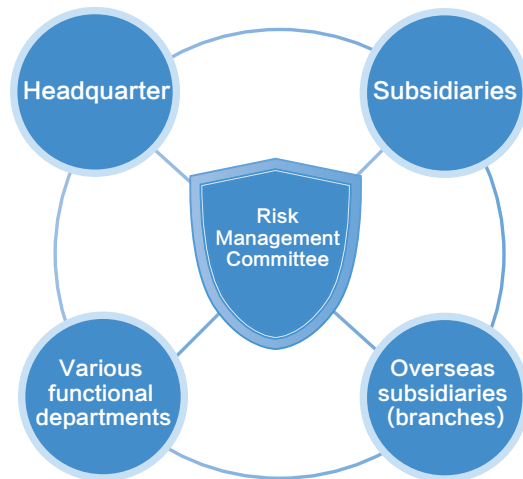
1.7 Lawful and Compliant Operations

We have always taken “Lawful and Compliant Operation” as the lifeline of the sustainable development. To conduct our business lawfully and in good faith and ensure compliance in running the enterprise, we have set up a complete system for compliant operation and risk management, which will ensure compliance with laws and regulations and provide robust legal support and guarantee for building SEG Group into a world-class refining and chemical engineering company.

• Compliance and Risk Management

◦ Risk management

We attach great importance to corporate risk management. As the top organization for decision making in comprehensive risk management, the Board of Directors is responsible for completeness and work efficiency of the Company’s comprehensive risk management system. The Company has set up a risk management commission to form a network-based organization system for general risk management consisting of the corporate home office, subsidiaries, offshore branches and the corporate functional managements of various levels. The Legal Risk Control Department is responsible for centralized corporate risk management. By launching various programs to enhance its risk management, the Company has primarily realized the management goal of “coverage of all businesses, monitoring of all processes”.



◦ Compliance management



Management system:

In our business operations, we regard compliance as the lifeline of a listed company. Guided by that concept, we have compiled the SEG Procedure for Compliance Management under the guidance of compliance advisors, establishing the Board of Directors as the top decision-making organization and the general manager as the first person responsible for compliance management. We have set up a compliance management system by relying upon functions of the general legal counsel and the existing legal organizations for enterprise based upon the president responsibility system.

Review and report:

Based upon our internal control regulations on authorization management, contract management, dispute resolution and information disclosure, we are actively engaged in explorations of new market and businesses. To honor our commitment to shareholders and investors, we have implemented a compliance review mechanism covering all flows of our business lines.

Compliance culture:

We pay attention to changes in the international capital market and regulatory environment. Following the development of HKSE’s Listing Rules, the Code on Corporate Governance, the Securities and Futures Ordinance and the Companies Ordinance, we have sorted out our internal control process and management regime, and established a long-term mechanism against money laundering and commercial bribery. We have formulated a Compliance Manual to promote the awareness of full and whole staff compliance among employees. By launching special topic trainings on topics such as corporate governance, information disclosure, related transactions, asset management, procurement tendering, environmental protection, work safety, clean and honest conducts and anti-commercial bribery, we will maintain a compliance culture on all fronts to cultivate a corporate culture recognized by employees, pursued by managers, accepted by regulatory organizations and trusted by investors.

● Internal Control System

We have made efforts to improve our institutional construction based upon requirements for listed companies. According to its new management regime and operating mechanism, the Company has established an internal control system which complies with regulations for listed companies and covers 42 business processes in 20 major categories, including internal environment, risk evaluation, information and communication and internal supervision of corporate level, as well as funding, investment, market development, production, procurement management, assets management, technology development and licensing, security business, financial report, legal affairs management, overall budget development, related transaction management, tax management, HR management, HSE management, quality management, information resource management, IT system management, information disclosure and internal audit etc.



● Enhanced Supervision through Audit

Oriented by risk control and aiming for more added-value, we focus closely on key links and businesses with high risk exposure in our operations and vigorously implement special audit while intensively conducting regular audits. We bring into full play the special role of internal audit in intensifying internal control, risk mitigation and accomplishment of corporate strategy, so as to promote sustainable and healthy development of the Company. The Company's Board of Supervisors has intensified the supervision over the process of major corporate decisions, business operations, and decision-making rules on major issues as well as the implementation of them. This constitutes a great push in the Company's scientific and legal decision-making, corporate management and performance.

The Company views external supervision as an important means to promote operational compliance and honest conducts in the Company. We work closely with governmental watchdogs and external audit organizations to identify problems and carefully make corrections to keep upgrading our level of business management and risk management.

CASE

The third meeting of the first session of board of supervisors

The Board of Supervisors held the third session of the first session in August 2013. Adhering to the principle of integrity and carefully fulfilling its supervisory duties, the Board of Supervisors strictly reviewed and discussed the Company's 2013 Interim Report, 2013 Interim Financial Report, 2013 Production and Operation Plan, Investment Plan and Financial Budget, and 2014-2015 Annual Cap for Continuous Related Transactions in Financial Services. By taking an active part in supervising the decision-making process on major issues, the Board



of Supervisors does it best to safeguard the Company's interests as well as shareholders' rights and interests.

● Anti-corruption

The corporate leaders and departmental chiefs have signed Statements of Construction of Honest Administration. The Company has organized employees to watch educational films on clean and honest administration. Detailed procedures have been established and carried out vigorously so as to improve honest administration, combat corruption and clearly define responsibilities in that respect.



Technical Innovation and Low Carbon Development



Energy is an important material basis for mankind's survival and development, and we believe that technical innovation is required to develop new energy and improve the energy supply structure to ensure energy security. We are committed to technological innovation for resource conservation and environmentally-friendly development. We will lead by using a green, low carbon, sustainable and healthy development of the industry.



1 To promote the steady innovation of petroleum processing technology aiming to achieve efficient and clean use of every drop of oil

Petroleum is “the lifeblood of the national economy”. China is a big oil consumer, with a serious shortage of petroleum supply. We have to enhance the value of every drop of oil by innovating our engineering technology because petroleum is scarce and non-renewable. To this end, we carry out endless technological updates and fine design concept, so as to come up with an optimal processing scheme with high value added for every drop of petroleum, and realize the green, efficient and clean use of every drop of oil.

Processing Crude Oil:

For a long time the air pollution in most areas of China was characterized by dust, soot and sulfur dioxide (SO₂). This air pollution gradually transformed into a compound urban air pollution mainly caused by soot and emissions from the growing number of motor vehicles, resulting in a significant increase of particulate matter (PM), hydrocarbons (HC), nitrogen oxides (NO_x) in the air. As a result, the content of fine particulate matter (PM_{2.5}) has become one of the outstanding problems of air pollution in many cities of China. Given this, a national “Directive on Improving Quality of Motor Gasoline and Diesel Products” was issued, and comprehensively upgrading the quality of gasoline and diesel products became a main task. Before the end of 2014, the sulfur content of motor diesel will drop to 50PPM, and sulfur content of motor gasoline and diesel down to 10PPM by the end of 2017.

Depending on the composition of crude oil, we will provide our clients solutions of upgrading the quality of oil products and refining high-standard environment-friendly oil products, through a series of proven technologies, such as atmospheric and vacuum distillation, catalytic cracking, catalytic reforming, hydro-treating and hydro-cracking, making a great contribution to the program to comprehensively upgrading the national standard of motor gasoline to reduce air pollution to be implemented from 2014.



CASE

SRH Technology of Diesel Liquid-Phase Circulating Hydrogenation

The development and industrial applications of this technology: different stages of diesel liquid-phase circulating hydrogenation are conducted in 2013 for this technology, including Jiujiang 1.5 MTPA Diesel Liquid-Phase Circulating Hydrogenation Unit, Shijiazhuang Branch Company's 2.6 MTPA Diesel Continuous Liquid-Phase Hydrogenation Unit,

Zhanjiang Dongxing 2.0 MTPA Diesel Liquid-Phase Circulating Hydrogenation Unit of Industrial Test, and Anqing Branch Company's 2.2 MTPA Diesel Liquid-Phase Hydrogenation Unit. The industrial application results suggest that SRH Technology of Diesel Liquid-Phase Circulating Hydrogenation is characterized by low capital investment, low operating costs and reliable space and safe operation, with products being able to meet the Guo IV and even Guo V quality standards for clean diesel. The development of this technology package provides the technical basis for upgrading the quality of petrochemical products in China.



**CASE****S Zorb – Gasoline Adsorptive Desulfurization Technology and Industrial Applications**

This technology features low octane loss, low hydrogen consumption and low operating cost. It's one of the primary means to upgrade the domestic gasoline quality up to Guo IV and V standards. During the reporting period, the Company has licensed a total of 12 units of this technology.

◦ Petrochemical Sector:

Through the self-developed packages of technology, such as cracking, separation and aggregation, the heavy ends are cracked to produce ethylene and other important chemical raw materials, which are converted into plastics, rubber, fiber and other high value-added chemical products through a series of technology, including that of polyolefin and synthetic rubber.

CASE**Wuhan 800 KTA Ethylene Complex Technology**

Wuhan 800 KTA Ethylene Complex Technology: based on several years of joint technical research, we developed the ethylene technology package with independent property rights and used it in Wuhan Ethylene Project in 2013. The entire plant's first-time startup succeeded in August with the feed of oil. The success of Wuhan ethylene project is a major achievement of the Company in the development of ethylene technology package, and a significant milestone in the development of Chinese petrochemical industry.



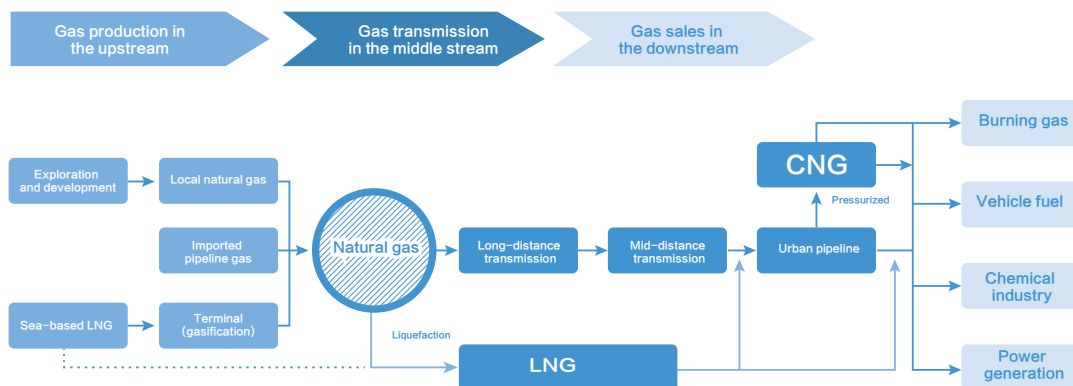
2 To develop LNG and SNG series of technology to promote the wide use of clean energy in China

As clean, efficient and low carbon energy, natural gas is widely used in chemical, power generation, industrial, transportation, civil and other sectors. It is the direction of energy development in the 21st century, and a key technology sector that we pay close attention to. In order to facilitate a green development of China's chemical industry, we have attached great importance to the investment in and the development of clean energy technology, and have made gratifying achievements in this sector in recent years.

We have undertaken a great deal of work and played an important role in implementing the overall strategy of China's natural gas industrial chain. For instance, we participated in the construction of Sichuan Puguang Gas Purification Plant that currently has an annual production capacity of 11 billion cubic meters of gas mixture and 2.4 million tons of sulfur, providing sufficient gas supply to the "Sichuan-to-Eastern-China Natural Gas Transmission Project".

Development of LNG Liquefaction and Receiving Station's Package of Technologies:

By focusing on years of research, engineering development, practical application and the scientific research of technology package for the LNG Receiving Station, we have accumulated experience in the design and construction of cryogenic tanks. In addition, we have undertaken the design of several LNG receiving terminals. We have developed the technology package of LNG receiving terminals, which has been successfully applied to the Tianjin project, and now we have both the capacity for and performance in providing package services including design and construction for LNG receiving terminals.





SNG plant's core technologies include coal gasification, purification and conversion of synthesis gas, as well as methane synthesis. **Gasification Technology:** We collaborate with other organizations in the development of coal gasification technology with industrialization achieved, which has been successfully applied in SINOPEC's joint venture coal chemical projects. **Synthesis Gas Purification and Conversion Technology:** with SINOPEC Ningbo Engineering Company (SNEC) as the main player, we have developed proven technology of industrialization in this sector. **Methane Synthesis Technology:** the pilot plant in SINOPEC Nanjing Research Institute is a success. We have cooperated with other organizations and completed the process package for one-train production of two billion cubic meters, with industrial application to be carried out soon.

CASE

Special Prize of National Science and Technology Advancement Award for "Safe and Efficient Development Technology and Industrial Application in Super-Large, Ultra-Deep and High-Sulfur Gas Field"



In 2013, SEI participated and earned the special prize of National Science and Technology Advancement Award for "Safe and Efficient Development Technology and Industrial Application in Super-Large, Ultra-Deep and High-Sulfur Gas Field". This project has successfully tackled four world-class challenges, achieved five innovations, and reached a leading level in the world in general. It is the highest award of National Science and Technology Advancement SINOPEC obtained.

As a major achievement in the Chinese oil industry, this project placed China one of the world's few countries that had grasped the core technology for the development of super-large, ultra-deep and high-sulfur gas field, which was of great significance to the natural gas development strategy of China. As a result, this technology has been used to develop and supply clean energy of natural gas to more than 70 cities of six provinces and two municipalities along the transmission pipeline of "Sichuan-to-Eastern-China Natural Gas Transmission Project".

CASE

Yuanba Project of Natural Gas Technology Development and Industrial Application:



Yuanba Gas Field Development and Production Project is another integrated project of ultra-deep and high-sulfur gas field construction, aiming to accelerate SINOPEC's development of upstream oil and gas business during the period of the "12th Five-Year Plan". In 2013, we finished the field test of UDS solvent, amine solvent of steric hindrance and MDEA solvent, and determined the plan of super gravity desulfurization experiment with different solvents and the manufacturing scheme of super gravity machine. We also finished the study on the cyclone removal of hydrogen sulfide as well as the optimization of the separator structure, which played an important role in the project execution.

3 Promote the development of new coal-chemical industry with new technology R&D for the clean and efficient use of coal resources

With the advantages of strong technical strength and talents, SEG Group is committed to promoting construction of new coal chemical projects and technological development in accordance with the policy of "clean, low carbon, green and healthy" development. We have achieved quite a number of technologies and patents in coal-to-gas, coal-to-syngas, coal-to-methanol, methanol-to-olefins, replacement of petroleum chemicals with coal, and coal-to-oil. In addition, SEG also developed or participated in the development of all MTO technologies in domestic applications, where the typical projects are Shenhua Baotou 600 Ktpa DMT0 Project and Shenhua Erdos Coal Liquefaction Project, with a leading position taken in the sector of efficient coal utilization.

In 2013, we analyzed and studied the technical superiority and advantages in project construction of our subsidiaries, established the coal-chemical industrial chain, provided the implementation scheme for EPC services, and set up the technology and management expert database classified by technology and industrial chain. Based on that, we provided professional consulting and design services for several coal-chemical projects, such as Xinjiang Zhundong coal-to-gas project, Zhong'an MTO project.





CASE

DMTO Generation-II and SMT0 Technologies

Based on a number of well-proven commercial units put into industrial production, the Company has led the upgrade and development of DMTO Generation-II and SMT0 Technologies during the reporting period, and further improved the methanol conversion rate and product selectivity, resulting in reduced consumption of material and energy. During the reporting period, the Company licensed a number of methanol-to-olefins (MTO) units with DMTO Generation-II and SMT0 Technologies.



CASE

SE Single-Nozzle, Cold-Wall Pulverized Coal Pressurizing Technology

This technology is characterized by advanced design and development concept, high reliability and leading technical indicators, and it optimized and integrated such technologies as single-nozzle, cold-wall and quench flow process of SE Dongfang Furnace (i.e. New Typed Water Wall Pulverized Coal Gasifier), Sulfur-tolerant Conversion and Rectisol. During the reporting period, the Company used this technology and finished the construction of YPC Single-Nozzle Cold-Wall Coal Gasification Industrial Demonstration Unit, with the single-furnace capacity of 1,000 tons coal input per day. Qualified hydrogen has been generated from the unit in reliable operation.



CASE

Syngas-to-Glycol Technology

As one of the technologies for efficient and clean use of coal, the Company finished building a 200 KTA Syngas-to-Glycol Demonstration Unit with this technology in the reporting period. The plant is now in the stage of commissioning and has entered into trial production.

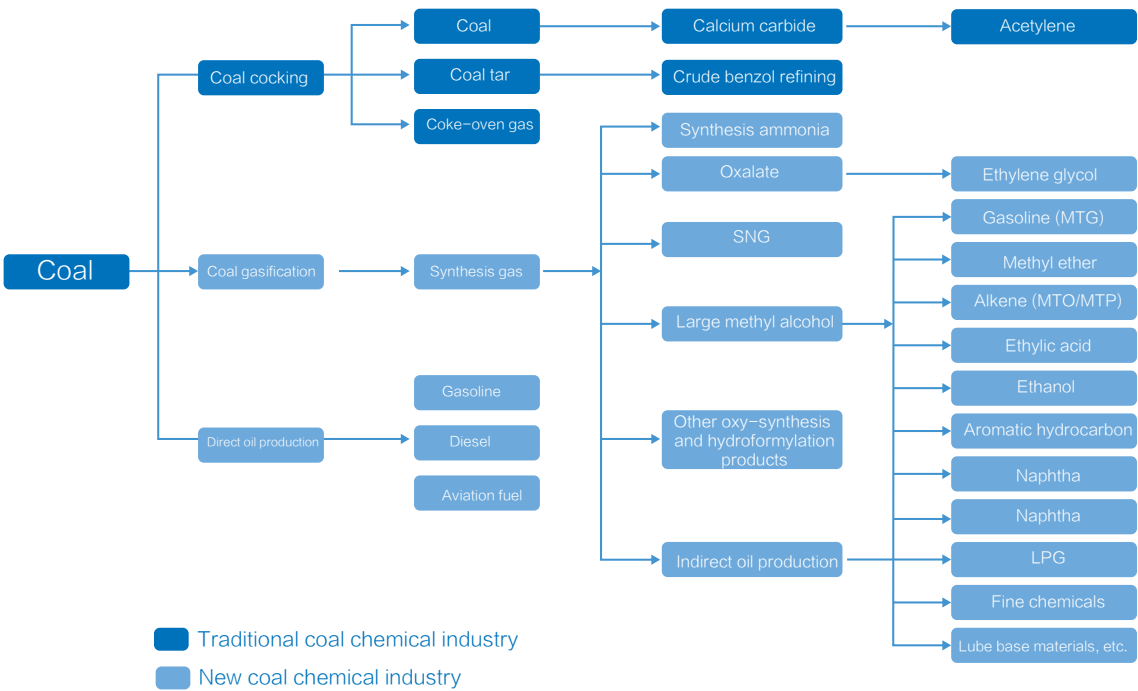


Diagram of industrial chain for traditional and new coal chemical industry



4 Proactive in the exploration of bio-jet-fuel and bio-diesel technology for energy technology improvement

In 2013, the bio-jet fuel that SEG Group participated in producing from the mixture of palm oil and waste cooking oil was successfully used for test flight in Shanghai. Based on the results of pilot test and industrial production test, we are preparing the process package for 100 KTA bio jet fuel production plant.

Research on bio-jet fuel is of great value as it is poised to be the main approach for the air transport industry to reduce CO₂ emissions. China has become a major consumer of aviation fuel, with the annual consumption of nearly 20 million tons, indicating good prospects of the bio-jet fuel market. We will continue to improve the technical standard and engineering service capabilities in this sector, so as to provide reliable oil solutions for the efficient reduction of emissions of aviation industry.





Design and Construction of Green Plants



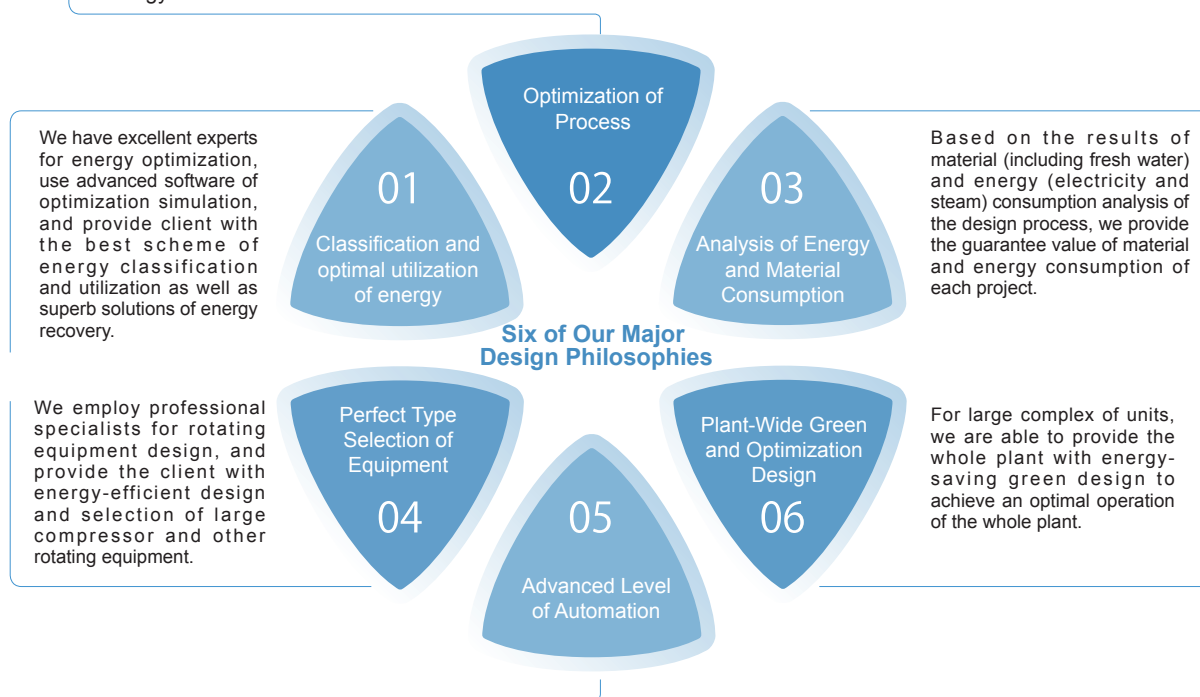
Through the perfect integration of endless technical innovation and fine design, SEG Group has taken the design and construction of environment-friendly green plant with high efficiency and low power consumption as our corporate mission and obligation, attached great importance to environmental protection and implemented whole-process green management. We are committed to being a green design champion, green technology developer, green project undertaker and green office promoter. As a result, it has carried out the green low-carbon concept in the whole process of planning and design, procurement and construction, completion and service, explored new paths in industrial development and promoted the industry to take a low-carbon and environment-friendly path.



1 Promoting the green design and applying energy saving concept at the root of design

Starting from the designing scheme, we tailor specific process and utility schemes that are intrinsically energy saving and green for customers according to local hydrological and climatic conditions. We take the following advanced methods of engineering design optimization to deliver intrinsically green design blueprint drawings for each project and build energy-saving plant of long-term operation for every customer.

We have top-class experts for process optimization, use self-developed software, whereby each unit's operation can be optimized into shortest possible flow of process with lowest possible consumption of energy and material.



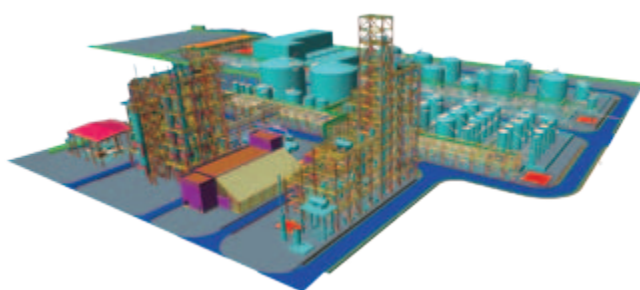
CASE

Full Implementation of Green Office

The implementation of green office is a basic requirement of SEG Group's business management, according to which the Company purchases office equipment as needed, regulates the provision, procurement and requisition of office supplies, streamlines the number of meetings, and applies video conferencing system to promote video conference. It advocates two-sided paper printing, pushes paperless office work, provides rubbish bin for classified collection and periodic recycling of waste paper, requests staff to close water tap after use, and transforms excessively water-consuming facilities. It also complies with the state regulations on air-conditioned indoor temperature and takes full advantage of natural ventilation.



2 Promotion of Energy-saving Technology and Digital Application to Build Plant of High Efficiency and Low Power Consumption.



With regards to energy-saving technology, the Company is committed to building the capacity of comprehensively applying and developing new type of energy-saving technology, efficient catalysts and process intensification technology, including the technology of plant energy system optimization, furnace thermal efficiency improvement, low temperature waste heat recovery, network based optimization of heat transfer, catalytic feedstock optimization and coke reduction, and multi-stage steam utilization, power consumption reduction of electricity transmission and distribution systems, efficient heat exchanger, high-voltage frequency control and other energy-saving technology.

Through the application of new energy-saving technology and equipment, we help clients improve the energy-saving management and make great achievements while its production scale has kept expanding.

CASE

The rate of comprehensive energy consumption falls by more than 5% as indicated by the inspection and acceptance of the national demonstration project for the innovation and industrialization of low-carbon technologies

July 18, 2013, the YPC and Maoming furnace renovation projects for which SEI is responsible for technical design and development, which is also a national demonstration project for the innovation and industrialization of low carbon technologies – “demonstration project for the innovation of energy-saving and consumption-reducing technologies for large-scale ethylene cracking furnace”, passed national acceptance at Nanjing YPC.

The cracking furnace has an extended operation cycle of more than 80 days, reduced the exhaust gas temperature to lower than 95°C, improved the thermal efficiency by more than 95%, and lowered the overall energy consumption down by more than 5%. The expert panel spoke highly of the YPC and Maoming furnace renovation project and recommended extensive applications of this technology as soon as possible.



3 Strengthening waste treatment and becoming a pioneer in the “blue sky and clean water” program

SEG Group makes every effort to provide clients with a series of special services from engineering to construction and the technology research for the treatment of wastes.

We have excellent experts on environmental engineering to provide clients with specific environmental protection solutions for waste treatment, anti-penetration and noise mitigation. We have our own R & D centers, and make investment in research annually for solutions to controlling wastewater discharge and converting wastes to valuables. In 2014, we launched the following new projects:

- Technology Research for Treatment and Re-use of Coal Chemical Wastewater
- Technology Research for Converting By-product of Methane from Cellulosic Ethanol Wastewater into Natural Gas
- Development of Process Technology for Treatment of High Concentrations of Nitrate Wastewater

We have developed in-house desulfurization and denitrification technology, which can effectively reduce SO₂ and NO_x emissions. In 2014, our subsidiary SNEC alone will undertake and execute a total of 32 projects of all kinds in the sector of desulfurization and denitrification. The steady input of R & D investment and the execution of a great number of environmental protection projects make us confident to become the pioneer in the “blue sky and clean water” program.



Wastewater Onspec Discharge Services for Nanjing Chemical Industries Co., Ltd.

Comprehensive Wastewater Treatment Technology: as an initiative of wastewater treatment technology research, the comprehensive wastewater treatment project of Nanjing Chemical Industries Co., Ltd. achieved the mechanical completion in mid-June 2013 and had test running in August. The results of test running indicated that with a rational capital investment and operating costs, and through such measures as technical upgrading and coordinated optimization, all indicators of effluent discharge from this project were better than regulatory standards. The success of this project served as a source of technology and engineering instance for comprehensive treatment of a variety of complex wastewaters, and provided technical supports for implementing the green, low-carbon, environmental-friendly and sustainable development strategy in the petrochemical industry.



Successful Startup of Sulfur Recovery Complex of Shengli Petrochemical Plant

As an EPC project undertaken by the Company, the sulfur recovery complex of Shengli Petrochemical Plant had successful test running, with qualified sulfur produced. As this project was put into operation, the sulfur production capacity of Shengli Petrochemical Plant reached 15,000 t/a, able to process 15,900 t/a sour gas, and CO₂ emission had a year-on-year reduction of 30%, so that the environmental requirements can be met for the execution of the 5.5 MTPA Refinery Complex Expansion/Revamp Project. The success of the sulfur recovery complex project has improved the surrounding atmospheric environment, and achieved the purpose of increasing production without increasing pollution.



4 Green construction assures the implementation of environmental protection concept in every process of management

The Company has been stringently abiding by the applicable state and local regulations. According to GB/T 24000-ISO 14000 Environmental Management System Standard, during project construction, effective management and working system shall be implemented, new techniques and technologies promoted, and construction organization optimized to minimize the adverse effects of construction activities on the environment, and reduce the consumption of resources and energy for the purpose of sustainable development. Through the implementation of environmental objectives and standardization of construction with regulatory requirements on environment, project construction is executed with the provision of appropriate resources, under first-class management, by using first-class technology, so that the construction pollution is mitigated and energy consumption reduced. The Company spares no efforts in complying with the environmental management standards, so that the adverse effects of construction processes to the surrounding environment of local landform, river and water system are minimized, with stringent control kept over noise, light and air pollution.

Construction site is controlled by effective measures of dust suppression, and control is maintained on the emissions from onsite vehicles, machinery and equipment, while the pollutions of dust, noise and waste arising from the transport are also kept under good control. The effluents such as wastewater and sewage from different sources of construction site

are all collected and subjected to specific treatments, i.e. removal of oil, decomposition of organic matter, sedimentation and filtration, so as to ensure that they are discharged in compliance within the standard limits. Standard workshop of prefabrication is built for project construction, which is segregated by noise shield and noise reduction structure, and nighttime construction activities and the use of noisy equipment is minimized for the purpose of reducing noise pollution. In addition, dust control facilities are provided to reduce dust pollution from sand-blasting and anti-corrosion activities. Effective controls and/or shelters are provided on the construction site for metal cutting and welding activities to protect surrounding areas from adverse effects. The Company has been improving the energy efficiency during construction, formulating energy-saving measures, using energy-efficient equipment and products, optimizing construction process, and making full use of clean and renewable energy. The water management is strengthened by minimizing the water consumption during construction, strengthening the water-saving management, developing practical water-saving schemes and technical measures, and maximizing the recycling and reusing of water. The Company has also taken effective measures to supervise and promote the rational, economical use of materials, and to recycle and reuse surplus materials as much as possible, so as to minimize the consumption of materials and resources during construction.





Quality First and Safe Operation



SEG Group has always put quality and safety first. Following the guiding principle that “always keep one step ahead with premium quality” and by vigorous quality control, we ensure that every aspect of the project is in compliance with applicable standards. Adhering to the policy of “whoever in charge will be responsible”, SEG has established a QHSE management system (Quality, Health, Safety and Environment) that is implemented throughout the process of operation and production, in order to assure the intrinsic safety of the project and the wellbeing and safety of clients and employees.



1 QHSE Management System

SEG Group has founded its Corporate HSE Management Committee as well as the Emergency Response Command Center. QHSE Management Department is set up in the head office, which clearly defined the QHSE management responsibilities of all subsidiaries on various levels.

The Company keeps improving the quality, health, safety and environmental institutional system, and has established a total of 84 procedures of management practices and 84 associated rules for implementation, which cover hazard identification and risk assessment, quality management, occupational health management, energy conservation and environmental protection, emergency management, incident and risk management, QHSE management of construction projects, QHSE management of contractors, QHSE management of overseas projects and so on. These procedures and rules for implementation have greatly promoted the quality, environmental protection, health and safety management in a more systematic, organized, standardized and normalized manner.

The Company has been following the management philosophy of "safety first, life paramount", and proactively exploring the use of information technology to realize the integrated management and centralized control, so as to combine the work of quality, health, safety and environment protection with information system gradually.

The Company attaches great importance to production safety, especially the quality and safety management of EPC project. QHSE steering group has made a number of site visits to eliminate safety and quality hazards. In 2013, 48 inspector visits of overall safety and quality inspection were made to the construction sites of five EPC projects – Shandong LNG Project, Hainan PX Project, Tianjin LNG Project, SECCO Butadiene Project, and SinochemQuanzhou Project. In 2013, the Company achieved again the target that no accidents of "quality, fatality and serious personal injury" happened in any project, in which was a first-class performance of QHSE management.



Flow chart of the Company's HSE Management System



2 Stringent Quality Control to Building High Quality Project.

The Company adheres to the philosophy of integrity and good norms, as well as the concept of scientific development, and acts with all staff participation, implementation of responsibilities, good process control, continuous improvement, and service of user's quality requirements, improvement in management system, optimal mechanisms, and appropriate onsite management. With comprehensive quality control, quality management departments established in subsidiaries, and special quality management personnel in projects, the Company's quality management function is staffed with 1800 full-time employees. In the subsidiaries, project quality management team is organized for each project to carry out quality activities and special training programs for full-time quality management staff, general staffs and new employees, so as to improve the quality awareness and capability of the employees.

In 2013, the Company fully carried out the program of "standardized design, advanced process design; standardized procurement of high quality products; modular construction of high quality projects". Regarding the design of each project as a work of art, the Company tries to work out the most reasonable process and layout through three-level optimization and four-level approval. Regarding every construction site management as a system, the Company has done stringent control over quality, strict implementation of construction process through standard and model site activities, aiming at constant improvement in construction quality so as to build every project into a world-class petrochemical plant.

In 2013, we designed, constructed and put into operation more than 70 petrochemical plants of all kinds, of which more than 20 EPC petrochemical and coal-chemical projects had successful test running. Sichuan-to-Eastern-China Natural Gas Transmission Project designed by the Company won Gold Medal of National Quality Engineering, while 32 projects won provincial and ministerial-level quality awards, including Beihai Refinery Relocation Project, and 480 KTA Coal-Based Synthetic Oil Project of Inner Mongolia Yitai Group, which are engineered and built by the Company. 11 projects, including 800 KTA Fujian Refining and Ethylene Project, won Gold, Silver Award for National EPC Projects. 5 projects, including Sinopec Wuhan 800 KTA Ethylene Cryogenic Pipeline Project won the National Excellent Welding Engineering Award. 5 projects, including EPC Project of Shanghai Petrochemical Refinery Revamp won the Award of Outstanding Heavy Lifting Performance.



3 Safety Risk Control

Refinery engineering is a high risk industry, so we always regard safety as the lifeline of enterprise development, keeping safety management in mind all the time, and creating a safety culture with “I want safety” as the core. By focusing on the safety management system and increasing the efforts for investigation and control of safety hazards, we have steadily promoted the establishment of the emergency management system, striving for a first-class management of work quality and job safety.

• For Production Safety

SEG Group has achieved a total of 303 million safety man-hours in 2013 without significant accidents and zero mortality rate for employees (including sub-contractors), and zero rate of serious personal injury. No significant environmental incidents occurred, nor occupational health incidents of acute poisoning, nor general incidents concerning public safety. Risk control program saw an implementation rate of 100%. Expatriates are provided with 100% coverage of employer liability insurance and personal accident insurance. Highest level of QHSE performance of refinery projects was achieved since SEG Group was established in 2007, providing a strong support and assurance for SEG's accomplishment of production and business indicators.



Case of field emergency drill

• For Safety Culture

Over the years, SEG Group has continued intensifying the theoretical exploration and working practice of safety culture, forming a distinctive culture of safety concept, organization, behavior and physical state. In the course of reform, the Company is based on inheritance of good practices, and focus efforts on innovation, in conjunction with its international business strategy, keeping pace with the times to get QHSE procedures enriched and sound for implementation, plus timely release of new version. We also proactively cultivate the QHSE culture and the values of “zero tolerance” to QHSE accidents by advocating the concept that “safety first, life paramount” and “all accidents are preventable”, in order for all employees to act consciously to consolidate the foundation for safety and cultivate a world-class safety culture with the characteristics of both the Company and the times.



Awarded by client HSE team prize for 1 million safety hours and excellent project manager prize

• For Equipment and Facilities Management

The Company organizes overall inspection of equipment safety every year. Starting with process, equipment and site management, we further improved the working mechanism of equipment maintenance, and implemented relevant responsibilities, so that early prevention and control process is in place to prevent “small problem” escalating to “major accident”. We proactively urged subsidiaries to rectify problems identified during inspection, while strengthening the inspection assessment, ranking the organizations/projects inspected and thereby motivating them to attach importance to this area.



Carried out “Selection of HSE Stars”, “Safety Theme Weekly Meeting” and “Award for Identification of Potential Risks” to award outstanding staffs.



• For Identification, Tracking and Management of Major Risks

In accordance with the principle of “focusing key points, making hierarchical supervision, and tracking the whole process”, the Company made overall inspections to strengthen the identification and management of potential risks. In 2013, the Company made an investment of RMB44.99 million for risk control, and, through one-year concentrated efforts, improvement have been made in the “standardization and regulation” of work at heights and other work with risk hazards.

• For Information-Based Safety Management

Full implementation of OSHA statistics for management, adoption of the open safety control method, and motivation of every employee to be fully responsible for safety assurance is a necessary to achieve sophisticated and professional safety management. OSHA statistics focus on statistical analysis of staff casualty, for the purpose of taking timely and appropriate measures to protect the security of life and health of employees. This reflects the people-oriented, staff-caring principles and concept.

• For Contractor's Safety Management

We developed a ‘Subcontractor Safety Improvement Program’, and proposed the Company’s action plan of safety management improvement. We publicized and implemented the Subcontracting Management Procedure, involving subcontractor classification and rating for better management, and established, improved the subcontractor assessment mechanism, with the setup of blacklist, so that the sub-contractors with quality and safety incidents occurred will be eliminated. We also conducted the management survey of subcontractors as a reference to formulating the subcontracting management policy in line with the Company’s development strategy.

• For Traffic Safety Management

In March 2013, the Company issued the “Notification on Strengthening Traffic Safety Management”, and implemented a special program of traffic safety control to further improve the traffic management system, and strengthen the management of transport vehicles, drivers, routine traffic control, traffic safety training and emergency response. As a result, employees can commute to and from work in an orderly and safely manner, resulting in an improved traffic management.

CASE

UAE RRE Project

December 2013, Fifth Construction Company achieved 60 million man-hours of safe execution of UAE RRE Project, and was awarded the Prize for EPC Contractor of Outstanding Safety Management Performance.



4 Improvement Institutional Mechanisms for Emergency Management

Following the reorganization, SEG Group set up a “Emergency Management Committee” for fully implementing the duties of organizing, directing and coordinating emergency management of the subsidiaries, and maintained a unified leadership and command of the Company’s public safety management overseas and major emergencies in China. The subsidiaries have also set up complete organization and established an emergency management committee that is headed by the principal leader in charge, and set up a special emergency management department for full coverage of the organization. Meanwhile, various units of the Company also vigorously

implement the principle of “production management shall be responsible for both safety and emergency response”, and sign the Letter of Accountability Commitment for managers at all levels so as to assign the responsibilities for emergency response to the job posts and individuals. In 2013, the Company made a timely revision of the “SEG Emergency Response Plan”, especially the special plans for overseas public safety assurance, clearly defined the emergency management responsibilities of branches and subsidiaries, and required all subsidiaries, branches and overseas project offices to revise their emergency response plan for dynamic management, with adjustment made in a timely manner.



CASE



SEG Group’s Overall Inspection of Production Safety.

In 2013, the Company made proactive overall inspection of safety, looking for hidden danger and hazards, and also organized safety self-examination in ongoing projects, with the focus on the breakdown of production safety responsibilities, the implementation of the Company’s safety management system, design compliance, and the “three simultaneous” implementation. The Company also organized overall safety inspection of its office environment and EPC project sites, as well as the design quality inspection of oil storage and transportation projects. We also organized the revision of emergency plan system framework, general emergency plan, special emergency plans, and project’s on-site emergency plan, improved the Company’s list of emergency contacts, and revised the incident response procedure.



5 Overseas Public Safety Management

By giving full play to the advantages of the Company's integrated management after its restructuring, we have made an overall allocation of SEG's offshore engineering resources, and strengthen overseas public safety management.

Firstly, we have strengthened training and improve employee's safety awareness and risk prevention capability; Secondly, in accordance with the requirements for overseas public safety management – “no assessment, no setup of project organization”, we have standardized the procedure of overseas public safety management, the emergency response plan requirements, and the dynamic information reporting form; Thirdly, we have increased capital investment, improved the camp's hardware facilities, maintained stringent management of camp access, and gradually standardized camp management, with effective measures taken to prevent traffic accidents.





Care for Employees to Promote Common Development



“People first” is an underpinning force that drives SEG Group’s sustainable development. It is our firm belief that employees are the most valuable resources and fortune of the company. Adhering to the “people first” concept, we have fulfilled our obligations to employees earnestly and spared no efforts in improving their working environment. We provide our employees with platform of career development, care for their occupational health, make efforts to hire local employees in overseas project and promote cultural diversification, striving to achieve common development for both the employees and the enterprise.



1 Let employees be owners of the Company

We have always put people first and taken employees as the most valuable resources and fortune of the Company. We have set up a mechanism for retainment, training and employment of talents to fully tap their potentials. The Company emphasizes respect to, care for and good treatment of its employees and compliance with laws and regulations in various countries. We care for and stress employee's interests and have provided them with platform to promote their comprehensive development, fostering a harmonious relation between employees and the Company.

As of December 31, 2013, SEG Group had 19,219 employees, including 182 fresh graduates, injecting new force into our team. We strictly observe local laws, regulations and policies where the projects are located, and we try to establish a harmonious and stable employment relationship by treating all employees equally and regulating labor management. Any discrimination in race, color of skin, nationality, language, belief, physical disability and political groups is banned in our recruitment, selection, employee development, payroll and welfare, and employment contract. Employees of ethnic groups in our Company account for 2.95% of the total. All of our subsidiaries have signed labor contract with their employees on the principle of "Equality, Willingness and Mutual Consultation". Conclusion of labor contracts in our company hit a rate of 100%.

In the Company, efforts are made to improve the level of personnel management, intensify cultivation of talents and diversify the way of career development for talents on various levels. We pay more attention to cultivating younger generations and setting up a regular training mechanism for key staff and the management of intermediate level. We have launched various training programs for discipline directors to comprehensively upgrade their competence, and have optimized the quantified assessment procedure for the promotion of those with intermediate and advanced technical titles.



Performance assessment in the Company follows the principle of "category and level-based, performance oriented, objective and just, closed loop management, and incentive + constraint". To enhance effect of the incentive and constraint mechanism, results of performance assessment is usually linked with personal salary, incentive annuity, status of post readjustment, training and development, performance assessment and renewal of employment contracts.

CASE

Democratic management and oversight

We persevere in maintaining employee's democratic rights, give play to their role in conducting democratic management and oversight so as to create an impartial, democratic, pragmatic and harmonious atmosphere in the company. We have our employees informed of the Corporate development and involved in enterprise through means including congress of employees to safeguard their rights to information and oversight.



2 Care for employees' occupational health

The Company carries out the Law of Occupational Disease Prevention and Treatment of PRC China in a down-to-earth manner. It stresses occupational health management and puts life, safety and the well-being of employee first. The Company follows up closely on changes in state policies regarding ongoing projects and workplace and occupational health surveillance, highlights identification, analysis and control of occupational hazards at worksite, stresses improvement of construction environment, and has taken active measures to maintain employee's physical health. Efforts were made in 2013 to improve and carry out various regulations governing employee's physical check-up, health records, recuperation and vacations. In 2013, occupational health check-up for employees in the Company hit a rate of 100% with a rate of 95% for monitoring occupational hazard factors in workplace. There was no work-related fatality, no acute occupational poisoning involving three people or more, and no new diagnosed cases of occupational disease.

3 Maintenance of interests for female employees

Female employees are widely distributed in different posts on different levels in SEG Group, accounting for 27% of the total staff in the Company. We strictly observe laws and regulations governing protection for female workers to safeguard their interests at root. Female employee commission has been established in trade unions of various levels to resolve issues they may encounter in work and life. We have made consecutive efforts to improve working environment and conditions for female employees and carried out regulations governing their leave during pregnancy, maternity and nursing period and regular physical check-ups, providing special care to the physical and mental health of female employees.



4 Training and development

Training goes through the whole process of employees' professional career to align corporate development with employee development. We have made unremitting efforts to enrich the training contents and innovate training modes to promote employees' career development. We take professional practices as an important way to cultivate talents and have implemented mentoring programs to boost the healthy development of various talents. In 2013, 14,200 employees from SEG Group, totaling 30,800 person times, participated in Sinopec's internal and external trainings, including training for 1,400 person times of operating and managing personnel, for 22,200 person times of technicians, and for 7,200 person times of operators.

We also organized training on standard operation of listed companies to understand the operation requirements for listed companies set forth by Securities and Future Commissions and HKSE, in order to intensify our consciousness for law, standard operation, integrity and self-discipline and enhance our level of standard operation.

CASE

The Campaign of Youth's Technical Paper Assessment

It has been 11 years since the campaign of youth's technical paper assessment was launched in the company. Through 11 years' exploration, it has become a renowned brand in performing youth-related activities for SEI, providing a good platform for young talents to stand out and playing an important role in creating an academic atmosphere among young technical personnel. By combining the process with technical title evaluation, the campaign closely

relates with development of both the enterprise and the employees, hence is highly valued across the Company. Oral defense for young people's technical papers recommended by various youth league branches is organized orderly per category and more than 500 spectators attended the defense as organized by various departments for over one month, rendering the youth an opportunity to polish themselves and share their lessons and experience with colleagues. Due to its great drive to the youth's efforts in improving their technical proficiency through study as well as development of young talents, the campaign is highly spoken of by all sides.



5 Build a harmonious enterprise and care for employees' life in all respects

We care for employees' life and strive to study and resolve their actual concerns to ensure their working and living environment and improve their living standard. We enrich employees' life by launching singing contests, table tennis competitions and other recreational and sports activities that are good for their body and mind. The corporate trade union takes caring for and safeguarding employees' interest as one of its main functions and fulfills its obligations earnestly. Special study has been conducted for codes and standards governing visit to employees on festivals, their birthdays and when they fall ill. It is a practice persevered in by the company to visit employees on their birthday, hospitalization due to illness, delivery and Women's day.

CASE

Enhance consciousness of integrity through recreational and sports activities

The corporate trade union launched the first Beihai Cup badminton competition and Chaoyang Cup table tennis competition in July and Oct. 2013 respectively. Through grass-root recreational and sports activities, the Company provides a platform to intensify communications. Those activities have won high praises from all levels of the Company.





Participate in Public Welfare Programs and Contribution to Social Development



Companies and society are interdependent to promote mutual growth. While pursuing sound financial performance, the Company has paid close attention to people's livelihood and social progress by actively participating in public welfare programs, fulfilling its responsibilities and obligations as a "corporate citizen", and making efforts to hire local people to boost local economy. The Company made donations in a total amount of RMB1,917,900 in 2013.



1 Poverty alleviation

By helping the poor, we can bring hope and light the future for them. In 2013, SEG Group emphasized the improvement of its social value while striving for better financial performance. We carried out and participated in many effective programs for public welfare based on local realities. When providing relief to areas stricken by earthquake, flood and drought, SEG Group spared no efforts and actively shouldered its CSR to provide relief for people in those areas.

CASE

Joining hands with Wulong Village to help people living there

In 2013, the engineering company in Shanghai completed network cabling and provided computers for the mass service station in Wulong Village. Previously, the Company had completed cabling and networking for Wulong Village to set up a village-level IT infrastructure for IT-based administration. The Company also donated RMB93,000.



CASE

Making contribution to oxygen-deficient Tibet

Wang Pengyan is now Deputy Chief Engineer of SINOPEC 10th Construction Co., Ltd., Deputy Secretary-general of Naqu Area of Tibet Autonomous Region, and Deputy Secretary of CPC Committee of Bange County. In providing aid for Tibet, his responsibilities include party building for Bange County, organization and aiding activities. He arrived in Lhasa and Bange County on July 31 and August 5, 2013 respectively. Holding fast to the belief of "sufficient strong will against deficient oxygen and firmer belief against higher altitude", he made down-to-earth efforts to make his due contribution to the economic development and social stability of Bange County and ensure successful implementation of SINOPEC's project to provide aid for Tibet. During his stay in Tibet, he supervised the use of SINOPEC's fund for aiding Tibet as well as the expansion of Bange primary school, new model residence project and hyperbaric oxygen chamber. In charge of Bange County, he conducted the research on grass-root party construction, addressed real difficulties, and prepared a research report. Based on full research, he prepared the 2014 Project Plan for SINOPEC Providing Aid for Bange County. Like other cadres in Tibet, he undertook rotational shifts to maintain stability and went to the countryside for research. He also provided aid to an orphan of ethnic Tibetan.



2 Provide support for education

Education can bring hope and dream for children. We are fully aware that education can become important force for promoting social progress. As a knowledge-intensive engineering company, we have prioritized providing support for education as an important means to fulfill CSR. By working closely with NGOs, we have organized and participated in many activities to provide support for education. In these activities, a number of excellent and persistent young volunteers have appeared.

CASE

Lei FengSpiritTheme Activities

On the same day, 15 young volunteers from SEI taught 20 students from Beijing Pengying School for Migrant Workers' Children general knowledge about petrochemicals, HSE & environmental protection. Acting in the spirit of Leifeng to disseminate positive energy of youth, they told the students that they should not only care for their families, friends and themselves, but also protect our homeland, environment and natural resources in daily life. After the training, SEI volunteers led students to visit China Science and Technology Museum, which broadened the children's vision and enriched their extracurricular activities and scientific knowledge.



3 Establish harmonious community

SEG Group has designed, built and served engineering projects across the world, thus establishing many corporate communities and project bases there. Following the concept of "local integration, mutual development and win-win cooperation", we have been making efforts to promote community development to achieve social harmony based on long-term mechanism of mutual interaction and joint efforts. To promote community culture, in 2013, SEG subsidiaries carried out a variety of cultural activities to build happy, safe and harmonious community for staffs. They established community senior citizen associations, university for the elderly, art troupes, calligraphy & painting associations, folk dance groups and various cultural and sports teams, so as to diversify people's life by offering frequent activities and matches. By organizing morality lecture, calligraphy & painting exhibition and photography exhibition, the university for the elderly cultivated people's artistic taste; by performing programs based on real-life incidents, community art troupes promoted harmonious neighborhood and beauty in life; meanwhile, communities also carried out a lot of activities to care for the elderly, handicapped and impoverished; the engineering company in Nanjing also joined hands with PLA University of Science and Engineering and fire-fighting teams to carry out activities for mutual progress. These colorful activities enhanced people's happiness in life and boosted our reputation in communities.

CASE

"hotline for maintenance package service"

The community affairs management center of the 10th Construction Company made great efforts to promote "hotline for maintenance package service" and "one-stop service counter for the convenience of people", thus greatly improving property service level and winning unanimous approval of company executives and residents. Just by dialing this hotline, residents can have excellent property maintenance service, covering the whole process of reporting, maintenance, completion and feedback. With "one-stop service counter for the convenience of people", people can easily get efficient services, thus promoting transformation of community functions from "management" to "service". This has been acknowledged by people living in communities.



4 Create job opportunities to promote local development.

Striving to become an integrative, international and differentiated world-class engineering company, we have designed, constructed and served many engineering projects throughout the world. Except a few dispatched managers and technical teams, we will use and develop local talents. We will hire contractors for labor and construction in non-core processes or constructions for engineering designs. Currently, we have more than 800 registered contractors. We provide job opportunities for engineering design, construction technology and construction work, etc. in a direct or indirect way. Statistics show that we have created job opportunities for more than 50,000 people in China as well as more than 5,000 job opportunities in multiple regions and countries in 2013. Overseas employees form an important part of our staff and support our strategy for international development. We focus on their career development, business training and health & safety, and strive to implement “international talents and local staffing”. Many overseas staffs have become an important part of our team and are playing more and more important role in our international operations.

Through training for local staffs and cooperation with contractors, we have spreaded its stringent quality control and green & low carbon concept into the mind of every staff, thus promoting staffs’ personal development and improving contractors’ management and competencies. Meanwhile, we have promoted local economic growth and are fully acknowledged and respected by local governments, communities, media and partners.

CASE

Introduction of SEG Group’s overseas projects in implementation, including overseas companies, total staffing, operated projects, and countries

In 2013, we executed more than 20 contracts in 4 foreign countries, and have hired 13,398 project managers and workers, including 1,541 staffs from SEG and 6,354 from contractors hired in China, providing 5,503 job opportunities for the host country; we achieved 49.94 million safe man hours in 2013.



	Area	Country	No. of Local Staff
👤	Middle East	Saudi Arabia	3918
		UAE	314
👤	Central Asia	Kazakhstan	1271

5 International corporate citizenship

As a large engineering company with international operations, we are quite aware that we should not only shoulder national responsibilities, but also undertake more international responsibilities. While undertaking more and more overseas engineering projects, we have focused on our international corporate citizenship and taken expanding and implementing overseas businesses as an inevitable path to build a “highly

responsible and highly respected” world-class engineering company. Following the concept of “harmony and all-win”, we have been working closely with overseas clients, local governments, communities and media to become well acknowledged and approved by local societies.

We have been following important strategic concept of green and low-carbon development. While expanding and implementing overseas projects, we have not only taken the initiative to understand environmental policies in the host country, but also recommended to clients our environmental technologies and innovative processes so as to protect local environment. In implementing large refining projects in countries like Saudi Arabia, we insisted on operation in accordance with the law and in good faith, showed full respect to Islamic culture and custom, actively communicated with local staffs, and earnestly fulfilled CSR as an international company. In Kazakhstan, we carried out training, discussion, communication and social activities with local staffs, and organized such public welfare activities as caring for the elderly with no kinship or with disabilities, winning full acknowledge from the project owner and local government and community.



Outlook for Year 2014



Looking to 2014, SEG will make greater efforts to help clients save investment and create more return for shareholders by consolidating our strengths in conventional refinery technologies, improving technology for alternative petroleum resources, promoting the growth of new and alternative energies and green & low carbon resources, and expanding engineering services in areas such as coal-chemical, natural gas and biochemical. Meanwhile, we will make even greater efforts to protect environment and promote efficient and cyclic utilization of resources, thus making contribution to build a beautiful environment and realize harmonious development of business, economy, society and environment. We will work together with other sectors to build a green, low carbon and beautiful homeland!



Reporting entity

SINOPEC ENGINEERING (GROUP) CO., LTD. (referred to as “SEG” or the “Company” in the report), and its subsidiaries (branches); for clarified expression and reading, they are referred to as “SEG”, “Group” and “Company” respectively.

Time frame:

January 1 – December 31, 2013, with some parts extending beyond this timeframe.

References:

- (1) HKEX's Environment, Social and Governance Reporting Guide
- (2) Guideline for SOEs to Fulfilling Their CSR promulgated by State-owned Assets Supervision and Administration Commission
- (3) Guideline for Preparing CSR in China (CASS-CSR2.0) released by CSR Center of Economics Department of Chinese Academy of Social Sciences
- (4) Guideline for Preparing Sustainable Development Reports (GRIG3.1) released by Global Reporting Initiative

* This report has not covered all relevant indicators.

Data clarification:

The data on business operation and financials contained in this report mainly come from the annual report of 2013. If any deviation, the annual report shall prevail. For the electronic version of this report, please visit www.segroup.cn. This report will also be submitted to HKSE and published on its website.

Disclaimer

This report contains some prospective statements. Except historical facts, all the statements about future or possible incidents (including but not limited to assumptions, targets, estimates and business plans) shall fall under the category of prospective statements. Owing to the impact of some changing factors, the future development or tendency of the facts are likely to be different with the prospective statements. The prospective statements contained herein were made in March 2014. SEG shall not be liable or obliged to revise these prospective statements.

Company information

Official name in Chinese

中石化炼化工程（集团）股份有限公司

Name in English

SINOPEC ENGINEERING (GROUP) CO., LTD.

Legal representative

Mr. Cai Xiyu

President

Mr. Yan Shaochun

Registered address

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Zip code

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Listing place, stock abbreviation and stock code

H share: Hong Kong Stock Exchange

Stock abbreviation: SINOPEC SEG Group

Stock code: 2386.HK

Registered No. of license of business corporation

10000000041054

Tax registration No.

110105710934908

Organization code

71093490-8

Internet website publishing this report

Designated website by HKSE Limited (hereinafter abbreviated as HKSE):

<http://www.hkex.com.hk>

Company website:

<http://www.segroup.cn>

Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited - Appendix 27: Environmental, Social and Governance Reporting Guide

Subject areas and aspects		Relevant content in the Report
A. Workplace quality		
A1	Working conditions	Chairman's speech 4 Quality First and Safe Operation 5 Care for Employees to Promote Common Development
A2	Health and safety	Chairman's speech 4 Quality First and Safe Operation 5 Care for Employees to Promote Common Development
A3	Development and training	Chairman's speech 5 Care for Employees to Promote Common Development
A4	Labor standards	5 Care for Employees to Promote Common Development
B. Environmental protection		
B1	Emissions	Chairman's speech 2 Technical Innovation and Low Carbon Development
B2	Use of resources	Chairman's speech 3 Design and Construction of Green Plants
B3	The environment and natural resources	Chairman's speech 2 Technical Innovation and Low Carbon Development 3 Design and Construction of Green Plants

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