



中国石化
SINOPEC

Undertaking Responsibility of Our Era
Promoting Sustainability Together



Sinopec Corp. 2016
Communication on Progress
for Sustainable Development

Report Information

The 2016 Communication on Progress for Sustainable Development (hereinafter referred to "COP") is the eleventh sustainability report from China Petroleum & Chemical Corporation (hereinafter referred to as "Sinopec Corp.", "the Company" or "We"). The theme of this year's COP is Undertaking Responsibility of Our Era, Promoting Sustainability Together. The COP introduces our efforts promoting economic growth, social development and environment protection, and highlights how we responded to stakeholder expectations in 2016.

Report Description

This COP covers our business activities from 1 January to 31 December 2016. The information herein comes from internal data, materials from our subsidiaries, and official documents and statistical reports. The Company's Board of Directors approved the Report on March 24, 2017. The report is available in Chinese and English. If there is any conflict or inconsistency, the Chinese version shall prevail.

References

This COP is prepared in accordance with Ten Principles of the United Nations Global Compact (UNGC), the criteria of the Global Compact Advanced Communication on Progress, the Guideline on Environmental Information Disclosure by Listed Companies of Shanghai Stock Exchange(SSE), and the Environmental, Social and Governance Reporting Guide of Hong Kong Stock Exchange.

Disclaimer

This COP includes certain forward-looking statements with respect to the results of our business operations and certain plans and conditions. All statements that address activities, events or developments that we expect will or may occur in the future, other than statements of historical fact, are forward-looking statements and by their nature involve risk and uncertainty. This means that actual results may differ materially from those indicated in the forward-looking statement due to a number of factors and uncertainties. The Company undertakes no obligation to update these forward-looking statements unless required by an appropriate regulatory authority.



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Address from Our Chairman

Dear friends,

First of all, on behalf of the Board of Directors of Sinopec Corp., I would like to express our heartfelt thanks for your attention and support.

2016 marked the beginning of the 13th Five-Year Plan in China. Sinopec Corp., guided by new national development concepts, formulated the company's 13th Five-Year Development Plan, outlining how we implement our five development strategies (value-oriented, innovation-driven, integrated resource allocation, open cooperation, and green and low-carbon growth) to create competitive advantages in sustainability.

Over the last year, Sinopec Corp. has faced severe challenges from low oil prices and the market. However, I am pleased to report that our management teams guided our staff to overcome these challenges, achieving an outstanding performance. We promoted supply-side structural reform, improving our economic position and assets utilisation efficiency, and delivered petroleum and petrochemical products to society, building a solid foundation for development. In 2016, our operating revenue was RMB 1.93 trillion, profit recorded RMB 79.9 billion and we produced 195 million tonnes of refined oil products and 69.96 million tonnes of chemical products. Our declared dividends were RMB 30.1 billion to shareholders and we paid RMB 316.1 billion in taxes and fees.

In 2016, we promoted supply-side structural reform. We strengthened upstream operations to navigate "the harsh winter" in oil markets, and improved the efficiency and reduced high-cost crude oil production. Efficient oil exploration and extraction was a top objective in 2016 and we took steps to improve our overall energy structure. We increased the natural gas production, producing 21.6 billion cubic meters inside China. Fuling shale gas field, China's first large-scale shale gas field, now has an annual capacity of 7 billion cubic meters. We also increased natural gas supply to the Yangtze River economic belt and the Beijing-Tianjin-Hebei region. To meet market demands, our downstream companies maintained the medium and high-end supply of products and quality services. We optimised structure of our products in the oil refining segment, integrating new technology and upgrading the quality of our refined oil to ensure oil products supply qualified with Beijing VI and National V emission standards. We also



accelerated our elimination of outdated and inefficient capacity. Our chemical segment continued to develop "basic and high-end" products, increasing the ratio of high-end products that we produce from synthetic resin, synthetic fiber and synthetic rubber (the Three Synthetic Materials). We enhanced R&D for new products and supported the integration of production, sales, and research to provide our customers with better all-around solutions. Focusing on the market, our sales segment used their network advantages to increase retail outlets scale and to promote CNG vehicle operations, providing society with clean and eco-friendly products. The non-fuel trade business, providing unrivalled one-stop services, grew with the turnover increasing by 41%, marking the progress in becoming a comprehensive service provider.

We continue to promote open cooperation and facilitate win-win development with business partners and stakeholders. We participated in the construction of the Belt and Road, developed our overseas oil and gas exploration and extraction activities, and upgraded our refinery and petrochemical business as well as international trade

business. We also cooperated with relevant international industries. Yanbu Aramco Sinopec Refining Company Ltd, which is established as a joint venture between Sinopec Corp. and Arabian-American Oil Company (Aramco), came into operation in 2016. We aspire to achieve localisation and win-win cooperation through our business and in 2016 we cooperated with 14 provinces and cities, promoting natural gas business and driving local economic growth. RMB 22.8 billion of social capital was inspired to invest into the natural gas pipeline project from Sichuan to East China. Reforms of our marketing company progress smoothly and we are pursuing strategic cooperation with the postal industry and shipbuilding industry. We are optimising our refinery and petrochemical operations, building production bases, and developing medium and high-end products, expecting to cooperate with our stakeholders.

We seek new advantages in innovation. In recent years, we have made breakthroughs in five areas including inventing a series of shale gas exploration and extraction technologies, developing and integrating low-cost technologies for exploiting clean oil products, qualifying the National V emission standards, developing a series of new coal chemical technologies for the industry chain, and industrialising a complete set of in-house-technology on ethylene facilities at the million tonnage level, which has reached advanced world level. We have also established world-class industrial unit applying high efficient and environmental friendly Aromatics Package Technology which is of independent intellectual property rights, reaching the top level in the world. At the S&T innovation meeting held in 2016, we deployed the future innovation plans. We will continue to motivate company-wide innovation and develop a new batch of core technologies that can transform our company and inspire new initiatives to promote sustainability.

As a corporate global citizen, we are committed to performing responsibilities. We put people first, enhance our approach to safety management, implement new measures to protect employee's rights and interests, aiming to promote decent work. Over the past three years we have invested RMB 20.9 billion in Blue Sky and Clear Water environmental protection campaign and reduced major pollutants emissions, increasing our capacity for green development. We value the protection of biological diversity and are working to reduce the negative impact on the environment. We welcome supervision from society.

We have invested RMB 105 million in infrastructure construction, education, health care, industrial assistance, occupational trainings in targeted poverty areas. We believe this helps people in poverty-stricken areas and promotes sustainability. We has invested RMB 6.58 billion in local community development, culture and education, and medical and health care.

Big enterprise undertakes greater responsibility. Looking to the future, during the key period when China builds a moderately prosperous society in all respects, we will continue to implement our five development strategies and observe basic state policies of energy conservation and environmental protection. We will focus on promoting supply-side structural reforms, and carrying forward traditions of prudence, circumspection and practicability in order to transform development models and adjust our development structure, and improve the quality and efficiency of our operations. We see humans as aspirational beings and we use that understanding as a guiding principle for our development. We will continue to undertake responsibility to promote harmonious development among enterprises, society and the environment.

Dear friends, as the Chinese ancient saying goes, "Victory is ensured when people pool their strengths; success is secured when people put their heads together". We hope that we can jointly take responsibility of our era to promote sustainability and contribute to our beautiful homeland.



Wang Yupu
Chairman
March 24, 2017

Sinopec Corp. Overview

- Sinopec Corp. ranks first in global refining capacity.
- At the end of 2016, our primary distillation capacity of crude oil was 295 million tonnes annually. Our primary facilities are located in China and we invest in Yanbu Aramco Sinopec Refining Company Ltd. joint venture in Saudi Arabia.
- In 2016, we processed 236 million tonnes of crude oil.
- Sinopec Corp. is equipped with comprehensive refined oil products sales network.
- At the end of 2016, 30,603 service stations carried the Sinopec logo.

Refining



Marketing and Distribution



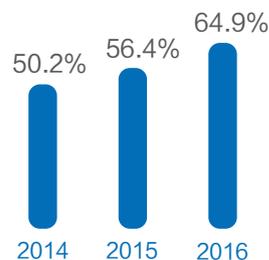
Exploration and Production

- Sinopec Corp. is a large Chinese petroleum and petrochemical enterprise.
- At the end of 2016, our proven petroleum and natural gas reserves totaled 1,552 million barrels and 203.3 billion cubic meters respectively.
- The national shale gas demonstration zone, Sinopec Fuling shale gas field with a production capacity of 7 billion cubic meters annually, is the largest shale gas field in the world outside North America.
- Our main oil and gas assets are located in China and in our four overseas projects in Kazakhstan, Russia, Colombia and Angola.

Chemicals

- Sinopec Corp. is the first in China and fourth globally in ethylene production capacity. We supply consumers with necessities for daily living. Our main products include synthetic resin, synthetic fiber and synthetic rubber.
- We produced 11.06 million tonnes of ethylene in 2016.

Declared dividends



Dividend payout ratio (according to ASBE)

- Sinopec Corp. has the capacity and technology to build refining facilities at the ten-million tonnage level, and ethylene facilities at the million tonnage level.

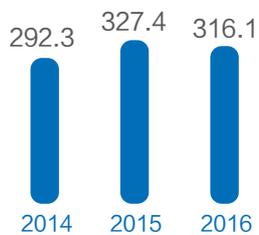
Technology R&D



International Trade

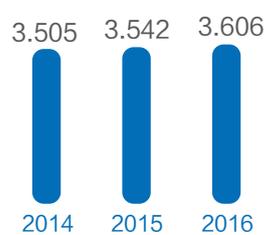
- Sinopec Corp. owns 13 wharfs of more than 200,000 DWT, with a discharge capacity of 326 million tonnes. In 2016 we imported 206 million tonnes of crude oil.

Taxes and fees paid



Taxes and fees paid (RMB billion)

Social contribution per share



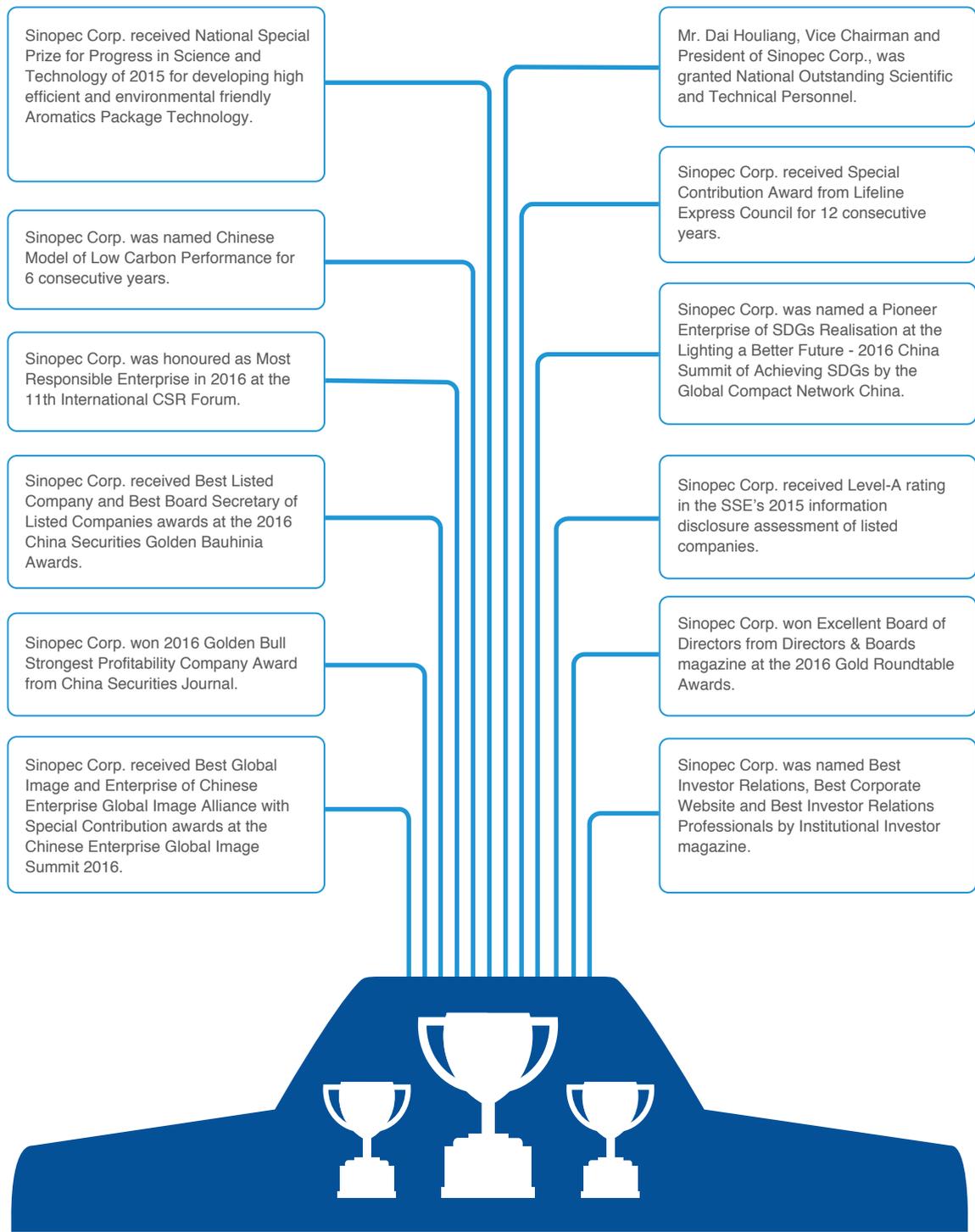
Social contribution per share (RMB/share)



Social contributions (RMB billion)

Calculated according to the definition in the Guideline on Environmental Information Disclosure by Listed Companies of SSE.

2016 Honours



Material Issues

The trust and support of our stakeholders is a fundamental driver of Sinopec Corp.'s approach to sustainable development. We make progress through our partnerships with all stakeholders jointly pursuing core values such as prosperity, democracy, civility, harmony, freedom, equality, justice, the rule of law, patriotism, dedication, integrity and friendship. We promote a sustainable development strategy based on economic growth, protecting the environment and building a harmonious society.



We have aligned the business operations with 17 Goals (SDGs) in the 2030 Agenda for Sustainable Development (UN 2030 Agenda) and Global Opportunity Report 2016 issued by UNGC. Considering all the above material issues as well as the features of the energy and chemical industry, we outline the following twelve material issues that we shall report.

Sustainable development management	P08	Occupational health	P38
Risk management	P17	Energy conservation and emission reduction	P24
Innovation	P18	Addressing climate change	P25
Shareholder returns	P04	Biodiversity	P27
Product quality and service	P14	Human rights protection	P38
Safety production	P24	Social contribution	P40

Material issues

Putting people first laying a solid foundation for sustainable development

Sinopec Corp. executes its responsibilities as a global corporate citizen by conducting business that serves society. We integrate a people-oriented approach to corporate culture and practices.

Our diversified portfolio includes energy resources such as crude oil and natural gas, refined oil products such as gasoline, diesel and kerosene, and thousands of brands and petrochemical products that contribute to social and economic development. Our products serve hundreds of millions of families.



We operate honestly and transparently and pay taxes in accordance with the law to contribute to national revenue and boost social development and prosperity.



We commit to realising sustainable development of the company and upholding stable and continuous dividend pay-out policy to return to shareholders all over the world.



On the way of achieving the company's sustainability, we focus on leading and cooperating with our partners along the upstream and downstream industrial chain, aiming to achieve win-win results.

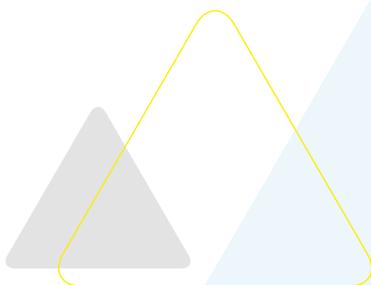


We provide a good working environment and optimise career development channels that show respect for our employees and promote decent work.



We engage in local communities by safeguarding community safety, protecting the environment, participating in local economic development projects, carrying out poverty alleviation programmes and sharing our corporate development with local residents.





In 2016, we strengthened our core values by integrating sustainability and construction of a green and efficient enterprise into our corporate culture. This reiterates the importance of putting people first, operating responsibly, upholding integrity, pursuing excellence, advancing innovation and achieving win-win developments.

People

We put people first when developing our company.

Guided by the needs of our clients and our stakeholders, we focus on providing first-class products and services. Sinopec Corp. employees drive our company and we work hard to provide them with a good working environment and career development opportunities for a better life.

Responsibility

We are committed to both bettering people's lives and contributing to society.

Our employees carry forward the enterprise spirit of "loving our country and revitalising the petrochemical industry" and are committed to helping the company grow. We contribute to our host countries by fulfilling our corporate responsibility and focusing on economic, legal and social betterment.

Integrity

We honour our commitments and comply with laws and regulations.

We view integrity as the cornerstone of our growth, and operate in a law-abiding, honest and disciplined manner to build a reputation that is grounded in respect.

Excellence

We strive for excellence in everything we do.

We advocate to work with prudence and meticulous attention to detail. We pursue precision in all our business activities, be it production and operations, or management and technology, and we always strive to improve our approach to management.

Innovation

We are striving to become a benchmark company for innovation in our industry.

We follow an innovation-driven strategy that pushes our development and growth forward, and we incorporate forward-thinking strategies that encourage technological innovation, improved management and a cutting-edge business model, to build an outstanding enterprise.

Collaboration

We believe collaboration enables common growth and is mutually beneficial to those involved.

Our business activities are based on the principles of inclusiveness, sincere cooperation and mutual harmony. We respect international and regional laws, regulations and cultures. We strive to provide value to our customers. Our long-term goal is to achieve win-win cooperation and common prosperity with all stakeholders.



Deepening reform improving quality and efficiency to upgrade development

Our challenges and opportunities

UN 2030 Agenda calls for ensuring access to affordable and clean energy, promoting economic growth, and reducing corruption and bribery. The global economic recovery remains weak and new economic growth points have not yet been formed.

China has been tackling these challenges by transitioning to a "new normal" that accumulates economic power through a new development model and economic structure. This means that China is primed to grab new strategic opportunities. In 2016, China's economy maintained a growth rate of 6.7 percent, and was among the front-runners in economic growth in the world.



Ensure access to affordable, reliable, sustainable and modern energy for all



Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all



Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

Our action

In 2016, facing severe challenges from low oil price and a complex and volatile operating environment, our management teams guided the staff and made significant achievements by overcoming these challenges. We implemented value-orientation and integrated resource allocation strategies, improved the quality and efficiency of our operations and transformed our development model. The new approach injected momentum into our development, and new advantages to our upstream, midstream and downstream operations, resulting in solid performance to contribute to the physical economy.

Revitalising the physical economy through supply-side structural reform

In 2016, Sinopec Corp. focused on improving the quality and profitability of corporate growth, by promoting supply-side structural reform. We also took measures to transform our development model and structure. Our commitment to market development, optimisation, cost reduction and risk control resulted in increased productivity.

Upstream segment We reduced high-cost crude oil production and improved the efficiency. Efficient exploration and extraction was our top objective and we improved our production of natural gas to form strategically viable operations. We advanced the construction of Fuling shale gas field which has a production capacity of 7 billion cubic meters annually. We made improvements to the natural gas production, trade, warehousing & transport, and sales, to provide clean fuel to regions in the Yangtze River economic belt. Our engagement with social investors contributes to our diversified operations in the Sichuan to East Gas Pipeline Project, which provides momentum and energy for the future development of the pipeline.



Mr. Dai Houliang, Vice Chairman and President, inspects the Company's subsidiary.

Refining segment Our four refining and chemical bases in Maozhan, Zhenhai, Shanghai and Nanjing have made significant progress, with the Maozhan already implementing its Zhongke Refinery and Petrochemical project. We also accelerated the refined oil quality upgrading and supplied gasoline of National V emission standards across the country. We have also adjusted our product structure and boosted production of much-needed gasoline, especially high-grade products.

Chemicals segment We have optimised the structure of production and operations, raw material and products, and shifted our focus to high-end and fine chemical engineering. We have increased our ratio of high-end products made from the Three Synthetic Materials, enhanced the R&D of new products and improved the integration of production, sales, research and application to provide comprehensive solutions for customers.

Marketing segment We have kept a steady increase in sales volume and retail scale, expanded our supply of high-grade petroleum products, improved the marketing network, and promoted the construction and operation of gas stations which increased the sales volume of CNG by 25%. The non-fuel trade business, as a new growth point, grew 41% in the turnover, providing abundant products and quality service to society.

We have seen a rise in development opportunities from the "Internet Plus" and built e-commerce platforms such as EPEC and ChemEmail, which enhanced resource allocation capacity, customer services and risk prevention and control.

Case study



Developing Sinopec refining and chemical bases

During the period of Sinopec 13th Five-Year Development Plan, we will build four competitive world-class refining and chemical bases in Maozhan, Zhenhai, Shanghai and Nanjing, all located in the Yangtze River Delta Region and the Pearl River Delta region. The four bases uphold our principle of pursuing win-win cooperation with local regions, and meeting petroleum product quality upgrading requirements. The bases will continue to upgrade our production of chemical raw materials, and optimise the product structure, quality and efficiency to facilitate growth in medium and high-end businesses. We will use the most advanced international production techniques and standards for energy conservation and emissions reduction when building these bases. Our goal is to promote base-centered and integrated refining and chemical operations in China that contribute to local and national economic growth, transforming and upgrading the Chinese petrochemical industry.

Today, the preliminary stages of construction at Zhenhai, Shanghai and Nanjing bases focus on tapping the potentials of existing units. The Maozhan base has accelerated and upgraded its construction, and on December 20, 2016, the Zhongke Refinery and Petrochemical project in Maozhan came into full operation.

The Belt and Road Initiative offers development opportunities

Sinopec Corp. actively provides high value-added products to countries along the Belt and Road. Our business covers investment in oil & gas resources, refining & chemical operations, and the international trade of oil & gas products, equipment and materials. During the 12th Five-Year Plan period, we imported 519 million tonnes of crude oil and exported 13 million tonnes of refined oil products. Our import and export turnover for equipment, materials and chemical catalysts amounted to USD 17 billion. We have established long-term partnerships with petroleum and petrochemical companies in Russia, Kazakhstan and Saudi Arabia, developing oil & gas exploration and extraction and oil refining & chemical businesses in these countries. In 2016, we imported 206 million tonnes of crude oil. Yanbu Aramco Sinopec Refining Company Ltd. has come into operation.



Being a comprehensive service provider to all customers

Sinopec Corp. always operates with integrity and in compliance with laws and regulations. We advocate fair competition and obey the laws and regulations such as the *Product Quality Law*. We also comply with local anti-trust and anti-money laundering regulations to prevent bribery, extortion, fraud and money laundering.

Inheriting "craftsmanship" and improving product and service quality

Improving the quality of our products and services is a top priority for Sinopec Corp. We always put "quality first" and comprehensively control and monitor the quality of raw materials procurement, production and sales, which conveys the high quality of our brand. In 2016:

- The marketing company enhanced the quality management of oil sources and completed the construction of laboratory information management system. By monitoring quality data in the procurement, warehousing & transport and sales processes, we ensure "the quality of every drop of oil is monitored". In 2016, more than 20,000 samples were spot checked by authorised organisations with all passed the inspections.
- The chemical sales company focused on making improvements in 2016, designing customised programmes for customers. We emphasise customer service and value creation in all aspects of our sales, production and R&D in order to meet or exceed the demands for products and services.
- The lubricant company took measures to improve the quality of products and services from the source and monitor the entire production process. By executing *Supplier Management Procedure*, the company guaranteed the quality of raw materials. In 2016, the company produced 34,240 batches of lubricants, with 100% passing factory inspections. In spot checks conducted by authorised organisations, 104 batches were inspected with all passed.

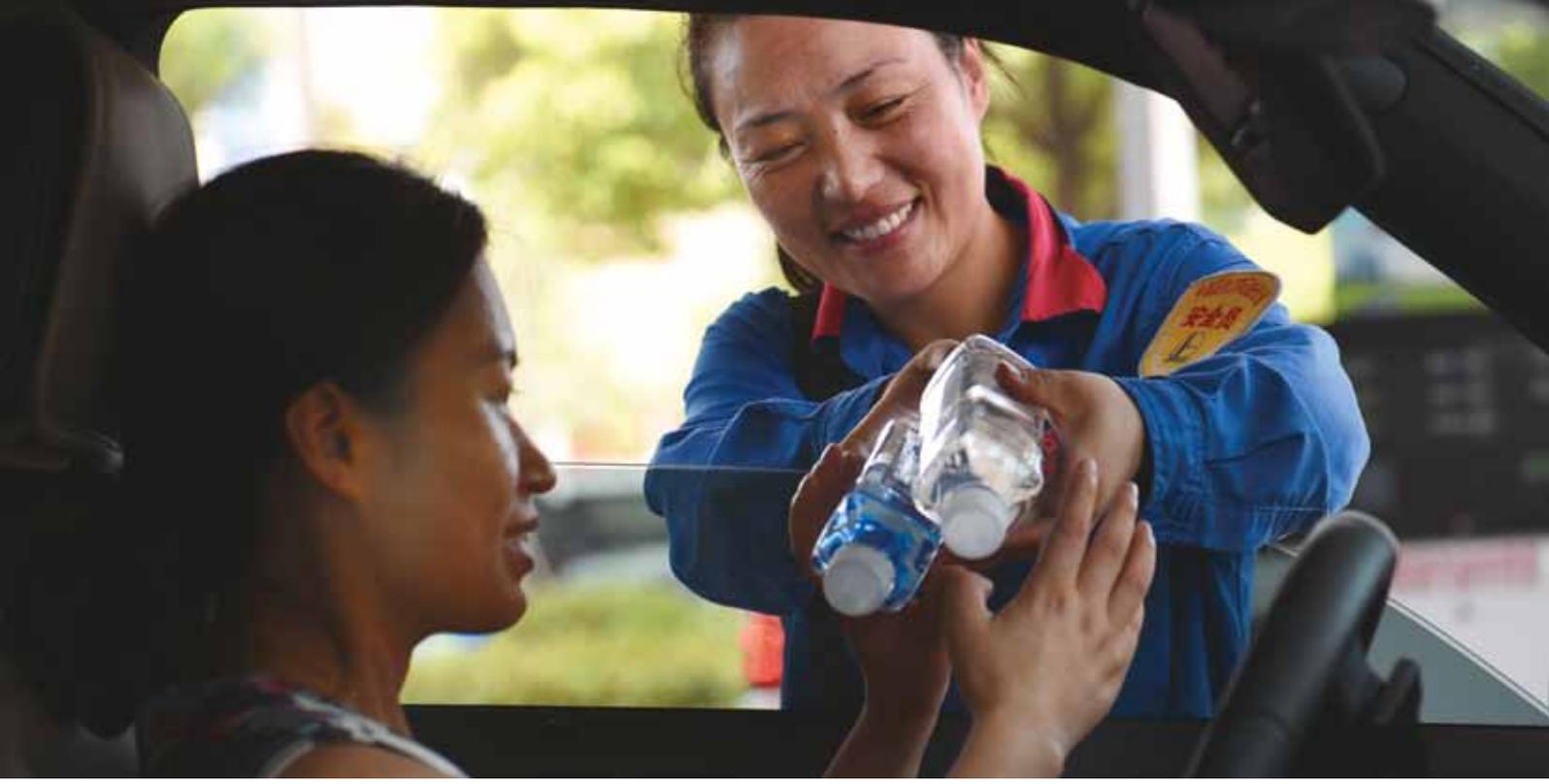


"Craftsmanship" escorts Shenzhou space crafts

On October 17, 2016, the Shenzhou-11 manned spacecraft was successfully launched and docked with the orbiting space lab Tiangong-2. As the exclusive lubricant supplier, Sinopec Lubricant plays a vital role in the control, probing and docking systems of Shenzhou-11.

As the long-term partner of China Aerospace, Sinopec Lubricant has contributed to many projects, including the Two bombs and One Satellite, the Long March Launch Vehicle Family, the Chinese Manned Space Engineering Project, and the Chinese Lunar Exploration Programme. The company designs products for every space mission, providing unrivalled service that lives up to the "craftsman" spirit. Sinopec Lubricant also solves lubricant problems that affect the space programme such as huge temperature differences, ultra-high vacuum (UHV) regimes and intense radiation. Nowadays, these aerospace-grade technologies have been applied in other industries and high quality products for civil use.





Meeting customer needs through diversified operations

Sinopec Corp. has implemented diversified operations, turning gas stations into "comprehensive service stations" and "motor lodges". We integrated our oil and gas refuelling operations, convenience stores, automobile services, fast food and finance business, and achieved non-fuel turnover of 35.1 billion in 2016, a year-on-year increase of 41%.

- We conduct cross-industry cooperation and marketing services with insurance companies, banks and e-commerce companies. The number of insurance outlets that we cooperate reached 5,000 and the number of automobile service stations increased by 573, providing customers with convenient one-shop services.
- We offer products featuring local characteristics. Through our 25,000 nationwide Easy Joy convenience stores, we facilitate the sale of local products through our supply-side operations, contributing substantially to local economic growth. Meanwhile we sell commodities that meet the daily needs of our customers through our demand-side operations.

Non-fuel turnover (RMB)

35.1 billion

Insurance outlets

5,000

Increased automobile service stations

573

Passionately serving customers

In 2016, Sinopec Corp. tracked comments and suggestions from customers in an effort to improve the quality of the products and services. Our marketing company sent 100,000 questionnaires to customers to get feedback on our management and services. Our chemical sales company sent 3,800 questionnaires and analysed feedback, the year-on-year customer satisfaction rate was increased by 1.6%. The customer satisfaction rate of Sinopec lubricant products also achieved a 4.1% year-on-year increase. The above companies are now using the results to optimise their own operations and are implementing measures that will improve their product and service quality.



Indicator	2014	2015	2016
Degree of customer satisfaction with lubricant products (%)	80.8	80.9	85.0
Degree of customer satisfaction with chemical sales (%)	94.3	89.7	91.3
Proportion of customer complaints for lubricant products solved (%)	100	100	100
Proportion of customer complaints for chemical sales solved (%)	100	100	100
Proportion of customer complaints for refined oil products solved (%)	100	100	100

Protecting customer privacy

Sinopec Corp. complies with local laws and regulations and protects customers' privacy. In 2016, we enhanced our customer service inspection system and internet application system, determined safety protection grades, and improved the data centers protection. We also organised operational maintenance initiatives and self-inspected our fuel card system, non-fuel system, computer rooms and core networks. These measures help us ensure providing comprehensive privacy protection to our customers.

Enhancing standardised operations

Advancing the law-based operation

Sinopec Corp. has always operated in accordance with the laws, whether in the reform and development or corporate governance system and operation management. In 2016, we focused on the simultaneous arrangement, deployment and operation of legal, technical and economic verifications, with 23 of Class A fixed asset investment projects being verified as legitimate and compliant with all regulations. While cooperating with the countries alongside the Belt and Road, we inspected the legality of all projects relating to oil & gas exploration and extraction, oil refining and international trade. We also took steps to protect and improve the management of our brand and intellectual property rights.

Improving the auditing and supervision system to prevent risks

Sinopec Corp. conducts regular audits related to economic responsibilities, financial revenues, internal assessments, and engineering investments, improves the efficiency of supervision protocols and business transparency, and boosts corporate governance and standardised operations. In 2016, we conducted 1,053 audits, receiving and implementing 2,333 suggestions from those involved. Our subsidiaries also conducted 613 efficiency supervision projects, which resulted in 3,260 pieces of supervision-related advice.

Promoting anti-corruption and advocating clean governance

Sinopec Corp. complies with all national laws and anti-corruption regulations, and all laws and regulations in countries where we operate. We keep promoting anti-corruption measures and advocating clean governance. We have made improvements to our corporate systems and revised our punishment and prevention mechanism in order to ensure a clean Sinopec Corp.

- We strengthen our supervision measures via patrol inspections, petition letters, facility visits and phone calls. In 2016, we detected 506 problems and proposed 156 corrective suggestions.
- We strengthen anti-corruption and self-discipline rules and regulations study to promote employee compliance. In 2016, we compiled and printed *Typical Cases of Law and Regulation Violation* to increase awareness on the rejection and opposition of corruption.

Risk management

Guided by our comprehensive risk management system and policies, we have integrated risk management into our internal control system and established a comprehensive risk management working group. Relevant departments are responsible for controlling and mitigating strategic and commercial risks across the company, for example safety, environmental protection, finance, legal affairs, anti-corruption and overseas public safety processes. We prepare the report on significant and major risks quarterly. At the beginning of 2016, we analysed both the domestic and foreign macroeconomic environment and predicted trends in the petroleum and petrochemical industries. We categorised external and internal risks and identified preliminary risks that could impact us. Our assessment helped us identify major risks to strategic planning, environmental protection, and safe production, and resulted the creation of contingency plans.



Propelling innovation-driven development creating a dynamic development engine

Challenges and opportunities

UN 2030 Agenda puts forward the requirement to foster innovation. Today, innovation is the primary engine of development. Increasingly, innovative and scientific advancements like artificial intelligence are shifting the economic paradigm and pushing countries and companies to look at new ways to facilitate growth.

China is now transitioning to a "new normal", placing innovation at the heart of the country's development agenda in an effort to accelerate supply-side structural reform and activate domestic power and energy for future growth.



Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

Our action

By implementing the innovation-driven strategy comprehensively, Sinopec Corp. is trying to create a "new engine" for development by utilising innovative technology, products and services, and a new business model.

Improving the quality and efficiency of traditional industries through technological innovation

In 2016, Sinopec Corp. formulated and implemented regulations and specific rules for technological projects, expenditure, achievement transformation & promotion, and incentive mechanisms. Focused on developing our enterprise and contributing to the society, we upgraded our technical operations for the exploration and efficient extraction of oil and gas, optimised refined oil products, implemented measures to lower the cost of basic chemicals, improved high-end chemicals proportion, and produced quality products. In 2016, Sinopec Corp. promoted a batch of new technologies for lowering the ratio of diesel to gasoline, increasing the output of jet fuel and so on. We also developed a series of new flexible and eco-friendly polypropylene products with high strength, and lowered the production cost of chemicals per tonne for three consecutive year.

Indicators	2014	2015	2016
Number of National Technology Invention Awards	2	2	4
Number of patent applications	4,968	5,246	5,612
Number of granted patents	3,011	3,769	3,942
Total number of domestic and overseas granted patents	14,580	18,349	22,291
Investment in R&D (RMB billion)	5.62	5.65	5.93
Number of R&D personnel	9,997	10,964	12,470

Tackling technological difficulties to upgrade the quality of refined oil products

We use technological innovation to upgrade the quality of our oil products and provide society with clean oil products. In 2016, we enhanced our efforts on innovation to tackle the technological problem of solid acid alkylation, a technology used in the production of clean oil products and one of the toughest problems in the petrochemical industry. We upgraded the quality of our gasoline and diesel for vehicles to meet the National V emission standards. Our subsidiaries upgraded their facilities and units for desulfurisation and hydro-desulfurisation of gasoline to provide Beijing with oil products that meet Beijing VI emission standards and that has been supplied for Beijing since March 1, 2017.



Boosting integration of industrialisation and informatisation to upgrade the traditional manufacturing industry

"Made in China 2025", "Internet Plus" and big data technology contribute to the integration of industrialisation and informatisation in China, driving our traditional manufacturing industry towards high-end, intellectual and green development.

- Our intelligent pipeline management system is put into operation, realising the digitalisation and visualisation of long-distance and interplant pipelines more than 30,000 kilometres. This helps us quickly respond to natural disasters, eradicate hidden problems, and improve the delicacies of varying management levels.
- We embarked on research into the Petrochemical Industry Intelligent Plant Standards and finalised construction plans of intelligent oil and gas field. The utilisation rate of advanced control systems and the automated collection of production data from four intelligent pilot enterprises increased by 10% and 20%, respectively, which enhanced our safety and environmental protection, energy conservation and emissions reduction, efficiency and cost reductions.

Intelligent plants to be constructed during the 13th Five-Year Plan period

10

Operational costs to be lowered

20%

During the 13th Five-Year Plan period, we will construct three to five demonstration oil and gas fields and 10 intelligent plants. We will conclude construction of the intelligent pipeline system, lower operational costs of intelligent oil and gas fields and intelligent plants by 20%, and increase labour productivity by 20%. We will also realise a 6% decline in comprehensive energy consumption per RMB 10,000 output value of intelligent plants.

Establishing an informationalised business ecosystem

By integrating customer data with our material purchase system, chemical sales, lubricant, and fuel oil, we have established uniform e-commerce and customer relation management (CRM) platforms, including EPEC (for chemical product purchase), ChemEmail (for chemical product sales), Lubricant CRM, Fuel Oil Ship Network, and Sales CRM. We have constructed a corporate cloud platform to provide cloud resource services, and established customer, product, and order centres—along with other sharing service platforms—which provide technical support for the establishment of a customer big data analysis model, the exploration of potential customers, and the implementation of precision marketing.



Pursuing green development constructing a safe and green enterprise

Challenges and opportunities

UN 2030 Agenda calls for making cities and human settlements sustainable, combating climate change, improving energy efficiency and protecting eco-environment. Global citizens are increasingly aware of the importance of mitigating negative impacts on safety, water resources, air quality and the environment.

The Chinese government has proposed to construct a clean, low carbon, safe and highly efficient modern energy system, and focused on guaranteeing the safety of people's livelihoods. China's 13th Five-Year Plan also states that it is important to "enhance the protection of ecological environment, increase resource utilisation rate, and provide more quality ecological products for the people". The aforementioned presents higher requirements for enterprises to guarantee safe production and environmental protection.



Ensure availability and sustainable management of water and sanitation for all



Ensure access to affordable, reliable, sustainable and modern energy for all



Make cities and human settlements inclusive, safe, resilient and sustainable



Ensure sustainable consumption and production patterns



Take urgent action to combat climate change and its impacts



Conserve and sustainably use the oceans, seas and marine resources for sustainable development



Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss





Our actions

Maintaining safe and stable production and operation

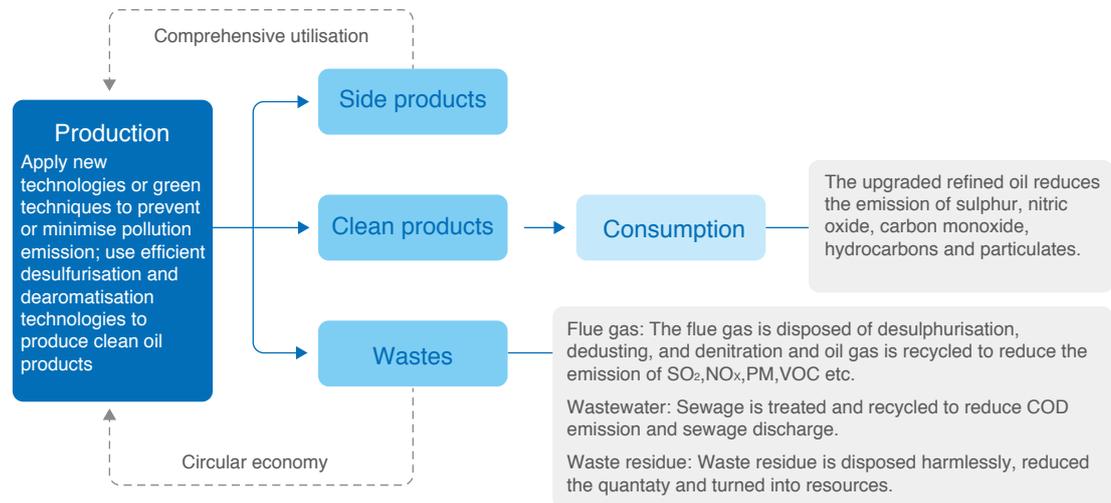
Sinopec Corp. complies with laws and regulations including the *Safety Production Law* and adheres to the idea that "development must not come at the expense of safety". We have implemented HSE management system, designed a safety index appraisal system, and built an emergency management and command system. We also enhanced our identification, prevention and control of risks, and have taken steps to assess and manage potential safety hazards. We regularly introduce initiatives to increase employees' awareness on safety and to prevent accidents and protect our employees and local residents.

In 2016, Sinopec Corp. cleared safety hazards detected in all oil and gas pipelines and promoted hazard detection and elimination of the tank fields. We enhanced communication with governments and pipeline patrol inspectors to prevent overstocks from occurring. In 2016, we invested RMB 290 million in safety training. We organised training programmes on occupational health and safety and public safety for safety directors and safety inspectors. We promoted safety emulation training measures and have constructed a training camp for frontline workers. We also held public safety trainings for overseas employees to improve their risk response capability.

Responding to climate change and promoting environmental protection

Sinopec Corp. implements the green and low-carbon growth strategy and obeys *Environmental Protection Law* and other related laws and regulations. We integrate energy conservation, emissions reduction and carbon reduction management systems to tackle climate change and promote clean production and environmental protection initiatives to build an efficient and green enterprise. In 2016, we continued to support the Global Compact Network China and participated in organising the SDGs-China Summit, playing a key role in encouraging Chinese enterprises to follow a sustainability roadmap. We have enhanced our management system and revised regulations focusing on the pollution prevention of industrial wastewater, flue gas and waste residue, and have upgraded our environmental monitoring management and environmental contingency management systems. We have set specific 2020 goals for energy conservation, environmental protection and carbon reduction. Our investment in environmental protection measures was approximately RMB 6.4 billion.

Sinopec clean management of production and consumption processes



Combating climate change

Tackling climate change requires social attention and participation. Sinopec Corp. is transitioning to lower-carbon economic model and has integrated carbon reduction measures to its production and operations.

Substantially developing clean energy

We promote natural gas exploration and extraction to improve our output. Fuling shale gas field has built up an annual capacity of 7 billion cubic meters.

Carbon capture and methane recycle

We continue to implement CO₂ flooding pilot tests and promote methane recycling from associated gas, test oil and gas, oil gathering and transportation systems and gas stations. In 2016, we injected 300,000 tonnes of CO₂, which resulted in 50,000 tonnes crude oil, and recycled 200 million cubic meters of methane.

Promoting the commercialisation of bio-jet Fuel

Following the first bio-jet fuel-powered commercial flight

in 2015, we started to build commercial production unit with an annual capacity of 100,000 tonnes in 2016.

Enhancing carbon management

In 2016, we continued to conduct carbon accounting and verification. We participated in carbon emission trading, built a trading team, upgraded carbon assets management, and optimised carbon trading strategies, facilitating environment protection and resource conservation. We finished the carbon footprint research on asphalt, aviation kerosene, lubricant, and caprolactam, and finalised carbon quota distribution baseline research for products such as ethanol, arene, pure terephthalic acid and ethylene glycol. Shengli Oilfield waste heat recovery project applied for CCER, reducing carbon emissions by 5,000 CO₂-equivalent tonnes per year.

Case study



Action Plan of Transporting Natural Gas to Yangtze River economic belt

We promote natural gas development and plan to double the annual production capacity of 40 billion cubic meters by 2020. We have constructed important resource bases along the Yangtze River economic belt and have also accelerated the construction and connectivity of our pipeline network facilities. Through our natural gas pipeline from Sichuan to East China, clean energy will be continuously transported to the Yangtze River economic belt, benefiting more than 70 cities in six provinces and two municipalities, covering over 200 million residents.



Case study



In October 2016, we concluded our three-year Blue Sky and Clear Water environmental campaign. During the campaign, we implemented 870 projects, investing RMB 20.92 billion. It's estimated that additional 3,400 tonnes of COD, 4,900 tonnes of ammonia nitrogen, 42,000 tonnes of sulphur dioxide, 71,000 tonnes of nitrogen oxide and 25,000 tonnes of VOCs will be reduced annually.

Managing pollutant emissions

Sinopec Corp. has improved the production techniques, processes and equipment to control pollutant emissions. We recycle flue gas, wastewater and waste residue to bolster circular economy. In cases where wastes cannot be recycled, we use harmless processes to mitigate any adverse impact on the environment.

Reducing wastewater discharge

In 2016, our subsidiaries upgraded and revamped sewage treatment plants, improving their treatment system, introducing an anaerobic denitrification function and installing Advanced Oxidation Process (AOPs) equipment. In areas where water resources are scarce, they installed ancillary sewage recovery equipment and hyperhaline water treatment equipment to meet a zero discharge rate. Our discharge of sewage meets relevant requirements, with a 3.86% decline in COD emissions and a 3.48% decline in ammonia nitrogen compounds.

Reducing flue gas emission

In 2016, we enhanced our prevention and treatment of air pollutants. We strengthened the reconstruction of desulphurisation and denitrification by upgrading catalytic cracking, sulphur recovery units, the heating furnaces and coal-fired boilers in our refining subsidiaries to meet ultra-low gas emission requirements. As a result, sulphur dioxide and nitrogen dioxide emissions were reduced by 4.07% and 4.53%, respectively.

We formulate a comprehensive treatment plan for volatile organic compounds (VOCs). The refining subsidiaries treat flue gas by focusing on the storage and blending of organic materials and the loading, wastewater recovery and treatment, and industrial controlled emissions. We use a range of environmental management modules including online monitoring and statistical analysis, and leakage detection and recovery modules to achieve goal. Our sales subsidiaries have also been promoting the revamp of oil depots and service stations to reduce VOC emissions.

Reducing waste residue disposal

In 2016, we enhanced our waste residue treatment and disposal. Our oilfield subsidiaries integrated methods to prevent slurry falling onto the ground in the process of well drilling, and recycled waste slurry from drilled wells in ecologically vulnerable areas. The detritus was utilised for general hardening, brickmaking and hardening roads, realising harmless treatment and resource reuse. The refinery and petrochemical subsidiaries also implemented a sludge drying project. 100% of our waste residue meets all relevant requirements after treatment.

Protecting biological diversity

Sinopec Corp. complies with all laws and regulations covering the protection of biological diversity such as the *Environmental Protection Law*. In construction projects that may affect the environment, we evaluate their impact by assessing ecological reserves, forests and wetlands as well as fauna and flora, and formulate measures to mitigate or eliminate their impact during the preliminary project appraisal process, construction and operation. In 2016, our subsidiaries assessed biological diversity in major projects, analysed the impact on the fauna and flora in Ecological Red Line Areas, forests and wetlands, and then implemented the environmental friendly project plan.

Case study



When our natural gas branch deployed the Qingning Gas Transmission Pipeline Project (a major gas transmission pipeline connecting Shandong and Jiangsu province with about 553 kilometers), they analysed fauna and flora in national reserves and 9 city and county-level reserves, 7 water conservation districts, 51 ecologically vulnerable rivers, Ecological Red Line Areas, and areas within 500 meters of the project. They then conducted a thorough examination of the pipeline routes, looking at the width of the construction work belt and assessing the construction period to determine which approach would most minimise adverse impacts on the natural environment, vegetation, and wild animals.

Water conservation districts

7

City and county-level reserves

9

Ecologically vulnerable rivers

51

The Baling branch organises community teen volunteers to participate in the Finless Porpoise protection activities.



Saving energy and reducing consumption

Energy conservation projects

418

Energy saved

565,000

tonnes of standard coal

Sinopec Corp. focuses on saving energy and reducing consumption in all business operations. Seven refining and petrochemical subsidiaries have completed their energy management systems and integrated it with the laboratory information management system, the production information management system, and the customer relations management system. By examining the cost of energy in our combustion systems, quantifying the pollutants we discharge and measuring our carbon dioxide emissions, we can make economic benefits appraisal, assess the environmental impact of our activities and optimise our combustion structure. In 2016, we reduced our consumption of comprehensive energy by 1.59% per RMB 10,000 of production value.

Enhancing energy conservation monitoring and advancing Energy Conservation Plan

In 2016, we enhanced measures to monitor our energy utilisation rate in large-capacity machine units and power equipment in refineries and petrochemical subsidiaries. We upgraded the water injection systems, oil pump systems and transmission systems in all oilfield subsidiaries. We also constructed an energy benchmarking system. Our subsidiaries continued to reduce their carbon and pollutant emissions by implementing energy conservation measures at the source. In 2016, we implemented 418 energy conservation projects, saving the equivalent of 565,000 tonnes of standard coal.





Case study

Zhenhai Refinery and Petrochemical Branch promotes energy efficiency

The Zhenhai Refinery and Petrochemical Branch ("Zhenhai Refinery") formulated a three-year rolling plan for energy conservation projects and implemented Total Productive Maintenance (TPM). 216 proposals were submitted to the management, covering daily operations and management, operational management of energy-saving facilities, electricity management, and steam system operation management. After implementing the suggestions Zhenhai Refinery saved the equivalent of 71,000 tonnes of standard coal. Zhenhai Refinery ranked first in an "Energy-efficiency leaders" competition held by China Petroleum and Chemical Industry Association that examined the comprehensive energy efficiency of ethylene products. According to a global ethylene unit appraisal report released by the Solomon Performance Appraisal Institution, the performance of ethylene unit at the Zhenhai Refinery ranked the first top group in the world.

Enhancing water resource management

In 2016, we enhanced the analysis and examination procedures for water resources, water intake, water utilisation and water saving measures, and sought to simultaneously design, construct and operate industrial water saving facilities in all major projects. We enhanced water saving management across our entire production process, and implemented water utilisation plans and target-based management. We also improved our industrial water recycling rate and wastewater (sewage) recovery rate and reduced fresh water consumption. The demand for industrial water was down by 1.1% year-on-year.

Decline percentage of industrial water consumption

1.1%



中国石化 SINOPEC

Advancing openness and win-win cooperation promoting sustainable growth in the value chain

Challenges and opportunities

UN 2030 Agenda calls for global cooperation and joint efforts. Economic globalisation provides strong power for global economic growth and promotes commodity and capital flows as well as S&T and cultural progress. However, due to the impact of the global economic downturn and increasing trade protectionism, the demand for more openness, win-win cooperation and mutual development is increasing for all countries.

China has implemented Going Global strategy and proposed the Belt and Road Initiative to respond to these calls, aiming to build an open global economy that promotes the liberalisation of trade and investment and facilitates further openness, communication, integration and development.



Strengthen the means of implementation and revitalize the global partnership for sustainable development

Our actions

Sinopec Corp. provides services that impact people's livelihoods. We proactively implement the open cooperation strategy, stick to the integration with local economy for win-win cooperation, steadily promote diversified ownership reform, and strengthen cooperation with our partners including contractors and suppliers in the value chain, aiming to jointly propel the sustainable development.

Building an open, just, transparent and honest value chain

Sinopec Corp. advocates the pursuit of shared values with its contractors, suppliers, purchasers and operators. By promoting the use of our construction project e-trading system, we can monitor our business operations, management, trading, assessment and appraisals via an online supervision system. We also implement *Business Ethics Agreement* which shall be signed at the same time with the business contract.

Our self-discipline

(excerpt from *Business Ethics Agreement*)

- ▶ Do not claim or accept discounted fee, agency fee, commissions, cashes, securities, payment vouchers, and other valuables offered by Party B
- ▶ Do not claim any expenses from Party B that should be paid by Party A or its individuals
- ▶ Do not seek unjustified interests for spouses and/or children of Party A from Party B

Our position

(excerpt from *Letter to Suppliers by Sinopec Corp.*)

- ▶ Stick to openness, fairness, justness and integrity
- ▶ Promote and will improve the construction of a market credit system, and cooperate with suppliers to create a healthy business ecosystem; forbid commercial bribery and dishonesty
- ▶ Firmly fulfil social responsibilities

Our initiatives

(excerpt from *White Paper of EPEC E-commerce Platform Operation*)

- ▶ Uphold the philosophy of "quality first", "customers first" and "credit first"
- ▶ Comply with the company's integrity incentives and dishonesty punishment mechanism, and create an e-commerce operating environment based on honesty, self-discipline, trustworthiness and mutual trust

Enhancing cooperation in the industrial chain

In 2016, Sinopec Corp. promoted the integration of upstream and downstream industrial chains to achieve mutual development through win-win cooperation. We cooperated with 14 provinces and cities to boost the development of our natural gas business, and focused on the market-oriented reform. We introduced social capital to the natural gas pipeline project from Sichuan to East China. Reforms of marketing company go smoothly. We are pursuing strategic cooperation with the postal industry and shipbuilding industry. We are optimising our refinery and petrochemical operations, building production bases, developing medium and high-end products, expecting to cooperate with our stakeholders.

Assuming our responsibilities with partners in value chain

Sinopec Corp. embraces responsibility culture and promotes quality management and HSE management in its value chain. We require a 100% qualification rate for project contractors, sub-contractors and carriers of hazardous chemicals and conduct credit-based assessments for all contractors and suppliers to assess their safety management. We assess suppliers to ensure they are in compliance with ISO 14000 and ISO 18000 standards, and check whether their safety production contingency management system are qualified. We also evaluate their social responsibility performance and the degree to which they handle emissions and waste disposals. We have built a safety assessment model that covers logistics systems for hazardous chemicals and established KPIs to supervise all carriers' safety mechanism and promote safe operations.

Case study



In October 2016, Sinopec Corp. disclosed information on its oil and gas pipeline facilities and opened its available facilities with remaining capacities to third-parties. Our admittance standard outlines the necessary conditions that must be met in safety, environmental protection, and employee care etc. The main requirements are as follows:

- Respect and agree with HSE concepts of Sinopec Corp, build and improve its HSE management system, and achieve good safety performance.
- Be responsible for employees and put people first; provide premium products and services to customers; be responsible for environment and attach importance to environmental protection.





Promoting growth in the value chain

Sharing resources and promoting growth in the industrial chain

Sinopec Corp. shares information and access to more than 30,000 suppliers with companies in the industrial chain and has built its EPEC e-commerce platform that encourages social enterprises to use online procurement. We present fair and just business opportunities for suppliers through specific standards and fair procedures.

Promoting the identification and prevention of risks in supply chain

Sinopec Corp. keeps track of the supply quality and progress. When major problems are detected, we issue a letter of notification to suppliers and take steps to help them control risks. We have set up goods supply risk warning system to help customers raise awareness on the importance of risk prevention and control. The ability for risk identification and prevention in the value chain has been improved.

Tender and bidding training programs for construction projects

5,278

person times

Supplier training

4,000

person times

Carrying out training sessions in the value chain

Sinopec Corp. holds training sessions for contractors and suppliers to facilitate communication on related laws and regulations, tenders and bidding management and corporate business. Through enhanced two-way communications, we promote the identification of values and help build capacity for economic, environmental and social sustainable development. In 2016, a total of 5,278 person times and over 4,000 person times were recorded in our tender and bidding training programs for construction projects and supplier trainings respectively.

Case study



The Sinopec EPEC e-commerce platform

To meet the needs of companies in supply chain, Sinopec Corp. built the EPEC e-commerce platform to connect the industrial chain and supply chain via the Internet and contribute to national supply-side structural reform.

The EPEC platform utilises procurement advantages accumulated over 12 years to provide tailored services to customers. From quality supervisions to trade dispute settlement, the platform provides one-stop service for customers. The EPEC platform cooperates with financial institutions to help upstream and downstream enterprises gain access to low-cost and convenient financing channels, creating shared value and growth.

By the end of 2016, 32,000 suppliers and 2,821 purchasers (84% are external purchasers) were registered on the EPEC platform. More than 726,000 kinds of goods were available for online sale and 107,000 customers were registered. The total transaction value was about RMB 50 billion with RMB 2.64 billion of purchase amount from external enterprises.

"As a response to the 'Internet Plus' strategy, Sinopec Corp. leverages multiple leading internet technologies to build the EPEC platform. EPEC will build a bridge between resource management, tendering and bidding and quality control, and create an open win-win market environment. As a result, the long-term success of Sinopec EPEC can be guaranteed while collaborative cooperation and mutual benefits can be promoted between enterprises in the supply chain."

Stephen Hinson
China Operations Leader of GE Oil & Gas, EPEC supplier

Total registered suppliers

32,000

Kinds of goods for online sale

726,000

Total transaction value (RMB)

50 billion





Pursuing shared development serving the people for better life

Challenges and opportunities

UN 2030 Agenda calls for closer global cooperation to eradicate poverty and to create opportunities of decent life and equality for all human beings. Today, more than 700 million people suffer from extreme poverty across the world.

China, by pursuing its people-oriented development and taking development-oriented poverty alleviation measures, has lifted 700 million rural poor out of poverty. The country prioritises the right to life and the right to development, and has set a goal to realise the rural poverty elimination and construct a prosperous society by 2020 so as to support people's well-being.



End poverty in all its forms everywhere



End hunger, achieve food security and improved nutrition and promote sustainable agriculture



Ensure healthy lives and promote well-being for all at all ages



Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all



Achieve gender equality and empower all women and girls



Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

Our actions

Our principles for human rights

Sinopec Corp. complies with all related laws and regulations on human rights and the *National Human Rights Action Plan*. We forbid child labour and forced labour, and oppose discrimination in any forms. We provide employment opportunities, protect employees' rights and interests, provide social insurance and ensure democratic negotiation to promote decent work. Sinopec Corp. values communication with local residents in communities where it has projects and actively participates in public welfare services to benefit the people.

Protecting employees' rights and interests, and promoting employees' growth

Protecting employees' rights and interests

We have established the workers congress system and labour union committee. We have formulated a consultation and negotiation system between employees represented by the labour union and the company to protect employees' rights and interests. In 2016, our subsidiaries collected 5,938 proposals and registered 3,151 cases with the employee congress. 1,417 proposals were related to production and operations, reform and corporate management, 822 were related to salary and welfare, and 586 were related to safe operations and harmonious development. All of the proposals received a quick response from the subsidiaries.

Creating a favourable labour relationship

In accordance with the principles of "equality, free will, and unanimity through consultation", Sinopec Corp. signs labour contracts with its employees and complies with the terms of the labour contract. We value employee diversity and gender equality. We create a favourable working environment for our employees, supporting their rights to regular work, rest and vacation. Our salary distribution system mainly ensures that salaries are paid in accordance with job performance, and we advocate equal pay for equal work. We have created a multi-level system that integrates our social guarantee system, commercial insurance, and enterprise supplementary insurance policies.

Enhancing occupational health management

Sinopec Corp. emphasizes the occupational health of its employees and stipulates that occupational disease prevention facilities must be designed, constructed, and put into production and operation simultaneously with the company's main projects. We employ occupational health management professionals and provide capacity buildings for them. Our subsidiaries monitor hazardous factors such as dust and noise at operation sites annually, assess the status of occupational diseases every three years, evaluate the impact and risk of occupational diseases and implement prevention measures. We keep records on our employees' occupational health, and regularly organise health examinations. We also perform timely examinations, evaluations and work shifts and provide disease diagnosis and medical treatment for our employees when signs of disease are detected. Our health training sessions are designed to increase employees' knowledge on health protection and introduce health and hygiene knowledge.

Career development and training

Sinopec Corp. has built diversified growth channels for its talent teams, including operations management personnel, technical professionals and technicians. In 2016, our corporate headquarters trained 4,505 person times in high-level personnel training. In order to enhance the new managers' overall quality and capacity of performing their duties, we carried out series of training programmes, including training for managers and seminar on innovation and development. The total training for senior management personnel reached 1,514 person times. We also organised 1,922 person times online theme trainings on "the new development philosophy" for managers. In order to solve the key problems in R&D and production, we held workshops for leading experts in the field of oil and gas exploration and experts in oil refining field, and seminar on "customer value-oriented" marketing capability. The training for high-level professionals and technical personnel reached 905 person times. Themed with exemplary role, skill inheritance and improvement, we also carried out chief technician training and skilled talents training in 5 types, including oil-gas gathering and transporting, catalytic cracking, etc., and 164 people get trained. Based on the actual situations, all subsidiaries carried out diverse trainings in different levels and fields, with off-job training 898,000 person times and various job trainings 1.086 million person times, including basic skill training. We continued to promote the construction of job training course system, developing about 500 cases. We also improved our remote training system and set up courses on macroeconomics, operations management, job skills, safety, environmental protection and psychological health and related case studies.

Off-job training

898,000
person times

Job training

1.086
million person times

Cases

500

Case study



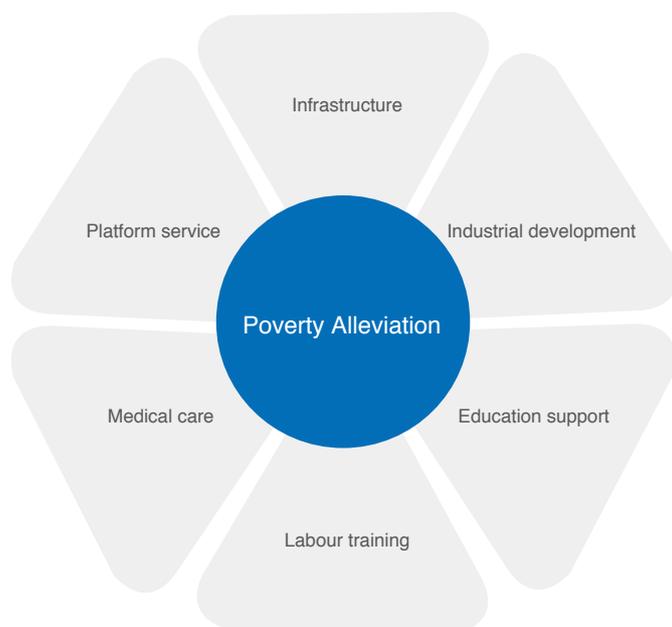
Training sessions for specialists of catalytic cracking unit

In 2016, Sinopec Corp. organised training classes for specialists in catalytic cracking industry, hiring 10 academicians and more than 30 experts to give lectures. After a year of study, the training class formulated one unit data brochure, one collection of cases, 4 special research reports and 36 special reports. While developing talent and improving our occupational capacity, we also developed theoretical and practical applications for the petroleum refining industry.



Valuing communication and serving society

We understand that our growth does not operate in a vacuum and that we must strive to positively impact the public. To this end, we implement measures to help needy people. Our targeted poverty alleviation measures contribute to poverty relief, and we also participate in public welfare services, care for disadvantaged people, and offer services that help those in need solve problems. We also take the initiative encouraging other enterprises to contribute to sustainable development.



Implementing targeted poverty alleviation

We uphold the principle of "blood-making style" and "blood-transfusion style" poverty alleviation, and help the needy people improve their capacity for sustainable development. In 2016, Sinopec Corp. paid great attention to targeted poverty alleviation, and persisted in targeted objects, targeted project planning, targeted utilisation of funds, targeted measures based on households, targeted personnel based on village and targeted poverty elimination effect. Focusing on poor villages and households, we implemented targeted poverty elimination plans in rural industry development, infrastructure construction, labour output trainings, poverty relief and education assistance. We also increased our investment, enhanced capital management and supervision protocols to ensure the effectiveness of the plans.

In 2016, Sinopec Corp. invested RMB 106.66 million in poverty alleviation, with RMB 105.45 million in targeted poverty alleviation. We helped 27,775 registered people out of poverty and aided 2,797 students. The headquarters of the company continued to implement Tibet and Qinghai aid programmes, and invested RMB 24.35 million in 8 projects.

In 2017, we will continue to enhance our efforts on targeted poverty alleviation and efficiency improvements. We will implement the "Five Batches of People" project to eradicate poverty by developing production, relocation, ecological compensation, education, as well as by guaranteeing basic living standards.

Investment in poverty alleviation (RMB)

106.66 million

Investment in targeted poverty alleviation (RMB)

105.45 million

Investment in Tibet and Qinghai from the headquarters (RMB)

24.35 million



Case study



Promoting poverty alleviation and lighting the Tibetan region

Baigoin County is one of the poorest counties in Tibet with 30% of local farming households living under the poverty line.

To alleviate poverty in the region, Sinopec Corp. has spent about RMB 300 million in Baigoin county, and implemented 111 assistance programmes to help them develop the local economy.

- Constructed a cultural activity centre and farmers' market, paved roads and built bridges to enhance local infrastructure;
- Implemented a housing project to provide cosy and safe houses for farming households;
- Supported education, using one third of its poverty alleviation fund to develop local education facilities and approaches to teaching;
- Developed processing products for livestock and supported the production of Tibetan blankets to develop special industries with Baigoin characteristics;
- Supported professional skills training initiatives to improve the skill level of local residents.

In 2016, Sinopec Corp. invested RMB 15 million to improve the quality of available medical services and hospital facilities. One of our subsidiaries also invested in the Zhuoma Spring drinking water project, which resulted in a 97% year-on-year increase, lifting sales revenue to RMB 730 million, and significantly contributing to regional economic development.

"Sinopec Corp.'s housing project substantially transformed the nomadic way of life in the region, delivering increased profits to the local farming industry, and elevating children's enthusiasm for school."

Nyima Dorjee, Mayor of Khyung Town, Baigoin County

2016 targeted poverty-alleviation work statistics form

Unit: RMB 10,000



Funds

10,056

Investment breakdowns

The investment breakdowns include money raised from the outside of Sinopec Corp. by our employees of subsidiaries in specific poverty alleviation projects.

Poverty elimination through industrial development

Categories of poverty alleviation programmes through industrial development

- Poverty alleviation through agriculture and forestry development
- Poverty alleviation through tourism development
- Poverty alleviation through e-commerce
- Poverty alleviation through assets income
- Poverty alleviation through science and technology development
- Others



208

Number of poverty alleviation programmes



3,842

Investment in poverty alleviation projects through industrial development



12,269

Number of registered poor people lifted out of poverty

Poverty elimination through labour transfer



227

Investment in professional skill training



2,733

Participants of professional skill trainings (person time)



1,589

Number of registered poor people helped with finding jobs

Poverty elimination through relocation



94 121

Number of relocated people helped with finding jobs

Investment in poverty alleviation projects through relocation

Poverty alleviation through ecological protection

- Conduct ecological protection and construction
- Develop ways for ecological protection and compensation
- Set up ecological charity posts
- Others



179

Investment in ecological protection

Poverty alleviation through social projects



2

Investment in coordinated poverty alleviation in East and West China



709

Investment in targeted poverty alleviation programmes



6

Charity funds for poverty alleviation



Goods and materials converted



Number of registered poor people lifted out of poverty

Poverty elimination through education



315

Investment in assisting poor students



2,797

Number of students who received assistance



248

Investment in education resources in poverty-stricken areas



624

Poverty alleviation through health care

Investment in medical and health care resources in poor areas

Guarantee basic living standard



146

Investment in left-behind children, women and senior people



829

Number of left-behind children, women and senior people assisted



44

Investment in assisting poor people with physical disabilities



424

Number of poor people with disabilities assisted

Other projects



220

Number of projects



4,497

Total investment



15,506

Number of registered poor people lifted out of poverty



Implementing "Warm Station" public welfare activity

Assistance provided

400,000

person times

Each year, as the Spring Festival draws closer, hundreds of thousands of migrant workers in the Pearl River Delta take their family members on motorcycles and travel nearly a thousand kilometres to return to their hometown. We implement "Warm Station" public welfare activity to assist those heading home. In 2016, 5,500 volunteers were organised in 218 Sinopec gas stations along eight travel routes, providing assistance of 400,000 person times and repairing more than 10,000 motorcycles.

Sinopec gas stations that provides assistance

218

Driving economic development in operating regions through beneficial and inclusive actions

In 2016, Sinopec Corp. cultivated a range of special commodities in eight provinces, and helped these local products to expand the market through its own channels and drive local economic development. We invested RMB 6.58 billion to improve regional infrastructure, support local education and health care, and improve people's livelihood. We promoted the localisation of employees in overseas operations, providing more jobs to serve local economic growth. Local employees account for more than 97% of our employees in projects in Russia, Kazakhstan and Columbia. The four world-class refining and chemical bases invested by Sinopec Corp. during the "13th Five-Year Plan" period will substantially promote downstream investment and increase growth in the manufacturing industry. Our action will boost local economies and contribute to the national economy which, we believe, will facilitate the stable and healthy development of Chinese economy.



Focusing on community communication and development

Establishing diversified communication channels

Through company activities such as the Sinopec Open Day and "social monitor" surveys, Sinopec Corp. enhances its communication with stakeholders through face-to-face talk, corporate newspaper, sustainable development reports, the official corporate website, Weibo and WeChat.

The Sinopec online museum

In 2016, Sinopec Corp. opened its online museum to the public. The six virtual exhibition halls in the museum integrate the transmission of scientific knowledge, interactive activities and expositions through multimedia and VR technology to facilitate visitors to learn about the petroleum industry and Chinese petrochemical enterprises.

Sinopec Open Day

On April 22, 2016, we held the 5th Sinopec Open Day under the banner of "Promoting a green and simple lifestyle, using resources economically and intensively". In 2016, 5,975 participants attended over 100 activities. Statistics show that 71.28% of participants said they gained a better understanding of Sinopec Corp. and its business operations, while 80.97% said they were willing to invite friends to attend future events. 62.98% said they hoped to become promoters of future activities.

Inviting the public to engage in feasibility studies on major projects

We attach significant importance to our communication with local residents. We invite local residents to discuss how our project will impact the environment when we implement new construction projects. In 2016, we solicited public opinion on four projects through newspapers, online notices, announcements in local communities, and questionnaires and published the feedback on the official website of Ministry of Environmental Protection, gaining support from the local residents.

Outlook

As the ancient Chinese saying goes, "The world moves on in a never-ending process of the new replacing the old." Looking to the future, Sinopec Corp. has formulated the 13th Five-Year Development Plan and has set up development goals and key tasks for the next five years. The Company will continue practicing the five key development strategies focusing on improving our quality and efficiency and upgrading to ensure our stable performance, and we will actively promote supply-side structural reform. While developing approach to the enterprise's sustainable development, the Company commits to providing cleaner oil products and better services, contributing to the society to safeguard and improve people's livelihood, implementing Green Enterprise Action Plan to develop green development advantage and to construct a green and efficient energy enterprise, and working together with partners, aiming to build a highly responsible and respectable enterprise. We will always undertake responsibility of our era and promote sustainability together with our shareholders.



Key Performance

Economic performance

Indicators	2014	2015	2016
Total assets (RMB billion)	1,455.6	1,447.3	1,498.6
Total liabilities (RMB billion)	804.5	657.7	666.1
Revenue (RMB billion)	2,827.6	2,020.4	1,930.9
Net profits attributable to shareholders of the Company (RMB billion)	47.6	32.28	46.42
Dividends declared (RMB billion)	23.83	18.16	30.15
Dividends pay-out ratio (%)	50.2	56.4	64.9
Taxes and fees paid (RMB billion)	292.3	327.4	316.1
Natural gas to barrels of oil equivalent (million barrels)	480.22	471.91	431.29
Crude oil output (million barrels)	360.73	349.47	303.51
Natural gas output (billion cubic feet)	716.35	734.79	766.12
Crude oil processing volume (million tonnes)	235.38	236.49	235.53
Ethylene output (kilotonnes)	10,698	11,118	11,059
Sales volume of refined oil products (10 kilotonnes)	18,917	18,933	19,484
Sales volume of major chemical products (10 kilotonnes)	6,079	6,287	6,996

Safety performance

Indicators	2014	2015	2016
Employee occupational health examination coverage (%)	98.8	98.9	98.9
Health check-up and health file coverage (%)	98.8	98.9	98.9
Number of newly diagnosed cases of occupational diseases	21	6	19
Safety training coverage (%)	91.3	100	100
Number of deaths	8	7	2

Environmental performance

Indicators	2014	2015	2016
Compliance rate for wastewater discharge (%)	99.30	99.77	99.8
Change in industrial water consumption (%)	-1.1	-1.0	-1.1
Change in COD in wastewater (%)	-2.5	-4.14	-3.86
Change in SO ₂ emission (%)	-8.1	-4.84	-4.07
Change in nitrogen oxides emission (%)	-3.9	-4.19	-4.53
Change in ammoniac nitrogen emission (%)	-4.2	-3.97	-3.48
Investment in environmental protection (RMB billion)	5.4	5.8	6.4

Society

Indicators	2014	2015	2016
Total number of employees	358,571	351,019	451,611*
Number of new employees during the reporting period	2,873	2,633	17,897*
Percentage of female employees (%)	29.66	29.46	35.95*
Percentage of female managers (%)	26.41	26.74	12.88*
Collective contract coverage (%)	100	100	100
Social insurance coverage (%)	100	100	100
Annuity coverage (%)	100	100	100
Percentage of employees with membership of labour union (%)	100	100	100
Donations (RMB 10,000)	12,490	11,185	13,288
Number of patients cured under the Lifeline Express Programme	3,006	3,286	3,248
Contributions to cultural education, community development and medical service (RMB10,000)	675,323	675,388	658,378

* In 2016, the Company implemented a reform of the employment system, and the statistical calibre was changed.

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UNGC 10 Principles Checklist

Scope	UNGC's 10 Principles	Sinopec Information Update for 2016
Human Rights	1. Businesses should support and respect the protection of internationally proclaimed human rights; and	P08-09,P23-29,P38-45
	2. make sure that they are not complicit in human rights abuses.	P38,P44
Labor	3. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;	P38
	4. the elimination of all forms of forced and compulsory labor;	P38
	5. the effective abolition of child labor; and	P38
	6. the elimination of discrimination in respect of employment and occupation.	P38,P44
Environment	7. Businesses should support a precautionary approach to environmental challenges	P23-25
	8. undertake initiatives to promote greater environmental responsibility; and	P23-29
	9. encourage the development and diffusion of environmentally friendly technologies.	P25-29
Anti-Corruption	10. Businesses should work against corruption in all its forms, including extortion and bribery.	P14,P17,P32

UNGC Advanced Level Criteria Checklist

Scope	Criteria for UNGC Advanced Level	Sinopec Information Update for 2016
Strategy, Governance and Engagement	Criterion 1: Key aspects of the company's advanced level sustainability strategy in line with Global Compact principles	P02-03,P08-09,P17
	Criterion 2: Effective decision-making processes and systems of governance for corporate sustainability	P08-09,P17,P20,P24-25,P32-33
	Criterion 3: Engagement with all important stakeholders	P07,P08-09,P13,P32-35,P38-45
UN Goals and Issues	Criterion 4: Actions taken in support of broader UN goals and issue	P07,P11,P19,P23,P31,P37

Scope	Criteria for UNGC Advanced Level	Sinopec Information Update for 2016
Human Rights Implementation	Criterion 5: Robust commitments, strategies or policies in the area of human rights	P02-03,P07-08,P38
	Criterion 6: Effective management systems to integrate the human rights principle	P07-08,P24,P38-45
	Criterion 7: Effective monitoring and evaluation mechanisms of human rights integration	P38-45
	Criterion 8: Key outcomes of the human rights integration	P24-29,P39-45
Labor Principles Implementation	Criterion 9: Robust commitments, strategies or policies in the area of labor	P02-03,P08-09
	Criterion 10: Effective management systems to integrate the labor principle	P38-39
	Criterion 11: Effective monitoring and evaluation mechanisms of the labor principle integration	P38-39
	Criterion 12: Key outcomes of the labor principle integration	P38-39
Environmental Stewardship Implementation	Criterion 13: Robust commitments, strategies or policies in the area of environmental stewardship	P02-03,P24
	Criterion 14: Effective management systems to integrate the environmental principle	P24-25
	Criterion 15: Effective monitoring and evaluation mechanisms for environmental stewardship	P16
	Criterion 16: Key outcomes of the environmental principle integration	P24-29
Anti-Corruption Implementation	Criterion 17: Robust commitments, strategies or policies in the area of anti-corruption	P02-03,P17,P32
	Criterion 18: Effective management systems to integrate the anti-corruption principle	P17,P32
	Criterion 19: Effective monitoring and evaluation mechanisms for the integration of anti-corruption	P17
	Criterion 20: Key outcomes of the anti-corruption principle integration	P17,P32
Value Chain Implementation	Criterion 21: Implementation of the Global Compact principles in the value chain	P31-35
Transparency and Verification	Criterion 22: The COP provides information on the company's profile and context of operation	Report Information,P04-07
	Criterion 23: The COP incorporates high standards of transparency and disclosure	P50-51
	Criterion 24: The COP is independently verified by a credible third-party	-

Feedback

Respected Readers,

Thank you for reading this Report. Your opinions and suggestions are important to us and can help us improve the preparation of future reports. Please help us by completing the following Feedback Form and sending it to the following address:

Secretariat of the Board

China Petroleum & Chemical Corporation

No.22 Chaoyangmen North Street, Chaoyang District, Beijing 100728, PRC

Your Information

Name:

Employer:

Title:

Contact Tel:

Fax:

E-mail:

Content	Very good	Good	Fair	Poor	Very poor
This Report completely and accurately describes the significant impact of Sinopec Corp. on the economy, society and environment.	<input type="checkbox"/>				
This Report responds to and discloses information about the concerns of stakeholders.	<input type="checkbox"/>				
The information, indicators and data disclosed by this Report are clear, accurate and complete.	<input type="checkbox"/>				
This Report's logic line, content, text and wording, and layout are well designed.	<input type="checkbox"/>				

Open-ended questions

1. What do you find most satisfying in this Report?
2. What other information do you think should be included in this Report?
3. What suggestions do you have for our preparation of the sustainable development progress report in the future?



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