2017
China Petrochemical Corporation
Social Responsibility Report
Powering Better Life
About This Report

Organizational Scope
This report discloses information about China Petrochemical Corporation (referred to as “Sinopec”, “the Company” or “we”), and all its affiliates in performing economic, social and environmental responsibilities.

Reporting Period
The reporting period is from 1st January to 31st December 2017, with some exception.

Release Cycle
Sinopec CSR report is published annually, and this is the 11th edition.

Reference Criteria and Reliability Assurance
The UN Sustainable Development Goals (SDGs),
Global Reporting Initiative (GRI) Guidelines on Sustainable Report (G4),
Guide on Delivering CSR by SOEs, issued by State-owned Assets Supervision and Administration Commission (SASAC),
Guide 3.0 for the Petrochemical Industry on Compiling CSR Report by Chinese Enterprises issued by the Chinese Academy of Social Sciences, and
Recommended Standards and Implementation Cases on Chinese Enterprises’ CSR by China Business Council on Sustainable Development.

Sources of Information
All information contained in this report comes from the Company’s official documents and statistical reports. The unit for financial data in the report is the Chinese currency, yuan, unless otherwise indicated.

Further Reading
If you are interested, you can get more information or download the report at our website www.sinopecgroup.com.

Rating of this report
Sinopec CSR report has been rated five-star for 6 consecutive years by China Enterprises CSR Report Rating Committee, the highest rank.
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Remaining True to our Original Aspiration and Mission, Powering Better Life

Year 2017 marked the successful convening of the 19th CPC National Congress and full implementation of the 13th “Five-Year Plan”. Under the strong leadership of the CPC Central Committee with Comrade Xi Jinping at the core, Sinopec well implemented Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era and the spirit of the 19th CPC National Congress, studied and implemented the new vision of development, stepped up governance of the Party, sought progress in stability, hit all full-year targets, achieved new progress in sustainable development, and contributed further to the building of a moderately prosperous society in all respects.

In 2017, we actively promoted the revolution of energy production and consumption, securing energy supply to social and economic development and fulfilling people’s aspiration for better life. Utilizing our integrated business strength, we diversified energy supply sources and established a modern energy supply system that is cleaner, less carbon-intensive, safer and more efficient. In 2017, we produced 35.05 million tonnes of crude oil and 25.7 billion cubic meters of natural gas in China, and 43.72 million tonnes of oil equivalent outside China. We delivered 199 million tonnes of oil products and 78.5 million tonnes of chemicals to customers, and our non-fuel business at the gas stations realized 51.95 billion yuan of transaction value. Capacity building in the Fulling shale gas field reached 50 billion cubic meters per year and gas output reached 6 billion cubic meters. Geothermal heating covered 50 million square meters, accounting for more than 30% of the national total in terms of medium to deep sources of geothermal resources. In Xiongian county, China’s first all-geothermal heating town, we were able to cover 4.5 million square meters of geothermal heating, providing a replicable green energy supply roadmap for the Xiongan New Area. We secured oil products supply during major events such as the 19th CPC National Congress, and made every effort to increase natural gas supply in winter. We intensified innovation and integration of industrialization with informatization, and won three first prizes of national technology awards.

In 2017, we further strengthened our effort in targeted poverty alleviation. Adopting a people-oriented approach and utilizing our strengths in network, specialization and technology, we focused on developing local industries, supporting education and healthcare, and building houses for the poverty-stricken areas. Among these measures, developing local industries was our priority. Since 2014, we have been cooperating with a Tibetan company to develop the Easy Joy Zhuoma Spring, a Tibetan glacial water product, leveraging our 26,000 Easy Joy convenience stores to help grow the water industry of Tibet. By the end of 2017, this business had contributed 160 million yuan in tax and fees to the local government and employed more than 500 people. Also in 2017, we sponsored three countieside tourism projects in the counties of Fenghuang and Lusi of Hunan and Dongxiang county of Ganzhu, helping improving people’s living standard. Total input of Sinopec in poverty alleviation in 2017 was 164.19 million yuan, among which 136.26 million yuan was used in designated regions and benefited 35,718 people.

In 2017, we continued with our opening-up and cooperation strategy to facilitate the Belt and Road Initiative. Our flagship projects including UDOM in Russia, the Apache partnership in Greece, and the lubricant plant in Singapore, together with our investment in other Belt and Road countries and regions, played important roles in providing energy and promoting local economic and social development. YASREF, Sinopec’s first overseas large-scale refining and chemical project, has world leading facilities and produces fuels meeting Euro V standards. This project is China’s largest investment in Saudi Arabia and has become a showcase of Sino-Saudi economic cooperation. We are committed to fulfilling our overseas corporate social responsibility while developing overseas business, making tax contributions, creating jobs, protecting the environment and promoting social welfare programs.

In 2017, we further implemented the green and low-carbon development strategy, integrating energy saving, emission cut and carbon intensity lowering. We pushed ahead with clean production, supplying clean and environment-friendly products, and acted as an active promoter of the beautiful China campaign. We supplied fuels of Jing VI in Beijing and fuels of GB V in the rest of China. In addition, we completed GB VI fuels replacement and started supply in more than 2,000 stations in Beijing, Tianjin and 26 cities in Hebei, Shanxi, Henan and Shandong. A passenger flight fuelled with Sinopec No. 1 bio jet fuel completed a trans-Pacific commercial flight, and bio-diesel was supplied to the market, turning used cooking oil into valuable fuel. We also had carbon audit and verification for the 7th consecutive year and accumulated carbon trading volume had reached 9.61 million tonnes with transaction value of 218 million yuan. In April 2018, we announced Green Enterprise Initiative according to which we will build into a clean, efficient, low-carbon, circular and green enterprise. This is by far China’s largest total value chain green enterprise initiative.

In 2017, we upheld the philosophy of creating value together and sharing with the society. We worked with all stakeholders including shareholders, employees, customers, partners, and the community to create values and achieve common growth. EPEC, our innovative industrial products e-commerce platform, was online and operational, and endorsing EPEC to serve BRICS was listed one of the eight key deliverables by BRICS Business Council (BBC) in 2017 and written into the BBC annual report that was presented to BRICS leaders. Our tax and fees contribution totaled 362.2 billion yuan, and we continued to sponsor numerous welfare programs supporting education, disaster relief, the Lifeline Express, gas station that cares, etc. We had donated more than 140 million yuan accumulatively to the Lifeline Express, curing more than 40,000 cataract patients. Easy Joy Zhuoma Spring, the Great Wall Lubricant and other Sinopec brands continued their respective sponsored programs. We also further strengthened communication with the public by holding Sinopec Open Day for the 6th consecutive year.

Making solid effort can help realize our dreams, and working hard will lead to glory. Year 2018 is the beginning year of implementing the spirit of the 19th CPC National Congress, the 40th anniversary of China’s reform and opening-up, and the 35th anniversary of Sinopec. Standing on the new starting point, we shall uphold the great banner of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, rally closely around the CPC Central Committee with Comrade Xi Jinping at the core, remain true to our original aspiration and mission of loving China, revitalize petrochemical industry and powering better life, and strengthen governance of the Party. We shall also give full play to the wisdom and strength of all employees, take concrete steps in developing the company into a world leading energy and chemical major, and contribute to securing a decisive victory in building a moderately prosperous society in all respects and striving for the great success of socialism with Chinese characteristics for a new era.

On behalf of the board and all employees, I would like to thank all our friends for supporting Sinopec in the past, and we look forward to working with you together in the future for the Chinese dream and a better life.
About SINOPEC

Company Overview

China Petrochemical Corporation (Sinopec Group) was incorporated in July 1998 on the basis of the former China Petrochemical Corporation as a state-owned enterprise. Its main businesses span across the hydrocarbon value chain, including oil & gas exploration, production, transportation and marketing; refining and marketing of petroleum products; manufacturing and sales of chemicals, petrochemicals, coal chemicals; petroleum and petrochemical engineering services; technology research, development and licensing. Headquartered in Beijing, Sinopec operates in 73 countries and regions, and has 726,000 employees globally.

Sinopec is committed to its mission of “powering better life” and vision of building a world leading energy and chemical company that fulfills its social responsibility and promotes sustainable development.

No. 3 on Fortune’s Global 500 list

Sinopec is an integrated energy and chemical company with world-class scale and capacity. In 2017, we ranked 3rd on Fortune’s Global 500 list with a revenue of 2,400.3 billion yuan.

largest refiner

We are the world’s largest refiner with an annual refining capacity of 274 million tonnes, producing gasoline, kerosene, diesel and lubricant.

by capacity, largest in aromatics, 4th largest in ethylene and 2nd largest in synthetic rubber

We have established comprehensive marketing and distribution network for chemicals, and we produced 11.61 million tonnes of ethylene, 4.62 million tonnes of paraxylene, and marketed 78.5 million tonnes of chemicals in 2017.

largest service stations operator

We have the most extensive fuels marketing network in China with 30,627 company-owned and operated gas stations.
Corporate Governance

Board of directors and special committees

Sinopec Group is a state owned and wholly invested company. China’s State-owned Assets Supervision and Administration Commission (SASAC) of the State Council exercises the shareholder (investor) rights on behalf of the State. The members of the Board of Directors are selected by SASAC and exercise the rights to decision-making, safeguarding investors’ interests and preserving and increasing the value of State assets. The members of the Supervisory Committee are dispatched to the Company by, and under the leadership of, the State Council. The Committee supervises the performance of the Board of Directors and the executive management team.

The executive management is selected, recruited and assessed by the Board of Directors.

There are six directors in the Board now, including the Company’s President, four external directors and one employee representative director. Under the Board, there are five committees, namely Strategy Committee, Nomination Committee, Remuneration and Assessment Committee, Audit and Risk Management Committee, and CSR Committee, providing consulting and recommendations for the Board.

Rule of law

Improving institutional and system construction

We published a regulation on specifying responsibilities for rule of law and governing in affiliates by key person in charge, setting up clear evaluation system incorporating rule of law and governance.

We formulated a regulation on legal review of project investment, requiring review and opinions by the legal department for M&A, investment and financing, and joint venture opportunities, emphasizing risk management for overseas major businesses.

We completed the pilot test of incorporating risk control into system, processes and job functions, and started wider application. We formulated an opinion on comprehensive implementation of risk control responsibility, a guidance on legal risks checklist and more than ten other guidance documents on environmental protection and other work.

We actively pushed forward education of law, carried out company-wide publicity campaign via distance learning system, held activities on the National Constitution Day on 4th December, improving employees’ awareness of rule of law.

We emphasized on publicity of consumer rights protection, IP rights protection, work safety, environmental protection, etc. through themed sessions and during law-related anniversaries.

Rate of the Company’s rules and regulations, economic contracts and significant decisions being audited:

<table>
<thead>
<tr>
<th>Year</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
<td>100%</td>
<td>100%</td>
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</table>

Risk control

Internal control

The headquarters formulated internal audit handbook and framework for corporate internal control, while the affiliates formulated specific rules and procedures for internal control.

We incorporated “risks list” into internal control handbook, implemented unified identification and review of major risks, formulated response measures to avoid significant loss, and promoted integrated management of internal control and risk management.

We improved risk control system by strengthening compliance and effectiveness, integrating regular risk prevention and control test, monitor and audit, so as to ensure total process control.

We incorporated internal control requirements into ERP system, enabling online and real time monitor at some 20 affiliates.

Risk management

We published procedures for meetings and resolutions of Board of Directors, specifying the Board’s responsibility in overall risk management, establishing a major risk reporting process and improving risk management mechanism.

We organized video training conferences for internal control and risk management, themed training for overseas business risk management, summit for internal projects risks evaluation, etc.

We published regulations including security risks evaluation guidance to help affiliates manage risks.

Internal audit

In 2017, the number of audit projects reached 1,100, monitoring and safeguarding the Company’s operations.

We continued to explore ways of reform in audit, formulated and amended eight regulations including internal audit rules.

We held 6 training sessions for audit chief and projects audit, covering 600 personnel.

In 2017, eight of Sinopec affiliates were awarded the title of national outstanding organizations for internal audit, and four employees the title of national outstanding internal audit personnel.

Open and transparent business

In 2017, the Company initiated 370 performance supervision projects, retrieving an economic loss of 495 million yuan.

In the open and transparent business campaign, 4.18 million pieces of business information were disclosed involving USD 75.56 billion and 1.3 trillion yuan of contract value.
As stated in the 19th CPC National Congress report, the principal contradiction facing the Chinese society has evolved to be the one between unbalanced and inadequate development and the people’s ever-growing needs for a better life. The Party’s original aspiration and mission has been to strive for the happiness of the Chinese people and rejuvenation of the China.

As a major state-owned enterprise, SINOPEC stands up to the expectation of the Party and the Chinese people, remains true to our original aspiration and mission of loving China, revitalizing petrochemical industry and powering better life, dedicates ourselves to national strategy and social responsibility, and works for the goal of building a moderately prosperous society in all respects and achieving sustainable development of the Company.
Reform and Opening-up have been the only path to the development and progress of contemporary China and the only path to the realization of the Chinese Dream. At the significant juncture of the 40th anniversary of reform and opening-up, we should surmount all obstacles to carry the reform further to its ultimate triumph.

—— Xi Jinping

In December 1978, China started its reform and opening-up as a fundamental policy, which proved to be a path to a stronger nation and driving force for socialist development.

In February 1983, the CPC Central Committee and the State Council issued a notice that China Petrochemical Corporation would be established, a milestone event in China’s economic system reform. In July 1983, China Petrochemical Corporation was officially inaugurated, and an editorial from the People’s Daily called for dedication to build the company into a competitive organization both inside and outside China with leading technology and management expertise.

By 2018, China’s reform and opening-up policy has been implemented for 40 years and Sinopec has been set up for 35 years. In the past 35 years, under the leadership of the CPC Central Committee and the State Council and guidance of China’s reform and opening-up policy, Sinopec has kept firmly its mission of meeting the nation’s expectation and people’s needs, remained true to its original aspiration of loving China, revitalizing the petrochemical industry and powering a better life. We have delivered our economic and social responsibilities, contributing to a stronger nation and better life of the people.

In the past 35 years, Sinopec has built and developed China’s petrochemical industry, promoted petroleum and petrochemical technology development, blazed a path of international operations and nurtured a strong team of professionals for the industry.

In the past 35 years, Sinopec has grown into an integrated company with the entire value chain, covering global operations and providing building block for national economic development, fuels and raw materials for people’s daily life.

In the past 35 years, Sinopec has made tremendous tax contribution to the country with accumulative taxes and fees from 2000 to 2017 reaching 3,562.9 billion yuan. We upheld low-carbon development philosophy and actively engaged in charity programs by taking environmental protection measures and sponsoring poverty alleviation, disaster relief, education and healthcare, promoting ecological civilization and social welfare and harmony.

### CSR data

<table>
<thead>
<tr>
<th>Economic Performance</th>
<th>Environmental Performance</th>
<th>Social Performance</th>
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<tbody>
<tr>
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<td>Revenue increased by 6.4 times from 375.4 billion yuan to 2,400.3 billion yuan</td>
<td>Discharged water COD decreased by 12.6</td>
<td>Engaged in designated poverty alleviation for 12 cities or counties in 7 provinces</td>
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<td>Taxes and fees increased by 8.3 times from 43.8 billion yuan to 362.3 billion yuan</td>
<td>NOx emission decreased by 31.0%</td>
<td>Number of countries operated doubled from 36 to 73</td>
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<td>Ammonia Nitrogen emission decreased by 13.1%</td>
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Focus One: 35 Years of Commitment and CSR Pioneer
China Petrochemical Corporation reached 2.96 million tonne/year ethylene capacity by 1997, hitting target set by the government. By 2017, annual profit and tax reached 20 billion yuan, as the China Petroleum and Chemical Corporation listed on Hong Kong, New York, London and Shanghai stock exchanges.

In 2017, China Petroleum and Chemical Corporation, in cooperation with Civil Aviation Administration of China, carried out “The Gas Station that Cares • A Better Road” initiative, providing free fuel and services for migrant workers during spring festival travel season. From 2011 onwards, Sinopec bio jet fuel completed trans-Pacific trip in 2017, proving its high free flow at shale well of Fuling, Chongqing. The Made breakthrough in shale gas exploration in Sichuan, yielding the highest single-day flow rate of 270,000 cubic meters, reaching breakthrough in high pressure and high temperature. Made another significant discovery in northeast Sichuan basin. Yuanba gas field, China’s deepest marine facies gas field, with proven reserves of 220 billion cubic meters.

In 2017, Sinopec owned 1,691 refueling stations, 36 key stations and depots, as an official partner of Beijing Olympics. Delivered 4,093 tonnes of fuels to vehicles and vehicles, and annual capacity reached 10 billion m³ for GB VI upgrading. Started supply of GB V fuels nationwide and Jing VI in Beijing in 2017, preparing for GB VI upgrading from 2017 to 2018. From 2011 onwards, Sinopec bio jet fuel completed trans-Pacific trip in 2017, proving its high free flow at shale well of Fuling, Chongqing. The made breakthrough in shale gas exploration in Sichuan, yielding the highest single-day flow rate of 270,000 cubic meters, reaching breakthrough in high pressure and high temperature. Made another significant discovery in northeast Sichuan basin. Yuanba gas field, China’s deepest marine facies gas field, with proven reserves of 220 billion cubic meters.

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As a central enterprise, Sinopec actively responded to the call of the CPC Central Committee and the State Council. We took on the task of designated-area poverty reduction and facilitating the development of Tibet and Qinghai. Guided by the call of “Winning the Battle against Poverty” in Xi Jinping’s report at the 19th CPC National Congress, Sinopec provided focused assistance with sincerity and hard efforts to effectively reduce poverty in the poor regions and make our due contribution to building a moderately prosperous society in all respects.

Dai Houliang, President of Sinopec Group, reviewing poverty relief efforts in Yingshang County, Anhui Province.

**Focus Two: Implementing Targeted Poverty Alleviation and Securing a Decisive Victory in Building a Moderately Prosperous Society in All Respects**

We should continue to implement targeted poverty reduction and alleviation measures. We will pay particular attention to helping people increase confidence in their own ability to lift themselves out of poverty and see that they can access the education they need to do so. We will strengthen collaboration on poverty alleviation between the eastern and western regions; and we will provide focused assistance to areas of extreme poverty. We must ensure that by the year 2020, all rural residents living below the current poverty line have been lifted out of poverty, and poverty is eliminated in all poor counties and regions. Poverty alleviation should reach those who truly need it and deliver genuine outcomes.

— Xi Jinping’s report at the 19th CPC National Congress

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**Answering the call of the times**
Engaging in the battle against poverty to realize moderate prosperity

In 2017, Sinopec took on the task of reducing poverty in designated areas including Yuexi County and Yingshang County in Anhui Province, Fenghuang County and Luxi County in Hunan Province, Dongxiang County in Gansu Province and Yuepuhu County in Xinjiang Autonomous Region, and of providing paired assistance to Ban’ge County of Tibet Autonomous Region and Zeku County of Qinghai Province, to make our due contribution to winning the battle against poverty.

**Overview of targeted poverty reduction work in year 2017**

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Delivering help to the needed
Warming their hearts with targeted poverty alleviation

- Facilitating the development of Tibet and Qinghai

In 2017, Sinopec made an input of 32.89 million yuan to help Tibet develop and accordingly implemented 9 projects including running transportation cooperatives in the local Ban’ge County, extending financial aid to college students living under the poverty line and expanding medical care and hygienic service centers. We made an input of 10.45 million yuan to help Zeku County, Qinghai to develop, centering on its infrastructure and educational progress and benefiting 4,602 people. We implemented a photovoltaic power generation project, constructed public utilities for a local ethnic middle school, and built a drinking water project for relocated poor people and their domestic animals.

Case: Developing the Easy Joy Zhuoma Tibet Glacial Water into a well-known brand

It has always been a priority for Sinopec to facilitate local industrial growth in supporting Tibet. Fully leveraging our industrial strength and marketing network, we have developed a mode of “advancing industries to eradicate poverty” with Sinopec characteristics, which is “to facilitate the specialty industries with our marketing network, to realize high tax contribution and high employment rate, hence sustainable poverty relief”. We are developing local industries to achieve targeted poverty relief. Since 2014 when we initiated the development of the Zhuoma Tibet Glacial Water with Tibetan local enterprises, we have been leveraging our more than 26,000 Easy Joy convenience stores to bring the glacial water from the Roof of the World to every household. Today, Zhuoma Tibet Glacial Water stands as the locomotive of the water industry in Tibet and has provided strong impetus to the local drinking water industry, thus facilitates regional economic growth and job creation.

In June 2017, Sinopec and the Tibet Autonomous Region government signed a “Strategic Cooperation Agreement on Enriching Tibet by Central Enterprises during the 13th Five Year Plan Period”. The two parties agreed to develop more projects including the expansion of Tibet Glacial Water plant to further advance local water industry and bring the quality Tibetan water to the wider world.

- Designated-area poverty alleviation

In 2017, Sinopec implemented 44 poverty relief projects in 6 designated counties. The living standards of local people were effectively raised and huge support was provided to those living under the poverty line.

<table>
<thead>
<tr>
<th>Funds into poverty alleviation efforts</th>
<th>Number of poor households who benefited</th>
<th>Number of poor people who benefited</th>
</tr>
</thead>
<tbody>
<tr>
<td>92.92 million yuan</td>
<td>7,929</td>
<td>28,484</td>
</tr>
</tbody>
</table>

Industrial development

- For the whole year, a total of 11.23 million yuan was invested to develop fish breeding and poultry raising and related processing industries, benefiting 2,227 households and 10,919 people.
- For the whole year, a total of 8 million yuan was invested to plant and process kiwi fruit, strawberry and edible fungus, benefiting 1,053 households and 5,158 people.

Housing for poverty alleviation

- Guided by the goals of “No more worry about food or cloth, no more worry about education, medical care and housing”, we conducted house construction projects in Yuepuhu County, Dongxiang County and Yuepuhu County including renovation of dilapidated houses and relocation of people living under the poverty line. In total, 24.6 million yuan was used in those projects, benefiting 1,080 households and 4,201 people.

Advancing education to alleviate poverty

- For the whole year, we put in 5 million yuan as education aid fund to finance 1,025 newly enrolled college and high school students from financially disadvantaged families but with excellent performance at school. We funded the building of computer classrooms and Lego Innovative Labs. In Dongxiang County, Gansu Province.
- Since 2008, we have accumulatively donated more than 20 million yuan as Sinopec Grant-in-Aid to sponsor more than 10 thousand students.

By the end of 2017

- Accumulative sales volume of Zhuoma Tibet Glacial Water reached 560 thousand tonnes
- From 2014 to 2017 Accumulatively paid taxes and fees of 160 million yuan
- More than 500 jobs created

Infrastructure development

- 956,000 yuan was invested to support Fenghuang County to develop its roads for passenger and agricultural vehicles in the industrial base, benefiting 1,132 people.
- 9.9 million yuan was invested for road works and lightning maintenance in Dongxiang County.

Other poverty relief measures

- Skills training program on the intangible cultural heritage of the Miao ethnic group including the wax printing was conducted in Fenghuang County, benefiting 670 people living under the poverty line.
- In Yuepuhu County, aid was delivered to 200 low-income households and 750 low-income people under the programs of “Emergency-Relief” and “Smart Emergency Broadcasting in One Hundred Counties and Ten Thousand Villages” with total investment of 3 million yuan. Four roads were repaired with an input of 2 million yuan. We also put in 2 million yuan to help with the flood relief efforts in Fenghuang County and Luxi County, Hunan Province.
Case: Implementing the rural vitalization strategy and conducting "Beautiful Village" as tourism-focused poverty relief project

Xi Jinping’s report at the 19th CPC National Congress called upon “to build rural areas with thriving businesses, pleasant living environments, social etiquette and civility, effective governance, and prosperity” and to implement the rural vitalization strategy. Sinopec fully adheres to the requirements and guidance from the CPC Central Committee and implemented ecotourism homestay projects in poor villages with relatively good natural environment and ethnic features, setting up a new foundation to facilitate long-term, stable and effective way of poverty eradication.

In 2017, Sinopec worked with China Foundation for Poverty Alleviation (CFPA) to conduct three “Beautiful Village” projects aiming at developing tourism to reduce poverty in Fenghuang County and Luxi County in Hunan Province, and Dongxiang County in Gansu Province. A total of 16 million yuan was invested. At present, Fenghuang County and Luxi County have finished their design proposal of village renovation and setting up co-ops, the trial operation of which is expected in October 2018.

Case: Sinopec in Xinjiang Autonomous Region

Xinjiang is a region of vast land and a large number of poor people living far below the poverty line. Poverty eradication in this place matters not only to the building of a comprehensively prosperous society but also to the enhancement of centripetal and cohesive force among different ethnic groups, to national unity and to social stability and long-term prosperity. Since 2013, Sinopec has taken on the task of reducing poverty in Yuepuhu County, Xinjiang as part of the designated-area poverty relief initiative. For the last five years, Sinopec has actively implemented the working policy on Xinjiang formulated by the CPC Central Committee through supplying quality energy, building infrastructure and supporting industrial development to provide impetus to the regional growth. By the end of 2017, Sinopec had put in 23.6 million yuan for the region and conducted 33 poverty reduction projects, and thus effectively supported the local poverty reduction.

Supplying quality energy

Since 1978 when Sinopec Northwest Oilfield started its business in Xinjiang, it has accumulatively produced more than 100 million tonnes of crude oil and thus safeguarded local energy supply and job creation. In 2010, Xinjiang Petroleum Subsidiary of Sinopec Marketing Company was established. Now it owns 3/6 operating service stations and 13 oil depots, providing quality oil products and services and fueling local economic growth.

Building infrastructure

By the end of 2017, Sinopec had aided building 5.9 km of road and 26 village-level entertainment rooms in Yuepuhu County, and thus created comfortable venues for local residents to satisfy their cultural needs. Year 2017 witnessed an input of 3.6 million yuan from Sinopec to support 300 low-income households in completing their house renovation, benefiting 1,106 people.

Supporting industrial development

For the last few years, we have enhanced our efforts in utilizing industrial development to facilitate poverty reduction. From helping sales of Xinjiang Lvdan Food Company’s jujube to developing local animal husbandry, we focused on providing means of creating wealth rather than ready fruits. Year 2017 saw Sinopec invested 3.4 million yuan, and 294 low-income households received support in raising donkeys and 1,045 people benefited.
Focused poverty reduction

With the guidance of Sinopec headquarters and support from the local government, Sinopec subsidiaries are proactively engaged in poverty reduction efforts in local poor areas through infrastructure building, industrial development, educational support and labor force training, to push forward the improvement of local living conditions, speed up local economic growth and bring benefits to the local people.

In 2017, Sinopec made an innovative move to issue “Sinopec in Tibet (2002-2017)” also known as the White Paper, which was the first report from a central enterprise on its aid to Tibet. The White Paper themed with “Aid Tibet with Sincerity, Realize Tibetan Dream” revealed the practices and achievements that Sinopec has accumulated during its 15 years of supporting Tibetan development, covering industrial growth, infrastructure, education, health, public interests and talents, etc., illustrating Sinopec’s strong sense of responsibility in answering the call of the times.

Sending company talents to serve in the poverty-stricken areas to aid poverty relief

Sinopec selected staff with strong capabilities, leadership skills and physical quality to serve temporary positions at local government units in poor areas to support local development. By the end of 2017, we had accumulatively sent 3 people in 3 batches to Qinghai, 16 people in 8 batches to Tibet and 56 people in 13 batches to other designated areas.

People in the local areas were nice to us. They believed it was a good thing for us to serve there and we were there to do some real good. That was the biggest compliment we can get.

— Han Jinyue from the 8th batch of staff sent to serve in Tibet

We were there to help meet the real needs of the general public.

— Zhou Yong from the 13th batch of staff sent to serve in Fenghuang County, Hunan Province

I have always adhered to the principle of “delivering real help to needy people with real efforts” and focused on Sinopec’s advocacy for efficacy and efficiency in the battle against poverty.

— Shi Baoming from the 13th batch of staff sent to serve in Luxi County, Hunan Province

Strengthen communication regarding poverty reduction

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Sinopec is the role model of all central enterprises in its practice of issuing The White Paper on Precision Poverty Alleviation and The White Paper on Aiding Tibet, innovating the way for central enterprises to communicate their corporate social responsibilities with the public.

— Cao Xueyun, Deputy Director General of the General Office, the State Asset Supervision and Administration Commission
We will promote a revolution in energy production and consumption, and build an energy sector that is clean, low-carbon, safe, and efficient. We will work faster to build China into a manufacturer of quality and develop advanced manufacturing, promote further integration of the internet, big data, and artificial intelligence with the real economy. We should cultivate a large number of world-class scientists and technologists in strategically important fields, scientific and technological leaders, and young scientists and engineers, as well as high-performing innovation teams.

We are working to advance the diversity of energy supply, to form a clean, low-carbon, safe, efficient and modern energy system, to secure the energy and resources needed for economic growth and improvement of people’s well-being, and to satisfy people’s demand for a better life. We set up systems and institutions to further stimulate the development of innovative capability, technological growth, and integration between industrialization and IT application, to improve quality and enhance efficiency, to enhance all-dimension security management and to safeguard safe and efficient operation of our businesses.
Safeguarding Energy Supply

Energy is the critical foundation for the survival and development of human being as well as the fundamental factor for the modern society to evolve.

Sinopec actively pushed forward high-efficiency exploration and profitable development to secure the supply of oil and gas. We optimized our refining and chemical capacity to secure the supply of quality oil products and chemicals. We also proactively conducted new energy businesses and advanced the development of unconventional energy and clean energy including shale gas, coal-bed methane and thermal energy, so to realize the diversity of energy supply, to provide continuous momentum for the social and economic growth and to serve the public in terms of clothing, food, housing and transportation.

Supply of conventional oil and gas and chemicals

In 2017, centering on quality and profitability enhancement, Sinopec actively advanced the supply-side structural reform, transformed our growth pattern, and secured the supply of conventional energy such as oil and gas, refined oil products and chemicals to serve the need for economic and social growth.

- Exploration and production
  - Domestic oil production: 35.05 million tonnes
  - Domestic gas production: 25.7 billion cubic meters, a year on year increase of 19.2%

- Refining
  - Refinery throughput: 240 million tonnes
  - Average refinery capacity: 8.84 million tonnes per annum
  - Refining capacity: 274 million tonnes
  - Oil products production: 151 million tonnes

- Chemical
  - Ethylene production: 11.61 million tonnes
  - PX production: 4.625 million tonnes
  - Chemicals business volume: 78.5 million tonnes

- Oil products marketing
  - Sales volume of oil products (excluding Hong Kong): 177.76 million tonnes
  - Number of self-operated service stations: 30,627
  - Gas filling volume increases: 36.2% YoY
Milestones in the supply of conventional oil and gas resources and chemicals

By January 2018, Sinopec Northwest Oilfield had produced more than 100 million tonnes of crude oil accumulatively and thus became China’s first marine-facies carbonate-reservoir oilfield that has produced more than 100 million tonnes of oil.

By May 2017, Sinopec Daniudi Gas Field had accumulatively produced more than 30 billion cubic meters of natural gas to satisfy the domestic demand for gas in Shandong, Henan and Inner Mongolia, covering over 100 million people, and thus became one of the major gas sources of the Greater North China. 30 billion cubic meters of gas could replace consumption of around 60 million tonnes of coal and thus reduce emission of 36 million tonnes of CO2, which is equivalent to that from around 24 million compact cars in a year. Meanwhile, we reduced emission of SO2 by 900 thousand tonnes and nitrogen oxides by nearly 300 thousand tonnes.

By May 2017, the Neijiang-Jianyang oil products pipeline constructed and operated by South China Subsidiary of Sinopec Marketing Company achieved a successful commissioning in one shot, signifying its oil products pipeline extending from Chongqing City to Sichuan Province. The oil products produced by coastal subsidiaries of Maoming, Zhanjiang, Beihai thus found a way into the inner land of Southwest China and realized interconnectivity of oil products pipelines in the six provinces (autonomous regions and municipalities) of Guangdong, Guangxi, Guizhou, Yunnan, Chongqing and Sichuan and a new stage of energy supply security in the Greater Southwest China.

In May 2017, Maoming Petrochemical Company of Sinopec unloaded 259 thousand tonnes of crude oil from Kaichuan carrier, the first cargo received at its single-point mooring after the revamping. This symbolized that the company had completed hidden hazard elimination of 300-thousand-tonne single-point mooring and subsea oil transmission pipeline and Asia’s largest-caliber subsea oil transmission pipeline successfully went online.

In September 2017, Sinopec Baling Petrochemical Company completed its first SEPS (styrene-ethylene-propylene-styrene) thermoplastics elastomer facility with a capacity of 20,000 tonnes per year. Thus, Sinopec became the world’s third and China’s first company which owns proprietary technology for industrial production of SEPS, and filled the gap in SEPS research and development between China and the world. The green and environment-friendly SEPS can be applied to produce lubricant viscosity modifier, lubricant grease, cable sealing grease, cosmetic grease, transparent elastomer and membrane products.

In February 2018, Sinopec Maoming Petrochemical Company successfully completed the trial production of environment-friendly high-crystalline anti-shock PP. PPB-MN35-S was one of the serial high-end PP products and featured with excellent rigidity and low temperature and impact resistance. With low level of VOCs, it could be widely applied to the automobile, home appliance and home decoration industries, and effectively reduce harm to human body and enhance comfort.
To secure energy supply and realize environmental sustainability, Sinopec advanced its development and utilization of unconventional oil and gas resources and new energy, so to play a major role in energy supply in a cleaner and greener way. In 2017, Sinopec continued with its new energy businesses such as geothermal energy, solar energy, bio fuel and battery charging/swap stations, etc.

Supply of unconventional energy and new energy

**Shale gas**
By December 2017, Fuling Shale Gas Field had realized its goal of 10 billion cubic meters capacity building as scheduled and produced 6.004 billion cubic meters of gas for the year. It had accumulatively produced and sold more than 16 billion cubic meters of gas.

**Coal-bed methane**
By December 2017, Sinopec’s first coal-bed methane field, South Yanchuan Block had produced 630 million cubic meters of gas since it started operation in 2015.

**Geothermal energy**
In 2017, Sinopec’s incremental heating capacity by geothermal energy stood at 12.06 million square meters.

**Solar energy**
In June 2017, the 20 MW PV power generation project went online in Baishui, Shanxi, marking Sinopec’s first centralized PV project.

**Bio jet fuel**
In November 2017, the first aircraft fueled by Sinopec No. 1 bio jet fuel realized a successful commercial flight with passengers onboard across the Pacific ocean, significant to China’s biomass energy research and development and green flight endeavor.

**Bio diesel**
In October 2017, the launching ceremony of pumping bio diesel produced with waste cooking oil at Sinopec service stations was held in Shanghai. Two Sinopec service stations were selected as trial sites to pump bio-diesel for vehicles of Shanghai public transportation and other select industries.

**Battery charging/swap stations**
Sinopec launched its trial charging facilities in existing service stations respectively in Beijing, Shanghai, Guangdong and Anhui. By the end of 2017, we had set up 11 charging stations, among which, 4 were in Beijing, 1 in Shanghai, 2 in Guangdong, 3 in Anhui and 1 in Shanxi.

Global energy supply

At the end of 2017, Sinopec was present in 73 countries and regions, providing energy and resources and serving economic and social development for the local communities.

**Oil & Gas**
- 50 oil and gas exploration and production projects in 26 countries
- Overseas production of oil and gas reached 43.72 million tonnes of oil equivalent

**Refining & Chemicals**
- Engaged with 11 countries
- 38 newly signed contracts
- Newly signed contract value stood at USD 1.529 billion

**Engineering**
- Executed 364 oilfield service projects in 38 countries with contract value of USD 15.62 billion
- Executed 71 refining engineering projects in 13 countries with contract value of USD 10.76 billion

**International trade**
- International crude oil trading volume stood at 339 million tonnes
- International oil products trading volume reached 42.43 million tonnes
- LNG trading volume was 8.44 million tonnes

**Storage facilities**
- 3 overseas storage facility projects
Advancing Science and Technology Capability

By implementing innovation-driven development strategy and facilitating the building of an innovative country, Sinopec continuously improves its management of technology innovation institutions, promotes the integration of informatization and industrialization, materializes scientific achievements and helps to raise growth quality and effectiveness.

We need to focus on market demand, improve competition and incentives mechanism, unleash innovative vitality and push forward science and technology innovation.

— Dai Houliang, President of Sinopec Group

Currently, there are 8 research institutes, 10 research institute branches and over 50 research departments within the subsidiaries under the direct management of Sinopec. Besides, we have established platforms involving 18 national R&D departments and 28 key laboratories under Sinopec Group. We have put forward a science and technology innovation system with four technology platforms concerning oil & gas exploration and development, oil refining, petrochemical and energy conservation and environmental protection. We have set up integration systems combining production, sales, research and application, or bringing production, academic and research together. We have improved incentive mechanism for innovation, centered on meeting demand and addressing problems, focused on major and key scientific and technological projects, carried out research in frontier and new technologies, boosted conversion of technology achievements, and supported the Company to transform development model, adjust growth patterns, and raise effectiveness of development.

Nurturing talents for science and technology innovation

Sinopec has put talents top on its innovation agenda, actively facilitated their growth, and broadened the space for their development. Sinopec has also launched a “Dozens, Hundreds, Thousands, and Tens of Thousands” initiative, emphasized the leading role of science and technology, the cultivation of young talents and the introduction of high-level talents, strived to establish a pool of high-quality talents, and improved Sinopec’s innovation capacity and profitability.

In 2017, Dai Houliang, President of Sinopec Group, was elected as a member of the Chinese Academy of Engineering. As a renowned expert in aromatics technology, Mr. Dai has been working in petrochemical production and technological development for more than three decades. He was also the lead of the project “Development and Application of Highly Efficient and Environmentally Friendly Aromatics Technology”. This project was conferred the Top Prize of 2015 National Science and Technology Progress Award, making China the third country to employ such technology throughout the world.

Ma Yongsheng, a member of the Chinese Academy of Engineering, Vice President of Sinopec Group, was honored with naming of an asteroid. Asteroid No. 210292 has been officially named as “Ma Yongsheng”, representing an international and lasting reverence. Xie Zaiku, Director General of Sinopec R&D Department, was elected to be a member of the Chinese Academy of Sciences. Sinopec awarded 2 employees the “Meritorious Award for Science and Technology Innovation”, 18 “Excellent Innovative Teams”, and for the first time, 6 employees as “Excellent Innovative Young Talents”.

Notes

“Dozens, Hundreds, Thousands, and Tens of Thousands” Initiative: through national and Sinopec major scientific research and engineering projects, Sinopec aims to cultivate dozens of scientists with global vision and strategic wisdom who can steer the future of oil & gas industry, hundreds of pioneering scientists who can champion their respective field, thousands of top-notch talents who excel in tackling difficult projects and tens of thousands of backbone talents who possess strong innovative strength.
Application of scientific and innovative achievements

Sinopec yielded fruitful results in patents and major science awards in 2017. Throughout the year, within and outside China, we applied for 6,830 patents and 4,239 patents were granted. We also won 3 first prizes and 1 second prize in National Science and Technology Progress Award, 2 second prizes in National Technology and Innovation Award and 11 prizes for National Patent Award.

6,830 patents applied within and outside China

4,239 patents granted within and outside China

Major national-level science and technology innovations achieved by Sinopec (2017)

<table>
<thead>
<tr>
<th>First prize of National S&amp;T Progress Award</th>
</tr>
</thead>
<tbody>
<tr>
<td>High-Efficiency Exploration and Development in Fuling Large-scale Marine Shale Gas Field</td>
</tr>
<tr>
<td>Efficient MTO Process Technology</td>
</tr>
<tr>
<td>Development and Application of Large-scale Modern Coal Chemical Technology Units- CTL-Olefins</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Second prize in National Technology and Innovation Award</th>
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<tbody>
<tr>
<td>Technology of Precise Description in Fractured Cavern Carbonate Marine Reservoir &amp; Numerical Simulation and Efficient Water Injection Development</td>
</tr>
<tr>
<td>Technology for Olefins Molecule Structure Steered Conversion</td>
</tr>
<tr>
<td>Delayed Coking Technology for Increasing Light Oil Yield</td>
</tr>
</tbody>
</table>

Integrating industrialization with informatization

In 2017, Sinopec implemented national strategies like “Made in China 2025”, “Intelligentsia”, pushed forward integration of industrialization with informatization, and hence yielded results in some key areas as pilot for intelligent manufacturing, integrated e-commerce application, centralization of management platforms, sharing services, concentrated control of Internet outlet and management of cyber and information security. Such efforts provided strong support underpinning Sinopec’s transformation and restructuring, and quality and efficiency improvement.

Case: Fostering a national benchmark of industrialization and informatization integration

In August 2017, Sinopec’s smart factory solution for the petrochemical industry and online industrial products trading system EPEC were awarded 2017 demonstration project for “Integration of Manufacturing and The Internet” by the Ministry of Industry and Information Technology. The project of “Smart Factory Standardization System for the Petrochemical Industry” and the project of “Smart Factory for Large-scale Domestic Application of Aromatic” were included in 2017 national projects list for “Comprehensive Standardization of Smart Manufacturing and New Model Application”. This marked a leap forward for Sinopec in “smart manufacturing” and “Internet+”, and on the fast track for integration of informatization with industrialization.

Building smart factory, and casting the “nerve center” for our company

In 2012, Sinopec launched pilot of smart factories in four companies. By the end of 2015, the core functions of the smart factories had been put into operation, giving birth to Version 1.0 of Sinopec smart factories. This made Sinopec a front-runner in process-oriented industrial smart manufacturing in China. Among the pilot companies, projects conducted by Sinopec Jiujiang Company, Sinopec Zhenhai Refining & Chemical Company and Sinopec Maoming Petrochemical Company were selected as national smart manufacturing/demonstration projects in 2015, 2016 and 2017 respectively.

Through establishing smart factories, Sinopec has come up with a slew of practical methods and industrial solutions for process-oriented industry, successfully developed numerous sets of smart factory software with “Sinopec Smart Manufacturing Cloud Platform” at the core, and led the setup of national “Smart Factory Standardization System for Petrochemical Industry”. Sinopec has formulated a series of standards of “universal technological specifications for smart factories of petrochemical industry” and is propelling development and identification of IOT application for smart factories.

Based on the development plan for the 13th Five-Year Plan Period and the overall plan for building smart factories, Sinopec will continue to foster an upgraded version of smart factories. We plan to complete the building of 10 smart factories by 2020 and improve the digital and smart production of our refining business.

Nurturing “Intelligentsia”, broadening the business ecologic cycle

In implementing the national strategy of “Integrated development of the manufacturing industry and the Internet”, Sinopec has built an unified platform for e-commerce and customer relations and an unified payment system. Focusing on platform economy, business model innovation and emerging business of “Intelligentsia”, we have established e-commerce platforms like “EPEC” and “chememall.com”, integrated marketing resources of online business center, mobile phone APP, and wechat official account, and set up integrated service network for online and offline sales in order to broaden Sinopec’s business ecologic cycle.
Ensuring Safe and Efficient Operation

Production safety is the basis and foundation for Sinopec. Upholding the principle of “life first, safe development”, Sinopec keeps improving production and operation safety, promoting risk control and danger screening, and strengthening safety management of the supply chain and security management, so as to improve production safety and logistics and ensure life safety, company sustainability and social security.

Production safety and management

Sinopec has earnestly implemented the requirements of “strict, constant and effective safety management”, set up a long-term production safety system and enhanced the safety awareness of all staff. To improve HSE management system, we have adopted a HSE monthly meeting system, and Sinopec’s management committees and subsidiaries, Production and Operation Management Department, Engineering Department and Procurement Management Department have attentively assumed safety responsibilities and effectively solved some prominent problems. The subsidiaries devised a system of monthly meetings held by principal officials and created a platform to make safety regulation a routine work.

Integrating safety with science and technology

Technology for safety management and scientific achievement application. Sinopec launched a Three-Year Plan for Safety Technology, and systematically identified the priority for introducing safe science and technology. We held the second “Sinopec Safety Technology Show”, where 45 subsidiaries displayed more than 200 new safety technologies and products.

We carried forward automatic, IT-based and visible safety management. The subsidiaries actively promoted integration of industrialization with informatization and raised the efficiency and effectiveness of safety management. The oilfield companies have been equipped with over 160 drones, so that our employees can take effective patrol in complicated environment like mountain areas, and can realize distance monitor and emergency shutdown of sour gas fields and offshore development. We also strengthened smart pipeline building to facilitate production safety. At present, we have finished the smart building of long distance pipeline and pipelines between petrochemical projects with a total length of 34,000 km, and improved technical methods like online monitoring.

Education and training on production safety

In 2017, Sinopec made innovation in education and training for production safety, launched pilot trials, set up platforms, enhanced safety awareness for all employees, and improved their production safety capability.

We have guided the subsidiaries in building safety system, imposed process discipline, operation discipline and work discipline, and strengthened the shift-changing system, inspection system and facilities overhaul system. For instance, Sinopec Shengli Oilfield Company organized a panel discussion to formulate specific measures for strengthening the “Three Fundamentals”; Sinopec Guangdong Oil Products Marketing Company conducted workflow standardization campaign and aimed to showcase standardization at 200 stations.

We initiated a pilot program of integrating safety training with post taking and promotion. The pilots were chosen from companies of different business segments. The safety qualifications of four types of staff specialized in Party and political affairs management, professional technologies, technical procedures and safety management were established respectively. We also set up general and professional knowledge base and formulated a rigorous standard as “no certificate for those who failed safety training, no post for those without certificates, and no promotion for those who failed safety tests”. We provided safety training courses through videos and case studies, created the “Sinopec Safety” column, shared typical accident cases and high-risk operation videos, and launched “snapshot column” to warn people of latent risks.

There were more than 500,000 participants in safety diagnosis in 2017. They put forward positive and effective suggestions, thus raising staff’s awareness of latent risks in their proximity.

We organized Production Safety Month Campaign and Production Safety Long March Campaign. The managers in charge of subsidiaries provided safety education training for over 50,000 people, hence fostering an environment where all staff prioritize safety.
Prevention and control of safety risks

Through our efforts in strengthening risk prevention and control, latent risk identification and dealing, and emergency response improvement for production safety, we have actively transformed our safety work from accident management to risk management.

We formulated and issued The Guideline of Sinopec Safety Risk Evaluation, guided subsidiaries to properly use the safety risk matrix standards and risk evaluation tools for production and operation, carried out the identification, analysis and evaluation of safety risks, drew up safety risk lists for different levels, and realized safety management focusing on screening risks. We continuously enhanced latent risk management for tank farms, with 30 companies like Sinopec Jianghan Oilfield, Sinopec Shanghai Gaoqiao Petrochemical Company and Sinopec South China Oil Products Marketing Company finishing the reform.

We developed a scenario construction plan covering upstream, midstream and downstream, organized cross-evaluation for over 1,500 plans among affiliates, devised on-site emergency response plans, and made emergency response plans more targeted and effective.

We, together with local governments, carried out shale gas field blowout and hydrogen sulfide leakage emergency drills. We worked with CNPC and CNOOC to conduct desktop drill of solving the explosion and inflaming of large oil storage tanks, in order to test the plans, polish the system and equip the staff with emergency response capabilities. Subject to the requirements of “no notifications”, Sinopec subsidiaries executed emergency drills of various levels and types. Besides, Sinopec was engaged in rescue activities of over 1,200 external accidents in 2017.

Safety management of supply chain

Our partners are an important part of Sinopec’s production and operation. The safety operation of Sinopec is closely interconnected with the safety of suppliers, contractors and logistics providers. Sinopec has incorporated HSE management of its suppliers, contractors and logistics providers into its safety management system, and strictly evaluated the company’s operation and performance in production safety, occupational health and environmental protection. We have strengthened source control, process supervision and special overhaul of safety production and reduced safety risks. In 2017, we continued to enhance safety management of contractors, and improved safety management of contractors and direct operations.

We, together with CNPC and CNOOC, conducted desktop drill of solving the explosion and inflaming of large oil storage tanks, in order to test the plans, polish the system and equip the staff with emergency response capabilities. Subject to the requirements of “no notifications”, Sinopec subsidiaries executed emergency drills of various levels and types. Besides, Sinopec was engaged in rescue activities of over 1,200 external accidents in 2017.

Public security management

To ensure public security and safeguard public interests, Sinopec made continuous efforts in oil & gas field security protection, anti-terrorism, oil & gas transportation safety, overseas public security, and comprehensive management of hazardous chemicals. In 2017, multiple long-distance pipelines of Sinopec realized the goal of ensuring “zero punching, zero pollution, zero overstock and zero accident”. We also stepped up efforts in “strengthening the foundation, building the system, intensifying management and focusing on prevention”, and ensured “zero death” of our staff working overseas due to security incidents for the 10th consecutive year.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
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<tbody>
<tr>
<td>Investment in overseas public security (by corporate headquarters) (million yuan)</td>
<td>6.05</td>
<td>7.42</td>
<td>6.68</td>
</tr>
</tbody>
</table>

Measures to strengthen safety management of contractors in 2017

- Strictly revised the safety management of contractors
- Conducted special improvement campaign on construction sites
- Strictly managed non-conventional operation
Feature: Securing Natural Gas Supply to Better People’s Lives

Natural gas is a premium, efficient, green and clean energy. To develop the natural gas industry is a must for China to accelerate building a modern, clean and efficient energy system. In 2017, China produced 148 billion cubic meters of natural gas, consumed 237.3 billion m$^3$, up by 15.3% year on year, breaking a new record of incremental for China’s natural gas consumption. Faced with the ever growing natural gas demand, we continuously improved our natural gas production chain, and ensured our natural gas supply through increasing oil & gas field production and resource supply, and improving gas supply structure, so as to satisfy people’s longing for a greener and better life.

Improving the development and application of natural gas

- Sinopec’s natural gas production in 2017 hit a historical high, reaching 25.7 billion cubic meters, a growth of 19.2% year on year.

- Annual Production of Fuling Shale Gas Field: 6.004 billion cubic meters

As the largest shale gas field in China, Fuling shale gas field has strengthened its connection and coordination with Sinopec Gas Company and downstream users, established emergency coordination system, completed a dozen times of production increases and decreases to meet the consumers’ requirement, and ensured a steady and orderly supply of shale gas. Fuling shale gas field maintained sales of around 16 million cubic meters per day in December 2017. In July 2017, under the approval and review of the Ministry of Land Resources (now Ministry of Natural Resources), the proven reserves of Fuling shale gas increased by 220.2 billion cubic meters. With a cumulative proven reserves of 600.8 billion cubic meters, Fuling shale gas field became the world’s largest shale gas field outside North America.

- Sinopec Southwest Oil & Gas Company Production in 2017: 6.07 billion cubic meters

Sinopec Southwest Oil & Gas Company accelerated production capacity building for shale gas and Pengzhou marine gas field, and also initiated 2018 geological assessment for old well potential tapping. By December 2017, the company had added another 13 wells into operation to secure gas supply for the winter, registering a daily production of 12.97 million cubic meters. It also tapped the potential for 3 old wells ahead of schedule and produced 710,000 cubic meters of natural gas.

- Facilitating the construction of LNG terminals

Sinopec Tianjin LNG Terminal, with a capacity of 3 million tonnes/year and a supply of 4 billion cubic meters of gas per year, is a terminal with the highest local content in China. In February 2018, the CESI Beihai tanker carrying LNG from the Australia Pacific LNG project arrived at the Tianjin LNG Terminal. The LNG the CESI Beihai delivered to Tianjin was regasified and supplied via pipeline to Beijing, Tianjin, Hebei and Shandong areas, alleviating tight gas supply in the region.

- Ensuring gas supply for the winter

To ease the tight gas supply in winter, Sinopec took the initiative in fulfilling our social responsibility, rearranged and rescheduled measures to increase natural gas production and ensure supply. We also polished our plans to ensure safe and smooth supply of natural gas in the winter. Meanwhile, we also strengthened safety check for pipelines in the winter, increased connectivity with other oil companies, formulated gas supply emergency plans in advance, and prioritized civil use over industrial use.

- Newly-added proven reserves in Fuling Shale Gas Field

220.2 billion cubic meters

Newly-added proven reserves of 600.8 billion cubic meters, Fuling shale gas field became the world’s largest shale gas field outside North America.

- To secure supply, gas production of Southwest Oil & Gas Company increased by 12.97 million cubic meters
China Petrochemical Corporation 2017 Social Responsibility Report

We have made notable progress in building an ecological civilization. We have become more purposeful and active in pursuing green development. We should promote a sound economic structure that facilitates green, low-carbon, and circular development, and spur the development of energy-saving and environmental protection industries as well as clean production and clean energy industries.

We comprehensively implemented the spirit of the 18th and 19th National Congresses of the Communist Party, upheld the principle of "green and low-carbon development" and "conservation first, environmental protection first, and prevention as the main thread" with building ecological civilization as the guideline, and stuck to the requirement of green, low-carbon and sustainable development. We also coordinated the management of energy-saving, emission reduction, and carbon cutting integration, highlighted energy-saving, emission reduction and efficiency increase, pushed forward clean production, and built resource conservation and environmentally friendly green company. We realized the goal of developing Sinopec’s green, low-carbon strategy, and facilitated the building of a beautiful China.

Our actions

- Strengthening Regulation on Environment
- Providing Clean Products
- Saving Energy and Reducing Carbon Emissions
- Protecting Environment

Green and Low Carbon Promoting Ecological Civilization

- Xi Jinping’s report at the 19th CPC National Congress

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Strengthening Regulation on Environment

We need to raise our political awareness, pursue green development, and facilitate the building of a beautiful China. We should strictly and earnestly focus on environmental protection, so that we can provide the best and most environmentally friendly chemicals.

—— Dai Houliang, President of Sinopec Group

Green and low-carbon is Sinopec’s foundation and solemn commitment. Sinopec is devoted to environmental protection, enhancing environmental risk control and prevention, passing on green development genes, and minimizing the impacts on the environment arises from our operations.

Improving environmental management

Sinopec has reckoned “green and low-carbon” as one of its development strategies. We have enhanced environmental management and promoted Sinopec’s all-round and sustainable development in terms of environmental protection organizations, systems and education.

In 2013, Sinopec set up an Energy Management & Environmental Protection Department in its headquarters. The department was the first to fulfill green and low-carbon goals, and integrate management of energy and environment among central enterprises.

Sinopec formulated and revised 14 management mechanisms for environmental protection including Management Regulations on Prevention and Control of Solid Waste Pollution, Management Regulations on Prevention and Control of Waste Gas Pollution, and Management Regulations on Environment Supervision. Sinopec formulated The Guidelines on Revisions for Environmental Performance Evaluation for Sinopec, and innovated the ways for supervision and management. Sinopec also established Management Regulations on Industrial Water-Saving for Sinopec to strengthen management of water conservation.

In 2017, we launched training courses for directors in subsidiaries across the business chain. We also organized quiz tests for all staff in Sinopec to increase their awareness of environmental protection and improve their performance.

Environmental protection organizations

Environmental protection system

Environmental protection education

Environmental protection organizations

Environmental protection system

Environmental protection education

Guarding against environmental risks

Environmental risk prevention and control is an important task for environmental protection. We improved systematic construction, strengthened environment supervision, conducted strict management of environmental protection for projects, and carried out training courses, thus making progress in environmental risk prevention and control.

Promoting all-round environmental risks management

We issued The Notice of Comprehensively Strengthening Environmental Risks Management, formulated The Plan for Building Environmental Risks Control System of Sinopec, carried out comprehensive environmental risks management, systematically implemented environmental risks identification, evaluation, control and supervision, improved prevention, control and emergency response ability, ensured a steady control on booming risks, and eradicated major environmental dangers.

Continuously improving online supervision platform for pollutants

At present, 414 points and locations controlled by national and local authorities under the responsibilities of 42 subsidiaries have been covered by Sinopec’s online supervision platform, bringing about comprehensive and effective supervision on pollutant sources.

Imposing strict environmental protection management on project construction

Based on the requirements of national and local environmental regulatory agencies, all new projects of Sinopec have completed environmental impact evaluation. All measures for environmental protection comply with relevant environmental protection laws and regulations. Environmental protection compliance ratio for new projects has reached 100%.

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Environmental protection system

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Providing Clean Products

Sinopec attaches great importance to the development and application of clean products, and makes continuous efforts to supply the market with clean fuels, biofuels and other products that contribute to environmental protection.

Oil products upgrading

Sinopec continues to upgrade its oil products. From 2000 to 2017, Sinopec invested a total of 92 billion yuan in oil products upgrading, aiming to supply clean energy to consumers. In 2017, Sinopec began to supply GB-V standard oil products nationwide.

Supplying Jing-VI oil products

In February 2017, Sinopec completed oil products upgrading for Sinopec-operated oil depots and all its 562 service stations in Beijing.

According to Beijing municipal government’s statistics, Jing-VI oil products are expected to help reduce particulate emissions from gasoline vehicles by 10%.

Emissions of non-methane organic gases and NOx can be cut by 8% to 12%.

For diesel vehicles, emissions of NOx and particulates can be lowered by 4.6% and 9.1% respectively.

Upgrading to GB-VI standards

In early 2017, Ministry of Environmental Protection, three other relevant ministries, Beijing, Tianjin, Hebei, Henan, Shandong and Shangxi issued 2017 Air Pollution Prevention and Control Work Plan for Beijing, Tianjin, Hebei and Surrounding Areas, making it mandatory to supply GB-VI standard gasoline and diesel in the two municipalities and 26 cities in the region, or “2+26”, by September 2017.

Sinopec was the first mover, launched revamping in Yanshan Petrochemical and other 10 refineries with solutions tailor-made to each refinery and completed GB-VI upgrading three months ahead of the state government’s requirement. On September 30th, Sinopec began to supply GB-VI standard fuels in over 2,000 service stations in the area. In November, Sinopec took the lead in two key national R&D projects targeting at developing GB-VI standard gasoline and diesel production technologies. That is one of Sinopec’s endeavors to fulfill the mission of powering better life and facilitate the construction of a beautiful China with cleaner fuels.

Notes

What are GB-VI standards? In December 2016, Chinese government issued Limit on and Measurement of Light Vehicle Emissions (Stage VI), which requires that from July 1, 2020, all sold and registered light vehicles meet Limit A requirements. Since July 1, 2023, all sold and registered light vehicles meet Limit B requirements.

GB-VI standard is one of the most stringent emission standards in the world. Compared with GB-V, GB-VI gasoline and diesel can reduce car emissions and improve air quality. It is equivalent to the European Union’s current fuel standard, with some indicators even higher.

“2+26” refers to cities along the air pollution route in the Beijing-Tianjin-Hebei region. They are Beijing, Tianjin, eight cities in Hebei, four cities in Shandong, seven cities in Shandong, and seven cities in Henan.
Application of bio jet fuel

Sinopec is at the forefront of the R&D of biofuels in China. Its home-developed No. 1 bio jet fuel represents the highest level for China’s research, development and application of biofuels.

Bio jet fuel is produced from renewable resources, which mainly include coconut oil, palm oil, lepsoy seed oil, linned seed oil, seaweed oil, and waste kitchen oil. Compared with crude-based jet fuel, bio jet fuel is a low-carbon and environment-friendly fuel, and capable of cutting carbon emissions by more than 50% in the entire life cycle.

Application of biodiesel

Sinopec is actively promoting biodiesel development, production and consumption, which will help to eliminate the risk of waste cooking oil getting back to dining tables and reduce pollution in cities. In October 2017, Sinopec B5 Biodiesel Launching Ceremony was held in Shanghai, and the new product has since been available in Sinopec service stations. This batch of B5 biodiesel was a blend of 5% biodiesel and 95% oil-based diesel. At present, Sinopec chose two service stations in Shanghai as pilots to supply biodiesel to Shanghai public transit and specific-purpose vehicles. During the pilot period, the retail price of B5 biodiesel was 5% off of the price of vehicle diesel or cost about 0.30 yuan less for one liter, which was intended to encourage consumption of biodiesel.

It is a big deal that Sinopec began to supply waste-oil-based biodiesel to the market. The final step to transform kitchen waste oil to something valuable in Shanghai is in sight.

— Xu Kunlin, Vice Mayor of Shanghai

Milestones of Sinopec No. 1 bio jet fuel

2009 
Research started. Sinopec successfully developed its proprietary bio jet fuel production technology.

2011 
Sinopec applied to Civil Aviation Administration of China for airworthiness certification.

2013 
Sinopec No. 1 bio jet fuel had a successful test flight with China Eastern Airlines in Shanghai Hongqiao International Airport.

2014 
Sinopec won the first certificate of airworthiness issued by Civil Aviation Administration of China, marking the entry of China’s home-developed bio jet into the phase of commercialization and application.

2015 
The first commercial test of a passenger flight was successful, making China one of the few countries that have proprietary bio jet fuel production technologies and have them commercialized.

2016 
In order to secure bio jet fuel supply, Sinopec Zhenhai Refining & Chemical Company was granted the approval of its feasibility report on the hydro-processing unit revamping, which is planned to be put into operation in 2018.

2017 
The first manned flight powered by Sinopec No. 1 bio jet fuel successfully crossed the Pacific Ocean, which further proves the viability of the technology and its great significance in biomass energy R&D and application as well as development of green aviation in China.

Bio jet fuel is a major trend in global aviation fuel development. It is an important innovation for China to develop green alternative clean energy, and promote the development and application of home-developed bio jet fuel. Sinopec No. 1 bio jet fuel is the first such product approved by China Civil Aviation Administration. The successful test flights mark another major breakthrough in our country’s R&D and commercialization of bio jet fuel.

— Xu Chaoquun, Director General, Department of Aircraft Airworthiness Certification, Civil Aviation Administration of China

Further reading

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According to the research of Tongji University, engines fueled by B5 biodiesel run normally, and level of NOx emissions is similar to oil-based diesel.

Emissions of heavy metal and PM2.5 are reduced by more than 10%.

More than 80% of NOx are purified.

Further reading

Biodiesel, also known as fatty acid methyl ester, is a renewable fuel that can replace hydrocarbon-based diesel. It is produced from oil crops, wild oil plants, aquatic plants like microalgae, animal fats and kitchen waste oil through transesterification.

R&D of environment-friendly products

Sinopec attaches great importance to the development and production of environment-friendly products. It has developed a variety of such products including “Love Running #98” gasoline, fuel additives, diesel exhaust fluids, diesel pour point depressants and windshield cleaner, which can effectively improve the efficiency of oil products and reduce emissions of hazardous exhausts.

“Love Running #98” is Sinopec’s home-developed and innovative premium gasoline, which can improve the engine’s speed, power, cleanness and combustion efficiency, and has excellent performance in terms of rust prevention, traceability, emissions cut and environmental protection.
Saving Energy and Reducing Carbon Emissions

In January 2017, the State Council issued The 13th Five-Year Master Plan for Energy Saving and Emissions Reduction, specifying main objectives and key tasks. Sinopec adheres to the principle of “green and low-carbon development”, places top priority on saving and environmental protection, and emphasizes prevention. Efforts have been made in this area to achieve good balance between economic development and environmental improvement as well as contribute to the construction of ecological civilization.

Sinopec’s whole-process clean production

Using as much non-toxic and non-hazardous renewable feedstock as possible, reducing CO2 emissions

Adopting green technologies and environment-friendly processes, so as produce less or no pollutants, enhance energy efficiency, improve resource utilization and reduce CO2 emissions

Waste gas: reducing SO2, NOx, PM and VOCs through flue gas de-sox and de-NOx, dust removal as well as oil and gas recovery

Waste water: reducing COD and ammonia nitrogen through wastewater treatment and recycling, and meeting wastewater disposal standards

Solid wastes: Bio-safety disposal, reduction and re-utilization of solid wastes

Reducing car emissions of SO2, NOx, hydrocarbons and PM

Green enterprise initiative

In April 2018, the Sinopec launched “Green Enterprise Initiative”, committing to supplying clean energy and green products, promoting green production, leading green development of the industry, building a clean, high-efficiency and low-carbon enterprise by 2023, and fostering green and low-carbon growth into a core competitive edge of Sinopec. The plan is by far the largest of the kind in China, and serves as a guideline for Sinopec’s development in the new era. It is both a concrete measure to implement the 19th CPC Congress decisions and Sinopec’s solemn commitment as a practitioner of ecological civilization and a participant in building a beautiful China.

Six components of Sinopec Green Enterprise Initiative

Green development

Optimizing production layout, ensuring ecological safety, adjusting industrial structure, and building green logistics

Green energy

Increasing clean energy supply, providing high-quality oil products, promoting geothermal development and advancing R&D of new energy

Green production

Controlling pollution from the source, throughout the entire process, and with high efficiency, utilizing resources to their full, and keeping environmental risks under control

Green service

Developing green chemicals, building green service stations, developing energy conservation and environmental protection sector, and building green supply chain

Green technology

Focusing on technologies for green petrochemical processes, resource recycling, pollution control and prospective green technologies

Green culture

Establishing long-term mechanism and cultivating green culture
Capitalizing on the advantage of the integrated chain of environmental energy, Sinopec actively promotes “Energy Efficiency Improvement” program, carries out energy-saving review and monitoring, strengthens energy management, improves energy efficiency, and strives to be the industry leader in energy efficiency.

Sinopec has established an energy and environment performance appraisal system, carried out energy audit, and built an energy management system that is in line with the government’s requirements and linked with each subsidiary’s integrated management.

Nine refineries including Sinopec Yanshan and Yangzi Petrochemical have built the energy management information system to conduct energy planning, energy operation, energy statistics, evaluation & analysis and energy optimization, and made a profit of 77 million yuan only with online optimization of steam power plants.

Sinopec is disciplined and stringent in project application and approval as well as basic design. Efforts were made to strengthen energy saving in the life cycle of the project and ensure effective implementation of energy saving measure.

Sinopec actively promotes special initiatives to save energy by means of technical service and digital platforms, energy saving and water saving testing, as well as development of energy and water conservation standards. By the end of December 2017, we completed testing of large units and main power equipment and systems in 17 refining and chemical subsidiaries, saving 315,000 tonnes of coal equivalent. The company completed water balance testing of 4 refineries, and reduced water loss by 2.19 million cubic meters per year.

**Green energy plan**

- Within 6 years, clean energy output will account for more than 50% of the company’s total production.
- In 2018, all Sinopec-produced gasoline and diesel will meet GB-VI standards.
- Within 6 years, Sinopec will build 1,000 new natural gas filling stations.
- In 2023, Sinopec’s natural gas supply capacity will reach 60 billion cubic meters per year.
- In 2023, Sinopec will have 10 thousand kilometers of gas pipelines and a LNG receiving capacity of 26 million tonnes per year.
- In 2023, Sinopec’s geothermal heating will cover an area of over 120 million square meters, taking 40% of domestic market shares.

The “Green Enterprise Initiative” is one of Sinopec’s major moves to promote the construction of ecological civilization and a beautiful China. We are expecting Sinopec to lead the efforts in practising green and low-carbon development in the business world, and make more contributions.

—— Huang Runqiu, Vice Minister of Ecology and Environment
Cutting emissions and pollution

Following the successful "Clear Water and Blue Sky" initiative, Sinopec continues its efforts in treatment of the “three wastes”, noise and odor control, pollutant discharge reduction and environmental protection.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discharge of waste water yoy (%)</td>
<td>0.27</td>
<td>6.57</td>
<td>3.25</td>
</tr>
<tr>
<td>Volume of industrial water yoy (%)</td>
<td>1.0</td>
<td>1.1</td>
<td>1.27</td>
</tr>
</tbody>
</table>

Sinopec has taken steps to reduce total emissions of air pollutants, including revamping coal-fired boilers in the eastern region to realize ultra low emissions of flue gas, tail gas treatment of catalytic cracking and sulfur recovery facilities, integrated control of VOCs regulation, and prevention and control of air pollution in Beijing, Tianjin, Hebei and surrounding area out in strict accordance with the government’s requirements.

Sinopec has made plans and targets for water usage, in order to improve water conservation and reuse more waste water, and reduce freshwater usage. In 2017, the company's industrial water withdrawal dropped by 1.27% compared with the same period last year.

Sinopec Zhenhai Refining and Chemical was awarded as Leader in Water Efficiency by four ministries including National Development and Reform Commission and Ministry of Industry and Information, and became the only winner of the award in China’s ethylene industry. Yizheng Chemical Fiber was awarded Leader in Water Efficiency by Jiangsu province.

Sinopec has strengthened solid waste storage, disposal and utilization in a bid to reduce solid wastes, eliminate hazards and reuse solid wastes as much as possible.

Case: 2.5 billion yuan invested in environmental protection facilities

In June 2017, Sinopec Yangzi Petrochemical started the largest environmental protection investment plan since its birth, and is striving to develop into an exemplary company in environmental protection in 2020. The plan involves 35 environmental protection projects such as raising waste water treatment standards, emissions of ultra clean flue gas from power plants, VOCs comprehensive treatment and construction of hazardous waste incineration facilities. A total of 2.5 billion yuan will be invested across the span of the “13th Five-Year” period. After all the projects are completed, main pollutant discharge index of the company will be better than the national and local standards, and the company will take the lead in “three wastes” treatment capabilities and environmental protection infrastructure in China.

In 2017, Sinopec Yangzi Petrochemical continued to reduce emissions of four major pollutants, with COD, ammonia nitrogen SO 2 and NO x down by 45%, 81%, 36% and 32% respectively based on Nanjing municipal government’s standards. Effluent discharge was cut by 14.25%. COD concentration was lower than the government-set ceiling of 30%. Cost of effluent discharge was reduced by 8.6 million yuan.

Case: Properly treating high-chlorine formation water in West Sichuan gas field

In order to tackle the challenge of high-chlorine formation water in West Sichuan gas field, Sinopec adopted the innovative technology of vacuum salt making. The company built the first high-chlorine gas formation water treatment facilities in China, and completed phase II in June 2014. As of the end of 2017, the company has built a capacity of treating 1,060 cubic meters per day, treated a total of nearly 1 million cubic meters of formation water, and produced over 65,000 tonnes of industrial salt. Condensed water quality met the Integrated Wastewater Discharge Standards (GB8978-1996) and Sichuan Water Pollutant Discharge Standards (DB51/190-93) requirements and can be reused for agricultural irrigation.

Case: Zero waste water discharge in Sinopec Great Wall Energy and Chemical

Sinopec Great Wall Energy and Chemical sticks to the principle of sustainable development, and chooses advanced technologies that use energy efficiently, consume much less coal and freshwater as well as cause minimal impact on the environment. The company is one of the first in China to engage in R&D of key technologies for comprehensive treatment and control of coal-chemical waste water and near-zero discharge, aiming at achieving separate crystallization of high-concentration brine in coal-chemical projects and developing Sinopec’s proprietary integrated technologies for zero discharge of industrial wastewater. At present, the company has built the first wastewater zero discharge project using home-developed technologies in Great Wall Energy and Chemical (Ningxia) Co., and plans to build a zero discharge and high-concentration brine separate crystallization project in Zhongtian Hechuang Energy.
Circular economy

Sinopec is committed to developing low-carbon circular economy and enhancing the level of resource recycling and utilization. The company adopted various technologies to use by-products (waste heat and associated gas) and the “three wastes”.

**Exploration and production**

- Increased recovery and utilization of low-pressure natural gas venting in oil and gas fields, and strengthened recovery and treatment of associated gas condensate.
- Promoted advanced technologies for treating and reusing fracturing fluids and oil production wastewater.
- Implemented freshwater reduction projects in well injection, replacing freshwater and re-injection with properly treated wastewater.
- Selected the best drilling mud additives, adopted technologies that prevented waste drilling fluids from getting to the ground, and recycled oil-based drilling cuttings.

**Refining**

- Gave full play to the advantages of integrated value chain, tapped potentials of recycling resources throughout the whole process, and adopted new technologies for heat combination and utilization of waste heat and residual pressure.
- Increased utilization rate of refinery by-products and by-product yield from flue gas treatment.
- Accelerated construction of demo projects for comprehensive utilization of spent catalysts, oil sludge and residual activated sludge.

**Case: Building a green plant**

Fuling Shale Gas Company places high priority on environmental protection throughout the E&P process, with particular emphasis on water protection and waste disposal. Following the mode of “reduction, reuse and recycling”, the company implements whole-process clean production by optimizing process design, using clean energy, feedstock and advanced technologies, improving management and integrating utilization, so as to reduce pollution from the source and enhance efficiency.

In 2017, the company was awarded the title of “Green Factory in Oil and Chemical Industry” by China Petroleum and Chemical Industry Federation and China Chemical Environmental Protection Association.
**Carbon asset management**

In line with the requirements of a national carbon market, Sinopec set the target of "reviewing carbon assets, reducing carbon emissions and creating carbon-based value". The company has improved carbon asset management by perfecting related systems, processes and decision-making mechanism. Carbon inventory and carbon trading have helped to maintain and increase value of carbon assets.

- Conducted training in carbon inventory and verification and carbon asset management, and built up a carbon asset management team of 1,100 people.
- Improved carbon asset management IT system, and completed modeling, verification, debugging and test runs of carbon asset management IT system in three subsidiaries including Maoming Petrochemical.
- Completed research on whole-life-cycle carbon footprint for products like jet fuel, bitumen, lubricating oil and caprolactam, and developed carbon print research methods for petrochemical products.
- Completed carbon quota allocation baseline for refined products, ethylene, aromatics, PTA and EG.
- Completed carbon inventory and carbon verification in 97 subsidiaries, which is the foundation for the analysis of emission reduction potentials and the development of emission control measures.
- Participated in carbon trade with 26 carbon trade pilot subsidiaries fulfilling 2016 carbon quota in time.
- In 2017, refining and chemical subsidiaries captured 270,000 tonnes of carbon dioxide, and E&P subsidiaries reused 190 thousand tonnes of carbon dioxide in oil flooding. So far, refining and chemical subsidiaries have captured an accumulative 1.44 million tonnes of carbon dioxide, and a total of 3.2 million tonnes of carbon dioxide were injected to oilfields for EOR.
- Increased recovery and utilization of associated gas, test gas and crude oil gathering and transportation facilities, recovered about 220 million cubic meters of methane, and reduced GHG emissions by about 3.3 million tonnes of carbon dioxide equivalent.

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<thead>
<tr>
<th>Indicator</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
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<tbody>
<tr>
<td>Carbon trade volume (10 thousand tonnes)</td>
<td>180</td>
<td>255</td>
<td>316</td>
</tr>
<tr>
<td>Carbon trade volume (10 thousand yuan)</td>
<td>5,400</td>
<td>3,775</td>
<td>4,000</td>
</tr>
</tbody>
</table>

**Protecting Environment**

A healthy ecological environment is the basis of human survival. In 2017, Sinopec intensified the protection of the ecological environment, tried its best to avoid environment-sensitive areas such as natural reserves, water source protection areas and ecology-fragile areas, and conducted restoration and reclamation around abandoned wells and along pipelines, all in a bid to minimize impact upon the ecological environment.
Feature: Developing “Geothermal+” and Building “Smoke-Free” Homes

Geothermal resource, a clean renewable, is abundant and widely distributed in China. There are enormous potentials for geothermal development and utilization. It is estimated that 1 percentage point of increase of geothermal energy in the energy mix will replace 37.5 million tonnes of coal equivalent and reduce 94 million tonnes of carbon dioxide.

Based on market demand and leveraging its integrated value chain, Sinopec has made great efforts to develop “geothermal+” model and revolutionize energy production and consumption so as to meet people’s aged for a well-protected environment and a better life. At present, Sinopec geothermal business covers 13 provinces and cities in China with a heating capacity of 50 million square meters, more than 30% of the country’s total capacity. The company helps to replace 1.42 million tonnes of coal consumption and reduce 3.7 million tonnes of carbon dioxide emissions every year.

Geothermal exploration

Sinopec began to explore the geothermal resource since the 1990s, and began to accelerate its development and utilization in 2006. At present, the company focuses on karst, sandstone and fractured reservoirs, and has made breakthroughs in Bohai Bay Basin, the south part of North China Basin, Fen Wei basin and Qinghai Tibet Plateau. Four major resources exploration areas have already built up in Hebei plain area, central Shaanxi, Shanxi basin group, north Henan and southwest Shandong, which are the foundation for developing smog-free cities by 2023.

Developing a “smoke-free” town in Xiongxian

In 2009, Sinopec Star Company and Xiongxian government cooperated to replace coal with geothermal in domestic heating. By the end of 2017, geothermal heating capacity has reached 4.5 million square meters in Xiongxian, the first smoke-free town in China and a success story that can be replicated elsewhere.

In 2017, guided by the “Xiongxian model”, Sinopec actively promoted clean-energy heating in the north, focusing on making the “2+26” cities free of smog. The company has built up geothermal heating capacity of 16.4 million square meters in 15 cities and counties in Hebei province.

Promoting “geothermal+” integrated utilization

According to the idea of “geothermal+”, Sinopec actively promotes the integration of multiple clean energy sources, and steadily builds demonstration projects, green projects and high-efficiency projects.

Geothermal projects

- Built up geothermal heating and cooling projects for a China Railway hospital in Xianyang and a Jingzhou subsidiary of Sinopec Oilfield Equipment Corporation.
- Sinopec implemented the shallow geothermal heating and cooling projects in Nantong and Pizhou of Jiangsu, and promoted similar projects in the riverside business district of Hankou and Canghai New Area of Wuzhou, Guangxi.
- In the future, we will take advantage of the Pearl River Delta's location and carry out shallow-layer geothermal projects in the region.

PV power generation

- In June 2017, a 20-MW agricultural photovoltaic power generation project in Baishui, Shanxi was put on stream. This was Sinopec’s first successful centralized photovoltaic project.

Waste heat utilization

- Sinopec has begun to focus on comprehensive utilization of waste heat, waste gas and residual pressure in oilfields and refineries, and built up quite a few demo projects in Tahe Oilfield (fuel gas waste heat recovery), Hamian Oilfield (effluent waste heat utilization) and Xuzhou Lipo Steelworks (furnace effluent waste heat generation), with a waste heat utilization capacity of 706,000 GJ per year.

Advancing R&D of geothermal technologies

The Sinopec uses National Geothermal Energy Center, Geothermal Energy Standardization Committee and Sino-Icelandic Geothermal Research and Development Center to build a comprehensive technology R&D system, and has begun deploying innovation chain along the geothermal value chain. So far Sinopec has applied for more than 40 national patents, and been granted more than 20. More than 20 geothermal standards have been issued. The six technological systems covering exploration, evaluation, drilling process, tail water reinjection, cascade utilization and IT are underpinning the wide utilization of geothermal resources.

Geothermal heating capacity in Xiongxian amounting to 4.5 million m²

Building geothermal heating capacity of 16.4 million m² in 15 cities and counties in Hebei
People with talent are a strategic resource for China as it endeavors to achieve national rejuvenation and stay ahead in international competition. We will work to foster a positive environment in which everyone wants, strives, and is able to excel themselves, and can do full justice to their talents. With this, we aim to see that in every field the creativity of talent is given great expression and their ingenuity and expertise flow freely.

Sustainable development would not be achieved by a company without the support and involvement of its stakeholders. We highly value the relations with shareholders, employees, customers and partners through joint growth. We provide responsible care to employees to safeguard their basic rights and interests and support their growth with the Company. We strive for customer satisfaction by providing them with sufficient quality products and premium services. We value working together with partners across supply chain and lead industrial growth.

Creating Win-Win with Partners

Xi Jinping’s report at the 19th CPC National Congress

Our actions

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Team Building
Optimizing Products and Services
Promoting Responsible Industry Chain
Team Building

Putting talent as the primary resource, we pursue the development principle of “people-oriented” and “ensure employees’ growth together with the company”, and implement the strategy of “fostering corporate growth through talent pooling”. We create favorable environment for talents to fully display their skills, promoting coordinated development of various talents, and supporting sustainable and healthy growth of the company driven by the wisdom of talents.

Employee rights and interests

Sinopec respects and safeguards the basic rights and interests of employees based on equality and consensus through consultation. The Company signs labor contracts with employees based on people-oriented labor management.

Sinopec abides by international and domestic laws and conventions, respects and safeguards human rights, and opposes any act that violates and disregards human rights. We maintain that all the employees be treated equally. We forbid gender, age, geography, religion, nationality, pregnancy or disability discrimination regarding recruitment, training, promotion and remuneration. We forbid the use of child labor or forced labor. We emphasize and strengthen labor protection for woman employees at workplace. And we ensure there are available regulations for woman employees on maternity leave, breast-feeding leave and regular medical check-ups.

We sign labor contracts with all the employees recruited based on equality and consensus through consultation. Meanwhile, we set up labor contract management system to ensure the labor contract to be stringently implemented.

We pursue synchronized growth in total payroll and corporate profitability. We create a warm, healthy, green and safe workplace by providing employees with regular medical check-ups, health record archives, and vacation and recuperation systems. And we provide multi-layer insurance system involving social security, commercial insurance and supplementary corporate insurance.

We emphasize employees’ participation in corporate governance. We promote systems to have employee representation in the Board of Directors and Board of Supervisors. We implement the system of employee representative conference, make necessary disclosure of corporate affairs, and improve people-oriented management system. We listen and resort to employees’ opinions and respect their rights to knowing, participating in and overseeing corporate affairs as well as business decision-making, connecting the employer with employees.

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<thead>
<tr>
<th>Indicator</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
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<tbody>
<tr>
<td>Total employees (in 10,000)</td>
<td>84.5</td>
<td>75.2</td>
<td>72.6</td>
</tr>
<tr>
<td>Overseas employees (in 10,000)</td>
<td>5.6</td>
<td>5.23</td>
<td>3.82</td>
</tr>
<tr>
<td>Local content (%)</td>
<td>69.4</td>
<td>69</td>
<td>65.8</td>
</tr>
</tbody>
</table>

Occupational health

We put people first and strengthen occupational health management. We create a safe and sound working environment for employees and provide them with reliable conditions for occupational health and labor protection.

- We continuously carried out regulations on Sinopec Occupational Health Management, with emphasising on the implementation of accountability and process control.
- We strengthened project management of the Three Simultaneities for Occupational Health, making sure that the facilities for work safety and protection of occupational diseases should be in place with the key units of our production facilities throughout the engineering, construction and operation phases in accordance with laws and regulations.
- We strengthened control on the source of occupational health hazards and completely prohibited the use of asbestos and any product made of asbestos.
- We took special inspections on labor protection articles, making checks on air breathing apparatus at workplace and spot checks on protective clothing, shoes, safety helmet and safety belt.
- We carried out Employee Assistance Program (EAP) for six consecutive years to provide employees with care and psychological assistance. By the end of 2017, EAP had been in place in nearly 70 Sinopec subsidiaries and covered over 600,000 recipients.
We improved career development system and provided favorable conditions for employees’ career development and self-fulfillment.

- We launched Ten Measures on Deepening Talent Development System and Mechanism, reforming measures in 10 aspects including management system, talent introduction, talent development and incentives, etc., and laying out 28 fiscal projects.

- We granted remuneration to technology award winners, put in place the incentives for the commercialization of research findings, formulated management approaches on science and technology incubators, launched pilot incentives regarding employee stock options and bonuses in science and technology subsidiaries, and introduced measures for talent standard system building.

- Attracting graduate students is conducive to developing the company. And thus we have proactively attracted elite talents into the Company.

- We strengthened attraction and training for high-caliber elite talents. Out of the leading talents selected in 2017, there were two academicians, two National Top Talent candidates. And we attracted 46 post-doctoral talents from mobile post-doctoral stations.

- We improved scientific evaluation and awarding system. In 2017 we selected and awarded 100 Sinopec Outstanding Expert Contributors and 200 Min Enze Youth Talent Award winners.

- We improved the three-level job-based post system in three job categories, including managerial experts, technology pros and skilled operators, to stimulate innovation capability of all kinds of talents.

- We advanced the selection process of high-level experts, applied the supplementary qualifying and evaluation mechanism, and engaged experts fulfill their functions.

- We improved the three-level job-based post system in three job categories, including managerial experts, technology pros and skilled operators, to stimulate innovation capability of all kinds of talents.

- We carried out training programs focused on corporate strategic development and capacity building. In 2017, we carried out various training programs that covered over 1.3 million person-time.

- We set up job-based training system to improve employee proficiency in and adaptability to their jobs. In 2017, we rolled out the training course system in oilfield and petrochemical subsidiaries, with 70 grass-root basic trainings selected as typical cases.

- We advanced off-job training, online learning and on-job practice in parallel, set up holistic job-post training system. In 2017, we set up Sinopec Online Learning Website based on Sinopec private cloud.
Employee care

Sinopec is engaged in corporate Family Culture program. The Company makes everybody feel increased team cohesion, sense of belonging and sense of gain by paying visits to onsite workshops and employees’ families, caring for retirees, and organizing recreational activities.

Set up employee WeChat platform

In 2017, Sinopec set up an online employee WeChat platform titled as “Endeavoring Sinopec”, with 600,000 employee subscribers and covering 85% of total company employees. The platform represents one of the largest among all SOEs’ corporate account platforms. It plays an outstanding role in sending top management messages, delivering education, implementing employee care program and providing psychological counseling, etc. In particular, it offers online psychological health counseling services in 3,281 person-time throughout the year.

Family culture development

We launched Family Culture program in Sinopec service stations and oil depots, advocating the core value of “interdependence and common growth between the company and employees”. The objective of the program is to guide employees to be honest, disciplined, friendly, diligent and responsible, and to do business in a way that satisfies employees, customers and the company.

Visits to onsite workshops and employees’ families

By paying visits to onsite workshops and employees’ families, we increased team cohesion. We continuously aided the employees’ families living in extreme difficulty and sent designated individuals or special taskforce to aid the needy employees. As a result, these employees and their families truly felt the warmth of Sinopec as a big family. In 2017, we spent 220 million yuan relief funds and helped all kinds of difficulty-stricken groups in 216,548 person-time.

Care for retirees

We care for the living and health of retired employees, providing regular medical check-ups, making home visits and organizing recreational activities. In 2017, we gave medical check-ups to retirees in nearly 300,000 person-time and paid 150,000 visits to retirees in hospitals or recuperation.

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<tr>
<th>Indicator</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
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<tbody>
<tr>
<td>Expenses on assisting employees living in extreme difficulties (in 100 million yuan)</td>
<td>1.76</td>
<td>2.2</td>
<td>2.2</td>
</tr>
<tr>
<td>Number of employees assisted</td>
<td>170,710</td>
<td>229,953</td>
<td>216,548</td>
</tr>
</tbody>
</table>

Cooking Contest at Sinopec Service Station.
Optimizing Products and Services

We are committed to continuous product development and service improvement. We created added value for customers and gained solid customer loyalty by supplying own or exclusive products, building branding system, offering quality products and premium services.

Sinopec branding system

Guided by the market and customer needs, we provide diversified products and services through independent innovation driven by advanced technologies. Today we have established our proprietary branding system featuring quality products and services across the integrated value chain in line with our slogan "Powering Better Life".

In 2017, Sinopec was ranked 2nd with a brand value of US$ 29.555 billion in Brand Finance Oil & Gas 50 2017 announced by Brand Finance, the British independent branded business valuation and strategy consultancy.
Non-fuel business

Sinopec takes the development mode of “brand + capital + commodity + service”. The Company advances in parallel the six approaches including profitability and market capitalization growth, synergetic growth of fuel retailing and non-fuel business, “bring in” and “go global”, online and offline platforms, independent operation and e-commerce platform, as well as physical and financial business growth. With emphasis on innovation and value creation, we provided customers with comprehensive non-fuel services. In 2017, the turnover of non-fuel business was 51.95 billion yuan, up by 48% year on year, and profit was 2.22 billion yuan, up by 48%. By the end of 2017, the Company had opened 26,000 Easy Joy convenience stores nationwide. We advanced professional operation and management of convenience stores, and strengthened marketing of own-brand or exclusive goods such as Sinopec Hailong® green product series, Sinopec Dolma® Tibet Glacial Water, Changbaishan® Spring, Oulu® Paper and Laimao® Spirit, etc. We introduced more foreign branded and regional specialty products to enrich the variety of the products. In addition, we are committed to providing one-stop services such as refueling, c-store, auto service, fast food, insurance and travel service, etc.

Product quality guaranteed

Sinopec adheres to the policy of always leading in quality and the target of satisfying clients in quantity and quality. We constantly improve quality management from the aspects of management system, product research and design, raw material procurement, standardized operations, quality control, client service and quality cultural construction, aiming to provide our clients with safe, healthy and reliable products.

Case: Stringent quality management and supply of premium products by Sinopec Lubricant Company

Sinopec Lubricant Company provides products and services tailored to the needs of different customers by continuously improving product quality, developing various products, and establishing quality management system. In 2017, Sinopec Lubricant Company manufactured 34,540 consignments of lubricant grease with 100% passing rate. The Company proactively conducted self-random-test of 11 consignments of products, and accepted random-test of 98 consignments of products by quality and market supervision department at various levels, all passed with reliable performances. The Company was also nominated Best Quality Management Award by Beijing Municipal Government.

In 2017, the company completed its transition to IATF 16949, the revised automotive quality management system standard developed by the International Automotive Task Force (IATF), as required by customers in auto industry. Afterwards, the company obtained the third-party accreditation and second-party acceptance by Mercedes-Benz, Sany Heavy Industry, Dongfeng Nissan, Changan Ford, etc. The company’s plant in Singapore was granted the accreditation for VDA6.3 standard by Mercedes-Benz and became the first Chinese lubricant supplier enlisted in the global service supply system of Mercedes-Benz.

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<tr>
<th>Indicator</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
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<tbody>
<tr>
<td>Passing rate of chemical products (%)</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Sales passing rate of petrochemical products (%)</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Random test passing rate of oil products (%)</td>
<td>100</td>
<td>100</td>
<td>100</td>
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Promoting Responsible Industry Chain

While achieving success in growing the company, Sinopec is committed to responsible procurement. We further improved management of suppliers and contractors, engaged strategic cooperation with them and supported the growth of national industry. Through joint efforts with suppliers and contractors, we aim to lead the growth of whole value chain and create win-win results.

Responsible procurement

We define bidding and purchasing as the main pattern in responsible procurement. In compliance with the state rules and regulations, we carry out responsible procurement through efficient online platform and based on the principle of fairness, equality, openness, integrity and CSR fulfillment. In 2015, we amended the bidding and tendering management system for material procurement and regulated the management approach and process. As a result, a “1+6+12” bidding and procurement system has been in place. In 2017, 100% procurement was completed through public bidding process.

Supplier and contractor management

In 2017, we conducted open cooperation with suppliers, optimized the qualifying and evaluation mechanism for suppliers, intensified penalty on the breach of the contract, and advanced market integrity system with higher transparency.

With respect to onsite review and evaluation, we strengthened the evaluation on suppliers’ HSE performance, including more indicators into the inspection standards, e.g. the attestation of ISO14000 and ISO18000, the implementation of production safety emergency response system, labor protection measures and the treatment on emissions and wastes. In addition, we also included into the bid evaluation standards the green and low-carbon qualification of the suppliers. These indicators helped egg the suppliers on to be more sensitive to pollution and more capable of protecting the environment.

Furthermore, we carried out regular trainings for suppliers and led them to grow on the learning curve of supply resource management and bidding management system.

We practiced the national strategy of “internet+” and put online Chememall, the chemical e-commerce website (https://www.chememall.com) in June 2016. On Chememall, we provide such services as chemical trading, chemical information, transaction settlement and logistics. The products traded on the website include synthetic resin, synthetic rubber, synthetic fibers and its materials, organic chemical materials, specialty chemicals, etc. Sinopec Chemical Sales Company, the builder of the website, has continuously upgraded the website through optimization, with Portal Page, Buyer’s Center, Seller’s Center, Operation Center put on the interface. The function of the e-commerce platform has been further enriched to provide tailor-made services to differentiated customers. By closely following the change in customer demand, allocating resources and putting them online, we strive to improve customer satisfaction succeeded in meeting customer demand.

In 2017, thanks to convenient operation process, customer-focused services, open and transparent traceability of Chememall, the number of its customers increased by 360% from 1,058 to 4,872, and the total turnover amounted to 4.25 billion yuan.

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<tr>
<th>Indicator</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
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<tbody>
<tr>
<td>Resolve rate of client complaint on refined oil products (%)</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Client satisfaction of lubricating products (%)</td>
<td>80.95</td>
<td>85.0</td>
<td>85.0</td>
</tr>
<tr>
<td>Resolve rate of client complaint on lubricating products (%)</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Client loyalty of chemical products (%)</td>
<td>98.2</td>
<td>98.4</td>
<td>99.2</td>
</tr>
<tr>
<td>Resolve rate of client complaint on chemical products sales (%)</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
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</table>

Case: Customers increased by 360% on Sinopec Chememall E-Commerce Platform

We continuously improved the services throughout the whole process from pre-sale through after-sale. We have a sound system of client relationship management to strengthen diversified communication with clients and meet their demands. We constantly keep improving client information protection system and taking relevant measures to safeguard client privacy and information security.

In 2017, Sales supplier trainings reached over 3,000 person-times.
In 2017, we set up the mechanism of selecting contractors through competition, partnered with strategic contractors who value credibility, reputation and enjoy stronger capability. We set up integrity evaluation mechanism based on key indicators, strengthened the evaluation on contractors together with their key administrators and staffs. The scores of contractors are put into the total integrity score for future bidding evaluation.

<table>
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<tr>
<th>Indicator</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
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<tbody>
<tr>
<td>Rate of suppliers with ISO9001 certification (%)</td>
<td>53.9</td>
<td>57.6</td>
<td>52.7</td>
</tr>
<tr>
<td>Rate of suppliers with ISO14001 certification (%)</td>
<td>24.2</td>
<td>30.2</td>
<td>27.5</td>
</tr>
<tr>
<td>Rate of suppliers with ISO18000 certification (%)</td>
<td>18.4</td>
<td>25.4</td>
<td>30.9</td>
</tr>
<tr>
<td>Rate of contractors with ISO9001 certification (%)</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Rate of contractors with ISO14000 certification (%)</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Rate of contractors with ISO18000 certification (%)</td>
<td>100</td>
<td>100</td>
<td>100</td>
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</table>

In 2017, Sinopec signed strategic cooperation agreement (or framework agreement) in various converging aspects with municipal or provincial governments of China, SOEs, foreign companies and Chinese private companies. We are engaged in diversified and crossover cooperation with different industrial sectors and partners, building new business circle and achieving win-win results through shared growth.

Case: Sinopec & JD.com jointly explore “new retailing” business model

Guided by the vision of open cooperation and shared development, Sinopec focuses on diversified customer demand, aims to offer best consuming experience, and steps up its transformation to a comprehensive service provider. In 2017, Sinopec Marketing Company signed strategic cooperation agreement with JD Group to explore innovative smart service station.

The strategic cooperation agreement will quicken the digital and smart upgrading of over 30,000 Sinopec service stations and 26,000 Easy Joy c-stores. The cooperation model helps deeply synthesize multiple resources such as people, auto-vehicles, finance, services and etc., and aims to provide customers with a smarter human-mobility-life service platform.

Meanwhile, Sinopec and JD Group will explore pilot programs in digital modeling analysis and supply chain optimization. Both sides will use advanced technology to consolidate Easy Joy c-stores, explore “new retailing” business model featured with O2O and scenarios consumption based on scenario digitalization, smart data network, so as to build a smart retailing network with wide coverage.

Revitalizing national industry

Sinopec is committed to developing the manufacturing of national equipment and maximizing Chinese content of key oil and petrochemical equipment. We work together with domestic business partners to achieve breakthroughs, improve industrial core competitiveness and develop national equipment manufacturers of international level. In 2017, Sinopec was ranked the 1st among global 500 manufacturers and brought into Kuwait the key equipment made in China with a value of 4.3 billion yuan. We are committed to supporting the growth of Chinese petroleum equipment manufacturers and leading Chinese equipment manufacturers to the world.

Driving industry growth

EPEC, a platform for business e-commerce system

With “Make Profession Procurement Possible” as its slogan, Sinopec’s EPEC represents China’s largest industrial products e-commerce platform. Its core value is to create superior customer experience, superior quality, superior cost effectiveness and superior credibility. It offers procurement service, sales service, financial service and supporting services. It forge new business model of “Internet + Supply Chain” to build a sound business platform. Since April 2016 when it was put online, EPEC had enlisted 45,500 registered purchasing or selling companies and 125,000 registered users, trading 2.46 million types of products online.

Valuable contributor to SC2B resource sharing

EPEC is unique in professional quality procurement, compliant tendering and bidding, tailor-made and attentive services and innovative resources sharing. It serves physical business through supply and trading of industrial products. It creates SC2B value and contributes to resource sharing and transformation of industrial business. It allocates resources from demand side while promoting China’s supply-side structural reform. By the end of 2017, the number of the transaction orders on EPEC had amounted to 200,000 and the total trade volume had reached 181.7 billion yuan. The supply chain finance credit to suppliers had reached 3.7 billion yuan. And EPEC signed strategic cooperation agreement with 35 stakeholders.

Bridge builder for global industrial product trading

Since established in April 2017, EPEC international business platform (global.epec.com) has been serving as the bridge for global industrial trading by introducing Chinese manufacturing products into international market and bringing world top-notch products into China. By the end of 2017, EPEC had put online various high-end suppliers from Brazil, Russia, India, South Africa, etc., together with 6,624 purchasing member companies, 601 online registered suppliers and 3,745 types of products. It also provided price inquiring process for exporters and third-party country trades, with transaction volume reaching US$2.9 billion.

Trade facilitator for BRICS countries

In 2017, EPEC was listed one of the eight key deliverables in the 2017 BRICS Business Council annual meeting. In the future, EPEC is committed to upgrading the platform functions, improving services and facilitating the economic and trading cooperation among BRICS countries. It aims to provide multi-lingual services, support whole-process purchasing and selling activities, assist industrial upgrading and facilitate trades among BRICS countries.

Strategic cooperation projects achieved in 2017 (typical examples)

- In March, Sinopec signed strategic cooperation agreement with SABIC
- In April, Sinopec signed strategic cooperation agreement with China Huadian Corporation Ltd.
- In May, Sinopec signed strategic cooperation agreement with CRBC
- In August, Sinopec signed strategic cooperation agreement with the government of Tibet autonomous region.

Forging strategic partnership

In 2017, Sinopec signed strategic cooperation agreement (or framework agreement) in various converging aspects with municipal or provincial governments of China, SOEs, foreign companies and Chinese private companies. We are engaged in diversified and crossover cooperation with different industrial sectors and partners, building new business circle and achieving win-win results through shared growth.

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Guided by the vision of open cooperation and shared development, Sinopec focuses on diversified customer demand, aims to offer best consuming experience, and steps up its transformation to a comprehensive service provider. In 2017, Sinopec Marketing Company signed strategic cooperation agreement with JD Group to explore innovative smart service station.

The strategic cooperation agreement will quicken the digital and smart upgrading of over 30,000 Sinopec service stations and 26,000 Easy Joy c-stores. The cooperation model helps deeply synthesize multiple resources such as people, auto-vehicles, finance, services and etc., and aims to provide customers with a smarter human-mobility-life service platform.

Meanwhile, Sinopec and JD Group will explore pilot programs in digital modeling analysis and supply chain optimization. Both sides will use advanced technology to consolidate Easy Joy c-stores, explore “new retailing” business model featured with O2O and scenarios consumption based on scenario digitalization, smart data network, so as to build a smart retailing network with wide coverage.
We should pursue the Belt and Road Initiative as a priority, give equal emphasis to “bringing in” and “going global,” follow the principle of achieving shared growth through discussion and collaboration, and increase openness and cooperation in building innovation capacity. With these efforts, we hope to make new ground in opening China further through links running eastward and westward, across land and over sea.

—— Xi Jinping’s report at the 19th CPC National Congress

Sinopec actively responded to the Belt and Road Initiative, by implementing open and cooperative strategy, constantly strengthening strategic cooperation with pertaining countries and regions and striving to build up new platform for int’l cooperation, so as to generate new power for shared development.

Sinopec’s presence in countries along the Belt & Road

Belt and Road·win-win cooperation

In 2017, Sinopec proposed the “4322” cooperation vision, integrating itself with Belt and Road development, for a diversified, in-depth and close cooperation with pertaining countries and regions to achieve shared development.

Sinopec “4322” Cooperation Vision

4 Business Chains
- Oil & Gas
- Refining & Chemicals
- Engineering Services
- Int’l Trading

3 Strategic Cooperation Zones
- Central Asian Countries—Russia
  - East Europe
  - Middle East (West Asia)—North Africa
  - Southeast Asia

2 Commerce Platforms
- Conventional Import & Export Commerce Platform
- EPEC, Electronic Commerce Platform for Procurement

2 Innovation Centers
- North America Center
- Middle East Center

By the end of 2017, Sinopec had invested and conducted joint projects in 27 countries along the “Belt and Road”, which has become our core strategic cooperation zone. Numbers of international cooperation projects with fairly large scales had been established, and it played an important part for the local social and economic development.

Udmurt Oil Company (UDM), Sinopec’s joint venture with Rosneft, accounts for 60% of the total oil reserve in Udmurt Republic, with a daily crude output of 17,000 tonnes. The project has been regarded as a model regarding Sino-Russia energy collaboration. In 2017, the UDM project produced 6.1 million tonnes of crude, providing energy and promoting economic development for the neighborhood.

The Apache project that SIPC had acquired realized an annual output of around 18 million tonnes of oil equivalent, accounting for 20% of Egypt’s oil and gas production. Outstanding contributions were made to Egypt’s economic development, energy security and social stability.

YASREF is Sinopec’s first overseas refining and chemical project, marking China’s largest investment in Saudi Arabia and the flagship of China-Saudi economic partnership. The project owned world-leading refining and chemical facilities, with a processing capacity of 400,000 barrels of crude per day. Refined products including gasoline and diesel meet Euro-V standards.

Sinopec Engineering Group (SEG) was awarded the Atyrau Refinery aromatics and modernization project. Completion of the project will bring Atyrau Refinery the most diversified petrochemical products with highest qualities in Kazakhstan, which will generate demonstrating significance for petrochemical upgrading.

SEG participated in Kuwait Al-Zour Refinery project in a consortium. The refinery would be the world’s largest, raising Kuwait’s refining capacity by 66%, representing a historic milestone of Kuwait’s oil industry.

Sinopec International Petroleum Service Company (Sinopec Service) has become the largest and most reliable drilling contractor in Kuwait, thanks to its high-quality, efficient, safe and sustainable services. Currently, there are 53 drilling and logging rigs in service for Kuwait oil industry from Sinopec Service, which expedites Kuwait’s oilfield development and greatly enhances the crude production.

Sinopec Lubricant Company in Singapore established and went into operation the Lubricants and Grease Plant, which represents a solid step for Sinopec’s go-global strategy. This plant links Sinopec with Middle East, Europe and Africa, contributing a local GDP growth of 41 million USD.

In 2017, Sinopec (Hong Kong) Limited acquired an empty plot on Yishun Avenue in Singapore to build a service station. This is a medium-sized gas station with possible services of convenience store, auto-beauty and engine oil sales. In future, Sinopec will enhance resource supply and deliver high-quality oil products and services.
China Petrochemical Corporation 2017 Social Responsibility Report

Belt and Road·beneficial to people’s livelihood

Sinopec joined UN Global Compact at an early stage. While implementing the Belt and Road Initiative, the Company constantly adheres to the principle of mutual benefit & win-win cooperation and gives back to the society wholeheartedly. Belt and Road Initiative does benefit local livelihood and has been spoken highly by local people and governments.

- Paying taxes according to laws and powering local economic development.
- Employing local workers and making local procurement to promote local sustainability.
- Pursuing green and low-carbon development and protecting local ecology. We realized 100% waste-water reinjection legally in Apache QPC operating company. We are the first Egyptian joint venture among the 17 who have realized 100% proper treatment of effluents before injection back to producing layers, winning recognition from the local environmental protection sectors.
- Conducting social welfares and helping community development. We pay attention to less privileged people in Egypt, Zambia, Tanzania and Morocco regarding their agriculture and early childhood education. We also participate in disaster prevention and disaster relief activities with the community, and improve local infrastructure.
- Sticking to the highest international standards for safety, health and environmental protection, receiving certificates for "4-million-hour continuous safety" from project owners.

Case: Implementing girls’ education project, rewarding Egyptian society

Sinopec Egypt and Apache project team uphold the philosophy of common development, win-win format and mutual benefits, actively fulfill social responsibility, gaining excellent credits and reputations.

Since 2004, the Apache project has started the Spring Board Project, helping girls with their education. The slogans are “education changes my future, and I change the future of Egypt” and “a mother’s decent education will benefit the whole family”. Building up and funding girls’ schools are the main approaches for us to fully support Egyptian girls’ education especially in farming areas.

Currently, Apache project has already established 201 girls’ schools mainly in Giza, Fayoum and Minya provinces, with a total investment of 3.5 million USD, among which 2.5 million are various donations from the society. Around 7,000 girls have been admitted to schools, among which nearly 4,000 are receiving primary education and around 2,200 are receiving secondary education.

<table>
<thead>
<tr>
<th>Total investment</th>
<th>3.5 million USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of girls’ schools</td>
<td>201</td>
</tr>
</tbody>
</table>
The wellbeing of the people is the fundamental goal of development. We should make steady progress in ensuring people’s access to childcare, education, employment, medical services, elderly care, housing, and social assistance.

Being devoted to our nation and people and making contributions to mankind, we pay taxes according to law to serve social and economic development. We strengthen community management, build harmonious community, and keep improving community environment. We are dedicated to public welfare with actions giving back to society, aiming to elevate people’s well-being and make contribution to a moderately prosperous society.
Tax Contribution

Sinopec has been always paying taxes according to law since its establishment for more than 30 years ago. From year 2000 to 2017, the Company’s taxes and fees totaled 3.5629 trillion yuan, with a daily average amount of over 1 billion yuan, which are spent on China’s public needs including national defense, R&D, education, culture and public health.

Each year, tax from Sinopec accounts for 3% of national total, in other words, 3 yuan out of every 100 tax is contributed by Sinopec. In 2017, the Company realized a total tax amount of 362.3 billion yuan.

<table>
<thead>
<tr>
<th>Years</th>
<th>Taxes and fees contribution (billion yuan)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>355.7</td>
</tr>
<tr>
<td>2016</td>
<td>353.6</td>
</tr>
<tr>
<td>2017</td>
<td>362.3</td>
</tr>
</tbody>
</table>

Taxes and fees contribution

Community Development

Sinopec builds the community as our home, and we attach importance to community construction for social harmonization. The Company develops itself together with the community, continuously building safe, happy, sincere, environment-friendly, healthy and harmonious communities through upgrading services and management quality. Our residents have acquired a stronger sense of gain and enjoy a safe and harmonious living environment.

- Till 2017, 77% of public water, power, gas and heating utilities as well as properties have been split from our core businesses and transferred to local authorities. 21 subsidiaries have signed transfer agreements and applied for government subsidies.
- We promote smart community development, improving community management by adopting information-based measures. We create APPs including “Shengli Community Care” and “Happy Zhongyuan” to raise service levels. The satisfaction rate of our community services was above 90% for many consecutive years.
- We develop livelihood projects. By the end of 2017, Sinopec had invested 4.234 billion yuan accumulatively in renovating 446 old residential areas, with the community appearance substantially improved. We completed 17 shanty apartment renovation projects covering 19,320 apartments. Construction of 4,172 new apartments was launched. Construction of 2,218 apartments was continued in 2017. Employees’ living conditions were greatly improved.
- Great efforts were made in afforestation. By the end of 2017, Sinopec owned 23,000 hectares of green land out of a total occupying acreage of 112,000 hectares. Our green coverage ratio reached 21%, with an annual increase of 230 hectares.
Social Services

While pursuing our own development, the Company is determined to deliver care through activities including social welfare, brand public welfare, social contributions and environmental protection. We wholeheartedly benefit individuals and the society.

Social welfare

The Gas Station that Cares • A Better Road Home

“China Petrochemical Corporation 2017 Social Responsibility Report” is a huge charity project of Sinopec starting from 2013. For 6 consecutive years, we have been providing warm services to those motor riders back home during Chinese Lunar New Year. In 2018, together with over 5,000 volunteers convened by the Communist Youth League of Guangzhou, we continued to set up caring service counters in 238 service stations in Guangdong and Guangxi, providing free service to migrant workers.

Number of volunteer

over 5,000

Number of service stations with service counters

238

15,000 free red packages for free fueling

10,000 free mail delivery services

Partnering with Guangdong EMI, providing free mail delivery service (below 10kg)

20,000 discount e-coupons

Providing “buy 100 yuan get 50 yuan off” e-coupons for new year products in designated Sinopec c-stores

1 free fueling, 1 Taiping short-term accident insurance, 1 set of safety protective clothing, and 1 “Easy Joy” lucky bag

Partnering with Guangdong Yueyun Transportation Company, we increased our free bus lines up to 15 in total, starting from Foshan and Zhongshan of Guangdong to Wuzhou, Guilin and Lalu Zhu of Guangxi.

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“My wife with two kids has already taken the bus. They will arrive in Guangx at 3 pm, where the local labor union will then send them home in our village. I will ride motorcycles with my town fellows, and I will be home right in time for supper.”

—— Yao Mingliang, a carpenter from Guangxi, working in Foshan Furniture Plant.

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—— Yao Mingliang, a carpenter from Guangxi, working in Foshan Furniture Plant.
Sanitary workers’ lounges

President Xi Jinping compares sanitary workers to city beauticians, and calls us to care and respect those workers and their work. Importance, support and respect should be given to our environmental hygiene and our people working on it.

In 2014, Sinopec launched branding public welfare project providing sanitary workers’ lounges. This public welfare undertaking has been integrated with our core business. Based on our existing gas stations, we set up caring counters, delivering 10 kinds of services like providing hot water, tea bags and medicine boxes, tire testing, urgent-repairing tools, etc. We also provided free hot water and meal-heating services to sanitary workers and taxi drivers in the neighborhood if conditions permit.

Our effort made in sanitary workers’ lounges has built the welfare project as a brand. This symbolizes our voluntary services have become more disciplined and normalized, which has better shaped our corporate image and passed on the positive energy.

Case: Sinopec Jiangsu Company is in action for building up sanitary workers’ lounges

Ever since we start building sanitary workers’ lounge, Sinopec Jiangsu Company made continuous efforts to carry out the project. 171 lounges have been set up in 13 cities of Jiangsu Province, receiving 13,400 visits. The Company has been brightly branded for its CSR.

Sinopec Jiangsu Company keeps standard design to the lounges. A designated area with facilities, signs, attendance and display board is indispensable. With facilities and display board in place, sanitary works could find the lounge in their neighborhood. In 2017, after discussions with labor union and city management departments, Sinopec Jiangsu Company upgraded the lounges into caring stations, providing services and assistance to more outdoor workers including traffic policemen, delivery men and drivers, and won favorable comments.

Sinopec sets up lounges, delivering care and love to our sanitary workers for long. This is something good, warm and down-to-earth, and worth promoting and popularizing.

—— Wang Wensheng, Vice Mayor of Xuzhou, Jiangsu

Special lounges for sanitary workers built by Sinopec demonstrate the bosom of a state-owned company. This is the way how a national company shoulders its CSR, which shall be learnt by other companies with similar conditions.

—— Dong Jun, Chief Commentator of Jiangsu Think-tank, Xinhua News Agency

Popularizing knowledge of law

Since 2012, Sinopec has made donations to China Legal Aid Foundation for 6 years, sponsoring “1+1” China Legal Aid Volunteer Action Program and popularizing knowledge of law and rule of law. The Company has accumulatively sent over 1,300 volunteers to 392 counties or districts in Central or West China to provide legal services. Over 54,000 legal aid cases were dealt with and over 18,000 workshops were held, providing excellent legal services to millions of poor people. Tens of thousands of disputes were settled, benefiting 15.7 million people and retrieving economic loss of nearly 3 billion yuan. In 2017, Sinopec was awarded as “the Outstanding Company for Legal Assistance Welfare” for the 20th anniversary of the establishment of Legal Aid Foundation.

Brand-supported Public Welfare

Sinopec encourages in-house branded products including Easy Joy Zhuoma Spring Water and Great Wall Lubricant to participate in public charity activities, creating social value, building up brand image and promoting brand excellence.
Social contribution

Serving peak farming seasons
In order to ensure smooth agricultural activities during farming seasons, Sinopec actively optimized logistics and supplied sufficient fuel products. We gave favorable treatment and high quality service to farmers to guarantee their good production.

Disaster relief and rescue
In times of disasters including floods, fires and typhoons, we immediately activated emergency response system, opening fast fueling lines to guarantee fuel supply. In the mean time, we arranged logistics, donating and transporting Zhuoma Spring water and instant food to the disaster-stricken areas.

In June 2017, a landslide occurred in Mao county of Sichuan. The Company made every effort to ensure a stable supply of fuel and other necessities, delivering 10 tanks or 2,160 liters of diesel in total, 2,400 bottles of Zhuoma Spring water and 15 boxes of instant food to the rescue scene.

In August 2017, a 7.0-magnitude earthquake struck Jiuzhaigou, Aba prefecture of Sichuan. We opened fast fueling lines for instant fuel supply to rescue vehicles, set up assistance stations and provided free water and food for rescuers.

Supporting major national events
In 2017, Sinopec as a gasoline supplier supported quite a few major events in China, including the 19th CPC National Congress, the Belt and Road Forum for International Cooperation, the 13th National Games, the 9th BRICS Summit and Boao Forum for Asia, through enhancing resource allocation, optimizing logistics and strengthening fuel supply.

As a partner of the 13th National Games, Sinopec sponsored 80 million yuan, designated over 200 service stations specially for the Games, providing GB VI oil products and high quality services.

Voluntary service
Sinopec actively conducted voluntary services from one to more areas, from within the Company to the whole society, passing on positive energy and promoting sense of pride of the employees. The spirit of “Devotion, Love, Help and Progress” has become a Sinopec culture regarding voluntary service.

Number of registered volunteers Over 200,000
Number of teams for voluntary services Over 1,500
Number of bases for voluntary services Over 2,000

Case: Ms. Song Liping, an SOE model, starting again for voluntary service
In 2017, Song Liping, mediator and head of volunteer station in the 10th community of Zhongyuan Oilfield, was selected as the one of the 1st batch of “Models from Central Enterprises”. Song Liping had supported 60 poor families, sponsored dropped-out and seriously-sick children, and collected a donation of over 600,000 yuan for 28 seriously-sick patients. She paired with 384 empty nesters, offering assistance when necessary. She became the 1,734th people for hematopoietic stem cell donation in China, and she was considered the most beautiful figure in the national “Learning from Lei Feng” activity.

Caring for environment
The Company actively took part in various environment-caring events, calling for the awareness of environmental, home and ecological protection.

▲ As a partner of the 13th National Games, Sinopec sponsored 80 million yuan, designated over 200 service stations specially for the Games, providing GB VI oil products and high quality services.
Eight-year-old Zhong Yan, a girl with congenital cataract from birth, used to be unable to read letters from the blackboard even when sitting in the 1st row in the classroom. This lucky little girl finally boarded on her Lifeline Express in the autumn of 2012. Her vision in both eyes recovered from 0.4 to above 1.0 after free treatment.

Meng Zhaowen, a college student, lost her right vision due to traumatic cataract caused by an accident when she was little. For the past 22 years, she could only rely on her left eye to see the world. In August 2014, a Lifeline Express, loaded with hope, brought her brightness. As the 30,000th patient cured by Sinopec Lifeline Express, she said excitedly, “Thank Sinopec for powering my healthy life.”

In October, 2014, Zhong Yan and Meng Zhaowen, both having recovered from eye operation, were invited to the 4th “Great Wall Lubricants China Aerospace Cheerleading Team” Campaign. Zhong Yan is the youngest team member. She said happily, “I saw rocket launch with my own eyes. I’m intrigued by how the rocket soars up into the sky. I will work hard and study rocket science when I grow up.

In Convalescent Zhong Yan(second from the right) Meng Zhaowen(right) went to see the rocket launch.

How Sinopec Lifeline Express came into being

The “Lifeline Express” is the charity project designated for cataract patients, donated by China Lifeline Express Fund. It is a gift from Hong Kong people to the Mainland people in 1997 when Hong Kong returned to China and is China’s only mobile ophthalmology hospital built on a train.

Sinopec has been donating to the “Lifeline Express” charity project since 2004. In 2007, with an aim to cure more poverty-stricken cataract patients, Sinopec spent 30 million yuan on building a train hospital named “Sinopec Lifeline Express”, the first and the only lifetime express sponsored by a company from China’s Mainland. The train travels to 3 different impoverished regions nationwide, stays for 3 months at each region and cures an average of 3,000 patients every year. Success rate for the operations reaches over 99.9%, comparable with that of the top hospitals in domestic first tier cities.

Cured over 40,000 patients for 15 years and brought brightness and hope

For 15 years, Sinopec has donated altogether over 140 million yuan for building one Sinopec Lifeline Express, one ophthalmic surgery training center and 18 Lifeline express/Sinopec cataract treatment centers. Sinopec Lifeline Express has traveled to 33 regions and counties in 19 provinces like Xinjiang, Qinghai, Ningxia, Tibet and Sichuan. It has made 38 stops and cured more than 40,000 cataract patients in poverty for free. We won the Special Brightness Award from China Lifeline Express Fund for 13 years in a row and the honorary titles of China’s Best Voluntary Service Project and SOE Excellent Voluntary Service Project by the Public Communication Dept. of the Central Committee of the CPC.

In 2016, 1,025 patients were cured. For example, 1,250 patients in Kashi, Xinjiang, 610 patients in Kuitun, Xinjiang and 567 patients in Jiouquans, Gansu.

In 2017, 1,026 patients in Kashi, Xinjiang, 1,048 patients in Baishan, Jilin, and 1,052 patients in Guilin, Guangxi.
By 2020, SOEs will have established mature CSR system, with better ability to create comprehensive value covering social, economic and environmental aspects, remarkable enhancement of social communication and operational transparency, and significant improvement of brand image and social recognition. A group of outstanding enterprises that lead CSR practices in their industries will come into shape with global influence and respectable images.

We stick to our mission of “Powering Better Life”, integrating CSR into corporate culture and daily operation, consolidating overall CSR management, making CSR plans, innovating CSR communication, and promoting CSR image in order to lead the sound and sustainable development of the Company and pursue the comprehensive social, economic and environmental value.
CSR Model

Sinopec adheres to the corporate mission of “Powering Better Life”, sticking to the primary target of value creation, practicing the national development concepts of innovative, coordinated, green, open and shared development and upholding the “Five Growth Strategies” of Creating Value, Driving Innovation, Optimizing Resources, Open Cooperation and Green Growth. The Company and its stakeholders jointly promote CSR fulfillment in five aspects of energy and chemicals, low-carbon development, working with partners, social rewarding and responsibility management, aiming to constantly create economic, social and environmental value comprehensively and facilitate the joint sustainable development of the Company and stakeholders.

CSR Management

CSR culture

We at Sinopec adhere to the original aspiration and mission of loving China, revitalizing petrochemical industry and powering better life, and uphold the good tradition of precise, careful, diligent and pragmatic work approach, making “Building a World Leading Energy and Chemical Company” our mission and “People, Responsibility, Integrity, Excellence, Innovation and Win-win” as our core values. We always put emphasis on “Putting People First, Green and Low-carbon Growth and CSR” throughout our development. Given that our corporate growth is closely linked to shareholders’ demand, we make great efforts to integrate shareholders’ demand into corporate management and daily operation to maximize corporate value and satisfy reasonable needs, which has become the Company’s unique CSR culture system.

Powering better life

We develop our business in line with people’s aspiration for better life, providing more advanced technologies, premium products and excellent services to power social development.

We stick to green, low-carbon and sustainable path and accelerate restructuring our businesses and operations which is conducive to energy saving and environmental protection, ultimately contributing to the building of ecological civilization.

We uphold the win-win cooperation philosophy and continuously reward the country and the people, bringing benefits to all shareholders along with our growth.
CSR integration into management

Sinopec has set up its CSR Committee to integrate CSR into the enterprise management. Sinopec is the first among central SOEs to have a CSR Committee under the Board of Directors. As the CSR decision-making body, this Committee is in charge of planning CSR work, making relevant policies and reviewing relevant documents.

The CSR Office, under the Public Communication Dept., affiliated to the CSR Committee is responsible for strategic planning, organization, negotiation and promotion of CSR work, compiling and publishing of CSR report, and communication, broadcast, assessment and study of CSR. Each department in the headquarters is responsible for part of CSR work based on functional division. Each subsidiary sets up CSR management body to promote CSR practice and ensure the work carried out in a smooth way.

In October 2017, under the guidance of SASAC General Office, the CSR Research Center under the Economics Department of the Chinese Academy of Social Sciences conducted field research in Sinopec for its SOE CSR Blue Book (2017) and SOE Overseas CSR Research Project. Both sides carried out effective exchanges on CSR practices and provided support for the projects.

CSR Communication

Whether a company’s stakeholders obtain full understanding and recognition of the company’s vision and brand value is of great importance for a company to achieve sustainable development. While taking the Company’s CSR issues into account and meeting reasonable expectation and the demand of internal and external stakeholders like the government, shareholders, creditors, clients, employees, business partners, relevant organizations, NGOs, communities and the public, we innovate our communication channel and method, precisely promote our CSR philosophy and fulfillment dynamics so as to build a responsible corporate image and enhance CSR competitiveness.

Sinopec official WeChat account has been rewarded as the Most Influential SOE New Media Account for the Year by SASAC for five years successively. Based on the statistics of People.cn, since their opening, the online media accounts at the Sinopec Group level have released over 5,000 articles with more than 700 million views. In 2017, all the press outlets of Sinopec published over 160,000 articles with 23,000 views.

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Feature: Upgraded Open Day Expands Communication Channels with the Public

April 21st, 2017, the day before the 48th World Earth Day, saw the launch of the 2nd Season of Sinopec Open Day Campaign with “Discovering Intelligent Energy” as the theme while proposing the initiative of “utilizing resources intensively and living a green and simple life”. It was China’s largest “Public Open Day” campaign launched by industrial companies so far, and also the first one among SOEs. It demonstrated Sinopec’s determination and sincerity to practice green and low-carbon development and carry out open communication with the public “with zero distance”.

Sinopec Yangzi Petrochemical Company held the “Environmental Protection Public Open Day” events, inviting local primary and secondary school students to visit the water plant and understand the green growth of the company.

Highlights of the 2nd Season of Sinopec Open Day

In 2017, “Public Open Day” was upgraded and innovated. 30 Sinopec subsidiaries located in 24 different cities held public open day campaigns separately, attracting nearly 1000 visitors. The public could pay visits to the production plant, the control center and the waste water treatment center and take part in smart classroom and try out H5 game, which helped them to get an in-depth understanding of green production of the oil fields, the refining and petrochemical plants and the service stations as well as the close link between oil and petrochemicals and people’s daily life.

Building “zero-distance” two-way communication platform

Public Open Day helps the public truly understand Sinopec, eliminates prejudice and misconception and strengthens understanding and recognition. At the same time, through Public Open Day, Sinopec further understands the outside changes and public expectations so that the Company could consciously and continuously improve communication, management and corporate culture to realize more high-quality, efficient and sustainable development.

We have received positive feedbacks from all parties since the launch of public open day. Based on statistics, 90% of the interviewees expressed their willingness to invite relatives or friends to join the event. 82% would love to help promote the event and 93% said they benefitted a great deal from the event.

Sinopec Public Open Day created a new model and a new channel for SOEs to reinforce communication with the public, which will exert an important role in enhancing public confidence in SOEs, promoting understanding and setting up good images.

—— Mao Yixiang, Director of SASAC Press Center

Industrial company open day campaign at such large scale hit new record for SOEs. It not only helps promote the knowledge on oil and petrochemical industries, but also presents a different Sinopec to the public.

—— Fang Yonglei, journalist from CNR
Keeping our Mission Firmly in Mind and Powering Better Life

To stand at the new starting point and look back at the path that has led us here, the original aspiration and mission of Sinopec are loving China, revitalizing petrochemical industry and powering better life, which entails the ambition, the firm faith and long-standing tradition for Sinopec to reward the country and works as the course mark and fueling station to take Sinopec going forward. In the future, Sinopec will fully implement the spirits of the Party’s 19th Congress. Under the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, we will remain true to our original aspiration and mission, consciously serve the national strategy, and strive to satisfy people’s demand for a better life. We will progress stably, focus on deepen supply side structural reform, stick to the work approach of “Reform, Management, Innovation and Development” and unswervingly push forward comprehensive and strict Party governance with an aim to promote all-round sustainable development for new results and draw up a new chapter for the Company.
## Appendix

### Performance in Key Areas

#### Business performance

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total assets (100 million yuan)</td>
<td>20,585</td>
<td>21,594</td>
<td>22,567</td>
</tr>
<tr>
<td>Revenue (100 million yuan)</td>
<td>20,473</td>
<td>19,692</td>
<td>20,033</td>
</tr>
<tr>
<td>Realized taxes and fees (100 million yuan)</td>
<td>3,557</td>
<td>3,536</td>
<td>3,623</td>
</tr>
<tr>
<td>Domestic oil production (10,000 tonnes)</td>
<td>4,178</td>
<td>3,566</td>
<td>3,505</td>
</tr>
<tr>
<td>Domestic gas production (100 million m³)</td>
<td>207</td>
<td>216</td>
<td>257</td>
</tr>
<tr>
<td>Oversea equity oil and gas production (10,000 tonnes)</td>
<td>4,436</td>
<td>4,295</td>
<td>4,372</td>
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<tr>
<td>Refining capacity (100 million tonnes/year)</td>
<td>23,829</td>
<td>23,732</td>
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<tr>
<td>Crude throughput (10,000 tonnes)</td>
<td>18,933</td>
<td>19,484</td>
<td>19,932</td>
</tr>
<tr>
<td>Fuel sales (excluding Hong Kong) (10,000 tonnes)</td>
<td>17,137</td>
<td>17,270</td>
<td>17,776</td>
</tr>
<tr>
<td>Ethylene production (10,000 million tonnes/year)</td>
<td>1,112</td>
<td>1,106</td>
<td>1,161</td>
</tr>
<tr>
<td>Chemicals sales (10,000 tonnes)</td>
<td>6,287</td>
<td>6,996</td>
<td>7,850</td>
</tr>
<tr>
<td>Fuel sales customer complaints handling rate (%)</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Customer satisfaction with lubricants (%)</td>
<td>85.0</td>
<td>85.0</td>
<td>85.0</td>
</tr>
<tr>
<td>Lubricants sales customer complaints handling rate (%)</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Chemicals sales customer complaints handling rate (%)</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Number of Company-owned service stations</td>
<td>30,547</td>
<td>30,562</td>
<td>30,627</td>
</tr>
<tr>
<td>Number of patents applied home and abroad</td>
<td>6,128</td>
<td>6,563</td>
<td>6,830</td>
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<tr>
<td>Number of patents granted home and abroad</td>
<td>4,343</td>
<td>4,876</td>
<td>4,239</td>
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#### Environmental performance

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy saving rate (%)</td>
<td>0.7</td>
<td>1.25</td>
<td>1.43</td>
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<tr>
<td>Industrial water withdrawal change (%)</td>
<td>-1.0</td>
<td>-1.1</td>
<td>-1.27</td>
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<tr>
<td>On-spec water discharge (%)</td>
<td>99.8</td>
<td>99.8</td>
<td>99.9</td>
</tr>
<tr>
<td>Carbon trading volume (10,000 tonnes)</td>
<td>180</td>
<td>255</td>
<td>316</td>
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#### Social performance

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total employees (10,000)</td>
<td>84.5</td>
<td>75.2</td>
<td>72.6</td>
</tr>
<tr>
<td>Collective contract coverage ratio (%)</td>
<td>100</td>
<td>100</td>
<td>100</td>
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<tr>
<td>Labor contract coverage ratio (%)</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Benefits package (insurance &amp; housing fund) coverage (%)</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Benefits package (insurance &amp; housing fund) payment ratio (%)</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Ethnic minority employees (%)</td>
<td>2.2</td>
<td>3.0</td>
<td>3.2</td>
</tr>
<tr>
<td>Female employees (%)</td>
<td>30</td>
<td>34</td>
<td>33.7</td>
</tr>
<tr>
<td>Female of Management Positions (%)</td>
<td>26</td>
<td>12.6</td>
<td>12.8</td>
</tr>
<tr>
<td>Ratio of employees joining the trade union (%)</td>
<td>100</td>
<td>100</td>
<td>100</td>
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<tr>
<td>Death toll</td>
<td>7</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Occupational health check-up ratio (%)</td>
<td>98.9</td>
<td>98.9</td>
<td>99</td>
</tr>
<tr>
<td>Health check-up and archive coverage ratio (%)</td>
<td>98.9</td>
<td>98.9</td>
<td>99</td>
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<tr>
<td>Social donations (100 million yuan)</td>
<td>2.0</td>
<td>2.3</td>
<td>2.98</td>
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<tr>
<td>No. of volunteers services (10,000)</td>
<td>42</td>
<td>80</td>
<td>150</td>
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<tr>
<td>Aid program investment in Tibet and Qinghai (10,000 yuan)</td>
<td>3,524</td>
<td>4,042</td>
<td>4,334</td>
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<tr>
<td>Special aid program investment (10,000 yuan)</td>
<td>7,518</td>
<td>8,873</td>
<td>9,292</td>
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<tr>
<td>Lifeline Express cured patients</td>
<td>3,286</td>
<td>3,248</td>
<td>3,126</td>
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<tr>
<td>Funded poverty-stricken students</td>
<td>940</td>
<td>1,140</td>
<td>1,025</td>
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## Index

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<td>Providing Clean Products</td>
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## Creating Win-Win with Partners

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### Features

- Feature: Securing Natural Gas Supply to Better People’s Life
- Feature: 15th Anniversary of Lifeline Express, a Bright and Happy Future
- Feature: Upgraded Open Day
- Keeping Our Mission Firmly in Mind and Powering Better Life
Assessment of this Report

Assessment on China Petrochemical Corporation 2017 Social Responsibility Report

Upon the request of Sinopec Group, the Expert Committee on Chinese Companies CSR Rating selected some experts to form a team to rate China Petrochemical Corporation 2017 Social Responsibility Report (hereinafter “Report”).

1. Rating Criteria

Guide: CASS-CIR 3.0 for the Petrochemical Industry on Computing CSR Report by Chinese Enterprises

2. Rating Progress

(1) The process rating panel interviewed key members of the Report compiling team and reviewed the related materials.
(2) The panel evaluated the compiling process and the information disclosed in the Report and gave this assessment.
(3) This assessment was signed jointly by the vice chairman of the expert committee and the leader of the panel.

3. Rating Results

Process management (★★★★★)

The communications department of Sinopec Group takes the leading role in setting up a report compiling team. The Social Responsibility Committee under the Board of Directors controls the key parts in the Report and the Board is in charge of the final edition. Sinopec positions the Report as a tool to improve the company’s responsibility management and image. Sinopec makes its responsibility management more standard and systemic by amending its responsibility management more standard and systemic by amending

Innovation (★★★★☆)

The report, based on the Report of the 19th CPC National Congress, actively responded to the national policies and highlighted the responsibilities of central enterprises. This report, started with two focuses of “35 Years of Striving Ahead Leads to a Responsible SINOPEC” and “Implementing Targeted Poverty Alleviation and Securing a Decisive Victory in Building a Moderately Prosperous Society in All Respects”, focused on key issues and SINOPEC’s history of responsibility fulfillment. Each chapter ended with a feature which described the features of SINOPEC’s responsibility fulfillment in detail. It corresponded to the theme and added to the enjoyment of the report. This report is very innovative.

Overall Rating (★★★★★)

The panel agreed to rate China Petrochemical Corporation 2017 Social Responsibility Report as super excellent and gave a five-star rating.

Innovative (★★★★☆)

More disclosure of negative data and weak points in CSR fulfillment is expected to balance the report

Panel

Leader: Cheng Daosheng, Director of Corporation Innovation Department of China Enterprise Confederation
Members: Wang Deqiang, Director of Social Mobilization Division, Department of Social Poverty Alleviation, the State Council Leading Office of Poverty Alleviation
Wang Zhanmin, Project evaluator

Dated: 7 May 2018

Feedback

Dear readers,

Thank you for reading our 2017 CSR Report. We highly appreciate your valuable feedback and suggestions for the report.

Postal address: 22, Chaoyangmen North Street, Chaoyang District,
Beijing, China

China Petrochemical Corporation (100728)

Your information

Name: 
Contact number: 
Email: 
Organization: 

Your Suggestions

Your comments and suggestions to this CSR Report

This report disclosed negative information like the “death toll”. The report is balanced.

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