

## China Petrochemical Corporation

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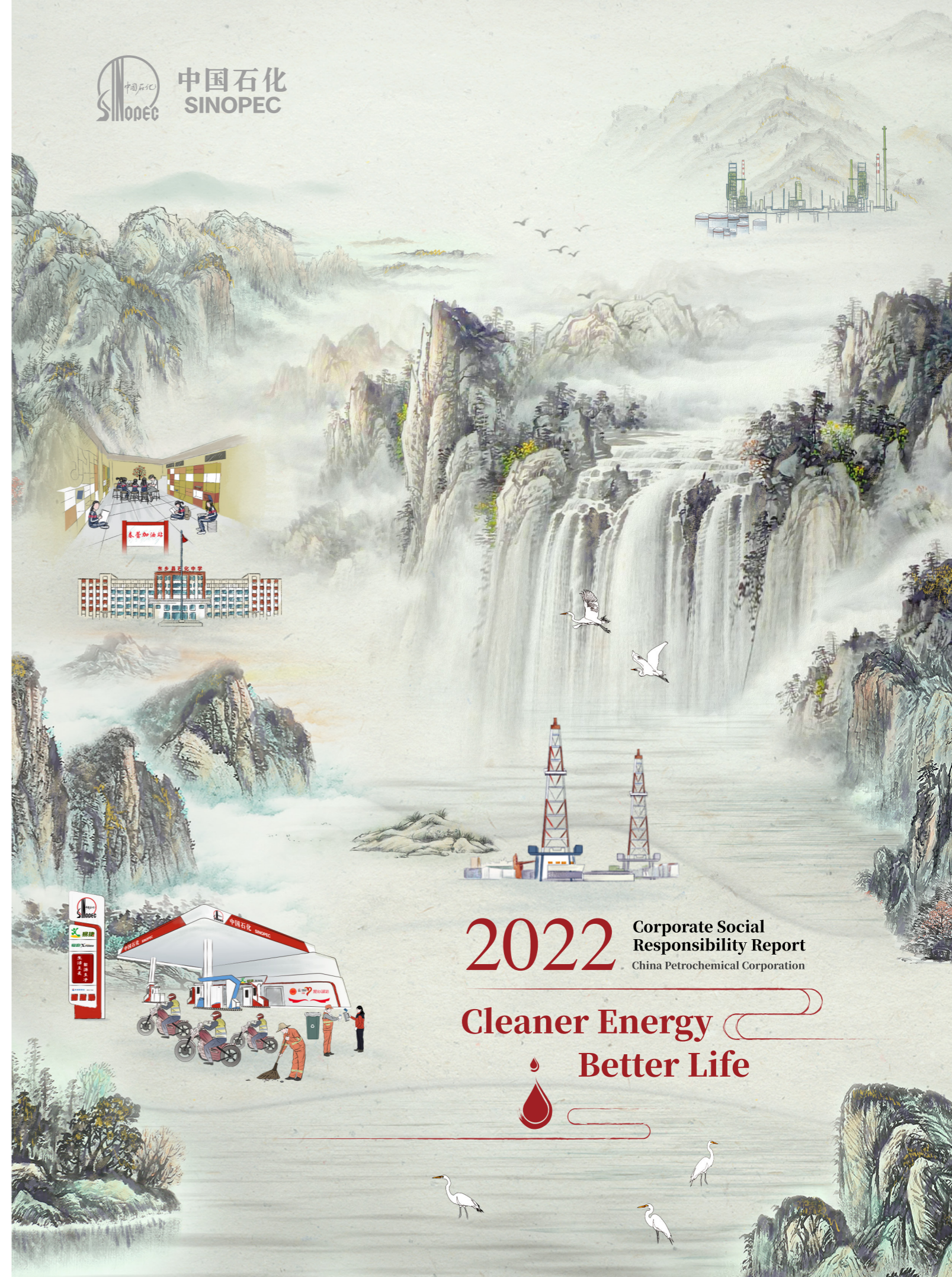
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**2022** Corporate Social  
Responsibility Report  
China Petrochemical Corporation

**Cleaner Energy**  
**Better Life**





# About the report

## Organizational scope

This report covers the economic, social and environmental performance of China Petrochemical Corporation ("Sinopec", "the company" or "we") and its directly affiliated units and affiliated enterprises.

## Time range

From January 1, 2022 to December 31, 2022 (including some content that is beyond the range).

## Release frequency

China Petrochemical Corporation's Corporate Social Responsibility (CSR) Report is an annual report. This is the 16th CSR report released by the company.

## References

United Nations Sustainable Development Goals (SDGs)

Global Reporting Initiative (GRI) Sustainability Reporting Standards (GRI Standards)

State-owned Assets Supervision and Administration Commission of the State Council "Guiding Opinions on Better Performance of Corporate Social Responsibility by State-owned Enterprises"

Chinese Academy of Social Sciences "China Corporate Social Responsibility Reporting Guidelines 4.0 Petrochemical Industry (CASS-CSR4.0)"

China Business Council for Sustainable Development "Recommended Standards and Implementation Examples of Corporate Social Responsibility in China"

## Info source

The information and data used in this report comes from the company's official documents and statistical reports. The financial data in the report is in RMB unless otherwise stated.

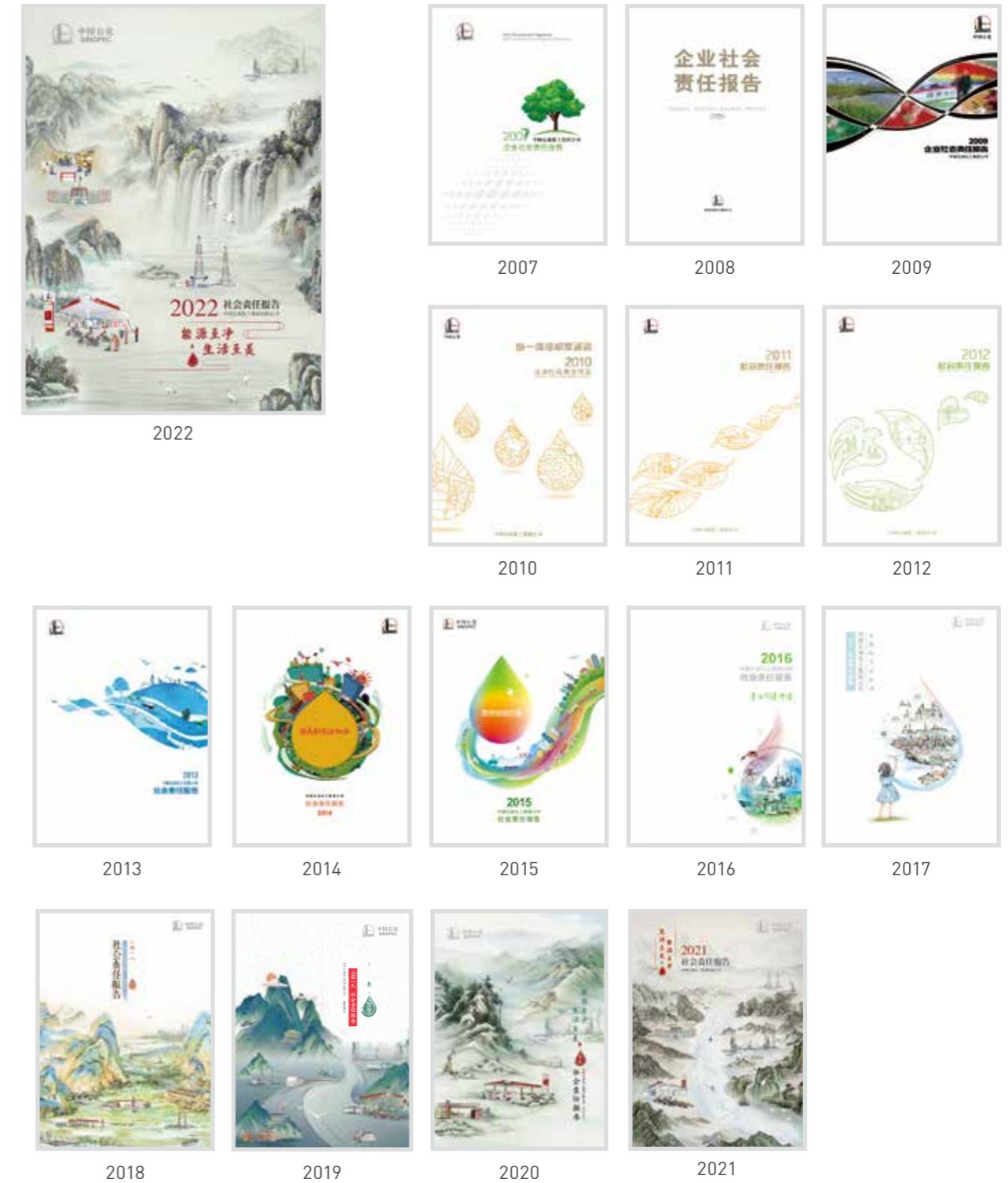
## Read more

Please visit <http://www.sinopecgroup.com/group/social/shzrbg/default.shtml> for more CSR information of the company or download the electronic version of this report.

## Report rating

Sinopec's 2022 CSR Report was rated as a five-star-plus report, the highest level, by the China Corporate Social Responsibility Report Rating Expert Committee.

## Sinopec's CSR reports (2007—2022)



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## Message from Chairman



**Ma Yongsheng**

Chairman of the Board  
China Petrochemical Corporation

2022 was an extraordinary and challenging year. Under the strong leadership of the CPC Central Committee with President Xi Jinping as the core, Sinopec, after studying and implementing the essence of the 20th CPC National Congress as a powerful driving force, and studying and implementing of the spirit of President Xi Jinping's important directive during his inspection of the Shengli Oilfield as its work guideline, cohesively boosted a high-quality development; unwaveringly and comprehensively focused on Party-building; saw gratifying achievements and important progress in all aspects of work; and provided answers through its sweat and toil in this politically significant year.

Sinopec's remarkable achievements in 2022 were a vivid microcosm of its historical achievements over the past decade. Since the 18th CPC National Congress, Sinopec has adhered to the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era; based itself upon the new development stage; implemented the new development concept; integrated itself into the new development pattern; comprehensively driven its high-quality development; comprehensively served major national strategies; helped economic and social development; gone all out to share the Party's cares and burdens fulfilled its responsibility toward the country, benefitted the people; and further polished its corporate image of "a good enterprise for the Party and people" and "a great international company with sense of responsibility".

**We are unwaveringly committed to guaranteeing national energy security.** Sinopec has also implemented the new strategy of energy security; continuously increased investment in oil and gas surveys and exploration; vigorously carried forward the seven-year action plan; actively participated in international energy cooperation; discovered the Shunbei 100 Million Ton-Reserve Uncompartmentalized Oil/Gas Field; comprehensively built a number of gas fields such as Fuling and Yuanba; and achieved breakthroughs in exploration, steady growth in crude oil production and progress in natural gas production. Over the past decade, Sinopec has added 1.483 billion tons of proven oil reserves; and produced 420 million tons of crude oil and 280.4 billion cubic meters of natural gas, significantly improving its ability and confidence in guaranteeing national energy security. Separately, Sinopec has taken up the construction of natural gas production, supply, storage and marketing as a key task to be carried out; done everything possible to raise resources and guarantee supply; and made every effort to ensure a stable natural gas supply for people's livelihoods. We are advancing the development of the renewable energy industry through all means; making every effort to build "China's No.1 Hydrogen Energy Company" and become the enterprise with the largest number of hydrogen refueling stations in the world. We have ensured geothermal heating coverage of more than 80 million square meters; set up 2,452 distributed photovoltaic power stations and 2,299 charging and swapping power stations, accelerated the growth of new business modes such as photovoltaics and biomass energy and further reinforced a safe and efficient diversified energy supply system.

**We are going all out to build a pillar industry of the national economy.** We have also strengthened and optimized the three major industrial chains of oil refining, ethylene and aromatics, with ethylene equity production capacity rising to second place in the world, and the production capacity of PX, polyolefins and other chemicals remaining in first place. We are also actively leading the progress

of "oil to chemicals" and "oil to special products" to provide a large number of chemical materials and high-end special chemicals to society, boosting hundreds of billions of downstream industries, and effectively driving the high-quality development of China's economy and society. Sinopec, as a pioneering cradle of original technologies with a long modern industrial chain, has successfully put China's first set of 10,000-ton 48K large tow carbon fiber homemade production line into operation, becoming the world's fourth enterprise to master the technology. And the carbon fiber independently developed and produced by Sinopec was successfully used in the 2022 Beijing Winter Olympics torch "Flying". The first industrial plant of the third generation of aromatics technology was successfully started by Sinopec, which has significantly improved the technical level and international competitiveness of aromatic hydrocarbon production in China. Sinopec has also successfully established Ecorigin, a biodegradable material brand produced with technological innovation and industry influence, carving its way from "a producer" to "a rule-maker". We are vigorously developing high-end chemical products such as medical and health raw materials, degradable plastics, and lightweight materials for green and environment-friendly automobiles to better meet people's growing demands for a better life.

**We are committed to building a beautiful China.** We actively responded to the call of the CPC Central Committee to conform to the general trend of green development; vigorously implemented the green and clean development strategy; and completed the largest environmental protection action plan -- the "clear water and blue sky" plan -- in the development history of Chinese enterprises. We have also further advanced pollution prevention and control; paid close attention to the protection of the ecological environment in the Yangtze River and Yellow River basins; vigorously implemented the "Green Enterprise Action Plan" and "Energy Efficiency Improvement Plan"; and completed the green development requirements in nearly all our affiliated enterprises. Besides, we steadily carried out eight major actions for carbon peaking; built and put into operation China's first million-ton CCUS project that can reduce carbon dioxide emissions by 1 million tons per year; established the first carbon industry chain technology company, with an annual carbon trading quantity of 2.71 million tons or amount of 219.98 million yuan. In a related development, we are fully promoting the protection of ecological diversification; and have built a number of garden-style factories, ecological drainage facilities, wetland parks, bird habitats and other beautiful landscapes for the harmonious development between production and environment, including Zhenhai Refinery's Egret Garden and Yanshan Petrochemical's Niukouyu Wetland and other picturesque landmarks of Sinopec.

**We sincerely share the fruits of high-quality development.** Adhering to the people-centered development thinking, we deemed poverty alleviation as a major political task. All the 750 villages in 8 counties allotted to Sinopec for support and aid were lifted out of poverty. The Bolengou River Basin in Dongxiang, Gansu, which President Xi Jinping was concerned about, was freed from poverty and has a new look. Sinopec has been rated as "good", the highest level in the assessment of the poverty alleviation assistance by designated central enterprises, for five consecutive years since 2018. As the central enterprise that took the lead to release the "14th Five-Year Plan to Help Rural Revitalization", Sinopec promised

to invest no less than 1.5 billion yuan in assistance funds and help sell poverty alleviation products of no less than 4 billion yuan; focused on "upgrades in industry, education and consumption"; and implemented the "one county and one industrial chain" assistance to help rural revitalization and improve people's livelihoods and well-being. For 19 consecutive years, we have carried on the "Sinopec Brightness" Health Express project, treating more than 52,000 cataract patients free of charge. We also built 5,415 "love stations", 3,586 "driver's homes", and "warm homes" for outdoor workers. For 11 consecutive years, we carried out the "The Gas Station That Cares - A Better Road Home" public welfare project, serving more than 57.8 million home-bound workers and 4.58 million motorcycle riders during the Spring Festival holidays. We launched the "Spring Bud Nursery" public welfare project to help girls grow up healthily in an all-round way. We implemented the "You're the Most Beautiful" Junior Development Subsidy Scheme to help Hong Kong-based kids enhance their abilities in all aspects.

**We are committed to our global corporate citizenship responsibilities.** In line with the development trend of economic globalization and the trend of China's opening up, we are participating in the Belt and Road initiative, carrying out mutually beneficial cooperation with countries along the route in the fields of oil and gas investment, refinery and storage investment, petroleum and petrochemical engineering and technical services, oil and chemical products and equipment and materials trade; jointly building a number of high-quality projects such as the Yanbu refinery in Saudi Arabia, the Sibur refinery in Russia, and the Azul refinery in Kuwait; and creating a long-term, people-friendly and sustainable cooperation model to serve the sustainable development of the global economy and society. We are fulfilling the responsibility of global corporate citizenship; abiding by the laws and regulations of international and local business operations; respecting local customs and culture; adhering to localized employment; supporting the development of local education, infrastructure, medical and health and other public undertakings; protecting the local environment; and creating a better future jointly with the local people.

2023, the first year we have fully implemented the spirit of the 20th CPC National Congress, also marks the 40th anniversary of the founding of Sinopec. We will closely rally around the CPC Central Committee with President Xi Jinping at the core; study and implement the spirit of the 20th CPC National Congress and the spirit of President Xi Jinping's important directives given during the inspection of the Shengli Oilfield; adhere to the people-centered development thinking; maintain the loyalty to the Party, the country and the people; accelerate the building of a Sinopec with strong strategic support, improve people's livelihood security; write a new chapter of a Chinese-style modern Sinopec with confidence; and make contributions to the comprehensive construction of a modern socialist country as part of the comprehensive advancement of the rejuvenation of the Chinese nation.





## About us

### Company profile

China Petrochemical Corporation (Sinopec Group) is a super-large petroleum and petrochemical enterprise group incorporated on the basis of the former China Petrochemical Corporation in July 1998. It is a state-owned company solely funded by the country. It is also an institution authorized by the state to make investments and is a state-owned holding company.

Headquartered in Beijing, Sinopec runs its business in 66 countries and regions across the world. Principal businesses of the Company include industrial investment and investment management; petroleum and natural gas exploration, production, storage and transportation (including pipeline transportation), sales and comprehensive utilization; coal production, sales, storage and transportation; oil refining; storage, transportation, wholesale and retail of oil products; production, sales, storage, transportation of petrochemical products, gas-based chemicals, coal chemical products and other chemical products; development and utilization of renewable energy such as wind energy, solar energy, geothermal energy, and hydrogen energy; production, sales, storage and transportation of renewable energy products; battery charging and swapping business for renewable energy vehicles and other related services; design, consulting, construction and installation of petroleum and petrochemical engineering projects; overhaul and maintenance of petroleum and petrochemical equipment; R&D, manufacturing and sales of electrical and mechanical equipment; production and sale of electricity, steam, water and industrial gases; research, development, application and consulting services of technology, e-commerce, information and alternative energy products; import & export, including import and export agency business of self-support products and commodities and technologies; and foreign project contracting, bidding and purchasing; international storage and logistics business.

Sinopec adheres to the corporate mission of "fueling a better life"; fulfills the promise of "Cleaner Energy, Better Life"; accelerates the improvement of its industrial pattern of "one basis, two directions and three growth poles"; actively shoulders "three core responsibilities"; speeds up the building of a Sinopec with strong strategic support, enhances people's livelihood security; drives high-quality development; and strives to build itself into "the world's leading clean energy and chemical company".





## Corporate governance

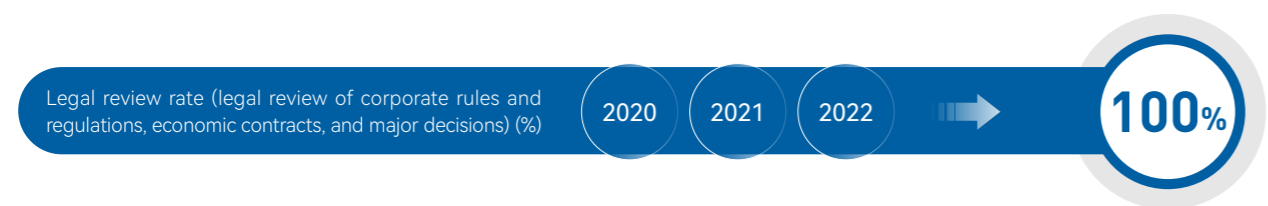
### Board of directors and special committees

China Petrochemical Corporation established a normative board of directors in April 2012. As the company's decision-making body, the board of directors reports to the State-owned Assets Supervision and Administration Commission (SASAC), accepts the guidance and supervision of the SASAC, and performs its duties in accordance with legal procedures and the company's articles of association for the purpose of safeguarding the interests of investors.

The board of directors consists of 9 directors, namely a chairman, a general manager, a deputy secretary of the Party group, 5 external directors and an employee director. The board of directors has set up five special committees, namely the Strategy and Investment Committee, the Nomination Committee, the Remuneration and Appraisal Committee, the Audit and Risk Committee, and the Corporate Social Responsibility Committee, to provide consultation and suggestions for its decision-making.

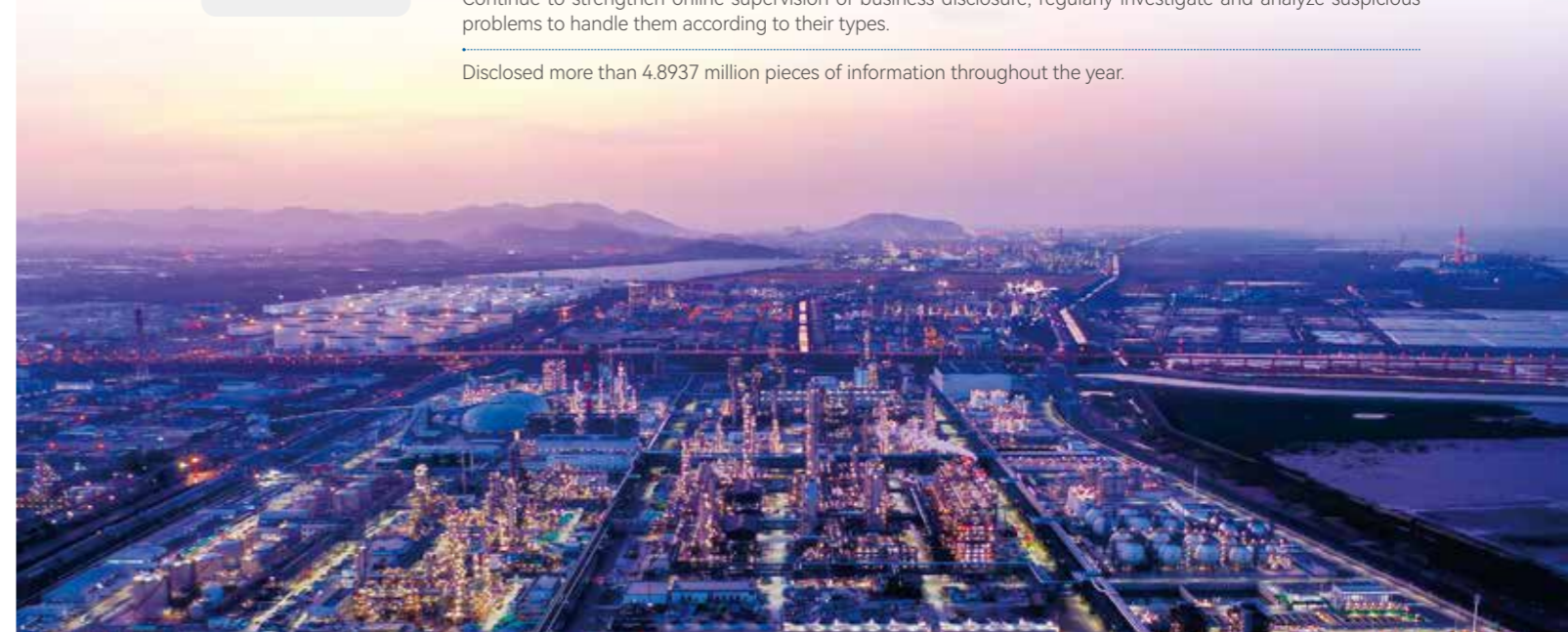
### Governing the enterprise according to law

<p>Improve the top-level design of corporate governance according to law</p>	<p>Actively build a "five-in-one" (system, risk, internal control, compliance, and law) rule of law work pattern; and make every effort to build a central enterprise under the rule of law featuring perfect governance, compliant operation, standardized management, law and integrity.</p>
<p>Maintain the risk bottom line of legal compliance</p>	<p>Implement the "three basics" management requirements; do a solid job in the investigation and disposal of foreign-related legal compliance risks; consolidate the basic management of contracts; and deepen the application of contract systems.</p>
<p>Promote the culture of rule of law</p>	<p>Participate in publicity activities of the "two sessions" for the construction of central enterprises under the rule of law; actively promote the integration of publicity and education on rule of law into all fields of production and operation, into all links of the construction of rule of law; and regularly carry out the study of laws and regulations such as the Constitution and the Civil Code.</p>
<p>Carry out special action against counterfeit state-owned enterprises</p>	<p>Actively implement the requirements of the State-owned Assets Supervision and Administration Commission, the Ministry of Public Security, and the State Administration for Market Regulation in the Special Action to Combat Counterfeiting of State-owned Enterprises; cooperate with the relevant deployment for the special governance of state-owned property rights to carry out anti-counterfeiting and rights protection actions and investigate the infringement of counterfeit Sinopec enterprises -- discovering a total of 87 obvious and suspected infringing enterprises, carry out rights protection work in accordance with the law by informing the person or serving a warning letter, reporting to the local market supervision department, and complaining through the 12345 service hotline. For obvious infringement and suspected infringing enterprises, all sectors of society are reminded to identify the company's subsidiaries through means such as public statements and avoid confusion and misidentification.</p>



## Risk prevention and control

<p>Internal control</p>	<p>Carry out "I diagnose the internal control system"; and strengthen internal control management by sorting out domestic and foreign IPO rules, diagnosing internal control manuals, and implementing "woodpecker" error corrections by all employees.</p>
<p></p>	<p>Organize and carry out special internal control inspections and internal control audits to achieve full coverage of Sinopec direct subsidiaries in three years for the first round internal control and risk control supervision.</p>
<p></p>	<p>Organize enterprises to complete the rectification of ERP access authorization to embed internal control access guidelines into the OA system, and continuously drive the informatization.</p>
<p></p>	<p>Organize and carry out training courses on risk control and internal control, publicity and implementation of internal control manuals, etc., to improve the awareness and ability of management on risk control and internal control.</p>
<p>Risk management</p>	<p>Formulate risk prevention and control objectives and measures; supervise the work monthly and report it quarterly; and boost major risk prevention and control.</p>
<p></p>	<p>Revise the <i>Sinopec Administrative Measures for the Reporting of Major Business Risk Events</i> to adjust the scope of reporting, clarify the reporting procedures, and establish a closed risk management loop.</p>
<p></p>	<p>Improve the methods and standards for risk assessment and procedural review of major investment projects; and strengthen the scientific and objective risk assessment of major investment projects.</p>
<p></p>	<p>Drive the application and testing of quantitative indicators of major business risks; establish standardized risk management indicator files; and strengthen early warning of risk events.</p>
<p>Internal audit</p>	<p>Carry out 1,139 audit items such as economic responsibility audit, risk internal control audit, fixed asset investment audit, and equity investment special audit or audit investigation.</p>
<p></p>	<p>Innovate and implement the "1+N+X" audit operation mode; and make good use of the three audit forces of Sinopec headquarters, its direct subsidiaries, and part-time audit experts (special auditors).</p>
<p></p>	<p>Insist on research-based audit throughout the whole process of auditing to drive audit with research, timely summarizing results and promote their application.</p>
<p></p>	<p>Improve the rectification system and mechanism, reaching a 100% rectification completion rate for the problems found in audits throughout the year.</p>
<p>Business disclosure</p>	<p>Carry out special supervision of key engineering projects; urge the revision and improvement of relevant systems and regulations; and promote more accurate and effective risk prevention and control in key areas.</p>
<p></p>	<p>Continue to strengthen online supervision of business disclosure; regularly investigate and analyze suspicious problems to handle them according to their types.</p>
<p></p>	<p>Disclosed more than 4.8937 million pieces of information throughout the year.</p>





## Highlight I Sinopec contributes its four decades of efforts and achievements to China's modernization

In February 1983, the CPC Central Committee and the State Council issued a circular, deciding to prepare for the incorporation of the China Petrochemical Corporation and pointing out that "it is a major event in the reform of China's economic system". In July the same year, the China Petrochemical Corporation (Sinopec) was formally established, and the *People's Daily* published an editorial entitled "Giving full play to advantages of the petrochemical economic entity", calling for "carrying forward the enterprising spirit for strengthening and prospering the country, and striving to build the head office into an economic entity with cutting-edge technologies, advanced management, and high competitiveness in both domestic and foreign markets".

By 2023, Sinopec has gone through 40 years of development. Over the past four decades, under the leadership of the CPC Central Committee and the State Council, Sinopec has adhered to the mission of serving the national hope and the purpose of meeting the people's needs; insisted on integrating the Party's original aspiration and mission into its tradition of "loving China and revitalizing petrochemical industry", and shouldering the responsibilities for the Party and country and benefiting the people by "cheering for a better life"; consciously assumed its historical mission of strengthening the state-owned economy, revitalizing the petrochemical industry, ensuring energy security and improving the people's lives. Through the arduous pioneering and continuous efforts of less than two generations, Sinopec has realized the centennial achievements of Western multinational oil companies, completed the heavy tasks entrusted by the Party and the people, and made achievements worthy of the times.

Through the past four decades, Sinopec has successfully established and developed China's modern petrochemical industry system through continuous probes and practices; made historic contributions to ensuring national energy security, promoting national economic development, resolving the problem of feeding and dressing the people, and improving the people's livelihood. Since entering the new stage of development, Sinopec has implemented the new development concept; identified its position during building a new development pattern; accelerated the construction of the "one basis, two directions and three growth poles" industrial pattern; adhered to the fulfillment of economic, political and social responsibilities; and embarked on a new journey to build itself into a world-leading clean energy and chemical company.

### Ensuring national energy security

Over the past 40 years, Sinopec has continued to increase the intensity of oil and gas exploration; actively planned renewable energy development; made every effort to improve the ability to guarantee energy supply; and resolutely shouldered the core responsibility of ensuring national energy security.

- ▶ From 2012 to 2022, the cumulative new proved oil reserves hit **1.483** billion tons; and the cumulative production of crude oil was **420** million tons and of natural gas was **280.4** billion cubic meters.
- ▶ Sinopec discovered and built China's first large-scale shale gas field -- Fuling Shale Gas Field, and discovered and exploited China's first deep shale gas field -- Weirong Shale Gas Field.
- ▶ "Deep Earth Project" has made major breakthroughs, successively launching "Deep Earth Project -- Shunbei Oil and Gas Field Base", "Deep Earth Project -- Jiyang Shale Oil Base" and "Deep Earth Project -- Sichuan-Chongqing Natural Gas Base".
- ▶ China's first uncompartimentalized marine high sulfur gas field -- Puguang Gas Field was set up, becoming the main source for the Sichuan Gas Eastward Transmission Project.
- ▶ Building four world-class refining and chemical bases in Maoming-Zhanjiang, Zhenhai, Shanghai and Nanjing.
- ▶ Building "heavyweight projects" such as Zhongke Refinery and Chemical and Gulei Refinery and Chemical Integration projects.
- ▶ Establishing a complete hydrogen industry chain covering "production, storage, transportation, refueling, consumption and R&D", and becoming the enterprise building and running the most hydrogen refueling stations in the world.
- ▶ Its cumulative geothermal heating capacity has exceeded **80** million square meters, and the residual heat's heating capacity has exceeded **45** million GJ/year.
- ▶ It has successfully developed bio-jet fuel production technology with independent intellectual property rights, making China the fourth country with such technology in the world.
- ▶ The cumulative supply of Sinopec's self-produced low-sulfur fuels to ships has accounted for about **60%** of the national output.
- ▶ It has devised and developed renewable energy industries such as photovoltaics and wind power, and built more than **2,299** charging and swapping power stations and **2,452** distributed photovoltaic power stations nationwide.



### Developing the modern chemical industry

Over the past 40 years, Sinopec has promoted its products extension from chemical raw materials to high-end materials through developing degradable materials, high-end polyolefins, and high-end synthetic rubber; and achieved great breakthroughs in the development of new materials and fine chemicals to boost the high-quality development of modern chemical industry.

The high-efficiency and environmentally friendly aromatic hydrocarbon technology has reached the international leading level, making China the world's No.3 in the technology.

Ultra-high molecular weight polyethylene fiber helps the installation of joints of the Hong Kong-Zhuhai-Macao Bridge.

The carbon fiber independently developed and produced was successfully applied to the 2022 Beijing Winter Olympics torch "Flying".

Setting up the world's largest meltblown cloth production base from scratch within 76 days.

Developing para-aramid technology with independent intellectual property rights, and breaking through the technological blockade of foreign countries.

The first domestic production line for China's first 10,000-ton 48K large tow carbon fiber project was completed and put into operation.

China's first 3,000 t/a high isotacticpolybutene-1 industrial demonstration plant was successfully started.

The biodegradable materials with independent intellectual property rights of process technology and product formula, or the "three biodegradable products" - PBST, PBAT, and PBSA, were created and launched in the market.

Establishing Ecorigin, a biodegradable material brand of Sinopec with technological innovation characteristics and industrial influence.



## Adhering to innovation-driven strategy

Over the past 40 years, Sinopec has adhered to the guidance of scientific and technological innovation; strengthened basic research; marched towards the fields of oil and gas exploration, oil refining and chemical industry, and major equipment manufacturing; striven to shoulder the core responsibility of "being the national strategic sci-tech force" and provide solid support for China's realization of high-level sci-tech self-reliance and self-improvement.

- From 2012 to 2022, a total of about **100,000** patent applications were submitted, and **62,000** patents were authorized, ranking first in the comprehensive advantages of patents among central enterprises.
- From 2012 to 2022, Sinopec won **1** first prize and **18** second prizes of National Awards for Technological Invention; **2** special prizes, **7** first prizes and **24** second prizes of the National S&T Progress Awards.
- As of the end of 2022, Sinopec had more than **60** R&D institutions at all levels and **24** academicians.
- By the end of 2022, a total of **208** major complete sets of technology industrial transformation had been completed in Sinopec.
- By the end of 2022, **15** refining and chemical intelligent factories, **4** intelligent oil and gas fields, more than **150** intelligent gas service stations, and **3** intelligent research institutes had been built, and more than **10** national pilot demonstration projects such as "industrial Internet + safe production" had been undertaken by Sinopec.
- Setting up **9** renewable energy, new materials, energy conservation and environmental protection innovation companies, and creating a specialized and cutting-edge R&D transformation platform.
- Setting up the industrial products e-commerce platform epec.com, the industrial Internet platform icloud.sinopec.com, and the petrochemical products sales and service platform chememall.com.

## Driving green and low-carbon development

Over the past 40 years, Sinopec has actively driven the cleanness of fossil energy, the scale-up of clean energy, and the low-carbon process of production; fought the battle against pollution; and improved the level of green production to contribute to the initiative of Beautiful China.

From 2013 to 2017, Sinopec completed the largest environmental protection action plan -- the "clear water and blue sky" plan -- in the development history of Chinese enterprises, invested a total of 20.9 billion yuan, implemented 870 environmental protection projects, and was rated as one of "China's Top Ten Contributors to Energy Conservation".

Since 2014, Sinopec has continuously boosted pollution prevention and control actions and "energy efficiency improvement" plans, and focused on protecting the ecological environment in the Yangtze River and Yellow River basins.

In 2018, Sinopec launched China's largest full industry chain Green Enterprise Action Plan. So far, all its subsidiaries are honored green enterprises.

Driving the upgrading of oil quality; and upgrading the standards of automobile gasoline and diesel from National Standard 1 to 6, resulting in the significant decrease of carbon monoxide and nitrogen oxides emissions after the fuel combustion.

In 2022, Sinopec set up Qilu Petrochemical-Shengli Oilfield Million-ton CCUS Project, the first of its kind in China, and put it into operation, boosting and the construction of CCUS projects in East China, Central Plains and other regions.

Sinopec promotes the development of "a waste-free corporation", with 12 pilot enterprises starting the demonstration projects.

## Dedicated to society

Over the past 40 years, Sinopec has adhered to people-centered development thinking; promoted targeted poverty alleviation and rural revitalization; carried out public welfare charity, participated in emergency rescue, and secured major national activities; and used practical actions to give back to the society and improve people's livelihoods and well-being.

- From 1983 to 2022, the cumulative tax and fee paid by Sinopec amounted to **5,408.4** billion yuan.
- As of 2020, Sinopec had invested a total of **2.4** billion yuan in targeted assistance, and all the **750** villages in **8** counties it assisted were lifted out of poverty, benefiting **3** million poverty-stricken people.
- From 2021 to 2022, Sinopec's total investment in rural revitalization was **400** million yuan (the headquarters invested in 8 counties), and (the headquarters) sent a total of **28** cadres to stations for on-site support.
- Serving the 2022 Beijing Winter Olympics and providing clean energy guarantee for infrastructure construction and event operations.
- For **19** consecutive years, Sinopec has run the "Sinopec Brightness" Health Express project, treating more than **52,000** cataract patients free of charge.
- For **11** consecutive years, Sinopec has run the "The Gas Station That Cares - A Better Road Home" public welfare project, serving more than **57.8** million home-bound workers and **4.58** million motorcycle riders during the Spring Festival holidays.
- A total of **5,415** "Love Stations" and **3,586** "Driver's Homes" have been set up by Sinopec.

## International operation

Over the past 40 years, China has continued to step up its efforts to "go global"; implemented the "Belt and Road" initiative; carried out extensive and in-depth international energy cooperation in oil, gas and refinery investment, international trade, petroleum project and refinery project services to promote the sustainable development of the global economy and society and help build a community with a shared future for mankind.

- By the end of 2022, Sinopec's business scope covered **66** countries and regions around the world.
- From 2013 to 2022, Sinopec conducted **58** oil and gas resource investment projects in **27** countries (regions) abroad.
- Jointly building a series of national landmark projects such as the Yanbu refinery in Saudi Arabia, the Sibur Butyronitrile Rubber Project in Russia, and the Kazakhstan Atyrau Refinery.
- Sinopec is operating **57** refueling (gas) stations and boosting the transition of **175** filling stations abroad.
- Sinopec has maintained its "zero death" record in overseas projects for **15** consecutive years.

At the new starting point of its 40th anniversary, Sinopec will leverage its unique role as a central energy and chemical enterprise in the overall situation of China's modernization; serve the "great plan of the Party" and "the supreme mission of the country"; and shoulder the new mission of "building a Sinopec with strong strategic support, support people's livelihood security with industrious efforts"; unite all forces to promote high-quality development; accelerate the construction of a world-class enterprise and move towards the world leadership; and write a new chapter of a Chinese-style modern petrochemical corporation with confidence.



## Highlight II Sinopec makes achievements in the extraordinary decade of the new era, and its new benchmark establishes new image

Since the 18th CPC National Congress, Sinopec has adhered to the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics in the New Era; implemented the new development concept; served the construction of a new development pattern; devised a world's leading development strategy; shouldered the three core responsibilities; and supported national strategy and worked for a better life for people.

Over the past decade, Sinopec has focused on the concerns of the country, society and the people; fulfilled its responsibilities and worked to ensure energy security and develop a modern chemical industry; supported self-reliance and self-improvement in science and technology; worked for the realization of the "carbon peaking and carbon neutrality" goal; helped the comprehensive revitalization of rural areas; and completed a number of projects of significance with a high sense of social responsibility, writing a new chapter of high-quality development in the new era, and handing over satisfactory answers to the Party and the people. In 2022, Sinopec selected the "Top Ten Social Responsibility Demonstration Projects", which have become a benchmark for Sinopec's performance of responsibilities in the new era, and also demonstrate Sinopec's active practice and unremitting pursuit of effectively securing the energy supply, ensuring national energy security, and meeting people's growing needs for a better life with high-quality services.



### Project 1

Benefiting thousands of households -- Sinopec Fuling Shale Gas Green Energy Project

Sinopec's Fuling Shale Gas Field, the origin of China's shale gas commercialization and one of the main gas sources for the Sichuan Gas Eastward Transmission, is located in the Wuling Mountain Range, which has a sensitive ecological environment. Sinopec regards the environment as valuable "eyes" and Fuling as a lovable "hometown", and as a result the Fuling Shale Gas Field is seeing Sinopec following a high-quality development path of "environmental friendliness and green demonstration". At present, the field can meet the daily gas demand of more than 46 million households, providing important support for ensuring natural gas supply and boosting the high-quality development of enterprises along the Yangtze River Economic Belt.

As a local enterprise, it benefits the locals. Over the past 10 years, Fuling Shale Gas Field has adhered to the development concept of joint construction and win-win cooperation with the local authorities. It has adhered to the path of green and low-carbon sustainable development; invested more than 200 million yuan to improve the local environment; set up the Jiangnan Avenue; upgraded and hardened more than 60 villagers' access roads along the avenue; built water cellars; repaired karst caves; and created nearly 5,000 jobs, becoming a model for enterprise-local cooperation.

### Project 2

Actively marching towards carbon peaking and carbon neutrality -- Sinopec's Megaton CCUS Green Action

The promotion and application of carbon dioxide capture, utilization and storage (CCUS) technology is considered to be the only way to achieve the goal of carbon peaking and carbon neutrality. Sinopec gives full play to its advantages in resources, technology and talents to further promote the development of CCUS technology, and its megaton CCUS demonstration project in the Qilu Petrochemical-Shengli Oilfield was put into commercial operation in August 2022.

The project captures the carbon dioxide from the tail gas of the Qilu Petrochemical Coal-to-Gas Plant, and sends it to the Shengli Oilfield to inject it 3,000 meters deep to flood the oil, and then store it, thus forming a closed loop, which, not only reduces carbon dioxide emissions but also greatly improves oil recovery, playing a demonstration role in reducing emissions and increasing efficiency for petrochemical enterprises. The project can reduce carbon dioxide emissions by 1 million tons per year.

### Project 3

"Homes En Route" -- Sinopec's "Driver's Home" and "Love Station" public welfare program

China has the world's largest highway freight market, and about 30 million truck drivers drive on the roads every year, promoting the orderly flow of economic goods throughout the country. However, long-distance driving across provinces and cities makes it difficult for drivers to eat, bathe, and rest. Similar to truck drivers, sanitation workers and delivery boys also face the problem of rest.

Sinopec has transformed gas stations into service outlets and built "driver's homes" and "love stations" to provide truck drivers, sanitation workers, couriers and other outdoor workers with rest, catering, hot water, bathing, laundry, parking, charging and other service facilities, and strives to create a "home en route" for them. As of 2022, Sinopec had set up and run a total of 3,586 "driver's homes" and 5,415 "love stations" in 31 provinces, municipalities (autonomous regions) across the country, serving those in need.

### Project 4

Help rural revitalization with characteristic industries -- Sinopec's "One County, One Chain" Industrial Assistance Program

The prosperity of industry is an important foundation for rural revitalization. Since 2021, Sinopec has focused on the "one county, one chain" industrial assistance program, and has assisted 8 counties to build large-scale, high-quality agricultural industrial chains and cultivate a number of branded products. In Dongxiang, Gansu, Sinopec helped build the whole quinoa industrial chain covering "production, marketing and research", and cultivated and promoted the characteristic product brand of Dongxiang Quinoa.

In order to help the villagers sell agricultural products, relying on the advantages of petrochemical employees' group buying website, Sinopec built the assistance model of "group buying to rejuvenate agriculture"; organized more than 400,000 petrochemical employees, more than 50 intra-group enterprises, and more than 30 platform cooperative suppliers to participate in the consumption assistance, benefiting more than 10,000 farmers. Baichuan Company insisted on giving priority to the areas in need in its procurement of restaurant agricultural and sideline products and trade union festive gifts, and its cumulative purchase amount in the past three years reached 20.82 million yuan. The rural revitalization special audit covers 77% of the cumulative assistance funds invested by Sinopec in the past three years. The audit center acts as an "economic guard" for helping root out poverty and rural revitalization.



### Project 5

An express heading to brightness-- "Sinopec Brightness" Health Express Public Welfare Program

"Sinopec Brightness" is the only health express program supported by domestic enterprises. As of 2022, Sinopec donated a total of 190 million yuan to the public welfare undertaking, the Health Express. The express stopped in 44 regions in 18 provinces (autonomous regions and municipalities directly under the central government), and performed free vision restoration surgery for more than 52,000 cataract patients.

The success rate of the Sinopec Brightness program is more than 99.9%, which is comparable to the 3A hospitals in China's first-tier cities. Driving into 3 regions each year, the express stays for 3 months in each region, and treats an average of 3,000 people per year. At the same time, the program donated aid to build 24 cataract treatment centers, trained ophthalmic technical forces for local ophthalmologists, and provided the latest eye examination equipment, leaving behind a permanent healthy express train for the locals.

### Project 6

"The Gas Station That Cares - A Better Road Home" -- Sinopec's large-scale public welfare activity for migrant workers' home bound trips during Spring Festival holidays

The home bound motorcycle riders, since the 1990s, have been a unique sight on the national highway during the Spring Festival holidays. A large number of migrant workers ride motorcycles back to their hometowns with packages of all sizes. And the headcount of motorcycle riders in Guangxi and Guangdong reached 250,000 at its peak.

With gas stations as a service platform, the company launched the "The Gas Station That Cares - A Better Road Home" -- Sinopec's large-scale public welfare activity for migrant workers' home bound trips during Spring Festival holidays, offering free refueling for "home bound motorcycle riders" at key points in Guangdong, Guangxi and Jiangxi, and providing free access to hot porridge, ginger soup, rest rooms, and mother and baby rooms for the travelers. These stations have served more than 57.8 million returnees and 4.58 million home bound motorcycle riders, involved more than 53,000 volunteers, and provided free refueling for 94,000 "home bound motorcycles". These gas stations, together with the travelers, have witnessed the great changes of people's livelihoods in the era moving toward a moderately prosperous society since the 18th CPC National Congress.

### Project 7

Let the egrets sing -- Zhenhai Refinery's Egret Garden Green Factory Ecological Protection Project

More than 1,000 egrets roost and breed in the grove between the refinery's towers, and the little egrets quietly break out of their shells, living in harmony with the workers, the towers and oil tanks. Located in the Zhenhai Refinery, this Egret Garden has a beautiful environment and attracts a large number of migratory egrets every year.

The Sinopec Zhenhai Refinery took the lead in launching the construction of an "odor-free factory" in the domestic petrochemical industry; put forward the environmental protection concept of "let the egrets sing"; and built China's first panoramic egret live streaming platform to showcase the white egret nature reserve in the factory area to the world, showing the achievements of its construction of a green demonstration plant without waste and odor, and reversing the public's inherent impression of "heavy chemical industry always having high pollution".

### Project 8

Transforming a drainage outlet into a wetland park -- Yanshan Petrochemical Niukouyu Wetland Ecological Protection Project

In the southwest corner of Beijing, the Niukouyu Wetland Park is lush with greenery, water, winding boardwalks, and chirping birds, where artificial beauty and idyllic fun complement each other.

The Sinopec Yanshan Petrochemical actively practices Xi Jinping's thought of ecological civilization, follows the world's popular design concept of "naturally treated wetland", took the lead in implementing the industrial sewage ecological purification comprehensive scheme of "treatment of industrial sewage up to drainage standard + wetland natural ecological restoration system", and built China's first wetland in an industrial park - the Niukouyu Wetland Park.

Over the years, Yanshan Petrochemical has continued to enrich biodiversity, planting more aquatic plants such as lotus, aloe and water lilies, building viewing platforms, children's playgrounds and other facilities, and building the Niukouyu Wetland Park into a model for harmonious coexistence between a garden-type refinery and the city.

### Project 9

Geothermal heating warms the residents -- Sinopec "Xiongqian Model" Geothermal Clean Heating Project

Sinopec responded to the national strategy; made every effort to ensure the energy supply of Xiong'an New Area; leveraged local resource endowments to carry out high-quality geothermal energy development and utilization; and built China's first geothermal heating "smoke-free city" in Xiongqian county, Hebei province, which was listed on the global promotion project list by the International Renewable Energy Agency.

The "Xiongqian Model" was gradually promoted. At present, Sinopec has built 10 geothermal heating "smoke-free cities" in Hebei, Shaanxi, Shanxi, Henan, Shandong and other places, and its geothermal heating business covering 62 cities and counties in 10 provinces (municipalities directly under the central government) including Beijing, Tianjin, Shaanxi, Hebei, Shandong, Henan and Shanxi. By the end of 2022, a total of 85 million square meters of heating capacity had been built, which can replace 1.615 million tons of standard coal and reduce carbon dioxide emissions by 4.2 million tons per year, equivalent to planting 2.23 million trees. Here, Sinopec has promoted green development with a clean energy supply guarantee.

### Project 10

Explore smart energy together -- Sinopec's "Open Day" program

Opening the door to enterprises is Sinopec's commitment to the public.

Over the past 10 years, Sinopec has carried out the "Open Day" program with the theme of "exploring smart energy". More than 100 Sinopec-affiliated enterprises in nearly 100 cities across the country opened their doors to surrounding residents, students, government officials, media reporters, etc. The program gradually demolished the "wall" and "barrier" between the public and the petroleum and petrochemical enterprise, and built a bridge of communication between enterprises and the public.

In total, more than 200,000 people visited Sinopec's factories on the "Open Day". And more than 80 million people participated in the event through online live broadcasts, covering more than 100 million people and became the largest "open day" activity organized by Chinese industrial enterprises.





# Highlight III

## Ten-year efforts bring huge changes in mountainous and rural areas, writing a new chapter for rural revitalization and common prosperity

Since as early as 2012, when the 18th National Congress of the CPC was held, the CPC Central Committee with Comrade Xi Jinping at its core has endeavored to realize targeted poverty reduction and alleviation, aiming to win the war against poverty and finish building a moderately prosperous society in all respects. The endeavors have led to a miracle in the history of humans' battle with poverty. By the end of 2020, all 98.99 million rural residents from impoverished villages had been lifted out of poverty, and absolute poverty has been eliminated from the country. Today, the country is striding ahead toward rural revitalization.

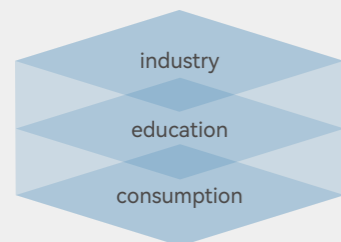
Whether for the war against poverty, or for rural revitalization, Sinopec has consistently implemented the instructions of President Xi Jinping and taken on the responsibility for poverty alleviation as a political task. Following the principles of adjusting and implementing measures according to local conditions, the company invested 2.4 billion yuan by the end of 2020 to provide pairing assistance and support for 750 villages in eight counties to get rid of poverty as scheduled. In 2021, the company released the "Plan for Supporting Rural Revitalization", promising not to reduce efforts, human input and funds for rural revitalization during the 14th Five-Year Plan period, and specifying the minimum amount of financial support and the value of products it would help to market. Especially for the key western counties with poor natural environment, poor basic conditions and difficulties in consolidating the achievements in poverty eradication and implementing the rural revitalization strategy, the company took the initiative to explore new modes that could take advantage of the resources Sinopec could offer as a central enterprise to help drive rural revitalization. Sinopec played a more active role and took effective measures to help rural areas achieve high-level revitalization.

### Sinopec's projects for rural revitalization

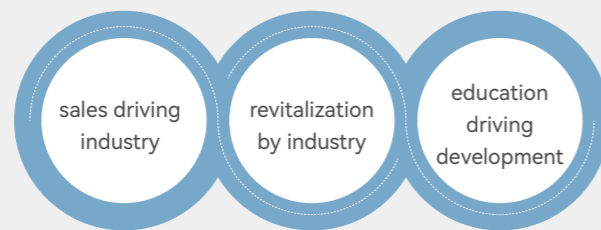
#### Pairing assistance and targeted support for counties (headquarters)

- |  |   |   |
|--|---|---|
| Baigoin county, Tibet autonomous region          | Zeku county, Qinghai province               | Fenghuang county and Luxi county, Hunan province  |
| Yopurga county, Xinjiang Uygur autonomous region | Dongxiang autonomous county, Gansu province | Yuexi county and Yingshang county, Anhui province |

#### Distinctive support mode



Focusing on improvement in industrial development, education and consumption



Adopting a distinctive mode featuring "sales driving industrial development which then drove revitalization, and education driving development"

### Sinopec's achievements in supporting rural revitalization (2022)

The Sinopec system undertook the task of assisting **8** counties and **616** villages

Dispatched **936** full-time village-based support workers

Invested funds of **211** million yuan in various assistance and support projects

Offered **1.156** billion yuan in consumption support

Helped introduce assistance and support funds of **232** million yuan

Provided training to **65,353** people in villages, townships and counties



Ma Yongsheng, chairman of the board at China Petrochemical Corporation (second from left, first row) and his contingent visit Dongxiang autonomous county in Gansu province for a survey on local quinoa industry, and greet people who have got out of poverty



## Remembering the instruction to assist poverty-stricken villages

Bulenggou village in Dongxiang autonomous county, Linxia Hui autonomous prefecture, Gansu province, had endured drought, poor traffic infrastructure and poverty for many years due to lack of water sources, roads and industries. On February 3, 2013, President Xi Jinping visited the steep mountain road, leaving behind an instruction of "ushering in water, smooth roads, and providing a new look to the village". In the same year, the CPC Central Committee entrusted Sinopec with the task of helping Dongxiang. Over the past 10 years, Sinopec has invested more than 700 million yuan in assistance; dispatched 11 cadres there for temporary work; implemented 236 assistance projects that benefited more than 154,000 people, and written the story of "building a new, happy and beautiful Dongxiang" in Gansu in the new era.

In order to promote the development of rural revitalization during the 14th Five-Year Plan period, in February 2023, Sinopec and the People's Government of Dongxiang Autonomous County of Linxia Prefecture, Gansu Province signed a Framework Agreement on *Sinopec's Five-Year Work Plan for Helping Dongxiang County*. During the coming five years, Sinopec will continue to increase its assistance to Dongxiang, invest more than 500 million yuan in assistance to help the county to achieve the goal of comprehensive revitalization.

### Sinopec's achievements in assisting Dongxiang over the past decade

**Production and consumption**

- Achievements**  
In the past decade, Sinopec has invested a total of 225 million yuan in industrial assistance funds to support 39 projects; helped selling a total of 26 products worth 61.9476 million yuan; and directly purchased products worth 60.733 million yuan.
- Practices**  
Sinopec helped Dongxiang build a whole quinoa industry chain integrating "production, processing, marketing and research"; invested more than 100 million yuan to build a quinoa processing industrial park; smoothed the "last mile" problem of agricultural products delivery relying on its 28,000 nationwide Ejoy Convenience Stores and sinopectg.com, and the "Best Products of Gansu" applet; and established the "fragrance of quinoa" and "legend of Longgu" brands to boost the rapid industrialization, standardization, scale production and brand reputation of Dongxiang quinoa.

**Education**

- Achievements**  
In the past decade, Sinopec invested a total of 174 million yuan in education assistance, supported 28 educational projects, and funded 881 students in need.
- Practices**  
Sinopec assisted in the construction of Bulenggou Primary School to resolve the education access problem of local children; launched the "one enterprise to help one school" project and handpicked its 6 direct subsidiaries to help 6 schools in Dongxiang county; co-invested in the construction of Dongxiang County Sinopec Middle School; and set up China's first "Spring Bud Nursery" girl-friendly space in the school.

**Infrastructure**

- Achievements**  
In the past decade, Sinopec invested a total of 264 million yuan in assistance funds; carried out 34 assistance projects; and built 75.3 kilometers of roads.
- Practices**  
In 2013, Sinopec built the hardened road to Bulenggou Village within just 62 days, connecting the village to the world beyond mountains. It also invested 67 million yuan in water supply and storage facilities, helping more than 13,000 people access tap water; built 56 new residences and repaired 1,335 dilapidated ones.

**Employment**

- Achievements**  
In the past decade, Sinopec invested a total of 5.82 million yuan in employment assistance and provided vocational skill training to nearly 27,000 students.
- Practices**  
Sinopec, taking the local industrial base into consideration, made efforts to offer stable jobs to people; provided 178 jobs to university graduates hailing from Dongxiang; and helped build eight poverty alleviation plants in the country to employ more than 200 women.

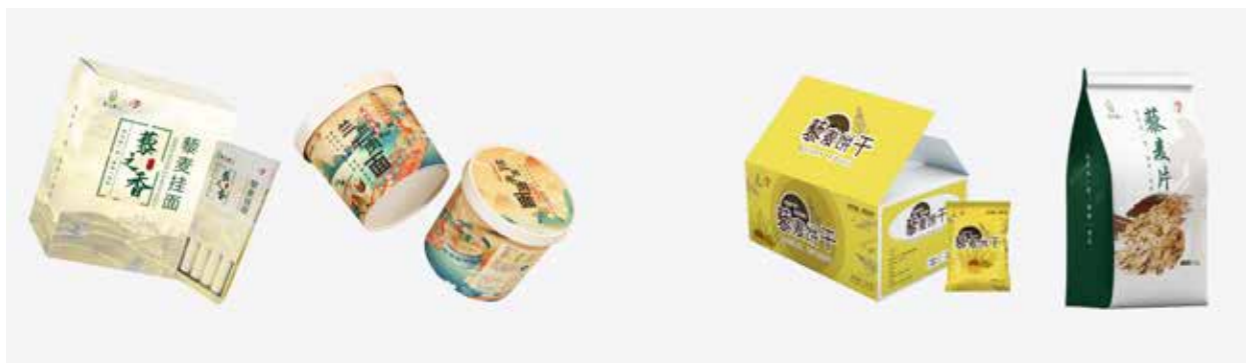
**Healthcare**

- Achievements**  
Sinopec invested 9.5 million yuan in the healthcare assistance project, and assisted in the construction of 3 healthcare centers and 34 village clinics.
- Practices**  
In 2019, the Sinopec Brightness Health Express entered Gansu province and helped 2,850 patients in Dongxiang and nearby counties regain eyesight free of charge. Since 2021, it has invested 1.5 million yuan in medical assistance every year to reduce the financial burden of poor patients.

**Ecology improvement**

- Achievements**  
Sinopec afforested the barren hills in Bulenggou River Basin, covering more than 1,333 hectares.
- Practices**  
Focus on building leisure agriculture and rural tourism products featuring ecology, environment, industry and wealthy farmers. Sinopec invested 12 million yuan to co-build the Tangbo Yunshe boutique homestay project; and spent 14.8 million yuan in building the Bulenggou revitalization demonstration village, integrating the development of primary, secondary and tertiary industries.





Sinopec actively explored the new sustainable development model of "planting + deep processing + brand building", and invested more than 100 million yuan to build a quinoa processing industrial park, planning to produce high value-added products such as quinoa noodles, quinoa beef noodles, quinoa biscuits and quinoa cereals



Dongxiang County Sinopec Middle School, a project supported by Sinopec



The hardened road to Bulenggou Village, which was built with the assistance of Sinopec



## Comprehensive assistance to enable the people live a happy life

The designated assistance to Dongxiang in Gansu province is only a microcosm of Sinopec's paired support and assistance projects. Since the 18th CPC National Congress, Sinopec has followed the unified deployment of the CPC Central Committee and the State Council; closely targeted the poverty alleviation goals; cared for the people in need; and made every effort to help the eight poverty-hit counties and several hundred villages under their jurisdiction and win the battle against poverty. In the new era, Sinopec has focused on rural revitalization's overall requirements of "prosperous industry, ecological livability, rural lifestyle, effective governance, and sufficient resources"; focused on the improvement in industry, education and consumption; explored and created an assistance model of "promoting industry with sales; boosting revitalization with industry; driving development with education"; continued to implement the "one county, one industrial chain" assistance mode; sought to run the local schools well; and provided consumption assistance to fully implement the rural revitalization.

## Creating "one county, one industrial chain" industries

Based on the resource endowments of the eight counties, Sinopec implemented differentiated assistance, applied the "one county, one industrial chain" method, and defined industrial directions for them, such as, quinoa in Dongxiang county; "Sunshine Bazaar" gray jujubes in Yuepuhu county; tea in Yuexi county; roast duck-eggs in Yingshang county; hard-bone pigs in Luxi county; kiwifruit in Fenghuang county; yak meat products in Bangor county; and agricultural and livestock products in Zeku County. With Dongxiang's quinoa and Yuexi's Cuilan Tea as the demonstration projects, Sinopec strengthened the implementation to fuel local economic development.

## Run local schools well to benefit the people

Sinopec coordinated internal and external resources to run local schools well, participated in the construction of a high-quality education system, and created good education opportunities for local children. It held a group-wide education promotion meeting to undertake key tasks, and issued documents such as the *Implementation Plan for Sinopec's Education Assistance Project* and the *Guiding Opinions on Paired Education Support for Sinopec's Direct Subsidiaries* in consideration of the requirements of rural revitalization policies. Sinopec gave assistance priority to 37 of the 246 schools which were built with donations and were operated normally. With "overall planning, systematic promotion and comprehensive efforts", Sinopec mobilized 37 directly affiliated enterprises to pair up with 37 schools and offer "one-on-one" assistance in campus construction, faculty training, and student development, exploring a "comprehensive, group-wide, and paired cooperation" education support model.

In 2022, in response to the "urgent" needs of teachers and students, Sinopec implemented facility transformation, renovated the canteens for teachers and students, and repaired teaching buildings, playgrounds and dormitories. It also promoted the deep integration of information technology with education and teaching, expanded the coverage of "cloud classroom", and enabled the "sister schools" in the east and west to take the same class remotely. The teaching quality of Gansu Dongxiang County Sinopec Middle School, which is a key project, was widely recognized. Sinopec donated 130,000 books, benefiting more than 20,000 teachers and students; and dispatched a total of 245 teaching volunteers to local schools, with a total of 1,196 days of stay in the schools. About 77% students of the "Spring Bud" class in Zeku county, Qinghai province, qualified the Grade A college entrance examination. And Sinopec organized the training for more than 2,000 teachers, and set up more than 170 pairs of Lanqing Mentor-apprentice Group. Sinopec's employees offered hand-in-hand pair assistance and helped more than 1,500 students.

### ☞ Cuilan Tea prospers in Dabie Mountain: Sinopec helps upgrade Yuexi tea industry

CASE

Sinopec defined Yuexi tea industry as the "one county, one industrial chain" assistance project; gave full play to its industrial and management advantages; coordinated and integrated funds and resources; prepared the overall plan of the industrial chain; built the Yuexi Cuilan Tea Industrial Garden; helped Yuexi Tea's brand building, promotion and publicity; and established an industrial benchmark for rural revitalization. Through "nurturing entities, strengthening alliance and promoting integration", Sinopec applied multiple measures at the same time, and spared no efforts in developing the local tea industry and promoting the Cuilan Tea brand of Yuexi. In 2022, Yuexi county had a tea garden area of 12,600 hectares, a tea picking area of 11,600 hectares, a tea output of 6,100 tons, an output value of 732 million yuan, and a comprehensive output value of 2.043 billion yuan. Among them, the output of geographical indication product Yuexi Cuilan Tea was 1,200 tons, with an output value of 400 million yuan.

In the future, Sinopec will further improve the quality and profit of Yuexi Cuilan tea; cultivate the tea industry into a pillar of rural revitalization and an important source of sustained income increase for local farmers; accelerate the formation of a tea industry cluster which is based on the production, processing, distribution and sales of Yuexi Cuilan Tea, and integrate scientific and technological innovation, brand management, tea-tourism combination and smart tea industry; enhance the brand value and reputation of Yuexi Cuilan Tea and promote the high-quality and high-efficiency development of the tea industry.





**Sinopec launched "Spring Bud Nursery" public welfare project to enable more girls to embrace a better future CASE**

In July 2022, under the guidance of the All-China Women's Federation, Sinopec and the China Children and Teenagers Fund jointly launched the "Spring Bud Nursery" public welfare project, and the construction of China's first "Spring Bud Nursery" girl-friendly space was completed in Dongxiang County Sinopec Middle School in Linxia prefecture, Gansu province. The project is an innovative initiative of the "Spring Bud Project - Dream of the Future", which is mainly implemented in schools covered by Sinopec's Rural Revitalization Program, and plans to subsidize no less than 1,000 girls, build 100 "Spring Bud Nursery" girl-friendly spaces, benefiting about 200,000 girls and their families. On the basis of sponsoring girls from disadvantaged families, through the implementation of growth empowerment actions, Sinopec gave the girls ideological guidance, spiritual encouragement and psychological care, and helped them grow up healthily and develop in an all-round way.

So far, additional 11 "Spring Bud Nurseries" have been completed in designated schools in Xinjiang, Gansu, Hunan, Anhui and other places. Sinopec mainly carried out girls' growth empowerment actions and the "Heart to the Party, Language and Love Together" Mandarin Promotion Activities to enrich the contents of the "Spring Bud Nursery" public welfare project; launched the "Spring Bud Aid" program to distribute scholarships to 250 girls in need and give 1,500 "Spring Bud Aid Packages" to encourage the girls in life and learning. In conjunction with the "The Gas Station That Cares - A Better Road Home" activity, Sinopec also sent 3,000 pieces of "Spring Bud Child Care Gifts" to left-behind children of truck drivers and migrant workers.



The "Spring Bud Nursery" of Dongxiang County Sinopec Middle School, Gansu province



Crossing mountains and rivers: Sinopec's education assistance over the year



The "Spring Bud Nursery" of Xiangchang Sinopec Middle School, Yuexi county, Anhui province

**Efficiently boosting consumption assistance**

Relying on the good foundation of industrial development and consumption assistance during the poverty alleviation period, Sinopec further strengthened strategic planning, interaction of production and marketing, and systematic improvement; optimized the business path of "production, supply and marketing"; reinforced the "one county, one industrial chain" model to give full play to its advantages in channels, marketing and influence; and formed an "industry + consumption" characteristic assistance model of "driving consumption assistance with product quality, industrial assistance with consumption assistance, and rural revitalization with industrial assistance".

Sinopec used its platforms such as enjoy365.com, epec.com and sinopectg.com to increase the promotion and sales of characteristic products from the poverty-hit area it supports. And, currently 1,710 products from 146 counties of 23 provinces and autonomous regions are included in the *Sinopec Consumption Assistance Project Commodity Catalog*. Sinopec released key assistance products and promotion activities on Marching Sinopec applet, Sinopec Monthly magazine, and sinopecnews.com.cn; organized activities of "group buying to rejuvenate agriculture" in its headquarters, oil fields, refineries and chemical enterprises; and participated in activities such as the "Week of Central Enterprises' Consumption Support for Rural Rejuvenation" and "Spring Festival Special" organized by the State-owned Assets Supervision and Administration Commission to smooth the rural produce sales channels. In 2022, Sinopec's consumption assistance amount exceeded 1.156 billion yuan, showcasing the responsibility of a central enterprise.



In September 2022, Sinopec held a special agricultural products exhibition in Yingshang county, Anhui province



In July 2022, the Fresh Food Map, a national fresh food sales website built by Sinopec's enjoy365.com, was officially launched in Guangxi. And 60,000 kg mangoes produced in Base was sold on enjoy365.com in the month



# Clean energy ensures safe supply

## Guidelines of the 20th CPC National Congress

We will thoroughly advance the energy revolution. Greater efforts will be made to explore and develop petroleum and natural gas, discover more untapped reserves, and increase production. We will speed up the planning and development of a system for new energy sources, strengthen our systems for energy production, supply, storage, and marketing to ensure energy security. We will promote the integrated and clustered development of strategic emerging industries and cultivate new growth engines such as next-generation information technology, artificial intelligence, biotechnology, new energy, new materials, high-end equipment, and green industry. Setting our sights on the global frontiers of science and technology, national economic development, the major needs of the country, and the health and safety of the people, we should speed up efforts to achieve greater self-reliance and strength in science and technology.



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# Coordinating the development of integrated industries

Sinopec shoulders the three core responsibilities of "ensuring national energy security, leading the high-quality development of China's petrochemical industry, and acting as a national strategic sci-tech force", and follows its vision of "building a World-Leading Clean Energy and Chemical Company", accelerates the development of "One Foundation, Two Wings and Three News", where energy resources are the foundation, clean oil products and modern industry as the two wings, and new energy, new materials and new economy as important growth poles. Sinopec is creating a multi-dimensional, coordinated and well-matched integrated industrial system, with a focus on building the petrochemical industry chain covering oil and gas exploration and development, refining and the chemical industry, oil and gas sales, and natural gas utilization. Sinopec has steadily developed petroleum and refining engineering services, international trade and other businesses, comprehensively improved energy supply security capabilities, and is serving people's needs for a better life.

## Conventional oil and gas and chemical products supply (2022)

### Oil and gas

- Crude oil output in China **35.32** million tonnes
- Natural gas output in China **35.3** billion cubic meters
- Overseas equity of oil and gas equivalent **35.01** million tonnes

### Oil refining

- Amount of processed crude oil **242.27** million tonnes
- Average scale of a refinery **10.259** million tonnes / year
- Capacity of crude oil distillation **302** million tonnes / year
- Refined oil output **140** million tonnes

### Chemical industry

- Ethylene output **13.44** million tonnes
- P-xylene output **4.72** million tonnes
- Synthetic resin output **18.58** million tonnes
- Synthetic rubber output **1.28** million tonnes
- Synthetic fiber and polymer output **3.98** million tonnes
- Fine chemicals output **710,000** tonnes

### Oil sales

- Refined oil sales volume **162.55** million tonnes (excluding Hong Kong)
- A complete marketing network for refined oil products in China, with a total of **30,808** gas stations
- Operating volume of gas **4.18** billion cubic meters

## 2022

- Sinopec saw 10 oil and gas exploration discoveries, and increased proven oil reserves by 202 million tonnes and proven natural gas reserves by 278.6 billion cubic meters in the year, exceeding the annual targets of the "Seven-Year Action Plan".
- In May, the air-jack dome lifting operation of China's largest liquefied natural gas (LNG) storage tank -- the Qingdao LNG terminal which has a capacity of 270,000 cubic meters -- was successfully completed. The tank was independently developed by Sinopec and is currently the largest LNG storage tank in China.
- In June, the Wangchu-6 well of the Jiangnan salt cavern natural gas storage of Sinopec was officially put into use. The well is more than 2,000 meters deep, and is the deepest of its kind in China.
- In July, No.2 propylene tower of the Sinopec Tianjin Nangang Ethylene Project, a national key project during the "14th Five-Year Plan" period, was successfully installed, making it the first large-scale ethylene equipment to be put up in the country. This marked the official start of equipment installation for the construction of the Nangang Ethylene Project and the beginning of the parallel operation of civil engineering and equipment installation.
- In August, the Shunbei Oil and Gas Field Base was named "Shendi-1". So far, the base has 46 wells with a vertical depth exceeding 8,000 meters, and directional wells which have a maximum depth of 9,300 meters, breaking the record for the deepest ones in Asia.
- In August, the national demonstration area of the "Shendi Engineering Project · Jiyang Shale Oil Base" was unveiled, and the continental shale oil in the Jiyang Depression is currently the deepest buried continental shale oil in China, with an average depth of 3,000-5,000 meters.
- In November, the first helium purification unit independently developed by Sinopec successfully started in the Chongqing petroleum LNG plant. The project can produce more than 20 tonnes of 99.999% high-purity helium annually.
- In December, the largest petrochemical cooperation project between the two sides of the Taiwan Strait - the Gulei Refining and Chemical Integration Project in Zhangzhou, Fujian province, was officially put into commercial operation.
- In December, the first megawatt-scale proton-exchange membrane, or PEM water electrolysis hydrogen production unit independently developed by Sinopec successfully started up, and China's largest single PEM water electrolysis hydrogen production unit was put into production.
- In December, the "Shendi Engineering Project · Sichuan-Chongqing Natural Gas Base" was officially unveiled, and the drilling depth of Yuanshen-1 well reached 8,866 meters, breaking the record of Sinopec for the deepest vertical well in Sichuan Basin.
- Sinopec organized gas storage and heating season resource arrangements in advance, implemented the detailed heating season guarantee plan and emergency plan, made every effort to increase production and supply, and held the bottom line of gas supply to meet people's livelihood requirements. In the 2022-2023 heating season, a total of 20.7 billion cubic meters of natural gas were supplied to the market.



Sinopec's top 10 oil and gas exploration discoveries





# Accelerating the energy transition

Sinopec has actively embraced the reform of new energy, advanced its layout of shale gas, coal-bed methane (CBM), geothermal energy, hydrogen energy, photovoltaic, wind power and other clean energy, promoted the use of bio-aviation fuel and other biomass energy, speeded up the development of the power charging and the battery swapping business, further increased the supply proportion of clean energy and renewable energy, accelerated the transition to an integrated energy service provider of "oil, gas, hydrogen, power and service", and provided safer, cleaner and diversified energy.

<b>Shale gas</b>	Added proven geological reserves by 145.9 billion cubic meters, and produced 9.91 billion cubic meters of shale gas.
<b>CBM</b>	Continuously enhanced adjustment and management of the old production area of Yanchuan South, cultivated the new production and construction area in Zhijin county, and produced 400 million cubic meters of CBM throughout the year.
<b>Geothermal energy</b>	The accumulated geothermal heating capacity exceeded 80 million square meters, and the waste heat heating capacity exceeded 45 million GJ per year.
<b>Hydrogen energy</b>	Supplied 1,686 tonnes of high-purity hydrogen for fuel cells throughout the year, and built 98 hydrogen stations, with an annual hydrogen refueling volume of more than 1,700 tonnes.
<b>PV</b>	Launched centralized PV projects such as a 120 MW project in Anlu, Hubei province, and a 106 MW project in Shengli Oil Field. A total of 2,452 distributed PV power stations were built with an installed capacity of 88 MW.
<b>Wind power</b>	Started a 112 MW decentralized wind power project in Zhongyuan Oilfield. The cumulative installed capacity of wind and solar power generation exceeded 850 MW, with a spontaneous green energy output of 450 million KWh and a carbon reduction of approximately 300,000 tons throughout the year.
<b>Bio-aviation fuel</b>	Successfully produced bio aviation fuel and obtained global RSB certification.
<b>Biodiesel</b>	Sinopec Shanghai Oil Products Company has a total of 230 B5 biodiesel supply stations, serving 370,000 cars on average per month.
<b>Low sulfur marine fuel</b>	With a market share of 46%, Sinopec has the largest market share of low-sulfur marine fuel oil in China.
<b>Coal chemical industry</b>	Production of 28.08 million tonnes of raw coal and 23.19 million tonnes of commercial coal.
<b>Charging (battery swapping) station and battery pack</b>	A total of 2,299 charging (battery swapping) stations, of which 128 are battery swapping stations.

## Sinopec is actively exploring the development and utilization of geothermal energy CASE

Geothermal energy is hidden 1,500-2,500 meters underground. With the obvious advantages of large reserves, wide distribution, clean and environmentally friendly, stable and reliable supply, it is a realistic and feasible green, low-carbon, recyclable clean energy. Over the years, Sinopec has been committed to promoting the large-scale and cost-effective development of geothermal energy. It has completed a cumulative clean heating capacity of more than 80 million square meters, with geothermal business covering more than 60 cities in 10 provinces (municipalities) in China, becoming the largest medium and deep geothermal energy development and utilization enterprise in China.

### History of geothermal development and utilization of Sinopec

<b>1998</b>	Using its own advantages in geological resource exploration, Sinopec drilled the Sanpu No.1 geothermal well in Shaanxi.
<b>2009</b>	Joined hand with the Xiongqian county government in Hebei province to promote local geothermal development and utilization.
<b>2011</b>	The geothermal business was expanded to Rongcheng county, Baoding, Hebei province; Laoling, Shandong province; Xixian New Area, Shaanxi province and Henan oil field, and exploration of geothermal power generation was done in Sichuan and Tibet.
<b>2012</b>	The Xianyang geothermal district heating project in Shaanxi was the first of its kind certified by the United Nations CDM (Clean Development Mechanism) in China and the world. The National Energy Administration, relying on the professional force of the Sinopec Star Co Ltd, established the National Geothermal Center.
<b>2013</b>	The Sinopec Star Co Ltd was positioned as a clean energy company focusing on geothermal energy development and utilization. A Sinopec geothermal development and utilization lab was established by Sinopec Star.
<b>2014</b>	The National Energy Administration decided to promote the "Xiongqian County Model" nationwide. The first sandstone thermal storage geothermal tail water extraction and re-injection combined system was successfully established. The first geothermal cooling and heating project - the ground source heat pump project of the Xianyang Central Hospital of China Railway 20th Bureau Group started operation.
<b>2015</b>	The geothermal heating project of Qinhan New City, Xixian New Area, Shaanxi province by Sinopec Star Co Ltd was the first registered geothermal heating CCER (Certified Voluntary Emission Reduction) project in China.
<b>2016</b>	The National Energy Administration approved the establishment of the Geothermal Energy Standardization Technical Committee and put the committee under its administration; the secretariat was established at Sinopec Star. China Ice Geothermal Center was established in Beijing.
<b>2017</b>	A geothermal heating project was established in 11 villages to replace coal heating in Xiongqian New Area. The geothermal heating business of Sinopec Star was recognized as a reform pilot of state-owned enterprise mixed ownership reform in the third batch.
<b>2018</b>	Three industrial standards, including the <i>Geothermal Energy Terminology</i> , compiled under the leadership of Sinopec Star, were released and implemented.
<b>2019</b>	Sinopec joined hands with several domestic institutions to establish a consortium and successfully won the bid for hosting the 2023 World Geothermal Congress on behalf of China.
<b>2020</b>	Sinopec signed the heating grid connection and heat source supply agreement with Xiongqian Bullet Train Operation Office of the Beijing-Xiongqian High-speed Intercity Railway. Sinopec completed the first large-scale air source heat pump project in Xiongqian New Area.
<b>2021</b>	The Xiongqian geothermal development project was included in the list of global promotion projects by the International Renewable Energy Agency.
<b>2022</b>	Sinopec implemented its overall layout in Xiongqian, Rongcheng and Anxin counties in Xiongqian New Area. Sinopec issued the first green carbon neutrality bonds in Xiongqian New Area.



### ☰ Sinopec promotes construction of distributed PV power stations

CASE

Sinopec has made an aggressive overall plan and arrangement for the PV power business to create an important growth pole and to achieve green and clean development and transformation. It has carried out the "PV Plus" initiative, combined gas station PV power with energy conservation, carbon reduction, and brand marketing. Also, to fully utilize the idle space on the roofs of more than 30,000 gas stations across the country, it has deepened the building-integrated PV (BIPV) construction and developed distributed PV power generation. The generated electricity is mainly used for gas stations and electric vehicles. As of 2022, a total of 2,452 distributed PV power stations has been built with an installed capacity of 88 MW. During the 14th Five-Year Plan period, it is planned to build 7,000 distributed PV power stations with an installed capacity of 400 MW. After completion, the annual power generation will be approximately 480 million kwh.



### ☰ Sinopec completes China's first marine methanol supply

CASE

Compared with fuels such as liquefied natural gas (LNG), methanol is more convenient to store and transport, with lower infrastructure costs, showing significant cost and safety advantages. It is the most feasible, cost-effective alternative to marine fuels with the least carbon emission. In September 2022, Sinopec Fuel Oil Sales Company supplied 90 tonnes of methanol for the first methanol dual-fuel vessel independently developed and built in China in Nansha Port, Guangzhou. It was the first marine fuel supplier with methanol filling business in China, providing a successful experience for new energy adoption in China's shipping industry.

### ☰ Sinopec's first battery swapping station for heavy-duty trucks put into operation

CASE

In July 2022, Sinopec's first heavy-duty truck battery swapping station -- Baijiawang integrated energy station, was completed and put into use. The station covers an area of 2,724 square meters and is located in the suburbs of Yibin, Sichuan province, an important transport hub. It is providing car owners with a one-stop experience such as refueling, heavy-duty truck battery swapping, and convenience store access (Easy Joy), meeting the diversified needs of end-users. The heavy-duty truck battery swapping area adopts a top-mounted swapping model and is equipped with seven pieces of 282-kilowatt-hour power batteries, compatible with engineering slag trucks, tractors and trucks. By using intelligent and automatic precise docking technology, the battery swapping process takes just three minutes. Each battery allows a vehicle to run for about 150 kilometers. And the station can meet the battery swapping demands of 168 vehicles per day, reducing carbon dioxide emissions by 3,550 tonnes a year. Sinopec has actively embraced the transformation and development of transportation energy, increased rational planning and utilization of existing sites to build charging and swapping infrastructure, and plans to build 5,000 charging and swapping stations by 2025.

### ☰ Sinopec helps in China's first international commercial cargo flight using aviation biofuel

CASE

Biological aviation fuel is a type of sustainable aviation fuel (SAF) made from renewable resources. Over the years, Sinopec has continued to explore the development of the whole industrial chain of biological aviation fuel. In 2009, it successfully developed the production technology of biological aviation fuel with independent intellectual property rights, promoting the first test flight, first commercial flight and first trans-ocean flight in 2013, 2015 and 2017 respectively, making China the fourth country in the world with self-developed production technology of biological aviation fuel.

In May 2022, China's first 100,000 tonnes/year biological aviation fuel industrial plant started the first large-scale pilot production in Sinopec Zhenhai Refining & Chemical Co Ltd, and won the first RSB global SAF certification in Asia. In December, a cargo flight using Sinopec's SAF arrived in Belgium after a journey from Hangzhou, East China's Zhejiang province. This was the first time that the country used such fuel for an international cargo route, marking the beginning of the era for SAF for international cargo.

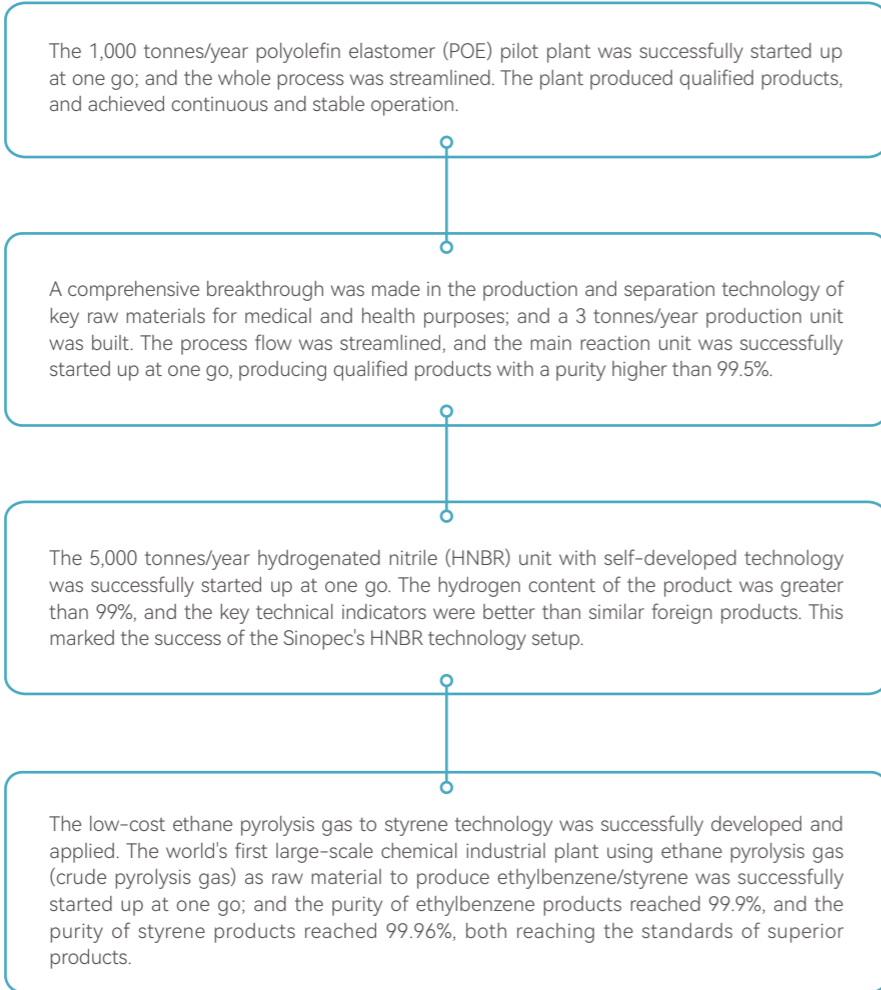




# Leading modern chemical industrial sector

Sinopec has accelerated the implementation of President Xi Jinping's important instruction of building a "world-class, high-tech integrated" green base. It has been optimizing the layout and structural adjustment of the chemical industry, has continued to increase R&D efforts in high-end polyolefin materials, advanced fine chemical synthesis technology and advanced plastic processing technology, and developed special fibers, special resins, high-performance rubber and other products. Also, it has actively promoted the development of biodegradable materials such as poly Glycolic acid (PGA) and PBAT, and strengthened the combination of production, marketing, research and application of medical and health materials, PV materials and new functional materials, and promoted chemical materials to move towards the mid to high end of the industrial and value chains.

Development of modern chemical industry (examples)



## China's first set of large tow carbon fiber domestic line to drive CASE

Large tow carbon fiber has the advantages of light weight, high strength and corrosion resistance. It is known as the "king of new materials" and "black gold". It can be widely used in wind energy, solar energy, high-speed rail vehicles, aircraft components and other scenarios. In October 2022, the first domestic line of China's first 10,000-ton 48K large tow carbon fiber project was put into operation at Sinopec Shanghai Petrochemical Carbon Fiber Industry Base, and qualified products were produced. The performance of the products is comparable to that of foreign products of the same level, and the quality has reached the international advanced level. This marks that Sinopec's large tow carbon fiber has successfully moved from key technology breakthrough, industrial trial production and industrialization to large-scale production and localization of key equipment, and truly realized independent control.

## First plant of Sinopec's third-generation aromatics technology put into operation CASE

In June 2022, the first industrial application of Sinopec's third-generation aromatics technology – Sinopec Jiujiang Company's 890,000 tonnes/year aromatics complex plant was put into operation and produced qualified products. It is a key project in the national industrial layout, and this indicates that China's aromatics technology has reached an international standard. As the first large-scale aromatics project in central China, Sinopec Jiujiang's aromatics project will play an important role in promoting the rise of the central region and driving the development of the refining-chemical integration industry chain.



## Sinopec produces "plastic gold" CASE

Polybutene-1 (PB-1), which is tasteless, odorless and non-toxic, is resistant to creep, stress cracking and impact, and enjoys the reputation of "plastic gold". In February 2022, China's first 3,000 tonnes/year high-grade PB-1 industrial demonstration plant was successfully started at the Sinopec Zhenhai Refining & Chemical Company, and produced nearly 100 tonnes of qualified products. This industrial demonstration of PB-1 technology marks another major technological breakthrough in the field of high-end synthetic new materials made by Sinopec. With this, Sinopec became the fourth in the world and the first in China to have the ability to continuously and stably produce PB-1 products.

## Sinopec accelerates the development of degradable materials industry CASE

Sinopec, the world's largest synthetic resin manufacturer, has always advocated green development and attached importance to the R&D and application of degradable plastics. Through years of joint research and development with universities and research institutes, Sinopec Yizheng Chemical Fibre has developed the technology and product formula of biodegradable materials with independent intellectual property rights, released three biodegradable products -- PBST, PPAT and PBSA -- to the market, and successfully cultivated the biodegradable material brand - "Ecorigin".

In October 2022, Sinopec Yizheng Chemical Fibre started the construction of a flexible transformation project for 120,000 tonnes/year PBT or 60,000 tonnes/year biodegradable material. It is a part of the 4 million tonnes/year high-end green new material integration project, which is a complementary project of the 3 million tonnes/year PTA project that is a leading project of transformation, upgrading and development of Sinopec Yizheng Chemical Fibre during the "14th Five-Year Plan" period. It is of significance when it comes to accelerating global plastic pollution control. At present, the biodegradable materials research and development team of the company is exploring and cultivating Sinopec brands with technological innovation and industry influence, and further promoting the brand upgrading from manufacturing products to establishing "standards".

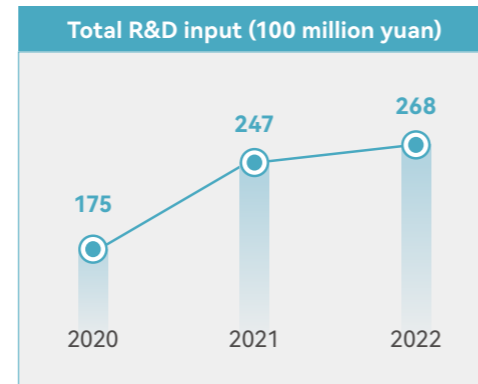


## Strengthening innovation drivers

Sinopec has always kept in mind the instructions of President Xi Jinping on "developing technology" and "maintaining a leading level", and shouldering the core responsibility of "the national strategic scientific and technological force". It is focused on making breakthroughs in key core technologies, continuing to strengthen cutting-edge basic research, promoting the reform of scientific and technological systems and mechanisms, and improving the ability to support and lead scientific and technological innovation.

### Sci-tech innovation system and mechanism management

Sinopec has built a competition mechanism for tackling key core technologies, formulated the *Implementation Plan for Open Competition to Select Best Candidates for New Sci-Tech Projects*, and launched six cutting-edge basic projects. Also, it has launched a pilot project for the "Seed Plan", of which the first batch targeted key universities and institutions such as Tsinghua University, with a purpose to solicit innovative and forward-looking ideas and solutions in the field of chemical engineering and materials to expand new fields, new processes, and new technologies. It is actively integrated into the national innovation system, and has applied to build 5 new national energy innovation R&D platforms. Of them, the establishment of the national key lab for energy carbonate oil and gas was publicized; three were included in the "open competition" mechanism, and one participated in the assessment for the best candidates of leading forces. Sinopec is one of the original technology source enterprises of the State-owned Assets Supervision and Administration Commission's (SASAC's) first batch. Also, it has systematically sorted out the systems of basic, urgent, cutting-edge, and disruptive technologies, brought together major scientific and technological tasks, announced the goals of leading development, and made great efforts to organize and carry out research and development to tackle key technical problems.



### Building of scientific and technological talent teams

Sinopec has introduced talents through its talents and projects scheme and implemented plans for the flexible use of talents. Also, it has strengthened the integration advantages of sci-tech research teams, and promoted sci-tech innovation and talent training. As a result, it has a group of talents with high education levels, leading expertise and cutting-edge technologies, as well as urgently-needed talents, and a higher proportion of R&D personnel compared with its peers. Sinopec has built a team of leading scientific research talents, designed incentives for young sci-tech talents, and accelerated the establishment of an evaluation system for sci-tech talents based on innovative value, ability and contribution. Focusing on national key fields and industries, Sinopec has organized industry-university-research institute collaborative research, cultivated talents in major scientific research tasks, and implemented special policies for building the talent echelons, supporting scientific research conditions, and management mechanisms. Also, it has implemented an academicians reserve support plan, and focused on strengthening the building of high-level talent teams and innovation teams.

### Transformation and application of scientific and technological innovation achievements

Sinopec has actively tapped its leading and supportive role in scientific and technological development, and continued to promote the transformation and application of scientific and technological achievements, so as to add impetus to industrial upgrading and economic development. In 2022, the company applied for 10,136 patents at home and abroad, and had 7,502 patents granted at home and abroad, ranking first among central enterprises for four consecutive years in terms of patent quality. Sinopec won seven Chinese patent awards, including one gold, two silver and four excellence awards. In the "Ranking of Patents of Central Enterprises" issued by SASAC in 2022, Sinopec ranked the first place in the A grade of patent quality evaluation results of central enterprises, the second place in the ranking of invention patent authorization as well as effective invention patents of central enterprises.

In terms of the oil and gas exploration and development technology, Sinopec has made breakthroughs in the theory of oil and gas reservoirs in various geological conditions. Significant achievements have been made in understanding the formation mechanism and in tackling key problems in exploration and development technology of shale oil gas. The rotary geosteering drilling system and equipment independently developed by Sinopec have been continuously applied and improved, and autonomous control has been realized in the all-node high-density seismic exploration technology and equipment. In terms of the oil refining and hydrogen energy technology, Sinopec has established

a complete technical system of formulated crude oil, and its phase change materials have provided important technical support for the Wentian Lab Module. Also, it has successfully developed the complete technology of low-sulfur heavy marine fuel, and put the hydrogen supply center for fuel cells into operation. In terms of chemical material technology, Sinopec has streamlined the production process of key medical and health raw materials. China's first 10,000-tonne-level 48K large tow carbon fiber production line has been completed and put into operation. And the production process for the first dedicated production line for high-strength and high modulus carbon fiber in China has been completed. In terms of public technology, Sinopec has developed the wet oxidation process technology for sulfur-containing waste alkali solution, as a supportive part of the million-tonne ethylene project; and the key technologies for long-term safe production in high acid gas fields have been applied, and the intelligent control platform for green and low-carbon operation of catalytic cracking units (CCU) has been successfully launched and put into operation.



### Digital and intelligent transformation

Sinopec has strengthened the application of digital technology, accelerated the digital and intelligent transformation of industries, promoted the transformation of management mode, operation mode and production paradigm, improved the total factor productivity, shaped new competitive advantages, and boosted the high-end, intelligent and green development of the petrochemical industry.

#### Optimizing the information management and control system, and stimulating the vitality of digital and intellectual innovation

Sinopec has developed and implemented the special implementation plan of digital transformation action plan, and established and improved the supporting systems of IT management, information systemic risk management, informatization expert management, information training, among others. It has released version 1.0 of Sinopec's informatization application architecture, and carried out the construction and pilot application of the software engineering cost evaluation system in the petroleum and petrochemical industry. Also, it has promoted the implementation of the new mechanism of "domain chief responsibility system", and carried out top-level design for informatization, business process standardization, data governance and further application of various business domains according to the new model of "data + platform + application".

#### Strengthening the construction of digital infrastructure and consolidating the cornerstone of digital development

Sinopec has made efforts to improve and upgrade the "Sinopec Smart Cloud" industrial Internet platform and build a service system integrating three centers: service control, capability exposure and continuous delivery. It has comprehensively improved the "cloud-network security" capability, built a remote data center, and formed an application active-active mode of the group's data center with "three centers in two places". It has built a hybrid cloud for state-owned central enterprises, and piloted the construction of the IT innovation resource pool featuring "one cloud and multiple cores". It has also optimized the network architecture of the group company, built a data center ring network, and completed the network flattening adjustment. It has strengthened network security management and improved Internet outlet security protection strategies.

#### Promoting the digital and intelligent improvement of various fields and offering strong support to the high-quality development

Sinopec has established a digital and intelligent analysis and decision-making system for financial data, improved the global treasury management function, launched the interest rate and foreign exchange risk and credit risk management application, and accelerated the construction of a strategic and intensive financial control system. It has improved the integrated investment optimization and control platform, and built an operation audit and technical audit integration big data platform. The headquarters intelligent operation center has deepened its application and promoted the digital and intelligent upgrading of production fields in the upstream, midstream, and downstream of the industry. The group company has achieved visualized supervision of the transportation of hazardous chemicals and environmental protection emissions, and the carbon asset system has been launched in 40 enterprises. The digital service capabilities and market influence of e-commerce platforms such as chememall.com have been significantly improved.

### Smart factory construction

Based on the "Sinopec Smart Cloud" industrial Internet platform, Sinopec has launched smart factories in six enterprises, promoted benefit-oriented production and operation mode of "overall optimization, precise implementation, and closed-loop control", and enabled green, safe and high-quality development. As of 2022, Sinopec had built 15 refining and chemical smart factories.



## Building a solid foundation of safety and security

Sinopec set an example in establishing the concept of safe development, strengthened the awareness of principal responsibilities of safe production, enhanced the construction of safe production mechanisms, thoroughly investigated and corrected the hidden dangers and risks to safety, and observed the concept of safe production through the whole process of production and operation, so that the development of the enterprise was based on a stable and reliable foundation of safety.

### Safe production management

Sinopec implemented the "first-in-command" safety mortgage system for high-risk enterprises, organized the HSE report and assessment of newly appointed leaders, and pushed leaders to shoulder safety responsibilities. It organized all stakeholders at all levels to sign the statement of safe production responsibility, and clarified the terms of accountability. It also strengthened the training and certification of personnel in key HSE positions, and enhanced their ability to understand and fulfill their responsibilities. Also, the company carried out safe production warning education, promoted the implementation of the Work Safety Law, and enhanced the safety awareness of employees and cadres at all levels. In 2022, the safety training coverage of the group company was 100%. The company also took measures to promote the effective operation of the HSE management system and organized comprehensive system audits. Also, it organized and carried out a comprehensive system safety inspection, established four special safety inspection teams for the group company, and completed the inspection tasks of key enterprises. Focusing on process control, alarm interlinking, and operation control, it carried out inspections in the "Four Nos and Two Straights" (no advance notice, no greetings, no report, no escort and reception, and going straight to the junior level and the scene), and established an inspection team to conduct special safety inspections. It has also organized and carried out offshore oil safe production law enforcement inspections, coal mine safety examinations, and safety audits, and "100-day safety actions" across the entire sector according to the work safety situation at the turn of a year.

### Safe risk prevention and control

#### Risk control and hidden trouble management

Sinopec ended its three-year safe production rectification campaign, and completed the correction of problems and hidden dangers on schedule. It promoted centralized efforts to tackle key problems in risk control and hidden dangers, and completed the construction of a "dual prevention digital and intelligent control platform" for production enterprises. Customized control policies and measures were implemented for old devices. Special investigation and rectification of lightning hazards were carried out in fuel, oil and gas storage facilities. The "offshore oil safety risk monitoring and warning system" was established, while in-depth safety risk assessment was conducted for manned platforms. Safety assessment was done for the main structure of aging platforms; and special investigation and correction were done in high-risk subdivision areas.

#### Emergency response to safe production accidents

Sinopec organized 78 enterprises to carry out cross review of emergency plans, conducted group company level emergency drills, and promoted the "135" emergency response principle (emergency response in 1 minute, stabilizing the situation in 3 minutes and fire control and hazardous gas control brigade and rescue force arriving at the scene in 5 minutes) at grassroots level. The company conducted 580,000 safe production emergency drills in the year, involving 3.3 million participants. It formulated the "Work Plan for Strengthening the Construction of Full-time Fire Brigades in Enterprises", and carried out special fire safety assessments and fire brigade performance compliance assessments. Also, Sinopec actively participated in social rescue, and 14 emergency rescue teams and three individuals were commended by the Ministry of Emergency Management.

### Operation safety

Sinopec completed the revision, issuance and publicity of the "7+1" system of direct operations, organized the production of a series of warning films for high-risk operation accidents, and effectively improved the safety awareness and risk prevention ability of on-site operators. It organized and carried out special contractor safety rectification programs centering on "eight inspections and eight rectifications", continued to conduct special inspections of high-risk construction projects, and implemented shutdown rectification and accountability assessment for any violations found. It also employed strict control measures for high-risk operations, implemented the special management requirements of "Two Specials and Two Keys" (special operations and special time; and hazardous chemical processes and hazardous chemicals under key supervision), upgraded the management of simultaneous operations, implemented the leader on-site supervision mechanism for major and dangerous projects, and made efforts to ensure safe production during special periods.

### Public security

In accordance with the requirements of national public security industry standards, Sinopec has promoted anti-terrorism compliance construction and completed the public safety guarantee tasks during major events such as the 20th CPC National Congress, the "Two Sessions", the Beijing Winter Olympics and Paralympics, and the 5th China International Import Expo. Sinopec comprehensively promoted the special investigation and cleaning of illegal construction on pipelines, and removed all illegal structures on in-service pipelines. It also organized key enterprises to conduct in-depth geological disaster investigation and evaluation, employed new generation of "aviation, aerospace and ground" multi-source investigation technologies to get a clear and comprehensive picture of risks and hidden hazards, promoted the implementation of control measures and engineering governance plans, and effectively enhanced the disaster and risk prevention capabilities of oil and gas facilities in the Sichuan and Chongqing work area. It organized logistic (operator) business backbones and personnel of strategic carriers from 82 enterprises to conduct safety training for hazardous chemical transportation, deepened the deployment and application of hazardous chemical transportation risk monitoring and warning systems, and enhanced the hazardous chemical transportation risk control capabilities of the enterprises.

Sinopec continued to adhere to the concept of "people first, prevention first and safe development" for the overseas public security work, revised and improved the management systems, carried out in-depth overseas public security risk assessment, continuously promoted the construction of security risk check and emergency response system, comprehensively enhanced country-specific risk warning and security risk early warning, actively organized overseas public security training, and maintained "zero death" record in overseas projects for 15 consecutive years.



Sinopec Shanghai Petrochemicals participated in "the Shanghai Emergency Response 2022" comprehensive drill on emergency handling of hazardous chemical leakage on vessels at sea



Special

## Important breakthroughs made in "Shendi Engineering Project"

China's deep and ultra-deep oil and gas resources account for 34% of the country's total, with high resource abundance and large reserves. The deep and ultra-deep strata have become the main location of major oil and gas discoveries in China. Sinopec has closely integrated the promotion of the "Shendi Engineering Project" with the implementation of the new energy security strategy of "four revolutions and one cooperation", continued to make efforts in research, exploration and development in the deep oil and gas fields, and become a leading force in China in this field.

Extended reading

In oil and gas exploration and development in China, strata with a depth greater than or equal to 4,500 meters are defined as deep strata, while that with a depth exceeding 8,000 meters are defined as ultra-deep strata, and wells with a vertical depth exceeding 9,000 meters are defined as ultra-deep wells. The shallow and medium-depth oil and gas resources in China have entered the late stage of exploration, development and production, and the exploration and development of deep oil and gas resources is an important part of the deep exploration of the Earth.

### Strengthening efforts to achieve breakthroughs in core technologies and advancing toward the "underground Mount Everest"

With the advancement of technology and the depletion of medium and shallow oil and gas resources, 60% of the world's new oil and gas reserves in recent years now come from deep strata. At 8,000 meters underground, we reach the ultra-deep strata where the oil is buried. But at such a depth, it is not easy to find oil and gas, because the deeper you go, the higher the formation temperature, which can reach 180-200 degrees Celsius, or even higher. In such a situation, even the hardest metal becomes "cooked noodles", and ordinary materials and instruments cannot function.

Sinopec is continuously doing theoretical research, comprehensively increasing its efforts to tackle key scientific and technological problems, overcoming technical problems, and has formed a theoretical and technical system for ultra-deep oil and gas exploration and development through independent research and development, laying a solid foundation for oil and gas exploration and production in the "underground Mount Everest".

#### Continuously developing geological theories

Sinopec took the lead in breaking through the "barrier" of ultra-deep oil and gas exploration of 8,000 meters, and proposed the suppression mode of hydrocarbon generation in marine source rock, the collective reservoir formation mechanism and the oil and gas accumulation mode of ultra-deep fault-controlled fracture-caverns under the conditions of "low ground temperature, high burial depth and high pressure", developed the theory of ultra-deep fault-controlled fracture-cavern hydrocarbon accumulation, enriching and developing the theory of marine hydrocarbon accumulation.

#### Continuing to achieve breakthroughs in exploration and development technology

Sinopec developed the ultra-deep reservoir stereoscopic imaging technology and fracture body fine engraving technology, which are equivalent to CT scanning of the deep strata of the earth, with the accuracy of fault identification improved from 30 meters to 15 meters. The company mastered advanced ultra-deep oil and gas drilling technology, achieved results in technologies such as ultra-high-strength casing, drill pipe, drilling fluid, measurement and control instruments, and completion testing tools, and developed a set of 8,000-meter-class complex ultra-deep wellbore structure design and supporting technologies and standards with Shunbei characteristics, realizing a major leap from "unable to drill" to "drill rapidly and accurately".

#### Setting three new records in drilling technology

CASE

The pressure at the well bottom of the Shunbei 21 inclined well is up to 163MPa, which makes drilling extremely difficult. The Sinopec Northwest China Petroleum Bureau employed the plugging while drilling fluid technology, "special-shaped PDC drill bit + vertical drilling system + high torque screw" anti-deviation and fast drilling technology, using managed pressure drilling and high-pressure gas well completion technology, and gradually overcame key problems such as high strength of deep Paleozoic rocks, fragile reservoirs, and the ultra-high pressure well opening and shut-in. It created three new records: "the highest shut-in pressure, the highest production pressure and the highest output of branch faults" in the inter-platform basin area of the Tarim Basin.

### "Shendi-1 project" launched to further exploration in Xinjiang

The Shunbei oil and gas field is located in the central and western area of the Tarim Basin. The reservoirs are ultra-deep, with high temperature and high pressure. The average depth of the reservoirs is more than 7,300 meters. It is one of the deepest commercial oil and gas fields on land in the world, and also an important representative of Sinopec's efforts of drilling the ultra-deep layers of the earth. Sinopec has continued to increase its exploration and development efforts, made breakthroughs in Shunbei No.1, No.5, No.4 and No.8 fracture zones, and established four 100 million tonne-level oil and gas areas. This marked the successful exploration and development of this world's deepest oil and gas field. In August 2022, Sinopec named the Shunbei Oil and Gas Field "Shendi Engineering Project · Shunbei Oil and Gas Field Base", which is the first oil and gas project named "Shendi" in China. The Shunbei Oil and Gas Field Base is known as "Shendi-1". At present, there are 46 wells with a vertical depth of over 8,000 meters in "Shendi-1". The average depth of oil and gas wells there is the highest in the country, and the deepest directional well is 9,300 meters, breaking the record for the deepest in Asia. These wells can be called "underground Everest".

2022

In June, the Shunbei 802X well tested a high-yield industrial oil flow of a daily output of 226.7 tonnes of crude oil, 1.257 million cubic meters of natural gas, and an oil and gas equivalent of 1,228 tonnes.

In August, the Shunbei 803 inclined well tested a high-yield industrial oil flow of 1,017 tonnes of oil and gas equivalent.

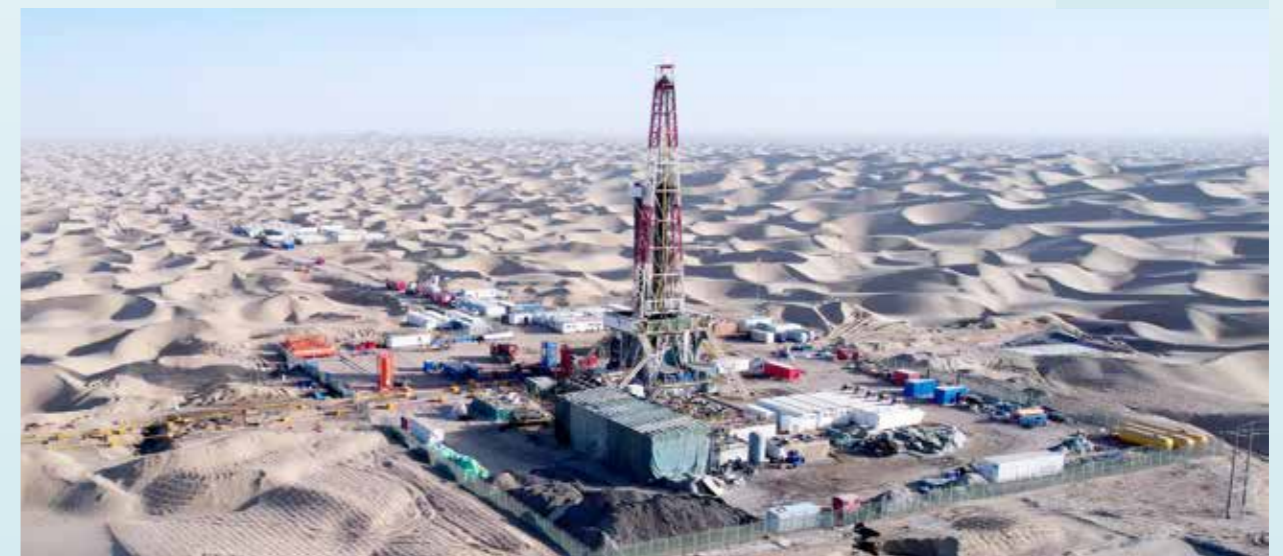
In December, the key exploratory well in the No.2 fracture of Shunbei Oil and Gas Field – Shunbei 21 inclined well – tested a daily oil and gas equivalent flow of 1,242 tonnes, with a depth of 8,836 meters. It was the 20th ultra-deep 1,000-tonne-level well of "Shendi-1", and also the first exploratory well in Shunbei Oil and Gas Field achieving a major breakthrough in the large branch fault zone.

### "Shendi Engineering Project" is a pillar of deep oil and gas exploration

In 2022, Sinopec launched "Shendi Engineering Project -- Shunbei Oil and Gas Field Base", "Shendi Engineering Project -- Jiyang Shale oil Base" and "Shendi Engineering Project -- Sichuan-Chongqing Natural Gas Base". In addition to the breakthroughs in the Shunbei Oil and Gas Field, Shengli Oil Field has built a national demonstration area of shale oil in Jiyang, with an annual increase of 1.15 billion tonnes of controlled reserves + predicted reserves. Qijiang Shale Gas Field -- another medium-deep shale gas field in the complex structural area of the Sichuan Basin margin -- was developed, with the first phase of proved geological reserves exceeding 100 billion cubic meters. In the future, Sinopec will continue to promote the "Shendi Engineering Project", increase the exploration and development of deep oil and gas, fully improve the exploration and development capacity of deep resources, continue to promote the development and application of forward-looking, leading and exploratory technologies, and provide strategic scientific and technological strength to ensure national energy security.



Sinopec Shendi-1



Shendi Engineering Project · Shunbei Oil and Gas Field Base is named Shendi-1, China's first oil and gas project named after Shendi



## Special

## Accelerate the cultivation and growth of the hydrogen industry chain to build China's No.1 hydrogen energy company

In March 2022, the National Development and Reform Commission (NDRC) and the National Energy Administration jointly issued the *Medium and Long-term Plan for the Development of Hydrogen Energy Industry (2021-2035)*, which clarified the strategic positioning of hydrogen energy in China's green and low-carbon energy transformation and drew a blueprint for the medium- and long-term development of China's hydrogen energy industry. Seizing the major strategic opportunity of hydrogen energy development, Sinopec has, in accordance with the idea of "building 1,000 hydrogen refueling stations, 1 million-tonne green hydrogen demonstration, two-wheel driven development with hydrogen transportation and green hydrogen refining, and reducing carbon emission by more than 10 million tonnes", made hydrogen energy the core business of new energy development, and established a hydrogen industry chain covering "production, storage, transportation, fueling, application and research". Centering on the hydrogen transportation and green hydrogen refining, Sinopec has developed a hydrogen energy integration business, realized the "integrated layout of production, transportation and hydrogen refueling", and accelerated the construction of "China's largest hydrogen energy company".

## Hydrogen energy transportation achieves significant scale effect

According to the general idea of "national layout, market demand, synergized development and meaningful strategy", Sinopec has made great efforts to enhance the hydrogen source supply and the construction of hydrogen refueling station projects. As a result, the hydrogen energy transportation business has made great progress. Sinopec has built the world's largest hydrogen refueling network. And Sinopec plans to, during the "14th Five-Year Plan" period, maintain the largest number of hydrogen stations in service in the world, increasing the hydrogen refueling capacity to 120,000 tonnes/year.



## Fuel cell hydrogen supply

A total of nine affiliated enterprises have established hydrogen supply centers for hydrogen cells. The total capacity of transportation hydrogen purification and refueling facilities has reached 19,000 standard cubic meters per hour (equivalent to about 16,500 tonnes per year), and 1,686 tonnes of high-purity hydrogen for fuel cells are supplied throughout the year.

## Coordinated layout of hydrogen refueling station construction

Relying on the advantages of more than 30,000 gas stations, Sinopec has accelerated the construction of a national hydrogen refueling station network, and completed building 24 new hydrogen refueling stations in the year, increasing the total number to 98 and the annual hydrogen refueling capacity to more than 1,700 tonnes. It has integrated into the industrial development of the "3+2" fuel cell vehicle demonstration city cluster, innovated on the model of hydrogen refueling station construction, and built a number of typical hydrogen refueling stations.

## Serving the Winter Olympics with hydrogen supply

Sinopec made every effort to ensure the supply of hydrogen energy for the 2022 Beijing Winter Olympics and Paralympics. Sinopec hydrogen ignited the Olympic torch at the opening ceremony of the Winter Olympics. The four Winter Olympics Hydrogen Refueling Stations supplied 87 tonnes of hydrogen to 8,689 vehicles during the event.

## Green hydrogen refining shows remarkable demonstration effect

In accordance with the development direction of "hydrogen and electricity integration, and carbon emission reduction with the use of green hydrogen", Sinopec has developed renewable electricity to produce hydrogen and continued to optimize the hydrogen supply structure. In coastal areas, it explored the use of large-scale offshore wind power to produce hydrogen for refining bases; in the northwest region, it focused on wind power and PV industries to develop the green power hydrogen production and supply hydrogen energy to local refining and chemical enterprises through pipelines. Sinopec has continued to promote the construction of "power source, grid, load, storage and hydrogen" integrated project, and accelerated the development of a number of major green hydrogen refining and chemical projects. It planned to build a 400-kilometer-long green hydrogen pipeline between Beijing and Inner Mongolia with an annual throughput of 100,000 tonnes, gradually replacing fossil raw materials to produce hydrogen in the field of refining.

## Sinopec builds the world's largest PV green hydrogen production project

CASE

In November 2021, Sinopec announced that the country's first 10,000-tonne-level PV green hydrogen demonstration project – the Sinopec Kuqa Green Hydrogen Demonstration Project – which started construction in Kuqa city, Northwest China's Xinjiang Uygur autonomous region. It is the largest of its kind in the world, with a planned annual output of 20,000 tonnes of green hydrogen. The project is a landmark demonstrating Sinopec's leading role in the development of hydrogen energy, and is also the first typical demonstration project in China that links the whole process of PV power generation, green power transmission, green power hydrogen production, hydrogen storage and transmission, and green hydrogen refining. After being put into operation, it will create a new development path for green hydrogen refining and drive refining enterprises to use green hydrogen on a large scale, and to reduce carbon emission. At the same time, major equipment and core materials will all be localized, which is of great significance to promote the rapid development of the domestic hydrogen production equipment industry.

## Sinopec continues to make breakthroughs in the key technology of hydrogen production using water electrolysis

CASE

The PEM water electrolysis hydrogen production technology is a green hydrogen preparation technology best coupled with renewable energy. It has advantages such as high hydrogen production efficiency, wide load range and no pollution. Therefore, it is an ideal hydrogen production technology used in hydrogen refueling stations. Sinopec concentrated resources on research and development of hydrogen technology with joint efforts of large corporations, and made breakthroughs in key technologies in the field of hydrogen production by electrolysis of water, creating a powerful innovation engine for China's hydrogen energy industry.

## Sinopec's first PEM hydrogen production demonstration station put into use

On December 10, Sinopec's first self-developed megawatt-level hydrogen production unit with PEM water electrolysis was successfully started, and went through the whole process on the same day, and produced qualified high-purity hydrogen. With an annual output of 180 tonnes of hydrogen, the project can achieve zero carbon and zero pollutant emissions in the whole production process. This marked the industrial application of Sinopec's hydrogen production technology by PEM water electrolysis, and effectively promoted the high-quality development of China's hydrogen industry chain.

## China's single largest PEM water electrolysis hydrogen production unit put into operation

On December 25, China's single largest PEM water electrolysis hydrogen production unit was put into operation, with a daily output of 1.12 tonnes of high-purity green hydrogen and electrolytic power of 2.5 megawatts. The unit is the core equipment of Sinopec's megawatt-level renewable electricity electrolysis water hydrogen production demonstration project, providing a replicable and scalable demonstration model for renewable energy hydrogen production in China.

## Strategic cooperation strengthening the industrial chain with strong driving effect

Focusing on the hydrogen energy and fuel cell vehicle industry, Sinopec has deepened mutually beneficial cooperation with major energy enterprises at home and abroad, and strategically invested in leading enterprises in the industry chain. It signed a memorandum of cooperation with Air Liquide, and inked a letter of intent for cooperation with Cummins and established a joint venture. Also, it held several industry summit forums such as a transportation energy transformation seminar and a forum on high-quality development of the hydrogen industry chain, giving full play to its role as a major supporter and facilitator, to jointly build a modern industrial chain for hydrogen energy application in China.

Sinopec has grasped the position of hydrogen energy in the energy system, understood the current development stage of the hydrogen energy industry, and regarded hydrogen energy as an important part of the company's transformation and development. During the "14th Five-Year Plan" period, Sinopec will speed up its steps in the hydrogen energy industry, and concentrate efforts on hydrogen energy transportation and green hydrogen refining. It plans to establish 1,000 hydrogen station (oil and hydrogen combined stations), and produce 1 million tonnes of hydrogen in total. Also, it will increase efforts in technology research and development, participate in the formulation of industrial standard systems, gather wisdom of the entire industry chain, and work together to stimulate the "chain reaction" of hydrogen energy development.



# Advancing the building of a Beautiful China with a better environment

## Guidelines of the 20th CPC National Congress

To advance the building of a beautiful China, we have persisted with a holistic and systematic approach to conserving and improving mountain, water, forest, farmland, grassland, and desert ecosystems. To this end, we need to coordinate industrial restructuring, pollution control, ecological conservation, and climate change response, work together to reduce carbon emissions and pollution, boost green growth, and promote ecological priority, conservation and intensive growth, and green and low-carbon development. Moreover, we should improve the regulation of aggregate energy consumption and intensity, with a focus on controlling fossil energy consumption, to shift toward a system for curbing total carbon emissions and intensity.



### Sinopec's actions

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## Strengthening environmental management

Adhering to the management philosophy that "environmental protection is above everything", Sinopec has improved its management system, paid attention to environmental risk prevention, strengthened environmental management of construction projects, and disclosed environmental information, thereby improving environmental governance.

### Improving the environmental management system

Sinopec observes national laws and regulations on ecological and environmental protection. Guided by the HSE management system, it has implemented the post-related environmental responsibility system, and prepared and revised six systems for environmental protection management, with 16 group company-based environmental protection systems covering the whole business lines of environmental protection management. Moreover, it has completed seven professional reviews of first-grade enterprise standards, and worked to improve the standard system for its environmental protection. Besides, it has issued the *Matrix of Environmental Protection Training Content*, and carried out campaigns such as special training, environmental protection system publicity, and giving onsite lectures to enterprises. All affiliates have held diverse training courses in light of their realities and the principle of graded training.

### Preventing environmental risks

Sinopec has strengthened its management of environmental risk prevention on a regular basis to improve its ability in this regard. It has also rolled out documents such as the *Technical Guide for the Assessment of Risk Index of Environmental Emergencies* and the *Guide for the Allocation of Emergency Materials for Enterprise Oil Spill Pollution (Trial)*. As required, all its affiliates have carried out environmental risk identification and assessment and implemented the hierarchical management of risk sources. By developing hierarchical management and control plans for environmental risks, implementing risk management responsibilities, curbing environmental risks and hazards, strengthening essential environmental protection, accelerating the withdrawal of facilities in the ecological red line areas and reapplying for environmental protection procedures, Sinopec has downgraded environmental risks. In 2022, it helped downgrade 30 first-level environmental risks, with no environmental pollution and ecological damage emergencies recorded at the group company.

### Regulating the environmental management of construction projects

To strengthen whole-process environmental protection management of construction projects, Sinopec has revised and improved the system for this purpose, controlled the access of EIA technical consulting firms and the quality of EIA reports, carried out feasibility study reports on construction projects, and done basic design review with countersignatures, in a bid to promote relevant enterprises to follow the requirements of the EIA and approval. During the year, the environmental compliance rate of new projects reached 100%.

### Disclosing environmental information

Following the environmental information disclosure system in accordance with national and local regulations, all affiliates of Sinopec disclose environmental information in a timely manner. Based on the mechanism for ecological and environmental information communication with residents in nearby communities, Sinopec participated in ecological and environmental public welfare activities. At present, all affiliates have carried out environmental information disclosure work as required, receiving no penalties in this respect.



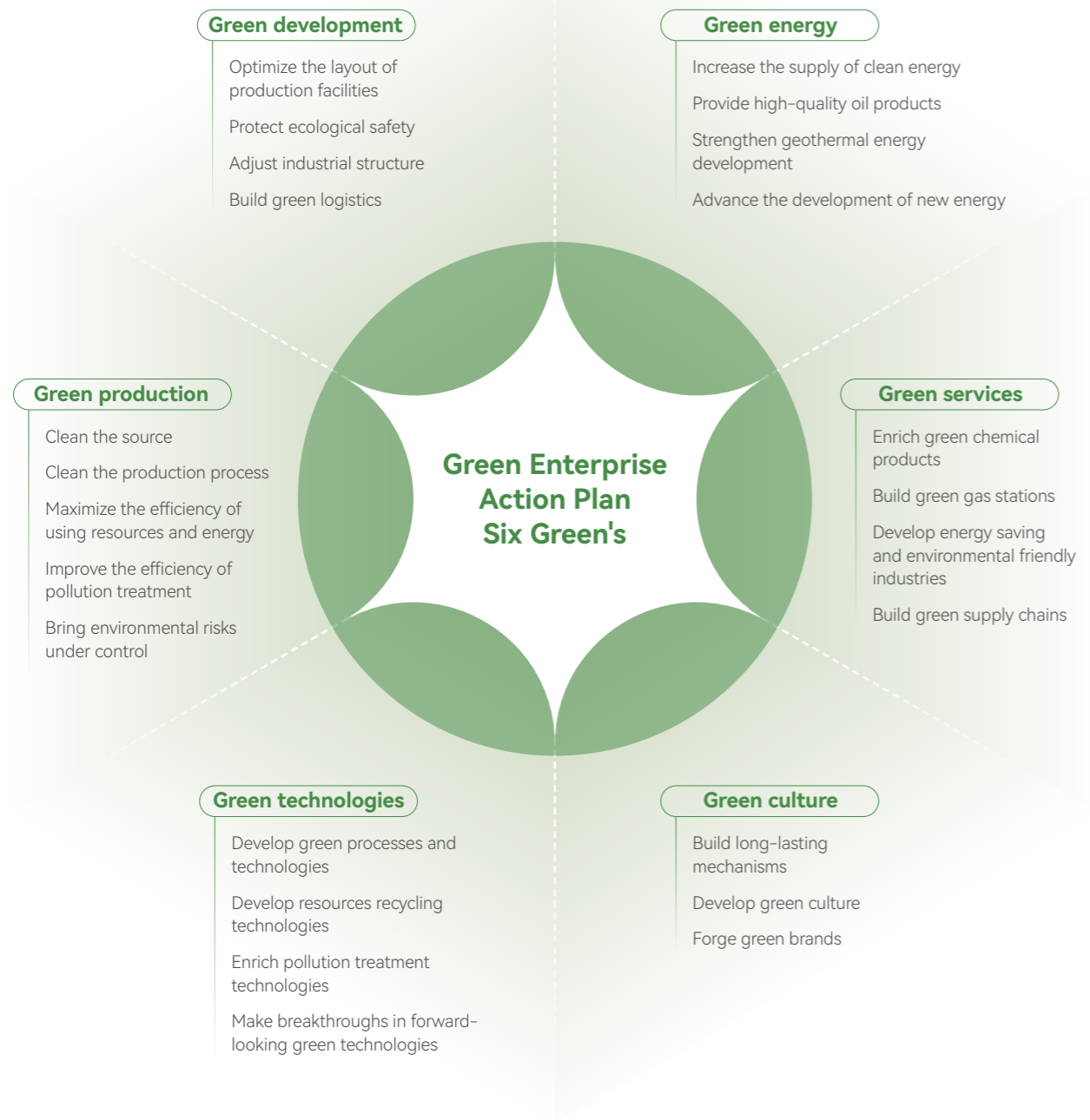


## Boosting green operations

Sinopec integrates the requirements for ecological and environmental protection into all the links related to corporate production and operation; promotes the "green enterprise action plan"; implements clean production, develops a circular economy; and promotes the in-depth implementation of a green and clean development strategy, striving to develop into a global leader in the clean energy and chemical industry.

## Promoting the green enterprise initiative

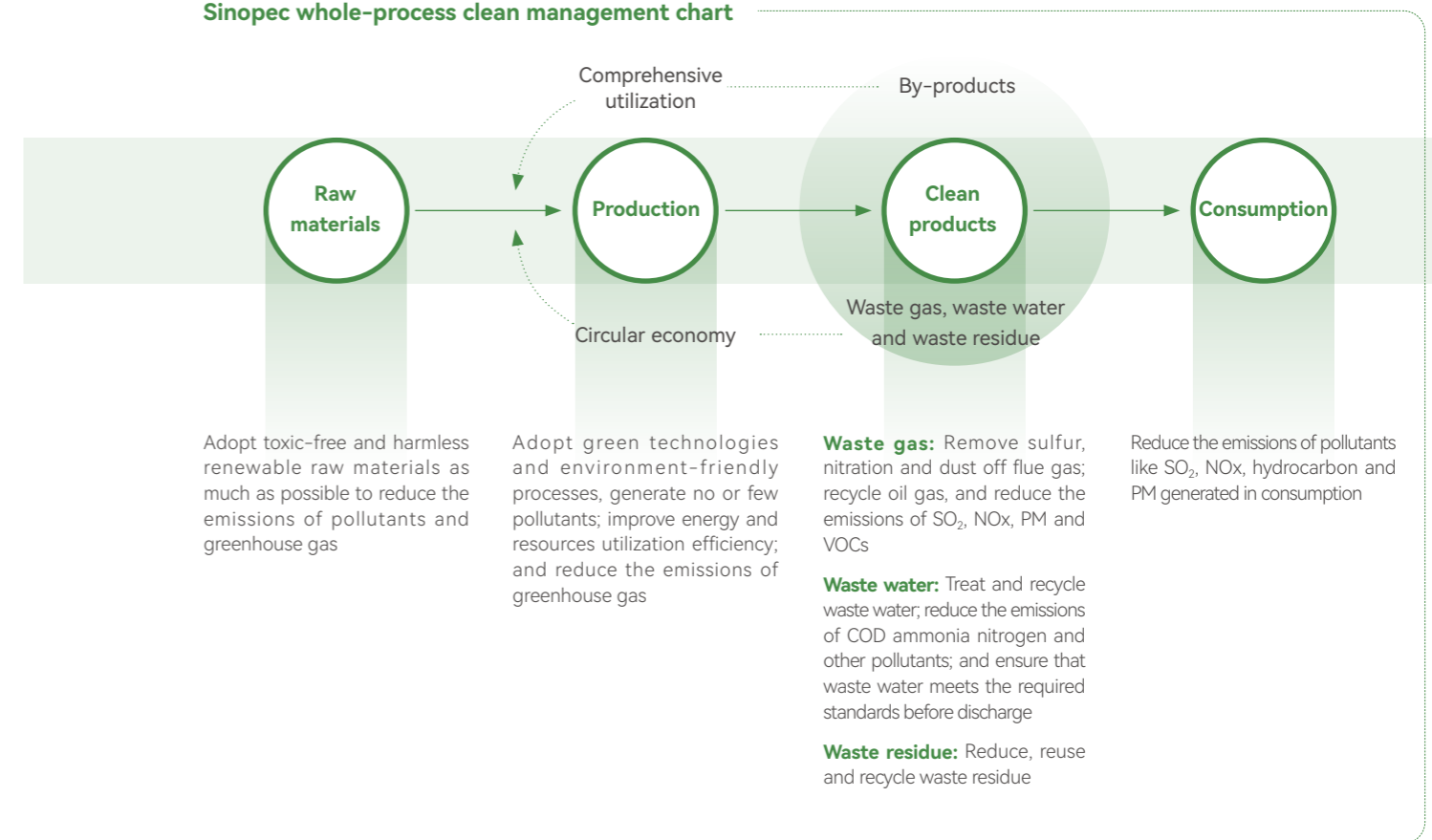
In fulfilling the "Green enterprise action plan", Sinopec has implemented a green enterprise and green grass-roots evaluation system in its major business sectors, achieving remarkable results in clean energy supply, resource and energy utilization, pollutant emission reduction, and carbon emission reduction. In 2022, 12 enterprises were honored as "Sinopec Green Enterprises", with all green enterprises reviewed. At present, all its affiliates have gone green, and so have more than 19,900 grass-roots entities.



## Implementing cleaner production

In accordance with the *Law on the Clean Production Promotion* and the *Plan for Implementing Clean Production During the 14th Five-Year Plan Period*, Sinopec has replaced toxic and harmful raw materials, expanded the promotion and application of green technology and environmentally friendly technology, and reduced the emission of "three wastes" and pollutant emissions in the consumption and use processes, thus reducing the impact of corporate operations on the environment, from raw material procurement to consumption.

### Sinopec whole-process clean management chart



## Promoting emission and pollution reduction

### Air pollutant emission management

Sinopec has abided by national and local laws and regulations on air pollution prevention and control, and reduced emissions by adjusting the energy consumption mix, increasing the use of clean energy, and improving clean production processes and technologies. In so doing, it has followed the national requirements to win the battle against pollution, defended the blue sky, and taken up a comprehensive campaign against air pollution in autumn and winter. Besides, it has launched emergency plans to address heavy pollution, and adjusted production and pollution prevention facilities, in a bid to meet the targets for air pollution response and emission reduction. Besides, based on grid-based monitoring and traceability of VOCs, it has made continued efforts to treat volatile organic compounds, done odor remediation, and included ozone pollution prevention and control in its special actions, marking the attainment of governance goals outlined in the Order No.1 of the General Manager. Separately, it has also issued the *Sinopec Plan for Environmental Protection Improvement 2021-2023*, and implemented stricter concentration standards to reduce emissions of NO<sub>x</sub>, VOCs and other pollutants, and promote the implementation of projects for emission reduction. In 2022, the company logged a 99.9% compliance rate in overall exhaust gas emissions, with the total emissions of sulfur dioxide and nitrogen oxides sliding by more than 4% year-on-year.



## Water resources management

Sinopec has steadily reduced the total amount of fresh water consumed by improving its water consumption structure, saving water from sources, and replacing fresh water using unconventional water resources. In 2022, water consumed for the company's industrial production slid by 1.1% from a year earlier. In the Selection of Key Water Efficiency Leaders in 2022 organized by the Ministry of Industry and Information Technology and other three departments, Qingdao Refining & Chemical, Tianjin Petrochemical, Qingdao Petrochemical, and Zhenhai Refining & Chemical was honored as "Water Efficiency Leaders" in the oil refining industry; Sinopec Great Wall Energy And Chemical (Ningxia) was listed as a "Water Efficiency Leader" in the modern coal chemical industry; and Sinopec-SK (Wuhan) Petrochemical, Zhenhai Refining & Chemical, Yanshan Petrochemical and Shanghai Secco won the title of "Water Efficiency Leader" in the ethylene industry.

In accordance with national and local policies, regulations, and standards for the prevention and control of wastewater pollution, Sinopec has implemented important national instructions on the prevention and control of water pollution in key river basins such as the Yangtze River and the Yellow River. With the implementation of enterprise-specific projects for sewage emission reduction in key enterprises, it has made headway in improving the management of rainwater and sewage systems in refining & chemical enterprises. In so doing, it has installed online environmental monitoring facilities, and adopted early warning and alarm measures, as well as prompt operation of production equipment and management of environmental protection facilities, to meet the sewage discharge standards. In 2022, the company's wastewater discharge went down by more than 6% year-on-year, 100% of the effluent met the standards, and the total COD and ammonia nitrogen emissions dropped by more than 8% from a year earlier.

## Solid waste management

In accordance with the *Law on the Prevention and Control of Environmental Pollution by Solid Wastes*, Sinopec is promoting the reduction, recycling and hazard-free treatment of solid wastes, in a bid to achieve comprehensive management and utilization of solid wastes. In building a "waste-free group", 12 enterprises have been included in the pilot demonstration, steadily promoting the establishment of the government-enterprise "one network" information sharing platform for the whole-process management of hazardous wastes and solid wastes. By strengthening the solid waste management during the construction of engineering projects; inspection and maintenance of Refining & Chemical enterprises; and drilling construction, Sinopec has built such demonstration projects such as Tianjin Nangang Ethylene and Hainan Refining & Chemical. In 2022, it registered a 100% compliance rate in solid waste disposal.



Sinopec Southwest Hazardous Waste Disposal Center can dispose 62,400 tons of hazardous wastes and 95,600 tons of general solid wastes per annum, making it the most comprehensive and largest industrial waste disposal center in Southwest China

### Establishing a reward system for environmental whistleblowing

### CASE

Since 2011, Sinopec Jinling Petrochemical has established and improved the reward system for environmental whistleblowing, and set up a hotline for environmental protection whistleblowing, accepting the environmental protection supervision by surrounding residents and all employees. So, whoever finds an abnormal odor can report it to the company. After receiving the report, the company will immediately trace the source and do an analysis. In case of an odor arising from production, it will promptly urge the relevant enterprise to do a rectification. In the event of external reasons, it will also inform the whistleblower to jointly supervise and improve the ambient air quality. The company will give a phone card as a reward to whoever gets involved in the efforts, encouraging the public to participate in environmental supervision, and jointly work for odor-free factories.



## Soil pollution control

In pursuing pipeline integrity management, Sinopec has organized relevant enterprises to study corrosion and repair of crude oil pipelines, implemented interpenetration of pipelines and replacement of old pipelines, worked with local governments to combat theft of oil by drilling, and further maintained, tested and renovated oil transmission equipment. In addition, it has beefed up environmental risk management and control to ensure that no materials and sewage are discharged into the outside environment. In terms of special inspection of soil hazards checking and monitoring in the key supervised enterprises, it has filed applications for 14 national soil source control projects and five pilot projects featuring a combination of production and pollution control. In 2022, no oil spill-related environmental events occurred at the group company.

## Groundwater pollution control

Sinopec attaches great importance to the prevention and control of soil and groundwater pollution risks. For this purpose, it has established a long-term monitoring mechanism, implemented a soil pollution hazards investigation system and bolstered the enterprise's self-monitoring requirements. Besides, it is carrying out research and application of the whole-process soil and groundwater pollution prevention and control technologies to improve the system in this regard.

## Noise control

To meet the new noise law requirements and control radiation, Sinopec consistently promotes the noise pollution control in the whole process of production and operation, and carries out special investigation and rectification of noise, and radiation pollution control and management, with a focus on controlling noise pollution by adopting improved production facilities, giving priority to low-noise processes and equipment, building sound barriers, implementing noise monitoring and information disclosure, and increasing R&D of noise pollution prevention technologies and personnel training.



## Developing a circular economy

To develop a circular economy, Sinopec recycles water resources and solid wastes, and promotes waste heat recovery and waste gas recycling, as well as oilfield associated gas recovery, improving the comprehensive utilization efficiency of resources.

### Sinopec's practice of developing a circular economy (examples)

**Comprehensive utilization of waste heat**

- Sinopec Yanshan Petrochemical used 100°C waste heat from catalysis, kerosene hydrogen finishing (KHF) and S-Zorb devices to drive the absorption-type I heat pump units to replace the original coal-fired boiler for heating.
- Sinopec Tianjin Petrochemical adopted the technology of large-temperature-difference heat exchangers, and realized the full recovery of waste heat of refining units and the consumption reduction of the units by using the waste heat of the refining unit for heat exchange with desalted water of thermoelectric units.

**Recycling of water resources**

- Sinopec Jinan Refining & Chemical used municipal reclaimed water to replace fresh water, reducing the groundwater and Yellow River water intake by more than 3.5 million tons per annum.
- Sinopec Jinling Petrochemical, Maoming Petrochemical, Guangzhou Petrochemical, Zhongke (Guangdong) Refinery & Chemical and other enterprises intensified their efforts to recycle rainwater, amounting to more than 1 million cubic meters a year.

**Oilfield associated gas recovery and recycling**

- Sinopec Northwest Oilfield adopted four sets of large-tank air extractors in the Tahe oilfield to recover flare gas, which strengthened its efforts in natural gas recovery and remote single-well wet gas recovery during well-completion testing. It recovered 390 million cubic meters during the year.
- Sinopec Jiangnan Oilfield promoted the "Self-operated high-pressure back-pressure valve boxes" test and production process in the Fuling Shale Gas Field, recovering 8.68 million cubic meters of natural gas in 2022.

## Addressing climate change

Sinopec follows the decision and arrangement of the CPC Central Committee and the state on carbon peak and carbon neutrality, and has integrated carbon emission control into the company's development plan. It has strengthened energy management, intensified its efforts to cut greenhouse gas emissions, and boosted development of the carbon industry, contributing to the green, low-carbon transformation of China's energy and chemical industry and the realization of the "dual carbon(carbon peaking and carbon neutrality)" goal.

### Improving energy efficiency

Sinopec has implemented the "energy efficiency improvement" plan, and improved the energy management system. By means of energy conservation in management, technology, new energy utilization, and IT-based development, it has conserved resources, and moved faster to build a resource-intensive and environment-friendly enterprise. In 2022, it implemented 483 "energy efficiency improvement" projects, saving 950,000 tons of standard coal.

In the Selection of Key Water Efficiency Leaders in 2022 organized by the Ministry of Industry and Information Technology and other three departments, Zhenhai Refining & Chemical won the title of "Water Efficiency Leaders" in the ethylene industry; Qingdao Refining & Chemical was recognized as a "Water Efficiency Leader" in the crude oil processing industry; and Hainan Refining & Chemical was named a "Water Efficiency Leader" in the paraxylene industry.

**Promoting benchmarking**

- Sinopec participated in the energy efficiency "leaders" selection organized by the Ministry of Industry and Information Technology and the industry associations, striving to be a benchmark enterprise in the industry.
- It developed energy efficiency benchmarking indicators system, and carried out mutual learning and competition as well as equipment (profession) compliance competition, improving energy efficiency.

**Increasing development and promotion of energy-saving technologies**

- Sinopec has made steady progress in making breakthroughs in key technologies for smart power plants and large-scale carbon dioxide capture, utilization and storage in coal-fired power plants. It developed total heat deep recovery technologies for gas flue gas self-drive and energy allocation technologies for high temperature heat pumps, improving the deep recovery capacity of waste heat.
- It has also adopted technologies for oilfield energy optimization and control, and short-process treatment of produced liquid in the oilfield enterprises. Moreover, it is focused on the promotion and implementation of energy system optimization, heating furnace efficiency improvement, hydrogen resource management and integrated optimization, sewage recycling and circulating water system and other energy- and water-conserving technologies in the refining and chemical enterprises.

**Improving energy management**

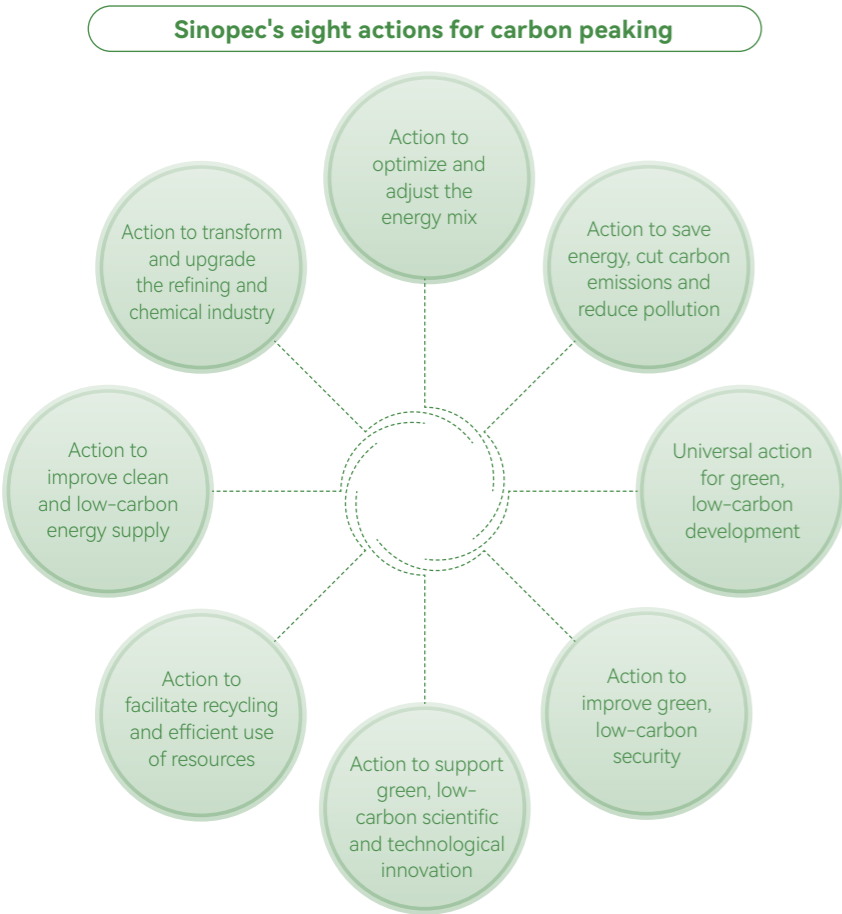
- It has further promoted the application of energy management systems to achieve digital transformation and intelligent development of energy management.
- It also carried out energy conservation supervision of relevant projects to ensure their high-quality implementation.





## Greenhouse gas emission management

Separately, Sinopec has issued the *Sinopec Action Plan for Carbon Peak Before 2030*, and developed and implemented the "eight actions" for this purpose, with a view to strengthening the management of greenhouse gas emissions, and promoting the reduction of carbon dioxide and methane emissions. The group company has been dubbed "China's Low-carbon Model" for 12 straight years.



The carbon sink generated from the Shengda Ecological Forest Farm of Shengli Oilfield, the first carbon neutral forest of Sinopec, is used to offset and neutralize the carbon emissions from the enterprises, and can offset and neutralize carbon emissions of 10,000 tons per annum

### Carbon dioxide emission reduction

Sinopec issued the *Guidelines on the Implementation and Accounting of Carbon Neutrality at the Gas Stations* and the *Guidelines on the Implementation of Carbon Neutrality at the Oil Production Well Sites*. And it has built 27 demonstration projects, promoting the demonstration and construction of pilot projects of carbon neutrality.

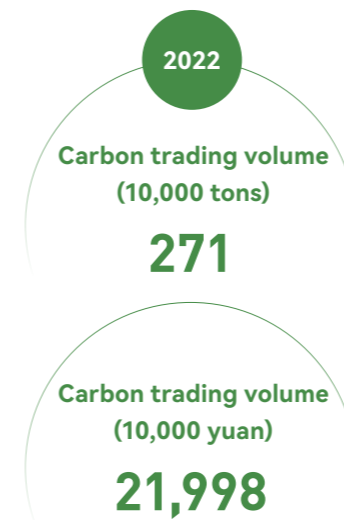
It has also intensified its efforts to recover and utilize high-concentration carbon dioxide from refineries, and carried out carbon dioxide flooding in oilfield enterprises in an orderly manner, covering 1.534 million tons of carbon dioxide and 657,000 tons of flooding. The megaton CCUS demonstration project of Qilu Petrochemical - Shengli Oilfield has been put into operation.

### Methane emission reduction

Oilfield enterprises have strengthened the use of closed mixed transportation technology, implemented casing-head gas recovery, promoted the comprehensive utilization of flare gas, strengthened the recovery of remote scattered wells and other measures, and implemented the recovery of vented gas. In 2022, it recovered about 834 million cubic meters of methane, reducing greenhouse gas emissions by some 12.5 million tons of CO<sub>2</sub> equivalent.

### Management of carbon assets

Sinopec has coordinated quota surplus and shortage of enterprises, prepared carbon trading plans, established full-time carbon trading teams, carried out centralized management of carbon trading, and fulfilled carbon quota compliance tasks as scheduled.



## Boosting the development of the carbon industry

Sinopec has participated in the development of the carbon industry and deepened opening-up and cooperation to achieve the "dual carbon" goal. In March 2022, Sinopec Star issued the first green "carbon neutrality" ABS bond worth 300 million yuan in the Xiongan New Area, facilitating the development of low-carbon industries in the form of green finance. In September, Sinopec unveiled Sinopec Carbon Industry Technology, China's first whole carbon industry chain technology player. With a focus on technology research and development; carbon asset management and operation; project equity investment and other businesses, the technology firm provides integrated solutions for domestic and foreign carbon markets. In November, Sinopec signed a memorandum of understanding with Shell, China Baowu and BASF on cooperation for carbon dioxide capture and storage (utilization), working with global partners for a green future with energy security.



# Protecting the ecological environment

Sinopec has attached great importance to ecological and environmental protection and observed the laws and regulations on environmental protection where it operates. It has tried to keep away from the fragile ecological environment and ecological conservation areas during its operations by strengthening the identification and analysis of environmentally sensitive areas and environmental risks. Besides, it has adopted scientific approaches to promote ecological and environmental restoration and reclamation around abandoned oil and gas fields and along the oil and gas transmission pipelines, in order to protect the surrounding ecological environment. Moreover, it has built a number of garden-style factories, ecological emission facilities, wetland parks, bird habitats and other attractive landscapes fitting in with its production and the environment, and striving to make it beautiful and green. On top of that, it has taken multiple measures to safeguard biodiversity, promote ecological balance, and propel harmonious development between man and nature. In 2022, the company had 118.05 million square meters of green areas, and built and renovated 1.869 million square meters of green areas, with a 28.5% greening rate of the built-up areas and a 32.3% green coverage rate of the built-up areas.

Migrate—Sinopec Hubei Petroleum Company Yangtze River, Yellow River basin protection



## Sinopec makes headway in protecting the Yangtze and Yellow river basins

## CASE

In recent years, Sinopec's enterprises along the Yangtze River and the Yellow River have worked for protection and not engaged in massive development. It has intensified its efforts to upgrade management of sources of environmental risks, and improved essential environmental protection, making the Mother River a happy river. In 2022, Sinopec released a special plan for ecological protection and high-quality development of the energy and chemical industry in the Yellow River basin, proposing to build an energy- and water-conserving clean energy supply base in this basin by 2025.



Sinopec East China Petroleum Branch implemented the strategy for the ecological and environmental protection in the Yangtze and Yellow river basins



Sinopec North China Petroleum Branch launched a special investigation and rectification of the ecological environment in the Yellow River basin



Sinopec Baling Petrochemical implemented a project for the caprolactam industry chain relocation and transformation and upgrading, helping realize the fundamental transformation from "chemical industry-centered development" to "a better river environment"



Sinopec Hubei Petroleum Branch shut down oil depots and terminals along the river, and invested a total of 3.68 billion yuan in rebuilding oil depots and upgrading environmental protection facilities, helping restore the ecology of the Yangtze River and protect the Chinese sturgeon, also known as the "giant panda in the water"



Special

## Ten years of efforts to build a "Chinese model" of shale gas development, committed to developing "Fuling shale gas of the country"

In the context of carbon neutrality, given China's resource endowment featuring "abundant coal, insufficient oil and shortage of gas", it has been a top priority for energy enterprises to enhance the supply of green energy, and accelerate the green transformation of the whole industrial chain. Developing shale gas resources is an important means to improve natural gas supply capacity, realize the national energy strategy of "reducing the use of coal and increasing gas supply", and achieve "energy conservation, emission cut and consumption reduction".

Since the 18th CPC National Congress, Sinopec has assumed the responsibility of exploring gas for the country, and worked hard to develop shale gas, promoting Fuling Shale Gas Field to achieve a historic leap from "a single well" to "many wells", from "an infant" to "China's model", and from "100 million cubic meters of production capacity" to "a dream of 10 billion cubic meters". This has created a magnificent epic in Sichuan and Chongqing, and become a model for commercial development of shale gas.

Further reading

Shale gas, mainly composed of methane, refers to the unconventional natural gas in an adsorbed or free state, occurring in organic-rich shale and its interlayers. As a clean and efficient energy resource and chemical raw material, it is widely used mainly for residential gas, urban heating, power generation, automobile fuel and chemical production.

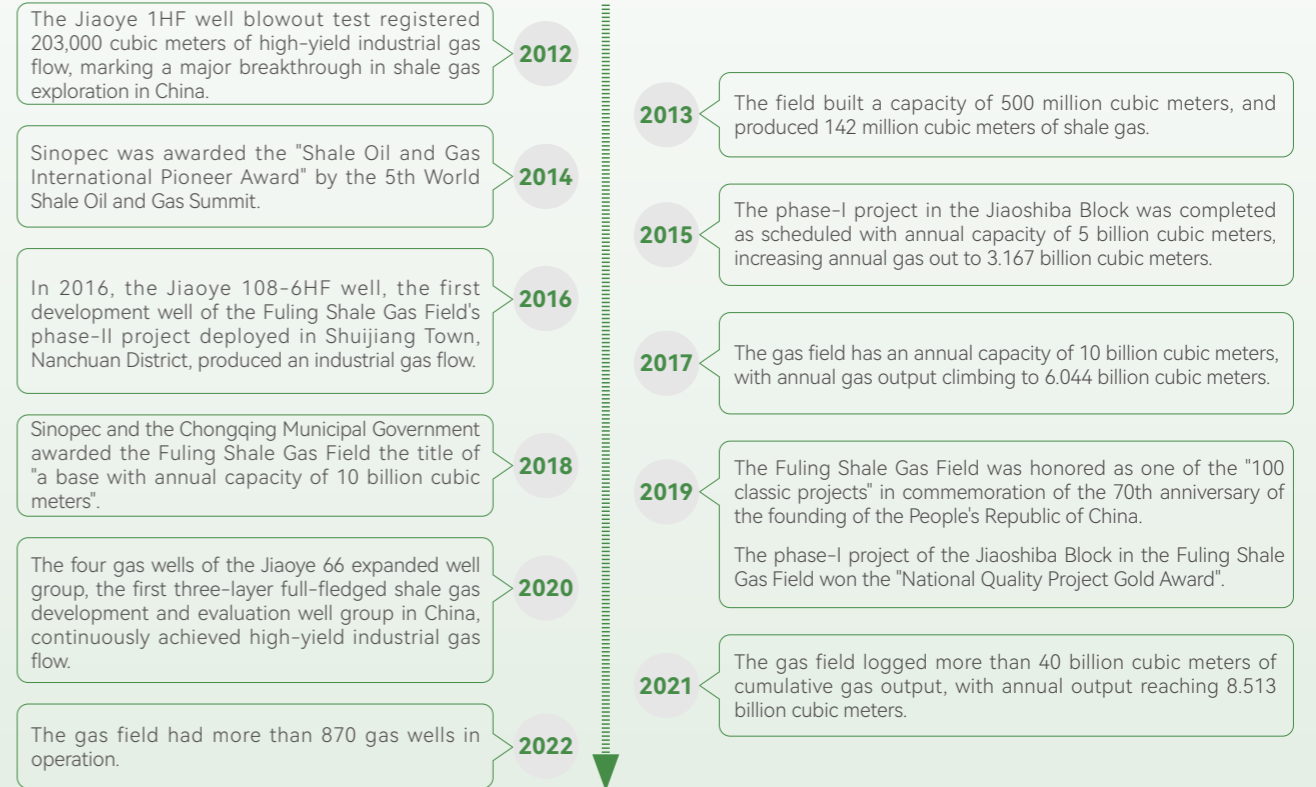
### Creating a Chinese model for shale gas development

In November 2012, Sinopec made an arrangement for drilling Jiaoye 1HF well in Jiaoshiba block, Fuling District, Chongqing, and tested high-yield industrial gas flow, opening a new chapter in the exploration and development of Fuling shale gas and the accelerated development of China's shale gas industry. In the past decade, Sinopec has aimed at "building it into a demonstration enterprise and leader". In so doing, it has continued to promote the construction of national shale gas demonstration zones and shale gas exploration and development demonstration bases, making China the first country outside North America to achieve commercial development of shale gas.

In March 2017, Sinopec built annual capacity of 10 billion cubic meters of shale gas as scheduled, and it can reduce annual carbon dioxide emissions by 12 million tons, equivalent to planting 110 million trees and stopping the use of 8 million vehicles. Its shale gas output topped 20, 30, and 40 billion cubic meters in 2018, 2020, and 2021, respectively, surpassing the four 10 billion cubic meters thresholds. It has realized leapfrog development, creating a "Chinese model" for the commercial development of shale gas. Over the past decade, Fuling Shale Gas Field has registered cumulative proven reserves of some 900 billion cubic meters, and produced more than 50 billion cubic meters of shale gas, setting a new record for the cumulative output among the shale gas fields in China.



### Chronicle of the development and construction of the Fuling Shale Gas Field over the past decade



### Creating a "green model" for shale gas development in China

The development area of the Fuling Shale Gas Field, located at the intersection of the Yangtze River and the Wujiang River, is an important ecological reserve in the upper reaches of the Yangtze River Economic Belt. And Sinopec has adhered to the guidelines of protecting the Yangtze River, and has attached equal importance to resource development and ecological conservation in a clean production mode featuring "reducing-recycling-reusing". For this, it has built a "four-in-one" environmental protection supervision mechanism, involving enterprise independent supervision, third-party supervision, government supervision and social supervision, in an effort to effectively protect waters, reuse wastewater and compliantly discharge sewage. Besides, it has put into operation the country's first project for treating sewage generated from shale gas production, with a 100% compliance rate of wastewater treatment. It also boasts hazard-free treatment and recycling of oil-based drilling cuttings, with the oil content of the treated drilling cuttings at less than 3%. The Fuling Shale Gas Field has won the titles of a green factory in the petroleum and chemical industry; one of the top 10 entities with environmental protection facilities open to the public in China; and a Chongqing-based environmental integrity enterprise. In addition, it was selected as a "green model" of the shale gas development in China by the Ministry of Natural Resources.



Going forward, Sinopec will work faster to develop the gas field with an annual capacity of 1 trillion cubic meters in Fuling and a gas field group with an annual capacity of 500 billion cubic meters in southern Sichuan. In addition, it will strive to make breakthroughs in gas exploration in Songliao, Yichang, southern Guizhou, central Guangxi and other new areas, and endeavor to build in Sichuan and Chongqing shale gas production bases with an annual capacity of 10 billion cubic meters. It will keep improving the management system for shale gas focusing on project-based management, market-oriented operation, platform-based well spacing, factory-like operation, intelligent control, and low-carbon development, elevating China's shale gas development to a new level.



# Creditable cooperation for deepening mutual benefits

## Guidelines of the 20th CPC National Congress

We will continue efforts to cultivate talent for the Party and the country and improve our ability to nurture talent at home. All this will see us producing first-class innovators and attracting the brightest minds from all over. We need to intensify efforts to implement the employment-first policy and improve related mechanisms to promote high-quality and full employment. We will accelerate the development of a modern economic system, and raise total factor productivity, so as to make China's industrial and supply chains more resilient and secure.



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中国石化 SINOPEC





# Empowering employee growth

Taking talent as the first and foremost resource, Sinopec has implemented the strategy of "strengthening the enterprise through talents", stressed and maintained legitimate rights and interests of its employees, and cared for their physical and mental health. Moreover, it has deepened channels for talent building, and made constant efforts to improve the environment for employees' work, life, study and cultural development, promoting the common development of the enterprise and its employees.

## Basic rights and interests

### Respect for human rights

Sinopec observes domestic and foreign laws and conventions; respects human rights; pursues equality; and fights disregard and abuse of human rights. Employees of different nationalities, ethnicities, races, genders, religious beliefs and cultural backgrounds are treated as equals, and the use of child labor and forced labor is prohibited. Labor contracts are concluded, performed, modified, rescinded or terminated in accordance with the law. It adheres to employee diversification and equal opportunities; equal employment of ethnic minority employees; and makes sure that female employees enjoy equal pay and benefits and career development opportunities, while actively building harmonious and stable labor relations. Sinopec has optimized the procedure for handling labor disputes; and established a case-specific record for dealing with public complaints, so as to prevent and reduce labor disputes, resolve labor disputes in a timely manner, and safeguard the legitimate rights and interests of its employees.

### Compensation and benefits

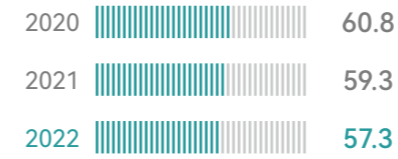
Based on the principle of connection with the value of the job, competence level and performance, Sinopec has established and improved an adjustment mechanism that links compensation and benefits with economic performance and labor efficiency. It has strengthened the overall salary incentive and built a multi-dimensional incentive system covering basic salary, performance bonus, insurance benefits, honors and recognition. Moreover, in accordance with relevant national and local policies and regulations, it has improved the system for endowment insurance, medical insurance, unemployment insurance, employment injury insurance, maternity insurance, and housing provident fund, as well as enterprise annuity system to improve employee protection.

### Democratic management

Sinopec has formulated *Measures for the Implementation of the Workers' Congress of the Entities Directly Affiliated to Sinopec*, clarifying the basic principles, scope of functions and powers, and organizational procedures for workers' congress development. Moreover it has established and improved the system for employee directors and supervisors. Specific shifts have been set up to study democratic management both online and offline to supervise and regulate the development of workers' congress. By making full of the "Internet + supervision" platform, it has further improved the effective channels for employees to express their opinions and appeals. Besides, it has effectively collected and dealt with proposals, and established and improved a closed-loop feedback mechanism for handling proposals. In 2022, it received 2,902 proposals from staff representatives, 100% percent of which were implemented and replied to.



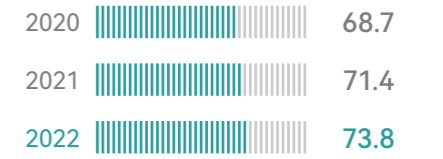
### Headcount (10,000)



### Overseas staff (10,000)



### Localized overseas staff (%)



## Employee health

### Improving working environment

Sinopec has developed the *Guidance on the Implementation of Excessive Noise Hazard Control*, and compiled the *Guidance Manual on Excessive Noise Control for Petroleum and Petrochemical Enterprises*, in a bid to promote advanced control technologies and management measures for curbing noise hazards. For key occupational hazards such as noise deafness and benzene poisoning, it has formulated targeted prevention measures to safeguard employee health.

### Controlling occupational health risks

Sinopec has implemented the Healthy China strategy to promote health management of all employees. By carrying out random checks on the quality of occupational health physical examination reports, it has summarized and reported typical problems, and prepared measures for occupational health protection and management. Additionally it has conducted in-depth studies on the management of radioactive sources; strengthened radiation health protection; and improved automation of radiation health of radioactive sources and repositories. By holding a publicity week for promoting the *Occupational Disease Prevention and Control Law*, and organizing monthly professional video training, it has improved its staff awareness and ability in occupational health protection. Besides, it has made headway in promoting the campaign to "be occupational health models", and endeavored to enable its health stations to benefit its production teams and front-line workers.

### Caring for employees' mental health

Sinopec has also set up a mental health committee to evaluate employee health periodically, and improve their mental health. It has implemented the employee assistance program (EAP) service, and adopted scientific counseling methods for psychological intervention.

## Career development

### Improving the talent development system

Sinopec has formulated and implemented a plan for talent development during the 14th Five-Year Plan period and medium and long term, to strengthen the enterprise through talent development during the new journey. In so doing, it has rolled out the "1+7+1" system documents; advanced the implementation of six major talent projects; improved six major talent lineups; and bolstered the six major talent development mechanism, so as to build it into an important talent aggregation center and an innovation highland in the field of energy and chemical industry.

### Strengthening talent introduction

To build a more sophisticated talent pool, Sinopec has brought in top-notch talents through its "Double Hundred Plan". And it has adjusted key orientation for talent introduction based on differentiated standards. Separately, it has improved the selection and management of expert teams by optimizing such items as the number of expert positions, recruitment conditions, remuneration, as well as assessment and evaluation, so as to achieve whole-chain management of experts. By 2022, three chief scientists, 30 chief experts, 145 senior experts and 93 top technicians were recruited from the group company. Also, it implemented the central government's drive to stabilize employment, and added 23,100 jobs during the year. For four years, from 2020 to 2023, it has attracted more than 11,000 college graduates. Also, it has endeavored to provide jobs for retired soldiers and firefighters; increased recruitment and vocational training for rural migrant workers; and guided enterprises in facilitating vocational training for rural migrant workers.



**Improving channels for talent growth**

In a bid to attract all kinds of talents, Sinopec has continued to strengthen its talent growth channels and set up a mechanism for chief scientists and chief engineering technology masters. By expanding the talent development space, and optimizing the mechanism for connection among different ranks, it has improved the vertical and horizontal system for career development. Besides, it has promoted training for key personnel at all levels, such as managers, technicians, and international talents. Through the year, it organized 33 key training programs in 54 sessions with 5,732 attendances; and the Sinopec Network Academy saw cumulative learning of 55 million class hours. In a related development, it has endeavored to build a school-enterprise joint training model for talents; and deepened its cooperation with colleges and universities at home and abroad by making good use of its joint training platforms of post-doctoral workstations and mobile stations. And it has continuously boosted the model for personnel exchange and composite training; advanced the "three thousand" practice training plan; and held four national-level competitions and five group company-level competitions. Additionally, it has carried out the "Rising Sun Program" training system for young talents in a progressive and systematic manner by starting with newly-employed college graduates, aiming to serve the corporate development strategy, and strengthening career planning for new employees. In 2022, thanks to its successful practice and the innovative measures in the training system, Sinopec won the 2022 Continuing Engineering Education Enterprise Leadership Award conferred by the International Association for Continuing Engineering Education (IACEE), a non-official organization affiliated to the UNESCO, making it the only award-winning Chinese enterprise in the past decade.

**Strengthening training for overseas employees**

To improve overseas project teams based on the integrated system, Sinopec has explored the mode for training international talents based on levels and specialties; strengthened the training for international talents, international professional backbones and international talent reserves; carried out training for overseas project managers, international trade managers, international financial talents, foreign-related law compliance talents; and organized pre-intermediate training for the strategic reserve team of talent reserves. In addition, it has worked to promote the institutionalization and standardization of overseas labor relations management; and made good use of overseas talent training bases such as that in Saudi Arabia to improve caliber and skills of local employees.



**Caring for employees**

**Nurturing a "family culture"**

Sinopec advocates the core philosophy of "interdependence between the enterprise and employees", nurturing a "family culture" at the oil (gas) stations, depots, and terminals, and enriching the "family culture". It has been committed to turning its primary depots and stations into better homes featuring "warmth, safety, progress, and harmony", and increasing its employees' sense of happiness and belonging.

**Visiting to families of employees**

Sinopec has improved the long-term mechanism for "visits to families of employees", and motivated officials at all levels to visit grass-roots teams and enter the families of employees to listen to them and address their problems. Trade unions at all levels within the group company have benefited on a regular basis.

**Relief fund expenditure (100 million yuan)**



**Assistance and funding to people in need (visits)**



**Caring for retired employees**

In keeping with the idea of "enabling retired employees to live a happy life is our responsibility", Sinopec has practiced "respecting and caring for the elderly wholeheartedly". Using field visits and other means, it has provided retirees with targeted, personalized and family-oriented services. Moreover, it has worked to carry out activities to show respect for the elderly, creating a strong atmosphere for respecting for the elderly within the whole system through multiple channels like the "petrochemical retirees" WeChat public account. In 2022, over 90,000 visits were paid to sick and hospitalized retired employees, and the company organized 310,000 health check-ups for retired employees, besides offering 18,000 aids to retirees with special difficulties.



## Improving customer experience

With its customer-centered approach, Sinopec has established its proprietary product and service brand system, and endeavored to promote innovation in technology, product, management, and business model, to inject vitality into its brand competitiveness, and to strive to improve product quality and service, creating a better life together with its customers.

## Non-oil businesses

As a non-oil business brand of Sinopec, Sinopec Easy Joy has expanded into businesses like automobile service, advertising, catering and coffee to meet diverse needs. Also, it has accelerated the development of automobile services, taking the total of service outlets to 9,313. In addition, it has created a new-type digital product "car maintenance card"; and promoted the implementation of the pilot program for integrated automobile service projects, exploring business models for automobile sales. It has also accelerated the introduction of renowned brands and regional fast food brands -- 15 new international brand restaurants and 153 new regional brand restaurants, with a total of 1,472 outlets. And, it promoted the electronic screen media network, taking the total number of media to 32,000 pieces. In 2022, it logged 38.05 billion yuan in operating revenue for its non-oil businesses, up 8 percent year on year; and 4.31 billion yuan in operating profit, up 6 percent from a year earlier.

## Product quality

In an effort to deliver high-quality oil products, Sinopec has focused on quality risk control in the selling process; and established a whole-process quality management system covering "procurement, storage, transportation and sales". In the procurement process, it has established an internal control index system for oil outsourcing to prevent quality risk; and improved the supplier management system to cement a "firewall" for procurement. In the warehousing process, it has established a complete laboratory network; built a professional management and inspection team and improved the quality inspection system; and implemented management of oil products to ensure quality control. In the transportation and sales processes, it has carried out the whole process, high-standard quality management in accordance with the system requirements. It has provided customers with safe products by promoting IT-based quality improvement and established an intelligent quality control mode.

For chemical sales, it has continued to follow the concept of "quality first", and "quality is the lifeline of an enterprise"; and focused on integrity, service and responsibility. It has coordinated and integrated the quality management systems of the regional companies; abolished the original inefficient quality management model; and clarified the quality responsibilities and rights corresponding to each level and position. Moreover, it has devoted itself to business operations in accordance with law and in good faith; and paid great attention to market response to resolve customer complaints efficiently.

### Sinopec Easy Joy provides diverse services for a high-value ecosystem of "people, cars and life"

CASE

#### Upgraded Easy Joy "Convenience"

In order to deliver high-quality customer service, Sinopec has developed insurance and finance, retail, e-commerce; and other businesses at the integrated energy service stations, so that consumers can enjoy more conveniences. Additionally it has launched four theme marketing activities -- "New Year shopping festival"; "car maintenance festival"; "beverage festival" and "Easy enjoyment festival", delivering through a differentiated marketing model. Besides, it has developed E-series proprietary brand products such as Easy Joy Tibet Glacial Water and Changbaishan Spring; and implemented the "genuine wine" plan to cultivate consumer awareness about "buying genuine wine at the Easy Joy"; and launched more than 10 kinds of smart payment methods such as one-click refueling, ushering in a new ecology of smart retail.

#### Upgraded Easy Joy "businesses"

It has consistently provided customers with whole-ecosystem services such as car selection, purchase, use, maintenance, wash, and replacement. By 2022, it had 189 automobile sales showrooms (exhibition sites). Besides, it has enriched catering services featuring diverse cuisines and comfortable travel; and by 2022, it had 1,472 catering projects. It has also enriched and improved coffee products, and worked with Tims to set up 25 co-branded stores. Moreover, it has explored and practiced a variety of insurance models, and built "Easy Joy insurance" and "Truck driver care" segments.

#### Upgraded Easy Joy "image"

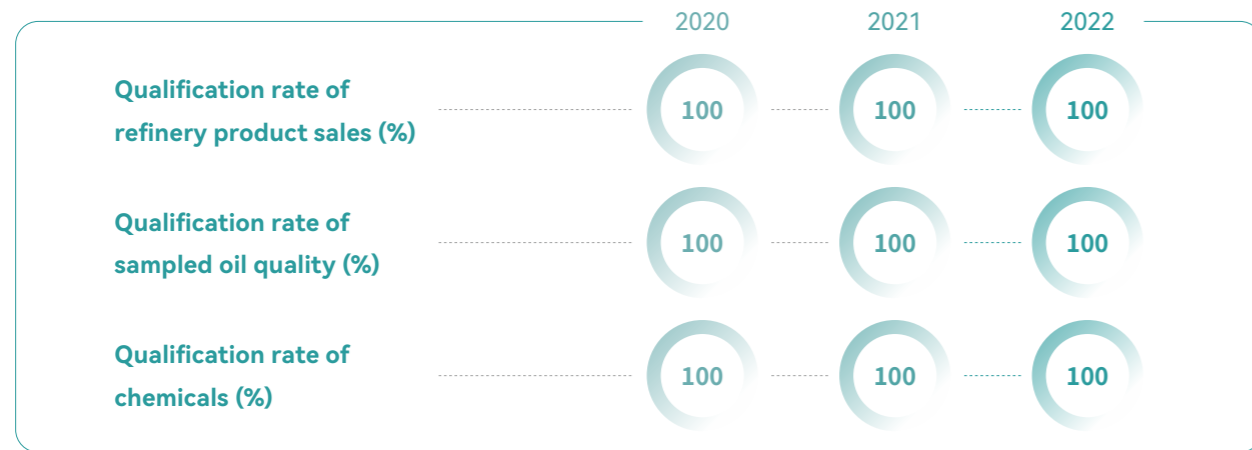
Sinopec has launched the new image of its convenience store, using "natural, beautiful, hopeful, vigorous, and dynamic" spring-bud green to echo Easy Joy's brand positioning of "green, vitality, enthusiasm and convenience". To improve its functioning, it has added self-service areas, smart devices, and customer leisure areas to enhance the customer experience. To create a good atmosphere, it has set up different purchasing environments and zones according to the sales characteristics of different types of goods such as proprietary brands and automobile supplies, creating a new comfortable shopping environment.

#### Upgraded Easy Joy "brand"

With the "five-in-one" brand-building concept, Sinopec has nurtured a "people - car- life" service brand from five dimensions - "credibility, identification, loyalty, popularity and reputation", ranking first in terms of brand value in China's retail industry. And has won multiple honors like "My Favorite Chinese Brand". It initially built a "1+4+N" proprietary brand matrix covering "product brand", "service brand", "platform brand" and "campaign brand".







**Efficiently upgraded motor gasoline meeting the state VIB standard** CASE

For Sinopec, "every drop of oil is a promise". And it has been dedicated to supplying high-quality products and efficiently promoting the quality of oil products. In 2022, Sinopec upgraded state VIB standard-based motor gasoline more than one month in advance in Zhejiang, Fujian, Henan, Yunnan, Shaanxi and other places, with nearly 20,000 gas stations providing car owners with gasoline meeting this standard. Before December 31, 2022, all gas stations and oil depots had completed oil replacement.

## Customer service

Based on improved content and pre-sales, during-sales and after-sales customer service, Sinopec has established multi-level customer communication channels featuring unified customer service center and 95388 manual telephone service; supplemented intelligent robots; created 95388 SMS, email, and WeChat accounts; set up a petrochemical E-trade platform, and created EPEC.com. Meanwhile, it has endeavored to promote its national unified membership APP; developed a unified evaluation platform for real-time customer satisfaction evaluation; and carried out monthly mystery customer inspection, maximizing service quality.

It has upgraded and launched the "Easy Joy Refueling" APP, providing convenient services such as "one-click oil/gas refueling"; "online recharging"; "appointment for oil pick-up"; "delivered to car"; "delivered to home"; and "online billing". The mobile App "I want to buy oil" tailored for major customers of refined oil products has launched a new function "one-click oil delivery", contributing to more convenient, accurate and efficient delivery, and ensuring customers are satisfied. Moreover, it has provided free road rescue services for users of refueling cards and registered cards in 21 provinces and cities across the country. If fuel card customers need free road rescue in case of vehicle failure or accident, they can call the 24-hour hotline of "Sinopec thanks you for using oil services".

Indicators	2020	2021	2022
Resolution rate of 95388-0 customer complaints (%)	100	100	100
Resolution rate of EPEC customer complaints (%)	100	100	100
Resolution rate of customer complaints on refined oil sales (%)	100	100	100
Lubricant product customer loyalty (%)	93	93	94
Resolution rate of customer complaints on lubricant sales (%)	100	100	100
Resolution rate of customer complaints on chemical sales (%)	100	100	100

## Building a responsible industry chain

With its commitment to building a sustainable and responsible supply chain based on the principle of responsible and transparent procurement, Sinopec has improved the management of suppliers and contractors; strengthened strategic cooperation; and expanded diverse cooperation models.

### Bidding and tendering management

In accordance with the *Law of the People's Republic of China on Tendering and Bidding*, the *Regulations on the Implementation of the Law on Tendering and Bidding*, and other laws and regulations, Sinopec has improved the "1+6+12" bidding management system; and prohibited the provisions of discriminatory and tendentious clauses for bidding. It has rolled out the Notice on Further Strengthening the Management of the Implementation of Bidding Results, clarifying the management requirements for the awarding; and performance of the bidding results to ensure the implementation of the bidding results. Besides, it has formulated the *Notice on Strictly Implement Regulations and Rules on Bid Invitation and Bidding and Regulate the Behaviors of Entities Involved*; and further ensured selection of preferred contractors through qualification and performance review of bidders.

### Supplier management

To promote market integrity system building in a transparent supply ecosystem, Sinopec has improved its supply resource management system; expanded supplier services; optimized supplier qualification review and dynamic performance evaluation mechanism; and intensified efforts to handle breach of contract.

#### Implementing qualification reviews

Sinopec has implemented strict review of supplier qualifications in line with the principle of pre- and post-qualification review; conducted onsite reviews of suppliers providing materials for production equipment, and involving production and construction safety. This has been strictly in accordance with the requirements for the "onsite review of factories, equipment, products, management, and performance". The on-site reviews involved 1,437 suppliers through the year.

#### Advancing quantitative evaluations

Focusing on legal entity credit certification, product quality evaluation, dynamic evaluation of contract performance, and market performance, it has advanced quantitative evaluations of suppliers. By December 2022, a total of 15,116 suppliers had completed the legal entity credit certification; it had released quality assessment methods for 5,894 categories of materials; 14,926 evaluations had been made for relevant products; 46,836 suppliers had given star rating for conducting the dynamic evaluation of contract performance; and 19,107 suppliers had completed market performance ratings.

#### Boosting warning and punishment

Through the year, Sinopec sent work reminder letters to 16 suppliers, keeping a close eye on suppliers' contract performance of key projects, and gave risk warnings to suppliers with risks of quality and late delivery. Through the release of risk warnings in legal entity credit certification, it released 211 risk warnings this year, bringing 689 items in total, reminding relevant businesses to avoid business risks, in a timely manner. In addition, it intensified punishment of defaulting suppliers, with 289 such suppliers punished in 2022.

#### Implementing green procurement

Sinopec has selected energy-conserving, clean and green industrial equipment for clean production, and environmentally-friendly products, technologies, equipment and facilities. It has procured green materials that have passed the certification of environmental labeling products, energy- and water-saving products, low-carbon products and green building materials. In order to establish a system for green supply chain procurement, it has intensified its efforts to build a green standards system.

#### Improving training and guidance

Sinopec has resisted unfair competition and dishonesty in bidding and tendering; strengthened examination and verification of suppliers' HSE management system certification, emission permit, green product certification, low-carbon product certification and other environment-related qualifications; and encouraged suppliers to develop green technologies and products. In 2022, it held six supplier-training sessions, clarifying such requirements for suppliers such as quality management and green production.



## Contractor management

To comprehensively regulate the management of contractors, Sinopec has issued the *Measures of Sinopec for the Management of the Integrity System of the Construction Engineering Market*; the *Measures of Sinopec for the Management of the Quantitative Assessment of the Contractors of Construction Projects*; and other systems or notices, implementing "red line punishment + scoring quantitative assessment". Contractors who violate the Clean Practice Responsibility Statement and other stipulations, and who use their power for personal gains or commit bribery will be blacklisted. Sinopec has promoted contractors in a comprehensive review and improvement. Besides, it has strictly implemented the management measures for market integrity system, giving such punishments as circulating a notice of criticism to 29 contractors, disqualification, restrictions on bidding, and blacklisting.

In the tendering standard documents, Sinopec clearly requires that contractors to hold quality management, environmental management, and occupational health and safety management system certification. Bidders are rejected in the event that, over the past three years, they have seen major engineering safety accidents; they have caused significant social impact due to environmental violations; or they have been blacklisted by relevant government departments. Bidders with less than 80 points are rejected in terms of HSE special review outlined in the review section. In the contract terms, it is expressly stipulated that the contractor should undertake safety responsibilities, environmental protection responsibilities and corresponding measures.

	2020	2021	2022
Suppliers with quality management system certification (%)	48.2	47.7	43.5
Suppliers with environmental management system certification (%)	34.6	34.0	34.6
Suppliers with occupational health and safety management system certification (%)	32.8	31.9	30.9
Main contractors with quality management system certification (%)	100	100	100
Main contractors with environmental management system certification (%)	100	100	100
Main contractors with occupational health and safety management system certification (%)	100	100	100





## Boosting industrial chain development



### Innovative operation of EPEC.com

EPEC.com, an industrial product e-commerce platform affiliated to Sinopec, aims at "making procurement more professional". Based on the supply chain to business (SC2B) e-commerce model featuring connectivity, the platform targets four major sectors - procurement; sales; bidding; and integrated services, committed to realizing value-added procurement and supply chains. By the end of 2022, EPEC.com registered 250 million yuan in cumulative transactions, involving 114,000 registered enterprises with 7.84 million kinds of online products.

As an e-commerce platform serving BRICS countries, EPEC has focused on global trade integration, enabling domestic enterprises to go global and more international businesses to make their presence felt in China. To date, it has established partnership with 183 suppliers and 162 purchasers in 61 countries involved in the "Belt and Road" initiative.

### Sinopec consistently promotes the construction of the "E series" e-commerce ecosystem

By the end of 2022:

<p><b>"Easy Payment"</b></p> <p>Providing safe and friendly payment guarantees for enterprises, with a cumulative 703.9 billion yuan in online payment.</p>	<p><b>"Easy Factoring"</b></p> <p>Providing efficient and convenient financing channels for enterprises; 562 platform enterprises obtained 30.9 billion yuan in factoring financing.</p>	<p><b>"Easy BillManager"</b></p> <p>Providing enterprises with rapid and flexible subrogation; with a cumulative 9.9 billion yuan opened via Easy BillManager, registering a cumulative circulation of 1.8 billion yuan.</p>	<p><b>"Easy Certification"</b></p> <p>Carrying out intellectual innovation capability evaluation for enterprises, and receiving 475 applications in total.</p>
<p><b>"Easy Zone"</b></p> <p>Providing professional purchasing and marketing services for enterprises; and labor protection through the cotton textile industry chain. Also, 693 kinds of Xinjiang textile products were launched, registering 320 million yuan in transaction value, helping expand sales of Xinjiang products; a value zone logged a cumulative transaction of 52.8 billion yuan.</p>	<p><b>"Easy Auction"</b></p> <p>Providing enterprises with systematic schemes for disposing waste materials, idle assets, second-hand equipment and other assets; registering a cumulative transaction value of more than 1 billion yuan, with an average premium rate of over 30%.</p>	<p><b>"Easy Life"</b></p> <p>Providing enterprises with digital well-being solutions, with a transaction value of more than 58 million yuan.</p>	<p><b>"Easy Insurance"</b></p> <p>Building a secure and reliable risk protection for enterprises; 4,122 platform enterprises have been insured, with premium transaction value of 29.47 million yuan.</p>
<p><b>"Easy Logistics"</b></p> <p>Providing enterprises with logistics solutions; 4,165 logistics service providers used the EPEC logistics cloud platform, with logistics services covering 29 provinces.</p>	<p><b>"Easy Joy Business Travel"</b></p> <p>Providing concise and efficient business travel services tailor-made for enterprises, with a cumulative transaction value of 100 million yuan.</p>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>Official website of EPEC.com</p> </div> <div style="text-align: center;">  <p>Official WeChat account of EPEC.com</p> </div> </div>	

### Strengthening strategic cooperation

Sinopec has deepened the strategy of openness and cooperation, and strengthened cooperation with government agencies, enterprises and universities, expanding cooperation for mutual benefit.

### Some of Sinopec's strategic cooperation projects in 2022

<p><b>March</b></p> <p>Sinopec signed a strategic cooperation agreement with China Post Group Co., Ltd. to carry out all-round, multi-field and in-depth strategic cooperation in product supply; capital cooperation; finance; logistics and distribution; membership rights and interests; and new energy.</p>	<p><b>April</b></p> <p>It inked a framework agreement for cooperation with the Ministry of Agriculture and Rural Affairs to boost the rapid implementation of such issues as ensuring priority oil use; implemented preferential refueling; provided quality services; helped save costs; improved efficiency; and provided precise assistance.</p>
<p><b>July</b></p> <p>It signed a deal with the China Hydrogen Alliance for the construction of hydrogen industry chain, with cooperation covering such as fields as technology for hydrogen production with electrolytic water, economic research on hydrogen energy technology; big data information platform development; hydrogen quality testing and standard research; and hydrogen energy life-cycle carbon footprint evaluation.</p>	<p><b>December</b></p> <p>It struck a cooperation agreement with INEOS Group, with both parties intending to carry out an important part of integration cooperation in Tianjin to help the development of China's high-end chemical industry.</p>



In November 2022, Sinopec signed procurement agreements worth US\$40.1 billion with 34 partners from 14 countries and regions at the 5th China International Import Expo

### Contributing to China's efforts to become a manufacturing power

Sinopec has been committed to localization of major equipment, consistently making breakthroughs in a range of globally advanced equipment such as electric fracturing equipment, high-end drill bits, large-sized hydrogenation reactors, large-sized ethylene cracking gas compressor units, propylene refrigeration compressor units, large-sized extrusion granulation units, ethylene cold boxes, and large-sized oil refinery distributed control system (DCS). In 2022, 97% of Sinopec's oil and gas exploration and development equipment was domestically manufactured, versus the 94% localization rate for its refinery equipment with an annual capacity of 10 million tons, and 90.9% for ethylene equipment with an annual capacity of one million tons.



## Special

## Promoting brand-building in an all-round way to boost Sinopec's "signature brand"

Since the 18th CPC National Congress, General Secretary Xi Jinping has attached great importance to Chinese brand building, calling for "efforts to promote the transformation from Chinese manufacturing to Chinese creation, from Chinese speed to Chinese quality, and from Chinese products to Chinese brands". In February 2022, when presiding over the 24th session of the Central Committee for Deepening Overall Reform, President Xi Jinping stressed the need to "accelerate the development of a number of world-class enterprises featuring excellent products, outstanding brands, leading innovation and modern governance".

Over the past four decades since its establishment, Sinopec has always underscored brand-building, and made efforts to build globally renowned Chinese brands, vigorously promote the company's brand building capacity and improve its brand value, covering all sectors ranging from diverse products to high-end technology; from traditional industries to emerging fields; and from livelihood protection to public welfare undertakings. According to the 2022 China brand value evaluation information, Sinopec's brand value was 327.571 billion yuan, with a five-year growth of 33%, ranking first for six consecutive years in the energy and chemical industry.

### Building outstanding brands for world leadership

Sinopec has made a difference in building a world-renowned Chinese brand, highlighting its responsibility as "a great power" in the process of strengthening the country through brand building, and promoting professional brand management and operation capabilities with reference to the practice of world-class enterprises. In so doing, it has established an influence corresponding to its size and strength, making its brand which is tenable, popular and powerful.

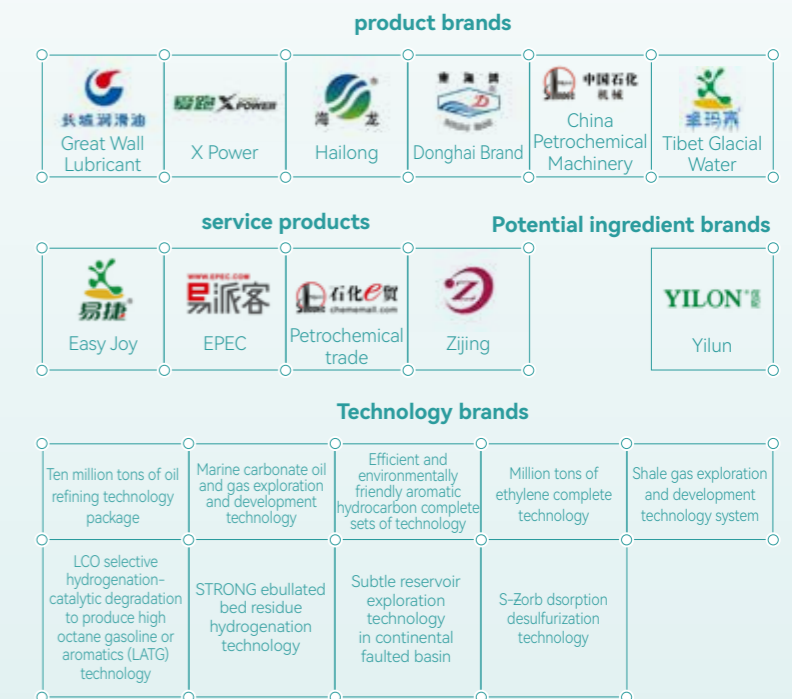
In December 2021, Sinopec held its first brand building conference, making an arrangement for its deployment during the "14th Five-Year Plan" period and for its medium - and long-term development. It proposed to boost its brand strategy; beef up its brand management and operation capabilities; and improve brand value, in a bid to build it into a world's leading brand. In 2022, Sinopec worked to nurture a prominent brand as a central enterprise to make its brand which is tenable, popular and powerful; and taking the lead in developing the internal enterprise brand benchmarking system and platform. Focusing on brand strategy, brand management, brand communication, brand guarantee, brand initiative and group company rating, Sinopec finished brand benchmarking of 131 entities within the whole system, with its brand strategy implementation rate hitting 93.89%. A total of 122 enterprises established mechanisms for brand integration business; and many developed plans for brand-building in light of their realities.



Sinopec's "Deep Earth Project" communication was dubbed a 2022 China Brand Innovation case. Chairman Ma Yongsheng attended the 2022 China Brand Forum and gave a keynote speech

### Characteristic positioning makes the brand tenable

Taking innovation as the source of brand building; quality as the lifeline of brand-building, and green and low-carbon development as the focus of brand-building, Sinopec has established the most stable cornerstone and the most powerful support for its brand building with first-class petrochemical technologies, products and services. In recent years, Sinopec has focused on the brand awareness of "innovation for a better future and responsibility for a better life", exploring the framework model of a "single main brand + a few quality sub-brands". Focusing on improving its brand power, and creating a small number of business brands with high added value and differentiated market demand, Sinopec has given play to the synergies of main brands and sub-brands, highlighting the core competitiveness of its brand. So far, it has nurtured a number of sub-brands with global influence, including excellent technology brands and top product, service, and ingredient brands.



### Telling brand stories makes its brand popular

Sinopec has devoted itself to brand building in the whole industry chain, and endeavored to build an omni-media brand communication matrix, consistently seeking value and emotional resonance with the audience. With the brand commitment of "cleaner energy, better life", Sinopec tells the stories on its energy transformation for creating a better life for people globally, so that more people know more about it.

By providing "cleaner energy", Sinopec tells stories of clean energy and green products, creating emotional connects and winning value recognition from its stakeholders. For instance, Sinopec led the research and development of the Winter Olympic torch, producing the world's first Olympic torch shell made from carbon fiber composite materials. Besides, its innovative use of hydrogen energy and carbon fiber technology enabled a green Olympics, creating a good reputation.

Sinopec provides people with quality products to meet their aspirations for a better life. Through its efforts, Sinopec has nurtured some influential social responsibility brand stories, such as "Sinopec Lifeline Express"; "The Gas Station That Cares - A Better Road Home"; "Driver's Home" and "Love Station". In the battle against poverty, Sinopec has offered paired assistance, which has helped lift eight counties out of poverty. Moreover, it completed the building of 16 melt-blown fabric production lines in just 76 days, expanding its production capacity to ensure supply.

### Enhancing the brand identity makes its brand powerful

Upholding its people-centered development philosophy, Sinopec has intensified its efforts to meet public demand, covering the whole process of scientific and technological innovation, manufacturing, quality management, marketing services and fulfilling social responsibility. Working for a better life at a higher level and in a wider range, it has been recognized by various sectors, making its brand image "popular" and "powerful". Based on to the concept of "quality is always a top priority" and "every drop of oil is a promise", Sinopec is dedicated to quality management throughout the whole process of its production and operation, creating an industry quality benchmark, and promoting brand vitality with top quality. In pursuing innovation, Sinopec has endeavored to develop into a technology leader, and become part of the scientific and technological force of national strategic importance, propelling innovation in technologies, products, management, and business models. In so doing, it has injected vitality into its brand competitiveness. To accelerate green development, it has fostered low-carbon transition of traditional energy sources and nurturing environmentally friendly brands by enhancing energy supply security.





# Pursuing a better life for people

## Guidelines of the 20th CPC National Congress

We must strive to realize, safeguard, and advance the fundamental interests of all our people. To this end, we must do everything within our capacity to resolve the most practical problems that are of the greatest and of the most direct concern to the people. We will stay engaged with our people and their communities, adopt measures that deliver benefits to the people and win their approval; and work hard to resolve the pressing difficulties and problems that concern them most. We will improve the basic public services to raise public service standards and make public services more balanced and accessible, so as to achieve progress in promoting common prosperity.



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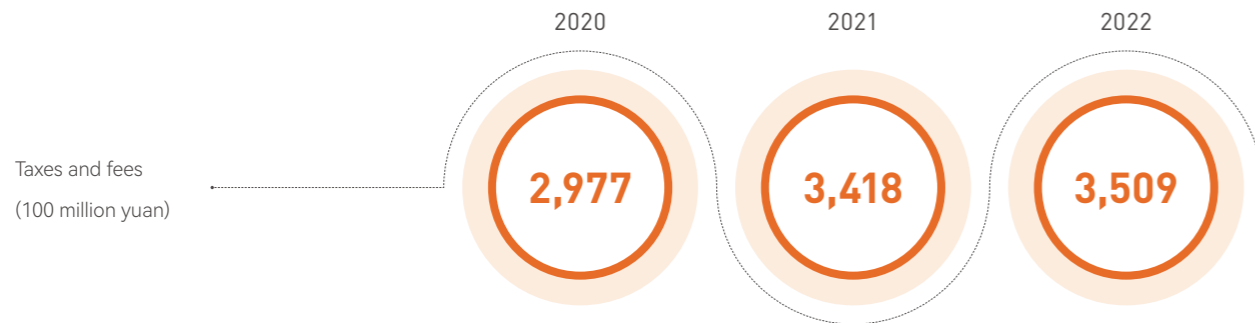
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## Making tax payment

Sinopec follows tax laws and regulations, and makes tax payments in good faith. In 2022, it paid 350.9 billion yuan in taxes and fees, contributing to promoting national defense; science; education; culture; health and other public services, advancing national economic development and social stability, and working for common prosperity.



## Participating in public welfare and charity programs

In pursuing overall development, Sinopec is involved in the public welfare and charity programs, and has established a social contribution system focusing on rural revitalization; social welfare; public welfare through proprietary brands; and environmental protection public welfare programs. It makes its contribution as a central enterprise by promoting social progress and improving people's well-being through diverse public welfare and charity programs.



## Social welfare

### "Sinopec Lifeline" Express

Since 2004, Sinopec has participated in the Health Express philanthropic program. In 2007, it donated 30 million yuan to build "the Sinopec Lifeline" Express, which is dedicated to providing free eye disease treatment services in the Chinese mainland. This is the first and only mobile ophthalmic hospital dedicated to charitable medical activities donated by a mainland-based company in China. Known as the mobile eye hospital, it is an important national project for cataract prevention and treatment.

Starting from 2009, "the Sinopec Lifeline" Express enters three poverty-stricken areas every year, and treats 3,000 people annually on average. With a success rate of over 99.9%, it is comparable to any Grade-A tertiary hospital in the first-tier cities in China. In 2022, the Express provided free assistance to 1,995 cataract patients in Huangshi, Hubei; and Dingxi and Linxia, Gansu. Besides, it has two Ophthalmology treatment centers, one in Dingxi, Gansu and the other in Linyi, Shandong.

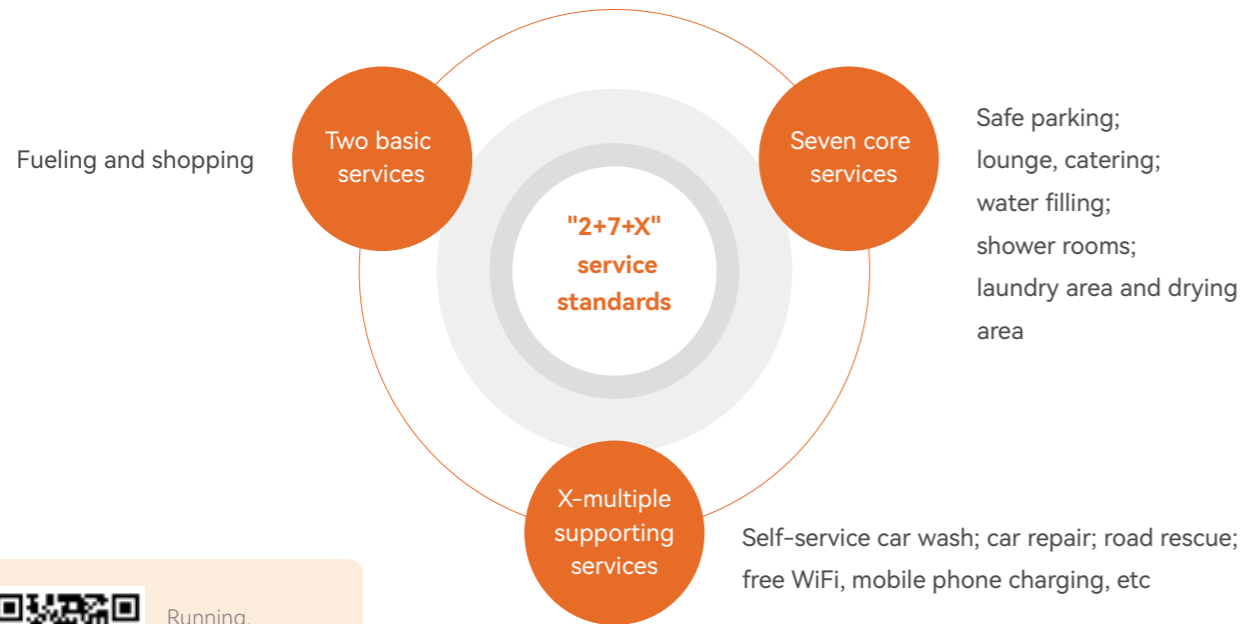
By the end of 2022, Sinopec has donated a total of 190 million yuan to the Health Express program to build 24 cataract treatment centers, and offered training to local ophthalmologists, leaving parked train hospitals for locals. "The Sinopec Lifeline" Express has travelled to 44 service sites in 18 provinces (autonomous regions and municipalities) across the country, helping more than 52,000 cataract patients regain eyesight.





### "Driver's Home"

In recent years, in order to facilitate outdoor workers such as truck drivers during their travel, Sinopec has worked with national and local federations of trade unions to build "Driver's Homes" in many provinces and cities across the country; and provide truck drivers with services to allow truck drivers to park and rest. In 2022, Sinopec accelerated the standardization of the "Drivers' Home" program; unified site selection; created functional standards and visual images; established a "2+7+X" service system; and set up flagship, standard and ordinary service outlets, meeting the diverse needs of drivers. In addition, it built a "2+7+X" service system to improve service quality, creating a "road home" for truck drivers. By the end of 2022, Sinopec had 3,586 "Driver's Homes" in service. It plans to build 5,000 such homes during the 14th Five-Year Plan period, forming a service network covering the whole country.



Running, Struggle, and Love - Record of Sinopec "Driver's Home"



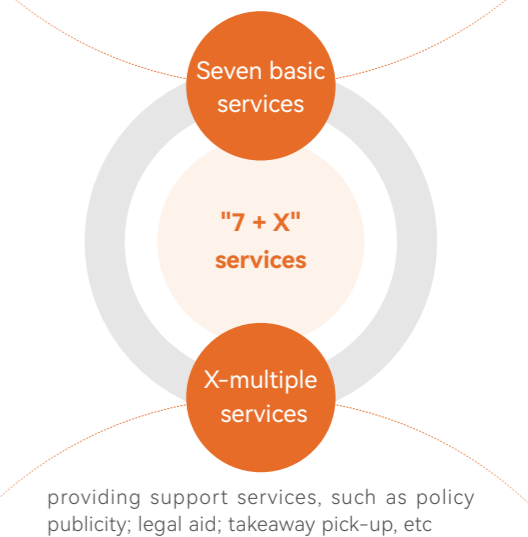
Outdoor workers avoid the summer heat at a Sinopec "Love Station"

### "Love Station"

To satisfy the needs of outdoor workers, Sinopec has built a full-fledged matrix of "benefiting people" through its "caring" and "practical" stations, providing "7+X" caring services for free. With its enriched service functions, the "Love Station" provides services to outdoor workers such as drivers, sanitation workers, and take-out deliverymen. By the end of 2022, Sinopec had built 5,415 Love Stations, and planned to add 8,000 during the "14th Five-Year Plan" period, making full use of the platform's advantages to enable more people to benefit from its development.



meals storage; food heating; hot water supply; reading area; mobile charging; medical kit; and cooling and heating





## Public welfare through proprietary brands

Sinopec supports its proprietary brands participating in social welfare programs and encourages its partners and other sectors to join its efforts.

In May 2022, Sinopec Easy Joy initiated "Micro Hope Plan", a public welfare program dedicated to helping rural teachers and supporting rural education; and launched 2,022 public welfare energy packages. The program focuses on the sports activities of rural schools in the new era, providing sports equipment for rural teachers and helping rural teenagers realize their sports dreams. In the meantime, with a series of activities consisting of a range of national public welfare live streaming; nationwide public welfare; entertaining and instructive public welfare classes; trips to seek the source of Micro Hope; batches of high-quality fresh farm produce; and a Micro Hope public welfare art exhibition, a public welfare lineup has been established, in a bid to build an Easy Joy-based higher-level national fitness system involving enterprise assistance and public participation.



In July 2022, at the sports specialist schools in Zhejiang province, the first leg of the "Easy Joy Micro Hope Plan" public welfare classes, "the Happy growth at the Micro Hope playground" were launched, to help rural PE teachers improve their teaching quality, stimulate students' interest in sports, and cultivate their good sports habits

## Environmental protection for public welfare

Sinopec follows the philosophy that "lucid waters and lush mountains are valuable assets", focusing on environmental protection public welfare as part of ecological conservation. It is engaged in environmental protection activities, guiding employees and the public in contributing to environmental protection.

In March 2022, the Sinopec Saihanba Ecological Demonstration Forest "Internet + Voluntary Tree Planting" program was launched on yiwuzhishu.cn, a website for nationwide voluntary tree planting communication. As China's first of its kind program by a large-sized central enterprise, it raised funds for the development of an ecological demonstration forest in the Saihanba Mechanical Forest Farm in Hebei province, helping improve the quality and ecological value of state-owned forests; and exploring new paths for achieving "carbon peak and carbon neutrality" goal, and supporting local ecological conservation and socioeconomic development. Since its launch, the program has received a strong response from the group company's officials and employees and general public. By the end of March, more than 154,000 people had donated about 6.75 million yuan. In May, the program started implementation in the forest farm. As of July, 1,000 mu or 66.67 hectares of afforestation and 13.1-kilometer-long fencing had been completed, and 162,500 trees had been planted.

In July 2022, the "Embracing the 'Dual Carbon' for a Win-Win Future" geothermal science popularization public welfare exhibition, co-hosted by the China Association for Science and Technology and Sinopec, received more than 400,000 visits, popularizing low-carbon environmental protection; and fulfilling the central enterprise's social responsibility for science popularization.



In March 2022, Sinopec Baling Petrochemical responded to the "Internet + voluntary tree planting" initiative, and organized a voluntary tree planting activity for "protecting the Yangtze River as a pacesetter". For the fifth consecutive year, the company carried out voluntary tree planting on the main dikes of the Yangtze River, planting more than 3,000 trees in total, a move to contribute to "the most beautiful Yangtze River banks"



The "Embracing the 'Dual Carbon' for a Win-Win Future" geothermal science popularization public welfare exhibition, co-hosted by the China Association for Science and Technology and Sinopec, received more than 400,000 visits in just five months following its launch at the China Science and Technology Museum



# Serving society wholeheartedly

Sinopec has implemented social service programs, such as rescue and relief; service for farmers; and service for major events to improve people's well-being and social harmony, making significant contributions to ensuring people's livelihood.

## Rescue and relief

In 2022, downpours in Panjin, Liaoning; Ningde, Fujian; and other places caused floods. Sinopec acted quickly in implementing flood control and relief measures; and participating in local flood control and relief work. It opened up a green channel for refueling vehicles to transport relief materials and oil products to the rescue teams. Due to the high summer heat, wildfires hit Sichuan and Chongqing, where enterprises under the umbrella of Sinopec joined hands in firefighting and rescue.

When earthquakes jolted Luding, Sichuan province and Menyuan, Qinghai province, Sinopec immediately launched emergency plans and opened up green channels to ensure priority refueling for disaster relief vehicles and to provide a smooth lifeline. Besides, it increased the supply at Easy Joy convenience stores along the route; and set up convenient service outlets to provide free services for rescue workers around the clock. In September, Sinopec donated 50 million yuan to support relief work and resume normal life in Sichuan.

## Service for major events

Sinopec ensured oil supply and services during major national events such as the 2022 Beijing Winter Olympics; the NPC and CPPCC sessions; and the Boao Forum for Asia Annual Conference 2022, showing high standards and top quality.

### Striving to support the 2022 Beijing Winter Olympics

### CASE

February 2022 saw the opening of the Beijing Winter Olympics. As the official oil and gas partner, Sinopec devoted itself to energy supply; and material support and volunteer services. In terms of energy supply, Sinopec Beijing Petroleum and Sinopec Hebei Petroleum provided support for infrastructure construction and event operation with 49 oil supply stations, 29 gas refueling stations, and four hydrogen refueling stations. Moreover, hydrogen from Sinopec Yanshan Petrochemical was used to ignite the cauldron of the Winter Olympics. In terms of material support, Shanghai Petrochemical led the research and development of carbon fiber composite materials for the torch shell and the mass production of the torch, making it an outstanding contributor to the games. Great Wall lubricating oil became the official lubricant partner. The insulated interiors of the Winter Olympic Games uniforms were made of Sinopec Yizheng Chemical Fiber's multi-functional polyester staple fiber. In terms of volunteer services, Sinopec recruited volunteer teams with Sinopec characteristics and launched a "clean energy refueling" campaign with the theme of "cleaner energy for a better Games", attracting 300 million people to participate in ice and snow sports.



## Service for farmers

In order to ensure agricultural production and machinery oil supply, and food security, Sinopec has formulated relevant policies to benefit farmers; ensuring priority oil, preferential refueling, and quality services, and delivering oil to the fields. Moreover, it ensures farm machinery oil supply during "spring ploughing"; "harvesting, planting and field management in summer"; and "harvesting, ploughing and sowing in autumn". In addition, Sinopec works to expand service channels; and increase services and facilities, promoting the development of the local agricultural industry chain.

## Law popularization

Sinopec has participated in law popularization and Constitution publicity. It has benefited more than 60,000 people in less developed areas in central and western China by supporting the China Legal Aid Foundation's "1+1" legal aid volunteer campaign, which has helped boost local socioeconomic development and rule of law.

## Volunteer services

Sinopec promotes the socialist core values and the volunteerism of "dedication, friendship, mutual aid and progress"; advances the organizational, mechanism and the brand building for youth volunteer services; and guides the youth league organizations at all levels and the young people in the petrochemical sector to be devoted to Chinese youth volunteer services, highlighting the "petrochemical business card" in youth volunteer services. As of 2022, it had established 3,132 youth volunteer service organizations within its system; and more than 87,000 registered volunteers had participated in rural revitalization, service for major events, and harmony community development, helping the company build the image of "a good enterprise of the Party and the people".



Since its inception in 2015, the "Desert Health Express" volunteer medical team of Sinopec Northwest Oilfield has treated and transferred 1,701 people with acute diseases; and the team has been dubbed the "desert lifeline" by local people. In November 2022, the "Desert Health Express" volunteer medical service program for remote areas won a bronze award in the final selection of the 6th China Youth Volunteer Service Competition.



Special

## The Gas Station That Cares - A Better Road Home, providing services for 10-plus years

Since 2013, Sinopec has run the "The Gas Station That Cares - A Better Road Home", a large-scale public welfare program for migrant workers returning home by motorcycle or minibus. Responding to their appeals and needs, Sinopec has expanded and improved its services for them.



### Providing services wholeheartedly

In 2013, Sinopec was the first to provide "free refueling" and other services at the gas stations in Guangdong for migrant workers returning home by motorcycle or minibus. After 11 years of development, "The Gas Station That Cares - A Better Road Home" has grown from "free refueling" to a "caring three-in-one service" and "1+10+X" service; from the "caring bus" special service to a direct bus service, linking five provinces and regions; from the mailing luggage to fulfilling the "car dream" of fellow villagers; and extending the "The Gas Station That Cares - A Better Road Home" service to the "Love Station" and "Driver's Home". With more diverse services, the Spring Festival travel rush has become safer and warmer. The project has so far served more than 57.8 million people returning home during the festival and 4.58 million migrant workers returning home by motorcycle or minibus, involving 53,000 volunteer services and free refueling for 94,000 motorcycles or minibuses. At present, the Gas Station That Cares - A Better Road Home has become a well-known public welfare brand in China, and won many international and domestic honors such as Superior Achievement in Global Branding and Reputation Awards; the SASAC "Central Enterprise Outstanding Volunteer Program"; The Gold Standard Award for Corporate Citizenship; the Central Committee of the Communist Youth League of China "Youth Volunteer Service Silver Award"; and Public Welfare Model Popular Program Award.

### Comments on "The Gas Station That Cares - A Better Road Home"

"It is not easy for you to stick to this program. Hopefully Sinopec will continue contribution to society and delivery positive energy."

-- Li Yufu, former vice chairman of the All-China Federation of Trade Unions, and first secretary of the Secretariat

"This program is of great social influence. We help people returning home by motorcycle or minibus and migrant workers within our capacity, making them feel warmth, so we feel our devotion is worthwhile."

-- Li Jinlan, a Sinopec Guangxi Petroleum employee volunteer and national model worker

"I am from Guilin, Guangxi. This is the fourth time I am participating in Sinopec's 'The Gas Station That Cares - A Better Road Home'. The volunteers are still enthusiastic, and I'd like to appreciate Sinopec for this event."

-- Mr. Liu, a worker returning home by motorcycle

### Providing services to benefit people as planned

In January 2023, Sinopec launched "The Gas Station That Cares - A Better Road Home", a large-scale public welfare program for the migrant workers returning home by motorcycle or minibus during the Spring Festival travel rush. This year marks its 11th edition. During this period, Sinopec's 166 gas stations in Guangdong, Guangxi, and Jiangxi provided free gas refueling, gift packages, and other services for those returning home; migrant workers working in Guangdong; and truck drivers engaged in cross-provincial transportation.

#### Upgraded free services

By means of "The Gas Station That Cares - A Better Road Home", Sinopec provided free "1+10+X" service during the Spring Festival travel rush, targeting at outdoor workers such as people returning to Guangxi and other places by motorcycle or minibus; long-distance truck drivers, sanitation workers; delivery boys, and takeout riders; as well as vehicles of people on duty. It provided migrant workers with 1,000 portions of disinfectants and 3,000 disposable face masks free of charge, so that they could return home safe and sound. Besides, to help migrant workers returning home by motorcycle or minibus, Sinopec worked with Guangong Post EMS to offer free mailing service, with 2,000 places for free delivery of Spring Festival purchases. Successful applicants could mail 20 kilograms at 20 gas stations in Guangdong.

<p><b>"1"</b> Providing services for the elderly, children, and pregnant women during the Spring Festival travel rush.</p>	<p><b>"10"</b> Offering 10 basic free services - emergency medicines; route consultation; hot water; rechargers; hand warmer; simple service kits; fuel drums; food heaters; resting chairs; and security services.</p>	<p><b>"X"</b> Some stations provide personalized services like car repair; water refilling; free WiFi access, etc.</p>
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#### Upgraded gift packages

Sinopec has also improved service outlets and expanded service coverage, so that more people enjoy services in the areas where migrant workers and outdoor workers gather and pass by. For those travelling by motorcycle or minibus during the Spring Festival travel rush, Sinopec delivered 2,000 "free refueling packages". Besides, it provided 1,000 "Spring Festival refueling packages" for couples working in Guangdong who were engaged in cross-provincial truck transportation. It worked with more than 10 enterprises such as Easy Joy and Great Wall Lubricant, providing 2,000 "lucky bags" for those returning home by motorcycle or minibus during the Spring Festival travel rush. For the first time, the China Children and Youth Foundation joined the "The Gas Station That Cares - A Better Road Home" public welfare campaign, offering 3,000 "child care gift packages" to the children of truck drivers and motorcycle riders.

<p><b>"Free refueling package"</b></p> <p>This package contained one free full-tank refueling, and one Easy Joy lucky bag delivered in conjunction with Easy Joy, Great Wall Lubricant, Taiping Property Insurance and other enterprises.</p> <p>It also contained food and beverage; a share of Great Wall motorcycle engine oil; a China Taiping short-term accident insurance; and a "Child Care gift package" from the China Children and Teenagers' Fund (CCTF).</p>	<p><b>"Spring Festival refueling package"</b></p> <p>This package contained a "diesel reward" worth 500 yuan (which could be exchanged for fuel or Easy Joy products); Guangdong's "Driver's Home" five full-year free services - "rest, shower, laundry, drying clothes, and water refilling for trucks"; and one three-piece for long-distance driving.</p> <p>It also contained a thermos cup, reflective stickers and a raincoat; a portion of Great Wall high-end diesel oil; an Easy Joy lucky bag; and a "child care gift package" from the CCTF.</p>
<p><b>"Lucky bag"</b></p> <p>This bag contained more than 10 food items and articles like insulated knee pads, a thermal cup, and eight-ingredient porridge.</p>	<p><b>"Child care gift package"</b></p> <p>This package contained a schoolbag, a stationery set, books, and online courses for left-behind children.</p>

#### Upgraded family reunion dinner

At the "Driver's Home" and "Love Station", family reunion dinner was offered to outdoor workers such as sanitation workers, delivery boys, taxi drivers, and community security guards, so that those working during the Spring Festival travel rush could have a happy festival.



# Driving common prosperity through openness and sincerity

## Guidelines of the 20th CPC National Congress

Building a community with a shared future for mankind is the way forward for all the world's peoples. China is committed to building a world of lasting peace through dialogue and consultation, a world of universal security through collaboration and shared benefits, a world of common prosperity through mutually beneficial cooperation, an open and inclusive world through exchanges and mutual learning, and a clean and beautiful world through green and low-carbon development.



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### Special

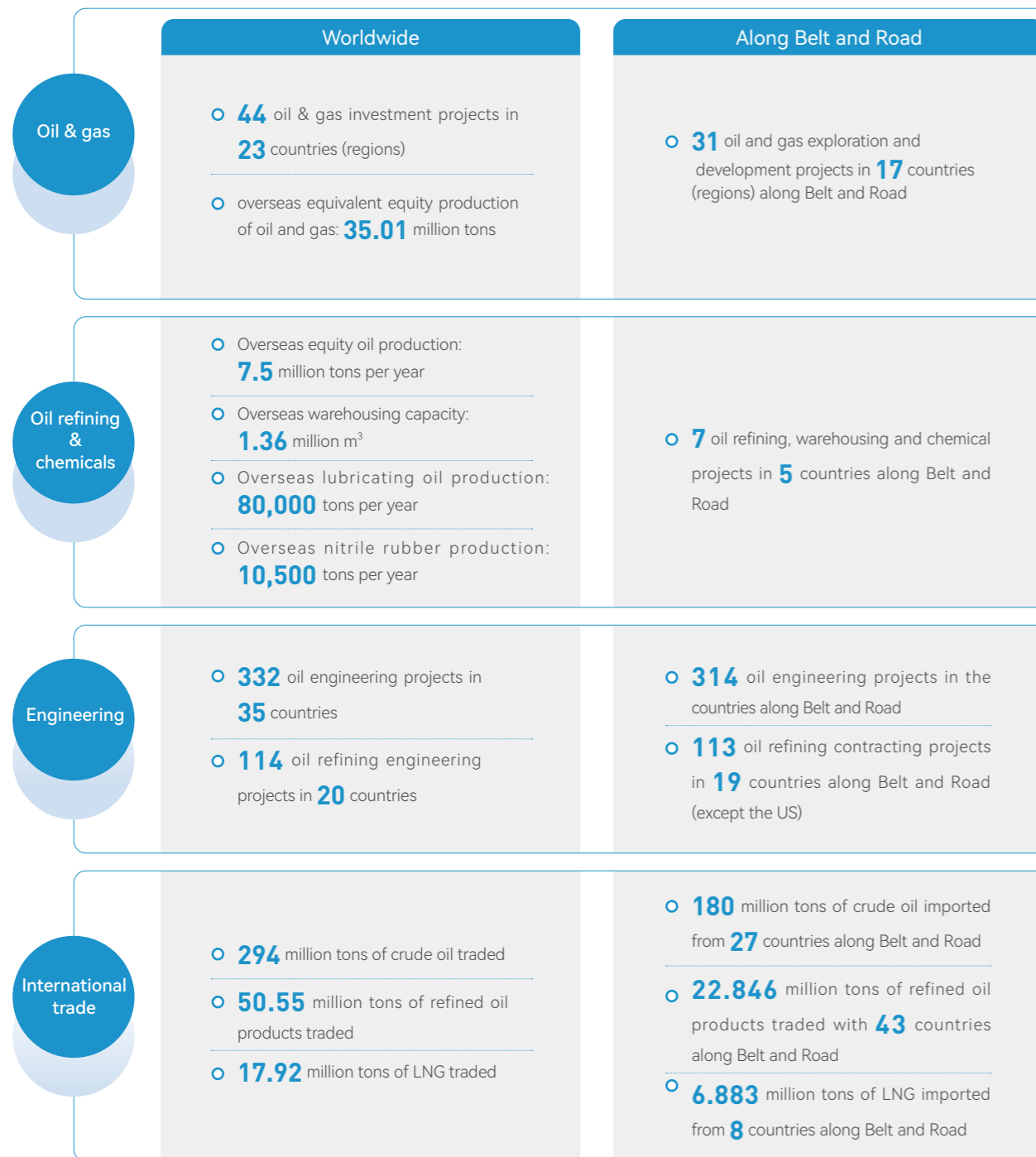
Collaborating with Saudi Arabia and setting an example for the cooperation under the Belt and Road Initiative	98
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# Increasing cooperation on production capacity

To meet China's opening-up at higher levels and speed up the "going global" strategy, Sinopec takes active part in international cooperation on energy and market competition, optimizes global deployment with the focus on the countries along the Belt and Road, and advances overseas oil and gas exploration and development, oil refining and sales, chemicals and new materials, and engineering and technical services in a coordinated manner, in an effort to support the sustainable development of global economy and society. In 2022, Sinopec operated in 66 countries and regions overseas, with 286 projects underway.



## Sinopec Shengli Directional Well completes drilling the first well in the CPA project in Mexico CASE

In November 2022, drilling of Well ALTAMIRA1098 Sinopec, for which Jingwei Shengli Directional Well Co., Ltd. provided technical services, was successfully completed, with positive oil and gas indications. As the first key horizontal well the Mexico-based CPA company deployed on the ALTAMIRA plot in 2022, the horizontal well features a short and medium radius and a slim hole, and thus involves a shallow kickoff point, a high build-up rate and other construction challenges.

Right after the construction task was assigned, Shengli Directional Well Co., Ltd. kickstarted the "regional construction" mode, in which technicians leveraged the well construction experience in the same region, identified the rules of well deflection in various stratum, and developed a detailed trajectory control plan based on improved selection of screws and drilling tools. During construction, bit pressure, rotary speed, displacement and other drilling trajectory parameters were fully used to reduce slide drilling, improve drilling speed and ensure a round and smooth trajectory. Drilling the inclined section took only 35.5 hours, strongly supporting subsequent operation.

## Sinopec signs an LNG storage tank construction contract with Sonatrach CASE

In February 2022, the consortium consisting of Sinopec Guangzhou (Luoyang) Engineering Co., Ltd. and Sinopec International Petroleum Service Corporation signed an EPC contract on LNG storage tank construction with Sonatrach, which involves an investment of US\$183 million and a construction period of 40 months. Located at the Port of Skikda, a natural gas export terminal in the east of Algeria, the project includes dismantling two 76,000 m<sup>3</sup> LNG storage tanks and building a 150,000 m<sup>3</sup> LNG storage tank and supporting facilities instead, and supplying and installing the equipment that connects the proposed storage tank to the new LNG loading system at the Port of Skikda.

## Sinopec Shengli Oilfield Engineering Institute sees the project in Cameroon accepted CASE

Located in the Atlantic Ocean to the southwest of Cameroon, MOCOCO ABANA is a highly porous and medium-high permeable unconsolidated sandstone oil reservoir that's similar to the marine guantao formation in nature. Gas lift is adopted in the preliminary stage, and electric pumps and submersible screw pumps are used in the later stage. Some electric pumps and submersible screw pumps currently see a short inspection cycle, which curbs the development of the oilfield.

The Shallow Sea Division of Shengli Oilfield Engineering Institute analyzed the problems arising from the oilfield development in terms of the liquid feed capacity of the oil reservoir, technical parameters of electric pumps and submersible screw pumps and supervision and management of construction operation. In December 2022, the project "Analysis of Reasons behind the Short Inspection Cycle of Electric Pumps and Submersible Screw Pumps at MOCOCO ABANA Oilfield" was accepted and highly recognized by the overseas project company in Cameroon. The Cameroonian side proposed long-term cooperation on plan preparation, water injection and chemical flooding to promote the offshore oilfield development.



## Protecting the earth

In compliance with the laws and regulations on safe production both internationally and in the places where it operates, Sinopec keeps improving safety management by completing the safe production management system, ensuring safety-related input, strengthening protection against safety risks, organizing safety training and refining overseas public safety management, in an effort to bolster the foundation for development. Sinopec highlights the protection of the environment and ecosystem, applies the green philosophy to the whole process of overseas operation, and steps up efforts in environmental management, clean production, green construction and biodiversity protection, so as to join the global move to meet climate change and protect the earth.

### Sinopec supplies the first ultra-silence drilling machine to Uganda CASE

In March 2021, Sinopec Central Plains Petroleum Engineering Co., Ltd. won the bid for the supply of 3 drilling machines to Total in Uganda for its remarkable performance in overseas market. In August 2022, the first ultra-silence drilling machine for the Uganda project was shipped from Guanghan, Sichuan.

Total's Uganda project is located in Uganda Forest Park, which is a UN natural reserve under tough environmental requirements. Sinopec develops and produces the drilling machines for the project. Integrating several new technologies, the 1,500HP low-displacement and automated silence drilling machine is one of the most automated and advanced onshore drilling machines with the lowest noise available so far. Painted in camouflage, the drilling machine is equipped with dimmable lights. Moreover, the noise reduction device can bring noise under 55 decibels, the waste recycling system enables zero discharge of waste solid or liquid, and the generator set has a tail gas exhaust and energy consumption system that can reduce carbon emissions by more than 90%. So, it's an advanced environment-friendly drilling machine. The project is of exemplary significance to the efforts across Sinopec to implement China's carbon peaking and carbon neutrality goals, join the Belt and Road construction and move into high-end markets, and is a great practice of intelligent and green manufacturing by China.

### Sinopec's green drilling crew helps create an oasis in Kuwait CASE

The green drilling crew campaign is aimed to make full use of resources, save energy, reduce emissions and protect the environment. In active response to the initiative, Kuwait Branch of Sinopec International Petroleum Service Corporation carried out a series of environmental protection activities. In energy conservation, it replaced all the damaged lights with LED lights and the light switches in public places with inductive switches, set air-conditioning temperature at 26°C, and started or shut diesel engines according to working conditions, which resulted in a notable drop in energy consumption. In environmental protection, it arranged waste treatment sites for recycling of different types of waste, recycled oil base mud to ensure it not to land on the ground, and planted trees in deserts to make the mining environment greener. The efforts led to the crew seeing diesel consumption 14% less than other crews, and were highly recognized by Kuwait Petroleum Corporation.

## Absorbing overseas talents

With a global vision, Sinopec localizes employment in places where it operates. Sinopec protects employees' rights, cares about employees' physical and mental health, and strengthens talent training to promote the growth of overseas business and the development of local talents. Also, Sinopec fully respects the customs and cultures of the places where it operates, organizes a variety of activities among employees, and drives cultural exchanges and fusion, to increase the sense of belonging and cohesion among employees. In 2022, Sinopec employed 33,600 persons overseas, which made up 73.8% of its overseas workforce.

### Sinopec's Ecuador subsidiary localizes employment and promotes cultural exchanges CASE

Upholding the principle of localized employment, Sinopec's Ecuador subsidiary strictly abides by the labor laws and regulations of Ecuador, trains and uses local management and technical talents, increases skill training for local employees, and learns from world-famous companies to build an international operation and management team. Local employees comprise more than 80% of its local workforce, and include 10-plus disabled persons, which contributes to local employment and yields positive social benefits. In addition, the Company puts people first, recognizes cultural differences, respects local religious beliefs, customs and cultures and living habits, and guides Chinese and foreign employees to celebrate respective festivals and cultures. The Company highlights cross-cultural exchanges between Chinese and foreign employees, and facilitates teambuilding through healthy running, China-Ecuador Food Festival, football and basketball matches, and Family Day, among other activities, to forge a stronger bond inside the team.

### "Cameroon Petroleum Talent Training and Development Initiative" promotes talent development CASE

The Cameroon Branch of Sinopec International Petroleum Exploration and Production Corporation (SIPC Cameroon Branch) has run the "Cameroon Petroleum Talent Training and Development Initiative", which was launched in 2011, for over a decade, and formed three steady channels for talent training and development. The first is the internship program, under which 54 local university or vocational school students underwent a 3-month paid internship at SIPC Cameroon Branch, 16 of whom were trained jointly with four local universities under cooperation agreements. The second is the on-the-job drill program, under which 83 students who graduated in 2022 or 2021 experienced a 4 to 6-month on-the-job drill at SIPC Cameroon Branch. The third is the on-the-job training program, under which 12 new graduates received an 18-month on-the-job training at SIPC Cameroon Branch. SIPC Cameroon Branch has devoted nearly US\$200,000 to paychecks under the talent training programs. Implemented at the same time, the three programs secure training of local reserve talents and become paths pursued by local young people.





## Building harmonious communities together

Sinopec localizes procurement to drive local industrial development. Sinopec develops community engagement plans, and supports the development of local education, public infrastructures and healthcare to promote community harmony. Also, Sinopec encourages employees to join community voluntary services, works for better ties with local governments and communities, and serves local communities through real actions.

### 📖 Sinopec supports public infrastructure construction to help African people lead a better life

CASE

Leveraging its expertise in construction, CGCOC, a company affiliated to Sinopec Star Petroleum Co., Ltd., has undertaken a number of infrastructure projects, including water well drilling and road and bridge construction, in Africa. Through high-quality livelihood projects, it merges into local communities and contributes to local development.

**Easing the access to drinking water for African people:** In Senegal alone, CGCOC has built 978 centralized water supply sites, 169 water cart-based water points, and 193 livestock water troughs, which covered 12 of the 14 regions in Senegal. Since it was launched in 2019, the rural well drilling project has effectively solved the water supply problem for over 2 million local people. Also, the Zobe water plant, which CGCOC constructed in Katsina State, Nigeria, was put into operation, supplying clean water to nearly 1 million residents in Katsina City about 60 km away and the villages and towns along the pipeline. This makes the access to water easier for local households, farms and businesses.

**Participating in local infrastructure construction projects:** In February 2022, reconstruction of the 63.75-km-long first section of Yaunde-Bafoussam-Bamenda Highway, which CGCOC won the bid for, was successfully completed. As the only way between Yaunde, capital of Cameroon, and Bafoussam, capital of a major province in the west of Cameroon, the rebuilt highway greatly shortens the time of material transport, facilitates travelling by local people, supports development of neighboring areas, drives economic development along the way, and is of great significance to urbanization.



Sinopec helps build water plants in Nigeria to solve the water supply problem

### 📖 Sinopec tells good Chinese stories through books

CASE

Sinopec Africa Office introduces a rich variety of Chinese books to Africa and tells good Chinese stories through the books, so as to increase cross-cultural exchanges. Egyptian Chinese University is designated as the place to keep the donated books, and selected Chinese books are placed on the special shelves in its library. The books cover areas including country governance, Belt and Road Initiative, traditional Chinese culture and TCM, playing a positive role in helping local teachers and students learn about China, Chinese language and specialized knowledge. Also, Chinese books shelves are arranged at Sonatarch Library and GSS oilfield, where local employees and residents are invited to learn about Chinese culture.

### 📖 Sinopec starts Phase II "Beauty for You" Youngster and Child Growth Support Program in Hong Kong

CASE

In August 2021, Sinopec collaborated with New Home Association and launched the "Beauty for You" Youngster and Child Growth Support Program in Hong Kong. The program has been well received by the State-owned Assets Supervision and Administration Commission of the State Council (SASAC), Hong Kong SAR Government, Hong Kong Chinese Enterprises Association, supported families and all circles of the society, and listed by Hong Kong Chinese Enterprises Association as one of the top 10 public welfare activities that connect Chinese enterprises to communities. In August 2022, Sinopec started Phase II of the program, donating HK\$2.8 million to New Home Association together with the Social Welfare Department. Under the program, 210 students will be selected from Hong Kong Island, Kowloon and New Territories, particularly those living in subdivided flats, as the targets of support to broaden the horizon and improve personal abilities.



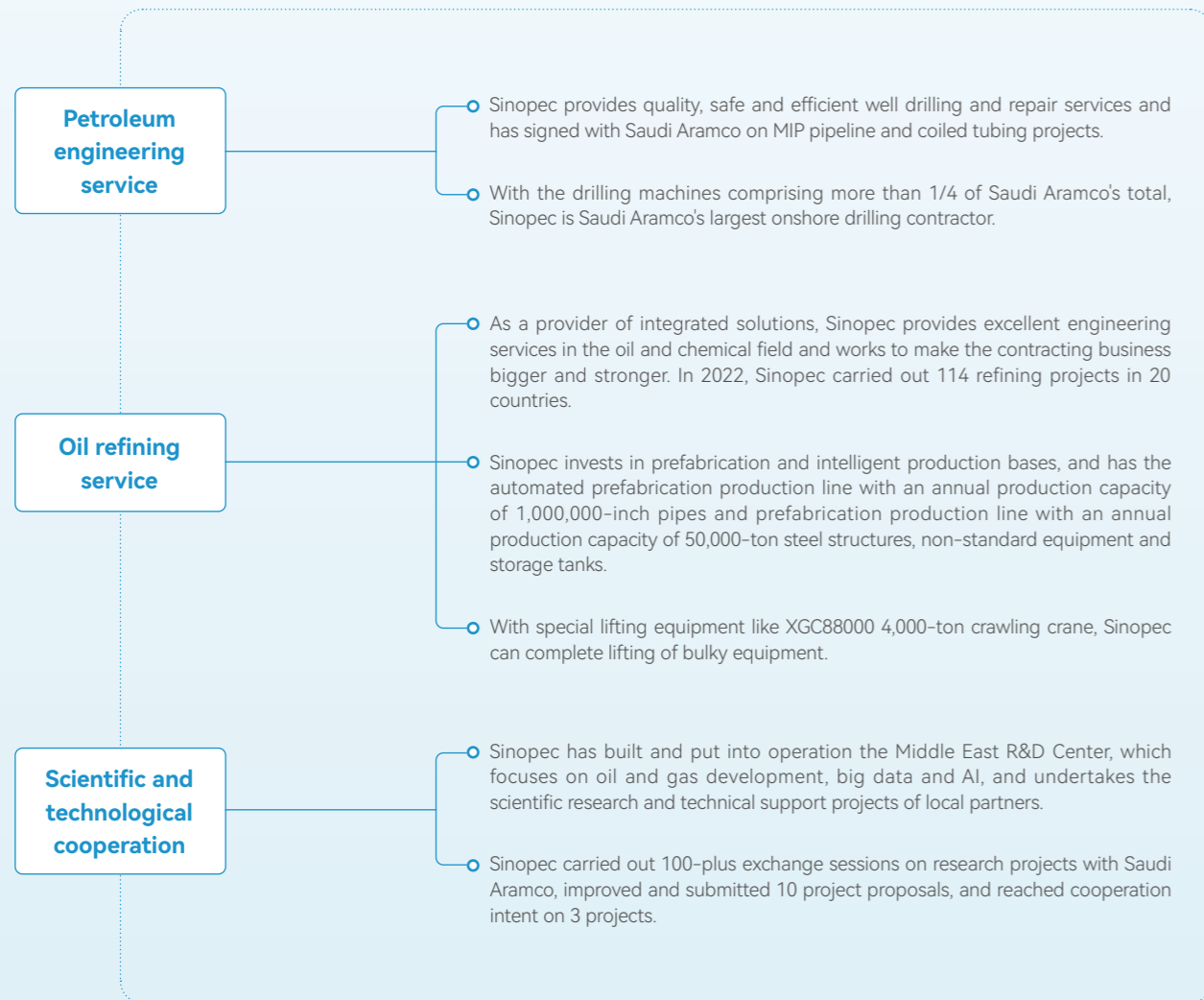
Special

## Collaborating with Saudi Arabia and setting an example for the cooperation under the Belt and Road Initiative

2023 marks the 10th anniversary of the Belt and Road Initiative. As a major participant in China's Belt and Road Initiative, Saudi Arabia, endowed with massive oil and gas resources, is a key player in the world's oil and gas industry and a major oil and gas supplier of China. For years, Sinopec has worked to promote the economic development of Saudi Arabia, increase cultural exchanges between the two countries, and promote local people's wellbeing. Also, Sinopec fully supports Saudi Arabian Vision 2030 as well as "Green Saudi Arabian" and "Green Middle East" initiatives, and works to connect China and Saudi Arabia in driving the Belt and Road Initiative.

### Diverse cooperation to promote economic transformation

Saudi Arabia is one of the countries with the largest petroleum reserves, output and sales in the world. Leveraging its advantages in integrated operation across the industrial chain, Sinopec actively provides Saudi Arabia's petroleum and petrochemical industries with high-quality petroleum and refining services, and carries out in-depth cooperation with local enterprises, including Saudi Aramco and MAADEN, on oil & gas resources investment, crude oil trade, and technological innovation, to promote the development of both economies. As one of the biggest importers of crude oil produced in Saudi Arabia and the biggest Chinese investor in Saudi Arabia, Sinopec promotes the mutually beneficial cooperation between China and Saudi Arabia, and advances the sustainable development of both countries.



### Yanbu Refinery, the biggest Chinese-funded project in Saudi Arabia, achieves the highest economic benefits in history CASE

In January 2016, Sinopec invested RMB8.6 billion and built Yanbu Refinery in collaboration with Saudi Aramco. With the launching ceremony witnessed by heads of state of both China and Saudi Arabia, the refinery is the biggest project invested by a Chinese company in Saudi Arabia, and a demonstration project of the cooperation between China and Saudi Arabia on energy, thus reputed as a "refining pearl in the desert".

After years of development, Yanbu refinery has developed the international management mode that is based on capital and led by technology. It has been operating efficiently so far, processing 287,000 barrels of diesel (41,000 tons) and 105,000 barrels of petroleum (12,000 tons) per day. With a leading production level in the world, it has become an exemplary project for the Chinese petrochemical companies that go global. In 2022, Yanbu Refinery performed well despite adverse international conditions, generating net profits of more than US\$1.4 billion during January–November, and hitting a record high in operating results.



### Collaborating with local stakeholders to promote harmony and happiness

**Upholding green and safe operation:** In compliance with the environmental laws and regulations in the places where it operates, Sinopec pursues green operation, advances the adoption of new technologies, processes and materials, implements efficient management processes, and protects desert species and ocean environment. Sinopec carries out activities like afforestation, eastern area cleaning and coast waste cleaning to improve the ecological environment. Also, Sinopec strengthens safety management, pays attention to employees' occupational health and safety, and works to ensure the safe operation of its affiliates and projects in Saudi Arabia. In 2021, the air separation project department of Sinopec Engineering (Group) Co., Ltd. in Jubail, Saudi Arabia was honored for "5 million safe man-hours", becoming a benchmark for responsible operation.

**Practicing localized employment:** Sinopec continues to increase the proportion of local employees, with some projects seeing over 65% of employees locally employed during peak periods. Sinopec partners with local schools on employment, offering internship and job opportunities for Saudi Arabian students. Sinopec strictly abides by local labor laws and regulations, respects local customs and culture, protects employees' rights, and works for common growth with employees by building a scientific and complete training system and establishing training platforms.

**Supporting community development:** Sinopec takes active part in the construction of local transport, water transmission and public health projects to improve infrastructures. On a cumulative basis, it has undertaken the construction of 30-plus urban overpasses and channels in Saudi Arabia, contributing to the improvement of local living conditions. Sinopec continues to carry out cultural exchange activities, and gets involved in public welfare undertakings, donating funds to charitable organizations and the "Summer Student Support Program", to advance local education and healthcare and build better communities together.



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# Leading sustainable development through lean management

An enterprise has not only economic and legal responsibilities, but also social and moral responsibilities. Any enterprise is part of the society, which is the arena for entrepreneurs to show their talent. Only by sincerely serving the society and fulfilling their social responsibility can entrepreneurs be recognized by the society and meet the needs of the time.

—Xi Jinping



## Sinopec's actions

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With "Fueling Beautiful Life" as its corporate mission, Sinopec actively practices its social responsibility, and makes CSR part of its philosophy, strategy and culture guiding operations. Furthermore, Sinopec steps up CSR management, explores CSR practice and increases CSR communication, to give full play to its irreplaceable role in driving economic, social and environmental sustainability and contribute to a better world and a brighter future.

### Sinopec's CSR management model

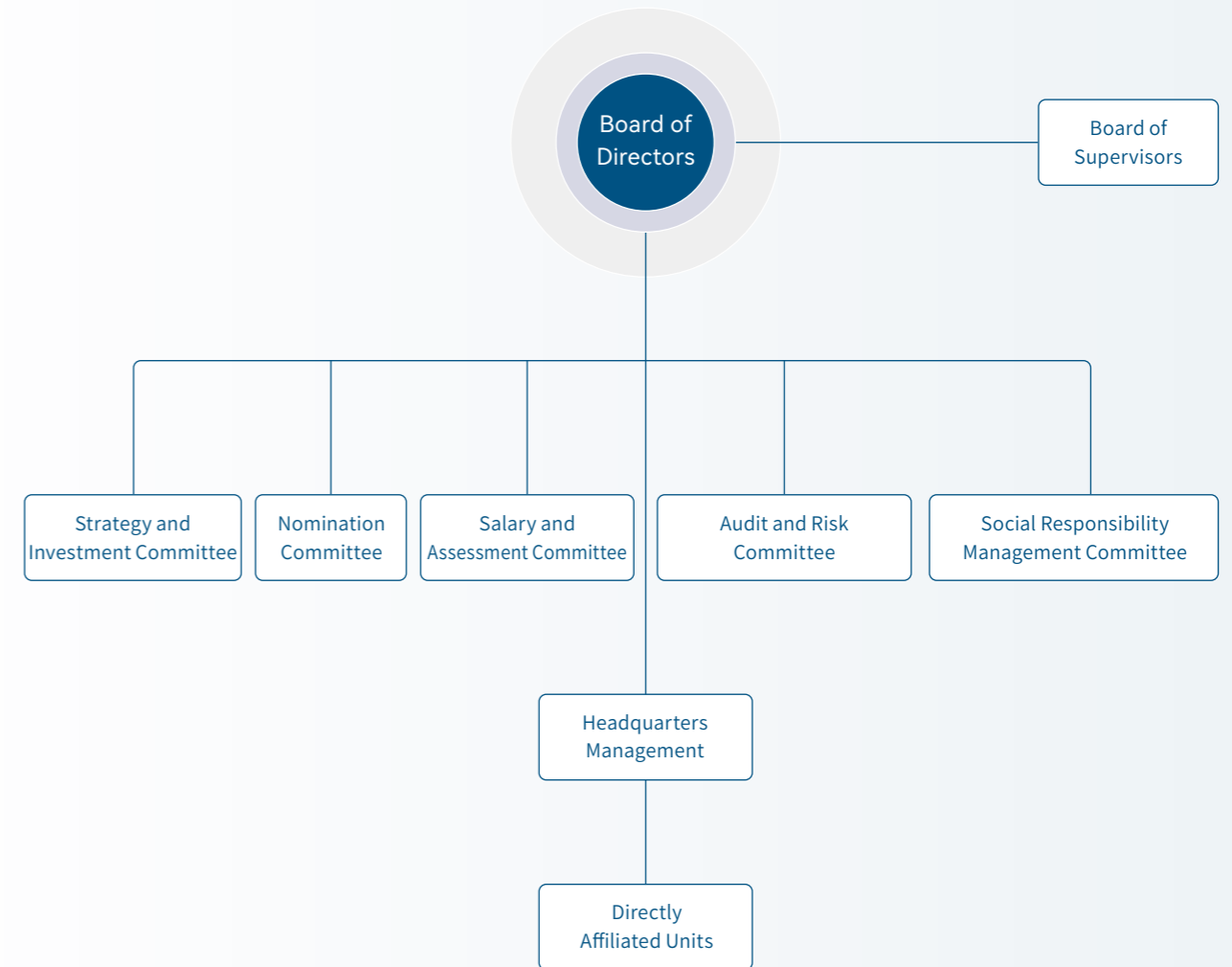


## Improving CSR organization

Sinopec has set up the CSR Committee, which is responsible for coordinating CSR work across the Company, developing relevant policies and reviewing relevant documents. Sinopec is the first central enterprise that sets up a CSR committee under the Board of Directors.

Established at the Publicity Department of the Party Group, the working body of the CSR Committee is responsible for the coordination and advancement of the Company's CSR strategy planning and management, as well as CSR communication and research. Departments at the Company's headquarters take charge of respective CSR work based on the division of labor. Directly affiliated units set up CSR management bodies to advance CSR practice and ensure the normal progress of CSR work.

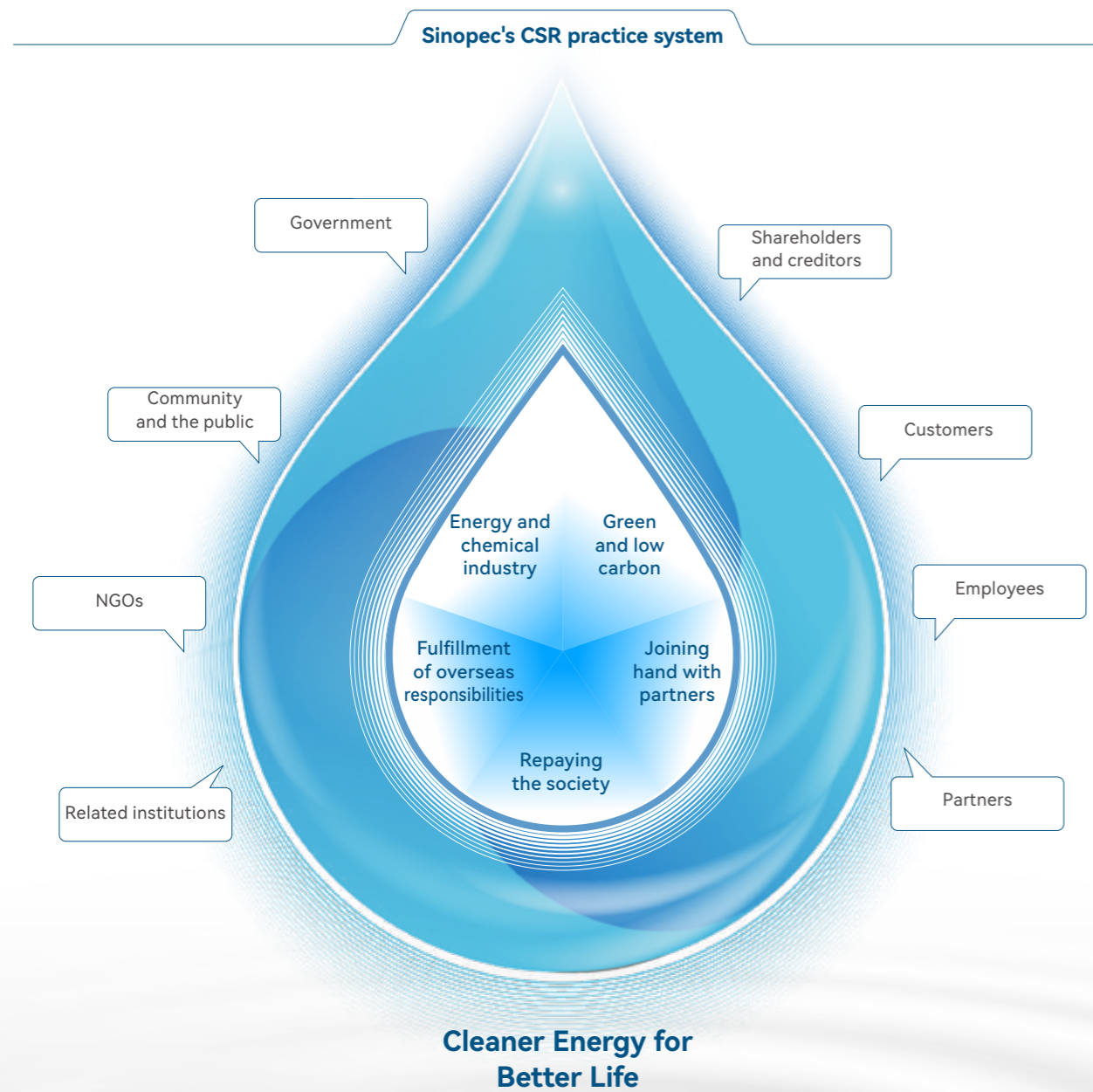
### Sinopec's CSR organizational structure





# Deepening CSR integration

To ensure CSR philosophy to be part of management and operation, Sinopec, based on China's macro policies, CSR standards at home and abroad, the Company's development strategies and plans, CSR issues in the energy and oil & gas industries, and social-wide concerns, has summarized 20 key CSR issues, combined them with the functions of affiliated enterprises (units) and applied them to specific workflows. Sinopec focuses on CSR practice in five aspects, i.e. energy & chemicals, green and low-carbon operation, collaboration with partners, support for the society, and overseas CSR performance, and works with stakeholders to create economic, social and environmental values and achieve sustainable development.



To improve CSR management, Sinopec formulated and issued the *CSR Management Measures (2022)*, which expressly define CSR management and related responsibility, planning, capacity building, communication management and results assessment, so as to make CSR work more institutionalized and standardized. Also, Sinopec carried out CSR improvement projects, implemented the requirements of SASAC on central enterprise CSR, geared up to the practice of world-class enterprises, and further improved CSR management.

# Creating new modes of CSR communication

Sinopec values communication with stakeholders, improves the CSR communication mechanism, expands the modes of communication, and creates new channels of communication. Also, Sinopec listens to and studies stakeholders' expectations, converts them into its goals and plans, and communicates with stakeholders on the Company's CSR philosophy and dynamics, in an effort to build its image as a responsible brand.

CSR communication	"1+N+M" reporting system	<ul style="list-style-type: none"> <li>• 2021 CSR Report of China Petrochemical Corporation</li> <li>• 2021 Sustainability Report of China Petroleum &amp; Chemical Corporation</li> <li>• CSR Report of Sinopec on the 10th Anniversary of the Exploration and Development of Shale Gas Field in Fuling</li> <li>• CSR Report of Sinopec on the 10th Anniversary of Partnered Assistance to Dongxiang, Gansu (2013-2023)</li> <li>• White Paper of Sinopec on Green and Low-carbon Development</li> <li>• CSR reports on Sinopec presence in Xinjiang, Qinghai and Jiangsu, among other provinces</li> </ul>
	Newspapers	<ul style="list-style-type: none"> <li>• China Petrochemical News</li> <li>• Sinopec magazine, etc.</li> </ul>
	New media	<ul style="list-style-type: none"> <li>• Sinopec News App</li> <li>• Sinopec weibo: <a href="http://weibo.com/sinopec">http://weibo.com/sinopec</a></li> <li>• Sinopec WeChat: sinopecnews</li> <li>• Fenjing Sinopec WeChat: ghi_8e30ffacfdbb</li> <li>• Sinopec Blackboard News WeChat: shhbb2014</li> <li>• Sinopec V WeChat: gh_fdc4f34963a8</li> <li>• Douyin: zgsh</li> <li>• Twitter: @SinopecNews</li> <li>• Facebook: @Sinopec</li> <li>• YouTube: Sinopec</li> </ul>
	"Internet+"	<ul style="list-style-type: none"> <li>• Sinopec official website: <a href="http://www.sinopecgroup.com/group/">http://www.sinopecgroup.com/group/</a></li> <li>• Sinopec News website: <a href="http://www.sinopecnews.com">http://www.sinopecnews.com</a></li> </ul>
CSR communication	"Sinopec Open House" activities	<ul style="list-style-type: none"> <li>• "Sinopec Open House" launched for 12 years in a row</li> </ul>
	CSR industrial exchanges	<ul style="list-style-type: none"> <li>• One of the first members of the "Central Enterprises ESG Alliance"</li> <li>• Participated in releases of the <i>Blue Paper on the CSR Performance of Central Enterprises (2022)</i> and <i>Blue Paper on the Overseas CSR Performance of Central Enterprises (2022)</i>, and conferences including the "ESG Training Conference for Listed Central Enterprises"</li> <li>• Participated in "ESG China Forum 2022 Spring Summit", "ESG China Forum 2022 Summer Summit", "14th CSR Sharing Open Lecture", "5th Beijing CSR Exhibition", and other China Social Responsibility 100 Forum conferences</li> <li>• Participated in "China · CSR Forum" jointly launched by China News Service and China News Weekly</li> <li>• Participated in the "International Conference on CSR Reporting" and other conferences</li> </ul>

# Advancing ESG building

Sinopec actively guides affiliated listed companies to operate more responsibly, strengthens ESG management, and advances ESG practice in terms of risk management, complaint operation, anti-corruption, technological innovation, environmental protection, safe development, win-win partnership, community development and rural revitalization, to protect the rights of stakeholders. Sinopec prompts affiliated listed companies to disclose ESG information and show their ESG performance and achievements. In addition, Sinopec takes active part in ESG-related exchanges, the preparation of the *Blue Paper on the Overseas CSR Performance of Central Enterprises* organized by SASAC, and ESG Training Conference for Listed Central Enterprises, and is among the first members of the "Central Enterprises ESG Alliance". In doing so, Sinopec aims to promote ESG system construction in China.



Special

# Creating a CSR reporting system and spreading CSR stories in diverse ways

Fulfilling CSR, creating social values and promoting sustainable development is a mission endowed by the CPC Central Committee to central enterprises in the new era, as well as an inevitable path to high-quality development and world-class enterprises. Based on the "3 steps and 10 methods" theory for CSR management, Sinopec keeps improving CSR management and innovative CSR practice, and continues to enrich the forms of communication dominated by CSR reports, so as to forge its image as a responsible brand.

## Creating the "1+N+M" reporting system and building a brand highlighting CSR communication

After years of practice, based on national strategies, social concerns and stakeholder demands, Sinopec has developed the "1+N+M" reporting system and a regular release mechanism. To be specific, "1" refers to the annual CSR reports of the Group, "N" refers to special issue reports, and "M" refers to regional reports. The purpose is to increase communication and exchanges through a variety of reports, spread its CSR philosophy and practice, improve brand reputation and enhance its soft power.

Sinopec's "1+N+M" reporting system	"1"	CSR reports	Released 16 annual CSR reports	Rated 5 Stars for 9 consecutive years; and rated 5 Stars-plus, the highest level, for 3 years in a row by Chinese Expert Committee on CSR Report Rating
	"N"	Reports on paired assistance	Released 3 reports on targeted poverty alleviation	White Paper of Sinopec on Targeted Poverty Alleviation (2002-2016) White Paper of Sinopec on Targeted Poverty Alleviation (2017-2018) Report of Sinopec on Poverty Alleviation through Consumption
			Released 4 reports on paired assistance	White Paper of Sinopec in Tibet (2002-2017) CSR Report of Sinopec in Xinjiang (1978-2018) CSR Report of Sinopec Helping Dongxiang, Gansu Province with Poverty Alleviation (2013-2020) CSR Report of Sinopec on the 10th Anniversary of Helping Dongxiang, Gansu Province with Poverty Alleviation (2013-2023)
			Released 2 reports on environmental responsibility performance	White Paper of Sinopec in Environmental Protection (2012) White Paper of Sinopec in Green and Low-carbon Development (2022)
	Released 1 report on scientific and technological innovation	Report of Sinopec on Scientific and Technological Innovation in 2022		
	Released 2 reports on product responsibility performance	ESG Report of Sinopec on Shale Gas Development CSR Report of Sinopec on the 10th Anniversary of Shale Gas Exploration and Development in Fuling		
	"M"	Reports on overseas CSR performance	Released 6 reports on overseas CSR performance	Sinopec in Brazil Sinopec in Africa Sustainability Report of Sinopec Serving the Belt and Road Initiative - Sinopec in Saudi Arabia Sustainability Report of Sinopec Serving the Belt and Road Initiative in Saudi Arabia Sustainability Report of Sinopec Serving the Belt and Road Initiative in Hong Kong Sustainability Report of Sinopec Serving the Belt and Road Initiative - Sinopec in Russia
	Released reports on regional development for years in a row	Sinopec in Anhui, Sinopec in Guangxi, Sinopec in Hubei, Sinopec in Hunan, Sinopec in Shandong, Sinopec in Tianjin, Sinopec in Zhejiang, Sinopec in Jiangsu, Sinopec in Shanghai, Sinopec in Sichuan, Sinopec in Qinghai, etc.		



## Communication through diverse channels to tell good stories of CSR performance by Sinopec

Sinopec publicizes CSR reports through websites, press conferences and media release, among other ways, to promote CSR information to be effectively spread, received, analyzed and responded to and make more stakeholders learn about its stories about CSR performance.



In May 2022, Northwest Oilfield, Tahe Refinery and Xinjiang Petroleum, Sinopec affiliated enterprises in Xinjiang, jointly held a press conference for the "Sinopec in Xinjiang" CSR report



In February 2023, Sinopec released the CSR Report of Sinopec on the 10th Anniversary of Helping Dongxiang, Gansu Province with Poverty Alleviation (2013-2023) in Dongxiang County





# Outlook

2023 is the first year in which the guidelines of the 20th CPC National Congress is comprehensively implemented, a critical year during the 14th Five-year Plan period, and the 40th birthday of Sinopec.

Going forward, we at Sinopec will keep our mission in mind and strive for better achievements. We'll thoroughly learn the guidelines of the 20th CPC National Congress and the important directives given by Chinese President Xi Jinping when inspecting Shengli Oilfield; take up our new responsibility; forge ahead on the new journey with confidence and persistence; and always bear in mind our new mission of "building a highly appealing and cohesive Sinopec with a strong support for national strategies and people's livelihood". In doing so, we aim to promote high-quality development in all aspects, accelerate the move towards a world-class enterprise, write a new chapter for the modern Sinopec with Chinese characteristics, and make greater contribution to the building of a modern socialist country and the great rejuvenation of the Chinese nation on all fronts.



# Appendixes

## Key performance

	Indicator	Unit	2020	2021	2022
Economic performance	Total assets	RMB100 million	22,400	24,181	25,433
	Operating revenue	RMB100 million	21,423	27,895	33,669
	Taxes and fees paid	RMB100 million	2,977	3,418	3,509
	Domestic crude oil production	10,000 tons	3,514	3,515	3,532
	Domestic natural gas production	100 million m <sup>3</sup>	303	339	353
	Offshore equity oil and gas equivalent	10,000 tons	3,672	3,643	3,501
	Refining capacity	100 million tons per year	2.96	3.02	3.02
	Crude processing volume	10,000 tons	23,860	25,528	24,227
	Number of gas stations bearing the Sinopec logo	Set	30,713	30,725	30,808
	Sales volume of refined oil products (Hong Kong exclusive)	10,000 tons	16,799	17,131	16,255
	Ethylene production	10,000 tons	1,206	1,338	1,344
	Turnover of chemical products	10,000 tons	7,603	7,289	7,002
	Customer complaint settlement rate in refined oil product sales	%	100	100	100
	Lubricant products customer loyalty	%	93	93	94
	Customer complaint settlement rate in lubricant product sales	%	100	100	100
	Customer complaint settlement rate in chemical product sales	%	100	100	100
	Number of patents applied for at home and abroad	Item	7,972	9,338	10,136
	Number of patents granted at home and abroad	Item	5,140	5,844	7,502

Environmental performance	Indicator	Unit	2020	2021	2022
	Year-on-year changes in industrial water intake	%	-1.1	-1.1	-1.1
	Up-to-standard rate of externally discharged wastewater	%	100	100	100
	Carbon trading volume	10,000 tons	360	970	271

Social performance	Indicator	Unit	2020	2021	2022
	Number of employees	10,000 persons	60.8	59.3	57.3
	Collective contract coverage rate	%	100	100	100
	Labor contract coverage rate	%	100	100	100
	"Insurance and Housing Fund" coverage rate	%	100	100	100
	Rate of payment as required for "Insurance and Housing Fund"	%	100	100	100
	Proportion of minority employees	%	3.2	3.3	3.5
	Proportion of female employees	%	31.0	30.2	29.2
	Proportion of women in management positions	%	12.6	12.7	12.9
	Proportion of employees who join the trade union	%	100	100	100
	Occupational health check rate among employees	%	99.9	99.9	100
	Physical check and health record coverage rate	%	99.9	99.9	100
	Social donations	RMB100 million	4.39	3.37	5.06
	Input in the assistance to Tibet and Qinghai (headquarters)	RMB10,000	4,685	5,154	6,136
	Input in the paired assistance to revitalize rural areas receiving (headquarters)	RMB10,000	—	14,070	16,697
	Number of financed students with financial difficulties	Person	1,170	2,854	1,500



## Index of indicators

Contents	UN SDGs	GRI Standards	CASS-CSR4.0	Pages
About the report		2-2, 2-3	P1.1-1.3	P01
Message from Chairman		2-22, 2-23	P2.1-2.2	P04-05
About us		2-1, 2-6, 2-9, 2-27, 201, 409, 419	P4.3-4.4, M1.1, M1.4, S1.2	P07-09
Highlight I: Sinopec contributes its four decades of efforts and achievements to China's modernization	Goals 7,9,16	203	P3.1-3.2, M2.1, M2.12, M3.1, M3.4	P10-13
Highlight II: Sinopec makes achievements in the extraordinary decade of the new era, and its new benchmark establishes new image	Goals 1,3,7,8,9,11, 13,15	203, 304, 305, 413	P3.1-3.2, M2.1, M2.4, S4.5, S4.9, S4.12, E1.9, E2.4	P14-17
Highlight III: Ten-year efforts bring huge changes in mountainous and rural areas, writing a new chapter for rural revitalization and common prosperity	Goals 1,2,3,4,5,6,8, 9,11	203, 413, 415	P3.1-3.2, S4.5, S4.8, S4.12-4.14	P18-27
<b>Clean energy ensures safe supply</b>	Goals 7, 9	Coordinating the development of integrated industries	M2.1, M2.4, M2.7	P30-31
		Accelerating the energy transition	M2.1, E2.6	P32-35
		Leading modern chemical industrial sector	M2.1	P36-37
		Strengthening innovation drivers	M2.4-2.7	P38-39
		Building a solid foundation of safety and security	S3.1-3.4,S3.6-3.7	P40-41
		Special: Important breakthroughs made in "Shendi Engineering Project"	M2.1, M2.4	P42-43
		Special: Accelerate the cultivation and growth of the hydrogen industry chain to build China's No.1 hydrogen energy company	M2.1, M2.4, E1.9, E2.4	P44-45

Contents	UN SDGs	GRI Standards	CASS-CSR4.0	Pages
<b>Advancing the building of a Beautiful China with a better environment</b>	Goals 7,13,14,15	Strengthening environmental management	E1.1-E1.2, E1.5	P48-49
		Boosting green operations	E2.8, E2.11-2.15, E2.17-2.18	P50-54
		Addressing climate change	E1.9, E1.12, E2.3-2.4, E2.6, E2.23-2.25	P55-57
		Protecting the ecological environment	E3.3-3.5	P58-59
		Special: Ten years of efforts to build a "Chinese model" of shale gas development, committed to developing "Fuling shale gas of the country"	M2.1, M2.4, E1.9, E2.4	P60-61
<b>Creditable cooperation for deepening mutual benefits</b>	Goals 3,5,8,12,17	Empowering employee growth	S2.1-2.8, S2.10-2.18	P64-67
		Improving customer experience	M2.1-2.2, M2.11-2.18	P68-70
		Building a responsible industry chain	M3.1, M3.3-3.4, M3.6, M3.10-3.12, M3.15-3.16	P71-75
		Special: Promoting brand-building in an all-round way to boost Sinopec's "signature brand"	M2.1-2.2, M2.4, S4.10	P76-77
<b>Pursuing a better life for people</b>	Goals 4, 11, 16	Making tax payment	S1.3	P80
		Participating in public welfare and charity programs	S4.6-4.11,E3.6	P80-85
		Serving society wholeheartedly	S4.6-4.11,E3.6	P86-87
		Special: The Gas Station That Cares - A Better Road Home, providing services for 10-plus years	S4.9-4.11	P88-89



Contents	UN SDGs	GRI Standards	CASS-CSR4.0	Pages	
Driving common prosperity through openness and sincerity	Goals 16, 17	Increasing cooperation on production capacity	203	M2.1, S4.1	P92-93
		Protecting the earth	304, 305, 403	S2.11, S3.3, E1.1, E1.3, E1.9, E2.1, E2.24, E3.4, E3.6	P94
		Absorbing overseas talents	401, 404, 405, 406	S2.15, S2.17, S4.2-4.3	P95
		Building harmonious communities together	203, 204, 413	P3.1, S4.1, S4.4, S4.10	P96-97
		Special: Collaborating with Saudi Arabia and setting an example for the cooperation under the Belt and Road Initiative	203, 304, 401, 404, 413	P3.1, M2.1-2.2, S4.2-4.3, S4.10-4.11, E1.3, E1.7, E2.7, E3.6	P98-99
Leading sustainable development through lean management	Goals 17	Improving CSR organization	102, 2-14	G1.1-1.2, G3.1-3.3, G4.1	P103
		Deepening CSR integration	102, 103, 3-1, 3-2	G2.1, G2.3	P104
		Creating new modes of CSR communication	102, 2-29	G2.4, G6.2-6.3	P105
		Advancing ESG building	102, 2-29	G2.3, G6.3	P105
		Special: Creating a CSR reporting system and spreading CSR stories in diverse ways	102, 2-16	G2.3-2.4, G3.2-3.3, G6.3	P106-107
Outlook			A1	P108-109	
Appendixes		Key performance	201, 302, 401, 403, 405, 415	A2	P110-111
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## Rating reports

### Rating report for the 2022 CSR Report of China Petroleum & Chemical Corporation

After being entrusted with the task by China Petroleum & Chemical Corporation, the Chinese Expert Committee on CSR Report Rating selected experts that made up a rating panel to rate the 2022 CSR Report of China Petroleum & Chemical Corporation (the "Report").

#### Rating basis

CASS-CSR 4.0 & China CSR Report Rating Standards (2020) of Chinese Expert Committee on CSR Report Rating.

#### Rating process

The rating panel reviewed and confirmed the CSR Report Process Materials Confirmation Letter submitted by the preparation group for the Report and relevant evidence materials;

The rating panel assessed the preparation process and contents of the Report, and drafted the rating report;

The Vice-Chairman of the Chinese Expert Committee on CSR Report Rating, the leader of the rating panel and experts on the rating panel jointly reviewed and signed the rating report.

#### Rating conclusions

##### Process (★★★★★)

The Group's CSR Office (Department of Publicity of the Party Group) led the report preparation group, controlled the overall direction and key nodes, and coordinated efforts to advance the preparation; the CSR Committee of the Board of Directors was responsible for the final review of the Report. The report is clearly positioned to be a major tool to improve CSR management, increase communication with the stakeholders and enhance brand reputation. Materiality issues were identified in combination with national macro policies, CSR standards at home and abroad, industrial benchmarking analysis, corporate strategies and social concerns. The CSR Work Management Measures (2022) were developed and issued, to push affiliated enterprises including China Petroleum & Chemical Corporation, Northwest Oilfield and Zhenhai Refining & Chemical Company to prepare CSR reports, and intensify vertical CSR management. Sinopec plans to hold a special press conference to release the Report, and present the Report in electronic and printed versions, and in both Chinese and English. The performance in the process is excellent.

##### Materiality (★★★★★)

The Report discloses issues critical to the petroleum and chemical industry, including the implementation of macro policies, product quality management, sustainable product supply, safe product transport, occupational health management, safe production, scientific and technological innovation, energy conservation and emission reduction, development of the circular economy, response to climate change, ecological protection and restoration, and supply chain accountability, in a systematic and detailed manner. So, the performance in materiality is excellent.

##### Completeness (★★★★★)

The Report systematically discloses 92.75% of the core measures for the petroleum and the chemical industry from perspectives including "Clean energy ensures safe supply", "Advancing the building of a Beautiful China with a better environment", "Creditable cooperation for deepening mutual benefits", "Pursuing a better life for people", "Driving common prosperity through openness and sincerity" and "Leading sustainable development through lean management". So, the performance in completeness is excellent.

##### Balance (★★★★★)

The Report discloses negative information, such as the number of environmental incidents caused by oil leakage, number of sudden environmental pollution and ecological damage incidents, and the number of penalties resulting from insufficient information disclosure, and details the establishment of the awarding system for environmental protection incident reporting at Sinopec Jinling to rectify the problem about plant smell. So, the performance in balance is excellent.

##### Comparability (★★★★★)

The Report discloses 53 key measures in three straight years for vertical comparison, including the taxes and fees paid, crude oil processing volume, input in the assistance to Tibet and Qinghai (headquarters), proportion of female employees, up-to-standard rate of externally discharged waste water and carbon trading volume, and lists rankings, such as No.5 in Fortune Global 500, the world's No.1 by refining capacity, and No.1 of Class A central

enterprises by patent quality assessment results, for horizontal comparison. So, the performance in comparability is excellent.

##### Readability (★★★★★)

Still themed "Cleaner Energy, Better Life", the Report elaborates the philosophy, actions and performance of CSR performance in the year under an issue-focused framework to answer stakeholders' concerns. The cover is designed under a Chinese painting background, cleverly blending pictures about primary business and public welfare projects like "The Gas Station That Cares - A Better Road Home", "Love Station" and "Spring Bud Nursery". Selected photos about CSR performance were used in chapter pages to make the Report more identifiable and readable. "Extended reading" and embedded QR codes were also available to interpret the Report. So, the performance in readability is excellent.

##### Innovation (★★★★★)

The Report highlights three major responsibilities, including "Highlight I: Sinopec contributes its four decades of efforts and achievements to China's modernization; Highlight II: Sinopec makes achievements in the extraordinary decade of the new era, and its new benchmark establishes new image; and Highlight III: Ten-year efforts bring huge changes in mountainous and rural areas, writing a new chapter for rural revitalization and common prosperity" in the beginning part. Each chapter started with the guiding principles of the 20th CPC National Congress and ended with the "special", to highlight the big-picture perspective of CSR moves and demonstrated Sinopec's fulfillment of CSR as a central enterprise. The "top 10 CSR demonstration projects" list was released the first time, to promote CSR performance by rating and improving CSR management. Special reports, including the CSR Report of Sinopec on the 10th Anniversary of the Exploration and Development of Shale Gas Field in Fuling and the CSR Report of Sinopec on the 10th Anniversary of Partnered Assistance to Dongxiang, Gansu (2013-2023), were released, to build a diverse reporting matrix and enhance the effects of communication.

##### Overall rating (★★★★★+)

The rating panel gave the 2022 CSR Report of China Petroleum & Chemical Corporation a 5-star rating in terms of process, materiality, completeness, balance, comparability, readability and innovation, and an overall rating of 5-star, making the Report a perfect example of CSR reports.



Sinopec CSR Report has won the five-star rating for 12 consecutive years.

#### Suggestions on improvement

Increased disclosure of core industrial indicators to make the Report more complete.

*Signature*

Vice Chairman of the Chinese Expert Committee on CSR Report Rating

*Signature*

Leader of the rating panel

*Signature*

Expert on the rating panel





## Feedback

Respected readers:

Thank you for taking time out of your busy schedule to read the 2022 CSR Report of China Petroleum & Chemical Corporation. We welcome all suggestions on the Report, and will listen to every reader attentively.

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## Your information

Name: .....

Tel: .....

Affiliation: .....

E-mail: .....

## Report assessment

	Completeness	Logicality	Readability	Innovation
Overall assessment				
Clean energy ensures safe supply				
Advancing the building of a Beautiful China with a better environment				
Creditable cooperation for deepening mutual benefits				
Pursuing a better life for people				
Driving common prosperity through openness and sincerity				
Leading sustainable development through lean management				

Note: Each rating is on a five-point scale, with 1 the lowest score and 5 the highest score.

## Your opinions

Your opinions or suggestions about the report

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