

**Cleaner Energy
Better Life**



北京2022年冬奥会官方合作伙伴
Official Partner of the Olympic Winter Games Beijing 2022

2021 Sinopec Corp. Sustainability Report



Report Information

The 2021 sustainability report (hereinafter referred to "SR") is the 16th sustainability report of China Petroleum & Chemical Corporation (hereinafter referred to as "Sinopec Corp.", "the Company" or "We"). The report introduces our sustainability philosophy and policies and our environmental protection, social responsibility, and corporate governance (hereinafter referred to as "ESG") performances in 2021, and highlights on how we responded to the expectations and concerns of our stakeholders.

Report Perimeters

This report covers our business activities from 1 January to 31 December 2021, with some content from beyond this time span for continuity reasons. The information herein comes from internal data, materials from our subsidiaries, and relevant public information. Unless otherwise specified, all monetary figures shown in this SR are expressed in RMB (yuan).

Unless otherwise specified, the data in this SR covers the data of Sinopec Corp. and its wholly-owned and controlled subsidiaries.

The Company's Board of Directors reviewed and approved this report on March 25, 2022. The report is available in Chinese and English versions, and the Chinese version shall prevail in case of any conflict or inconsistency. The report can be downloaded at the website: <http://www.sinopec.com/listco/en>.

References

This report is prepared in accordance with the Guideline for the Self-Regulatory Supervision of Listed Companies of Shanghai Stock Exchange (SSE) No. 1 - Standardised Operation, the Environmental, Social and Governance Reporting Guide issued by Hong Kong Stock Exchange (HKEx), Ten Principles of the United Nations Global Compact (UNGC), and the criteria of the Global Compact Advanced Communication on Progress, and with reference to the 2021 GRI Universal Standards (GRI Standards) and GRI 11: Oil and Gas Sector 2021 issued by the Global Sustainability Standards Board (GSSB). The Addressing Climate Change section is also prepared with reference to the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) and Climate Disclosure Guidance issued by Hong Kong Stock Exchange (HKEx).

Disclaimer

This report includes certain forward-looking statements with respect to the results of our business operations and certain plans and conditions. All statements that address activities, events or developments that we expect will or may occur in the future, other than statements of historical fact, are forward-looking statements and by their nature involve risk and uncertainty. This means that actual results may differ materially from those indicated in the forward-looking statement due to a number of factors and uncertainties. The forward-looking statements are made by March 25, 2022 and the Company undertakes no obligation to update these forward-looking statements unless required by an appropriate regulatory authority.

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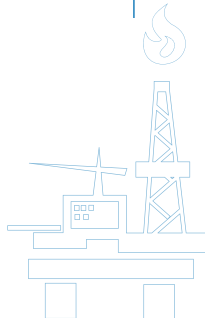
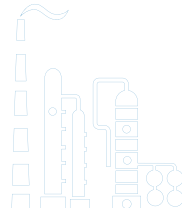
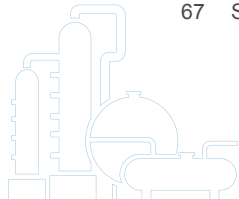
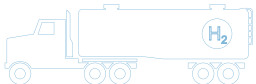
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Cleaner Energy Better Life



Letter from Chairman



Dear Friends,

On behalf of the Board of Sinopec Corp., I would like to express our heartfelt gratitude for your continuing attention and support!

Looking back in 2021, confronted with the severe challenges of the Covid-19 pandemic, climate change, energy security, etc., people around the world desired for green and low-carbon development more than ever. The Chinese government attached great importance to the implementation of the UN 2030 Agenda for Sustainable Development, succeeded in eliminating absolute poverty, made steady progress in transition towards green and low-carbon development, contributed to the global fight against the pandemic, and promoted the building of a community with a shared future for mankind. As a LEAD member of the United Nations Global Compact and a major player in the energy and chemical industries, Sinopec Corp. embraces green development transformation, takes "net zero" of carbon emissions as the ultimate goal and firmly devotes to a green, low-carbon, safe, responsible, and high-quality growth path to the sustainable development of our society. During the last year, we vigorously implemented our world-leading development strategy, actively integrated into the new development paradigm, and got good results in promoting high-quality development. We achieved the best performance in the past decade, further integrated our business development with ESG and made new progresses in key areas such as corporate governance, technological innovation, energy supply, green development, etc..

Focusing on compliance and efficiency, we continued to improve governance efficiency. We elected new members to the Board of Directors and the Board of Supervisors and made appointments to senior management, enhancing diversity on the board level and all independent directors fulfilled their duties with diligence. We optimized a number of corporate governance practices, promoted the construction of the compliance management system, and enhanced the effectiveness of the internal controls. We further strengthened the ESG governance and deepened the benchmarking programme of improving management, further enhancing the management efficiency. We constantly reinforced planning and coordination of the overall supervision to better serve supervisory duties, and strengthened communications with our stakeholders to maintain the Company's transparency.

Focusing on innovation-driven development, we achieved fruitful results. Aiming to become a technology leading company, we continued to deepen reform of our technology management mechanism, expedite the construction of new R&D institutions and tech incubators, and effectively stimulated the innovation vitality. We vigorously promoted research into core technologies in key areas such as exploration and development, new chemical materials, new energy, green and low-carbon development, etc., and made significant progresses in shale oil exploration and development, direct catalytic cracking of crude oil to ethylene, high-end carbon materials, medical materials, proton exchange membrane electrolysis hydrogen

production technology, and accelerated the layout of such cutting-edge technologies such as fuel cells. *Development and Industrial Application of Megaton-Scale Steam Cracking and Recovery Technology for Complex Feedstocks* and other six technological projects won the State Science and Technology Award. In 2021, we were granted with a record high of 4,853 patents, ranking the top among China's large enterprises.

Focusing on sustainable and reliable energy supply, we endeavoured to build a diversified supply system. We intensified exploration and development of oil and gas, increased the reserves and production, and enhanced reserve capacity, providing a strong guarantee for the stable development of society and economy. We promoted the transition to low-carbon energy and actively coordinated the development of natural gas production, supply, storage, and marketing, yielding a continuous share increase of natural gas in the total production of oil and gas production. To enhance the green energy supply capacity, we increased the supply of natural gas and actively advanced the layout of the hydrogen industry, constructed eight hydrogen supply centres and accelerated the development of photovoltaic projects according to local conditions, and gradually promoted the supply of biomass energy. We are dedicated to transforming ourselves into an integrated energy service provider for oil, gas, hydrogen, electricity and non-fuel businesses and becoming a leader in clean energy supply to provide safer, cleaner, and more diverse energy for social development.

Focusing on green and low-carbon development, we endeavoured to build a clean and beautiful home. We actively promoted the green and clean development strategy and the Green Enterprise Campaign, deepened the pollution prevention and control and ozone pollution control action, and the emissions of major pollutants and the amount of industrial freshwater consumption continued to decline and the solid waste was disposed by 100%. We took well-ordered steps to carry out actions for carbon peaking and carbon neutrality: actively implemented the "Energy Efficiency Improvement Plan" and enhanced the control of total energy consumption and energy intensity; built the million-tons CCUS demonstration project to further promote the emission reduction and utilisation of carbon; strengthened the management of methane emission control and jointly established the methane emission control alliance of Chinese oil and gas enterprises; and continuously improved the carbon asset management and enhanced the carbon absorption capacity of forest and grass.

Focusing on safe and healthy development, we improved intrinsic safety management. We comprehensively promoted the establishment of the HSE management system, published the HSE Management System Handbook, conducted the three-year safety rectification programme, accelerated the hidden danger treatment progress, and improved the capability of safety risk control. We further strengthened the safety qualification inspections

of contractors to improve management, and enhanced operation safety management. We developed a special safety supervision mechanism, eliminated workplace safety hazards, and improved the deployment of safety equipment, improving the management of employees' health. We strictly continued the routine pandemic control measures, and effectively addressed the impact of catastrophic floods and typhoons. We maintained safe and stable operations throughout the year.

Focusing on serving the people for a better life, we fulfilled our social responsibilities as a corporate citizen. Adhering to the principle of putting the people first, we are committed to providing high-quality public products, closely combining our high-quality development with satisfying the people's needs for a better life, and fulfilling our responsibilities as a large enterprise. We expanded cooperation with our industrial chain partnerships to lead the high-quality industry development. We developed three distinctive brands of industrial support, education support, and marketing support to promote rural revitalization. We made efforts to fight against the pandemic, provided rescue and relief to disaster victims, and strengthened flood control and disaster relief, and promoted public welfare programmes such as *Warm Stations Programme* and *Driver's Home Programme for Truck Drivers*, bringing security and happiness to people. As an official partner of the Olympic and Paralympic Winter Games Beijing 2022, we provided comprehensive clean energy and executed the concept of *Clean Energy for the Winter Olympics and Paralympics*.

Looking ahead to 2022, Sinopec Corp. will fully and faithfully implement the new development philosophy, better integrate ESG into strategy and operation, and continuously improve our ESG management and performance. We will continue to integrate reform and development with corporate governance, energy supply with green development, and transformation and upgrading with technological innovation. Adhering to the principle of openness, sharing, and win-win cooperation, we will work together with stakeholders to explore leading ESG practices for sustainable development, and vowing to make new achievements in promoting sustainable economic and social development. We cherish your valuable suggestions for the Company's sustainable development, and look forward to joining hands with you to build a better life and create a brighter future!

Ma Yongsheng

Chairman

March 25, 2022

Board's Statement on ESG Governance

The Company's Board of Directors made the following statement in accordance with the requirements of the "Environmental, Social and Governance Reporting Guidelines" of the Stock Exchange of Hong Kong Limited (hereinafter referred to as the "Hong Kong Stock Exchange").

The Board of the Company promises that the Company and its Board of Directors strive to follow the Requirements of the Guidelines for the Governance of Listed Companies issued by the China Securities Regulatory Commission, and the Environmental, Social and Governance Reporting Guidelines issued by Hong Kong Stock Exchange, and continuously optimise its environmental, social and corporate governance mechanism. We will further strengthen the Board's role in supervising and participation in ESG related issues, and vigorously integrate ESG considerations into the Company's major decision-making processes and various business practices.

Board's Role in ESG Governance	ESG Management	Targets, Indicators and Review of Progresses
The Board of Directors bears the ultimate responsibility for Sinopec Corp.'s ESG governance. The Sustainability Committee under the Board of Directors is responsible for overseeing the implementation and progress of the Company's sustainability and ESG strategies and plans, overseeing the commitments and performances of the Company on key ESG issues such as climate change, environmental protection and compliance management; overseeing key information regarding sustainability issues related to the Company's businesses and approving the Company's annual sustainability reports; coordinating with other committees and functional departments to incorporate ESG factors into internal control, risk management, strategic planning, remuneration and incentives, etc., and reporting ESG performances and major plans to the Board of Directors. The Sustainability Committee is composed of four directors, including one independent director, with Chairman of the Board serves as the chairperson of the committee. The Committee convenes at least once each year, and can hold ad hoc meetings when necessary. The Committee shall inform the Board on ESG related issues in a timely manner.	The Company attaches great importance to ESG management and regularly analyses ESG-related risks and opportunities in the context of macro policies, socio-economic environment, and the strategy, production and operation, and stakeholder engagement of the Company. It also carries out materiality analysis by conducting stakeholder research and expert consultation, to identify key ESG issues and continuously optimise its ESG management.	The Company has established an ESG target management mechanism, with ESG performance indicators and regular reviews of them, covering its development plans and key tasks, such as clean energy utilisation, climate change, environmental protection, safety management, and anti-corruption and compliance, etc. To ensure the achievement of these targets, the Company signs annual performance commitment documents with management staff and subsidiaries to integrate the Company's key ESG performance indicators, such as workplace safety, energy conservation and environmental protection, and operation compliance, as the KPIs for key management staff. To ensure the reliability of our ESG performance indicators, the Company hired KPMG Hua Zhen LLP to conduct an independent assurance of the Sinopec Corp. 2021 Sustainability Report, and issued independent assurance opinions regarding 17 ESG performance indicators of the Company.

China Petroleum & Chemical Corporation Board of Directors
March 25, 2022

About Us

Sinopec Corp. is one of the largest integrated energy and chemical companies in China that headquartered in Beijing. The Company was listed in Hong Kong, New York and London Stock Exchanges respectively in October 2000, and in Shanghai Stock Exchange in August 2001.

	Exploration and Production	- Sinopec Corp.'s main oil and gas assets are located in China. Overseas, we only participate in four joint projects overseas, including UDM in Russia, Block 18 in Angola, CIR in Kazakhstan, and Mansarovar in Colombia respectively, and there is not any other oil and gas assets overseas. - In 2021, Sinopec Corp.'s crude oil production was 279.76 million barrels and natural gas production was 1,199.44 billion cubic feet.
	Refining	- Sinopec Corp.'s primary refining facilities are located in China. Overseas, and we hold shares in a refining joint venture project in Yanbu, Saudi Arabia. - In 2021, Sinopec Corp. processed 255.28 million tonnes of crude oil and produced 146.21 million tonnes of refined oil products.
	Marketing and Distribution	- Sinopec Corp. has a well-established marketing network for refined oil products in China, with 30,725 service stations. - Sinopec Corp. sold a total of 220.79 million tonnes of refined oil products in 2021.
	Chemicals	- Sinopec Corp.'s primary chemical production facilities are located in China, producing synthetic resin, synthetic fibre, synthetic rubber, basic organic chemicals and other petrochemical products. The only overseas projects include the Sibul project and the Amur project under construction. - In 2021, Sinopec Corp. produced 13.38 million tonnes of ethylene.
	International Trade	Sinopec Corp. is an important trader of crude oil in China, engaging in the international trade of crude oil, refined oil products and chemical products.
	Technology R&D	- We have four State Key Laboratories, five National Engineering Research Centres, a National-Provincial Joint Engineering Research Centre, a National Engineering Lab, four National Energy R&D (Experiment) Centres, a National Testing and Evaluation Platform, and two State-Certified Enterprise Technology Centres. - As of the end of 2021, Sinopec Corp. had been granted 43,563 patents cumulatively, of which 4,853 were granted within the year.

Recognitions and Awards

Ranked No.1 of Fortune 500
China in 2021

Won the title of Golden Bauhinia-the
Best Listed Companies

Won the title of Environmentally and
Socially Responsible Enterprise 2021

Won the title of Enterprise with
Outstanding Contribution to
Environmental Protection 2021

Won the title of China Low Carbon
Model for the 11th consecutive year

Won the title of Responsible
Enterprise 2021

The only company in China that has won this
honor for 13 consecutive years

Won the Responsibility
Golden Bull Awards

Won the Hong Kong Corporate
Governance and ESG Excellence
Awards 2021

1 Corporate Governance

Sinopec Corp. has established a solid corporate governance structure. The Company routinely optimises basic systems such as the General Meeting of Shareholders, the Board of Directors, and the Board of Supervisors. To lay a solid foundation for sustainable development, the Company strives to integrate sustainability concepts into its development strategy, corporate culture, and all aspects of day-to-day operation, and actively protect the legitimate interests of investors, communities, customers, employees, and other stakeholders.

- Development Strategy
- Governance System
- Business Integrity and Operation Compliance
- Risk Management and Internal Control
- Sustainability Management
- Technological Innovation
- Digital Transformation

Development Strategy

Adhering to the development concept of "innovation, coordination, green, openness and sharing", the Company further implements the six strategies including "value creation, market orientation, innovation driven, green and clean, open cooperation and talent-cultivation", expedites formation of the development pattern of "One Foundation of energy and resources, Two Wings of clean fuels and advanced chemicals, and Three Growth Engines in new energy, new materials, and new economy", and strives to build a world-leading clean energy and chemical company.



Governance System

Sinopec Corp. strictly abides by the Articles of Association and provisions on the supervision and administration of securities at both domestic and international levels, and constantly improves its corporate governance system. In 2021, the Company completed the succession of the Board of Directors and the Board of Supervisors with the members of the eighth Board of Directors and the Board of Supervisors elected, adjusted the setting of Board Committees, and strengthened the corporate governance structure.

Board of Directors

For details of the members of the Board, please refer to the Sinopec Corp. 2021 Annual Report.



As the end of 2021

The proportion of female Directors

10%

The Company continues to optimise the Board's composition, standardise relevant mechanisms for the Board and its committees, improve the functions of the committees, and attach importance to the role of Independent Directors, laying a solid foundation for the sustainable development of the Company. The General Meeting of Shareholders of Sinopec Corp. approved and adopted the Articles of Association and the Rules of Procedure of the Board of Directors to establish legally binding provisions on the composition, functions and authorities, rules of procedure, and other related matters of the Board and its committees.

In 2021, the CSR Management Committee of the Board was restructured into the Sustainability Committee. The eighth session of the Board of Directors approved the amendments to the working rules of the Nomination Committee and the Sustainability Committee.

Effectiveness of the Board

To ensure the interests of the Company, its shareholders, as well as other stakeholders, the Board promotes the diligence of Directors through upgrading policies and

improving working mechanisms. The Company regularly prepares the report of the Board and issues Board's reports and annual reports to fully reflect the work performance of the Board.

Diversity of the Board

The Company has formulated the Board Diversity Policy, which stipulates that members of the Board shall be nominated and appointed based on the capabilities and experience necessary for the overall optimum operation of the Board, while also taking into account the targets and requirements for the Board's diversity. The Company's consideration of the diversity of the Board includes but is not limited to professional experience, skills, knowledge, length of service, regions, cultural and educational backgrounds, gender, age, and other factors. The present Board of Directors has extensive experience in different industries both home and abroad. Their professional backgrounds include petroleum and petrochemicals, economics, accounting, and finance, all of which are beneficial to ensuring the scientific decision-making of the Board. By the end of 2021, the proportion of female Directors in the Company was 10%.

Attendance of the Board

In accordance with relevant laws, regulations, and the Articles of Association, all members of the Board are diligent and conscientious in exercising their professional skills, standardising the exercise of their functions and authorities, earnestly implementing the resolutions of the General Meeting of Shareholders, and making scientific decisions for the sustainable development of the Company. In 2021, the Company held seven Board meetings with full attendance of the directors. Relevant information about the meetings is disclosed on the websites of related stock exchanges and our corporate website in the form of announcements.

Other Positions of Independent Directors

In accordance with the relevant requirements of China Securities Regulatory Commission, and to ensure that independent directors have enough time and energy to effectively perform their duties, the Company stipulates in the Articles of Association that "those who have concurrently served as an independent director in five listed companies" are not eligible to be an independent director of the Company.

Board Election

In accordance with the Articles of Association, directors shall be elected or replaced by the General Meeting of Shareholders, and each Board has a three-year tenure of office. After the end of the tenure, the General Meeting of Shareholders shall elect all members of the next Board and outline the nomination methods and procedures of directors in the Articles of Association and the Procedures for the Nomination of Director Candidates of Sinopec.

Independence of the Board

The Company has established a solid independent non-executive director system. Independent non-executive directors are chosen from prominent personnel and industry experts both home and abroad in strict accordance with the election procedures and terms of appointment stipulated in the Articles of Association. The number of independent non-executive directors shall account for at least one-third of the Board's total members. The Company requires the nominators to express their opinions on the qualifications and independence of the nominees as independent directors, and the nominees shall make a public statement to declare that they do not have a relationship with the Company that would influence their independent and objective judgment.

The Company's Terms of Reference of the Independent Non-Executive Directors require independent non-executive directors to fulfil their duties in good faith. When expressing independent opinions on company affairs, they should pay particular attention to the following matters: nomination and appointment of directors, appointment or dismissal of senior management personnel, remuneration of directors and senior management personnel, major related-party transactions, issues that may harm the rights and interests of minority shareholders, etc.

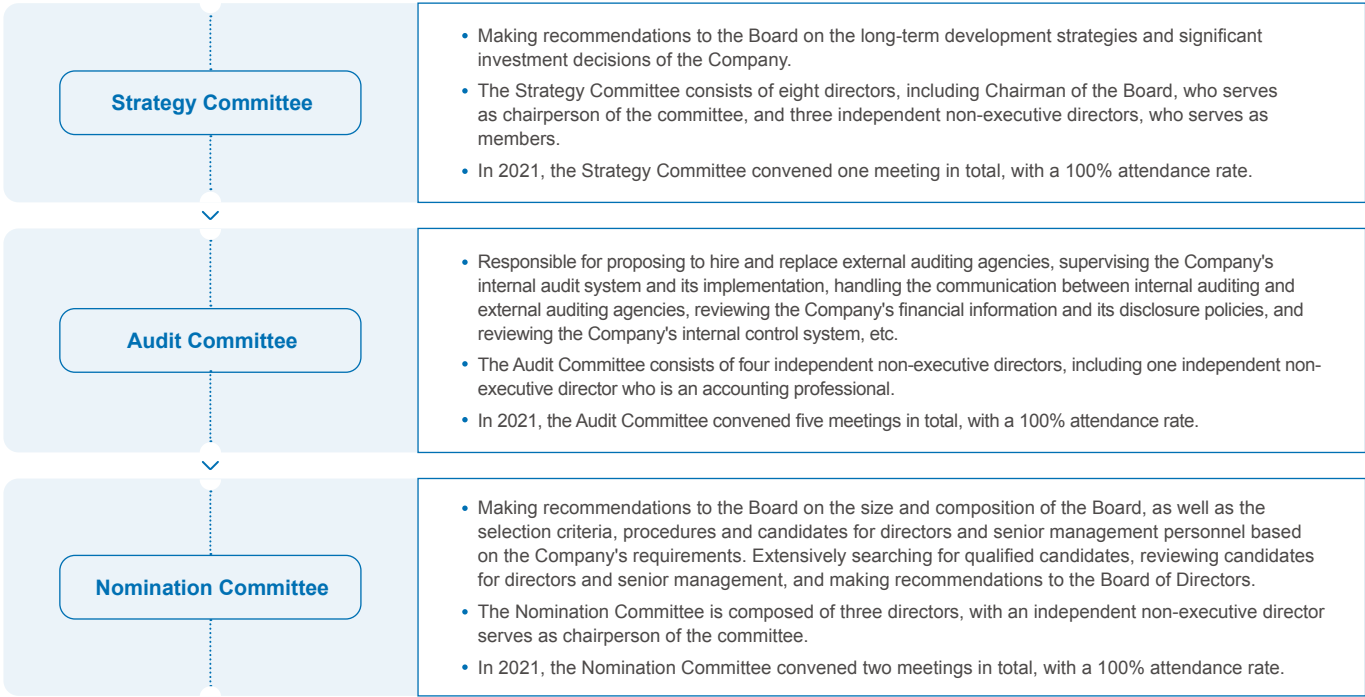
As of the end of 2021, the Company had four independent non-executive directors in the Board, accounting for 40% of its total members. Independent non-executive

directors fully participate in the work of five committees of the Board, three of whom serve as chairperson of the Remuneration and Appraisal Committee, the Audit Committee, and the Nomination Committee respectively.

The Articles of Association and related policy documents can be found at:

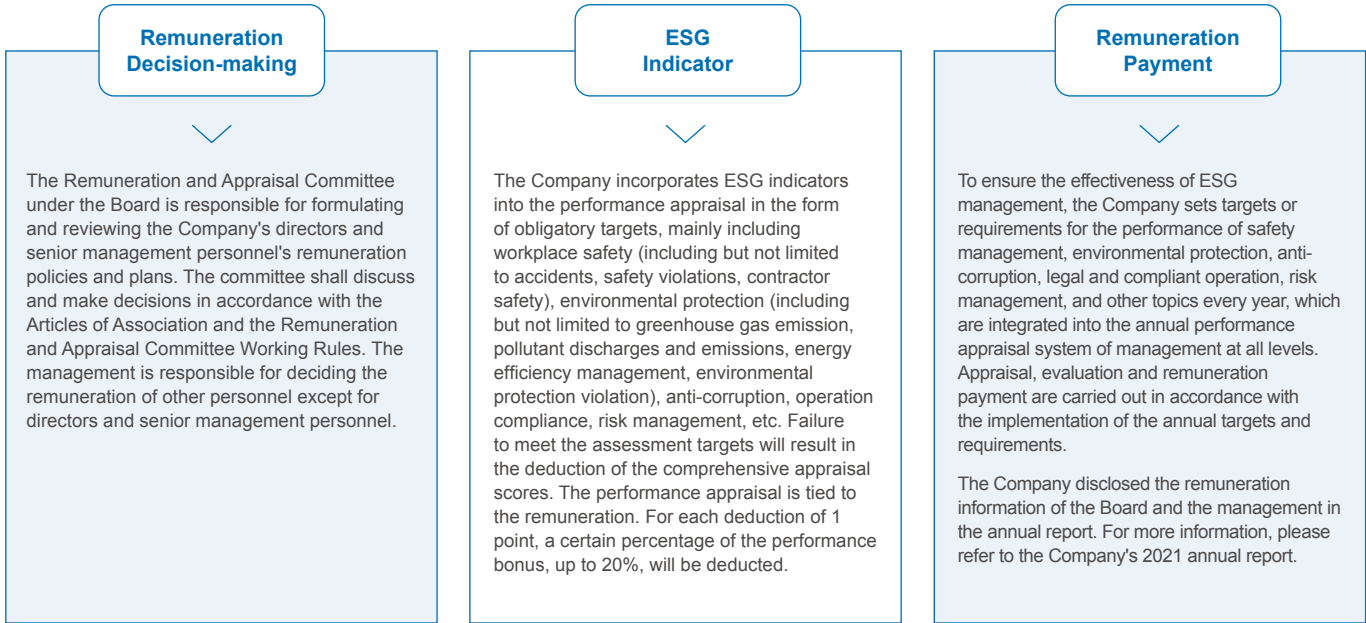
Board Committees

The Company has established five committees under the Board, which are the Strategy Committee, the Audit Committee, the Nomination Committee, the Remuneration and Appraisal Committee, and the Sustainability Committee. The committee conduct research on professional matters and present opinions and suggestions to the Board for decision-making. The members of the Board committees are directors of the Company. In 2021, the Company has inspected the duties and composition of each Board committee, broadened and expanded the scope of their duties, replaced the CSR Management Committee with the Sustainability Committee to optimise and expand its duties, and further promoted the in-depth integration of sustainability issues with the Company's operations.



Remuneration and Appraisal of Directors and Senior Management Personnel

Based on the relatively unified basic salary system, Sinopec Crop. has developed a salary distribution system that is based on job evaluation, performance contribution, and capability improvement.



Conflict of Interest Prevention

The Company requires directors, supervisors, and senior management personnel to act in good faith when performing their duties, avoid putting themselves in conflict of interests situations, and fully perform their duties such as giving priority to the Company's best interests, not exceeding their authorities, and not seeking personal gains from the Company's property.

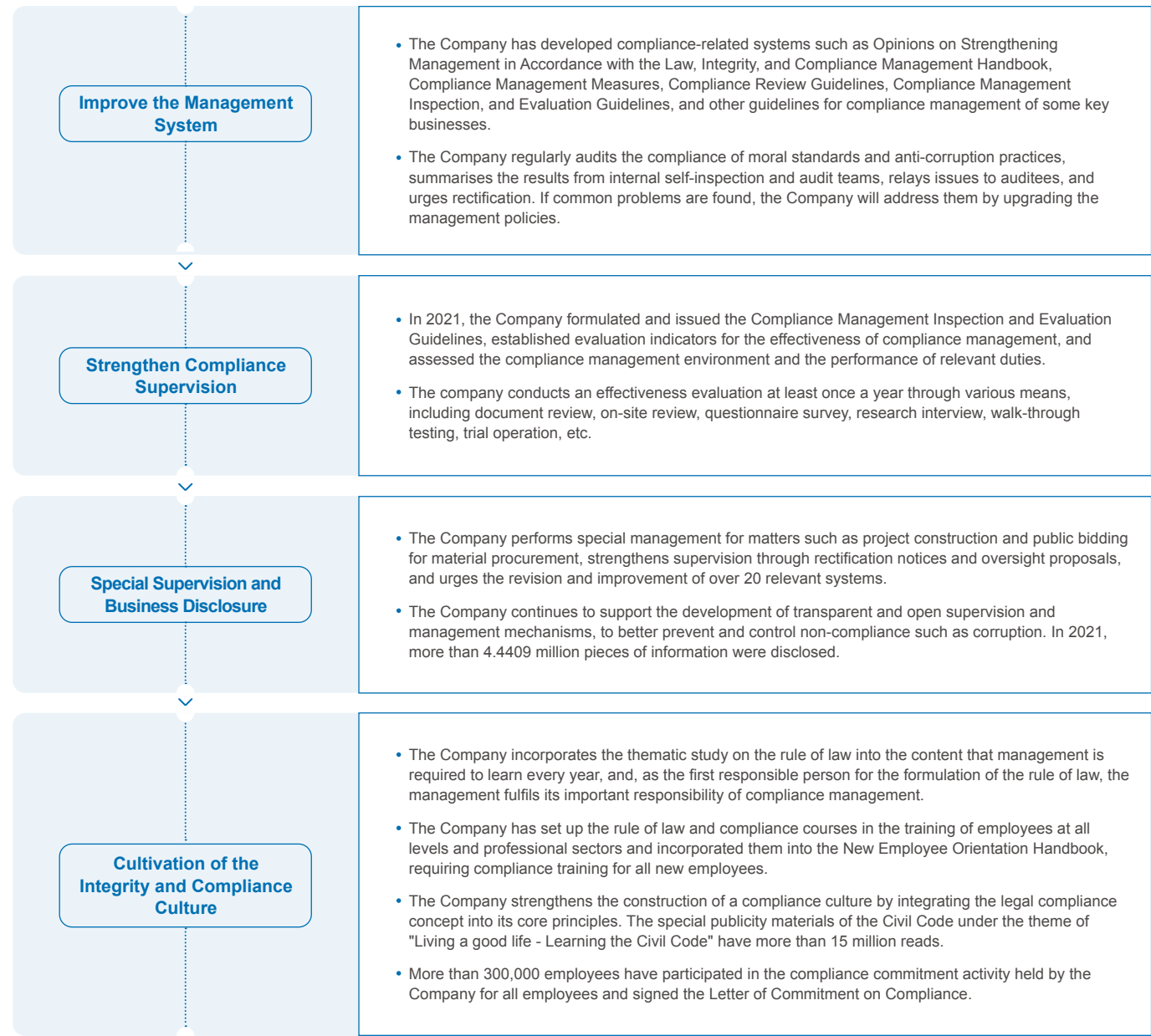
The Board of Supervisors is responsible for overseeing and inspecting the Company's business activities in accordance with laws and regulations and the Articles of Association and inspecting and correcting the performance of the duties of the Board and management personnel. The members of the Board of Supervisors are supervisors elected by the General Meeting of Shareholders and supervisors democratically elected by employees.

Business Integrity and Operation Compliance

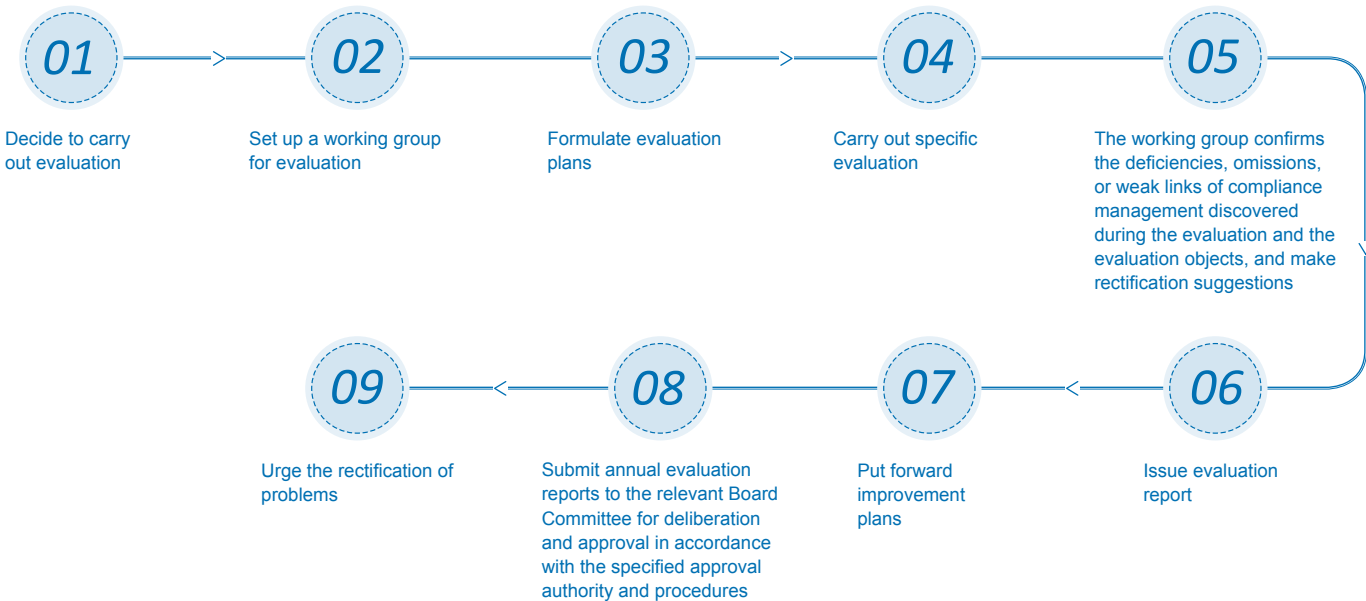
Compliance Management System

Sinopec Corp. adheres to the rule of law and the integrity culture of "honouring agreements and operating compliance", and considers integrity and compliance management as a critical cornerstone of the Company's long-term stability and growth. The Company continues to improve compliance management policies and systems, foster a good compliance culture, implement a "zero tolerance" policy towards corruption and violations of business ethics, and strictly deal with relevant violations of law and discipline, striving to eliminate all forms of corruption and promote integrity and compliance management.

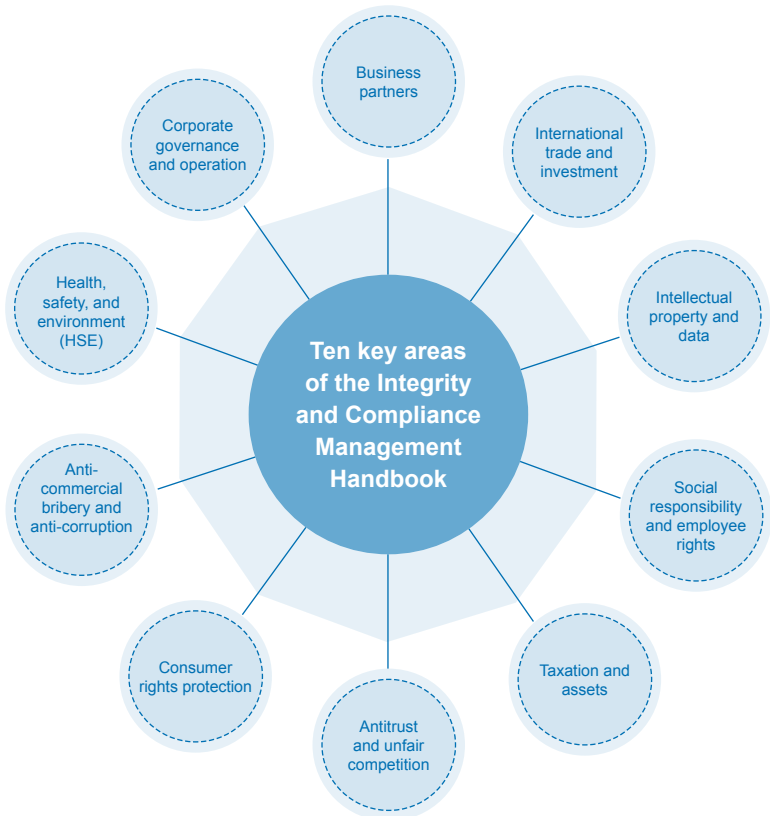
The Company has fully deployed and promoted the development of a compliance management system. All directly associated enterprises had developed a compliance management system construction plan. Throughout the reporting period, the Company had no major legal violations.



Process of compliance management inspection and evaluation



Employee Codes of Conduct



The Company has formulated the Employee Codes of Conduct, which provides behaviour guidelines for employees in areas such as health and safety, environmental protection, business conduct, ethical standards, workplace protocols, quality requirements, confidentiality, etc., and requires all employees to adhere to relevant rules such as business integrity, anti-discrimination, and information confidentiality. Any employee who violates the Employee Codes of Conduct will face disciplinary measures under the Sinopec Regulations on Punishment for Violations of Disciplines and Rules. In circumstances where the offender may be charged with a crime, the offender will be transferred to the judicial system for legal liabilities.

For details of Employee Codes of Conduct, please refer to:

In 2021, the Company revised and improved the Integrity and Compliance Management Handbook, which focuses on key areas such as safety, environment, antitrust, anti-corruption, taxation and assets, securities, and intellectual property rights. The Company has specified 54 codes of conduct that the Company should follow and 50 codes of conduct that staff should abide by, and further emphasised the purpose and significance, formulation basis, and relevant systems of compliance management.

Anti-Corruption Management System

The Company strictly abides by China's anti-corruption laws and regulations and the anti-corruption and anti-bribery laws applicable to the countries and regions where it operates, fully supports the United Nations Convention against Corruption, the United Nations Global Compact, and other relevant initiatives, complies with the business integrity and anti-corruption regulations and commitments of its business partners. The Company also advocates for an integrity culture, has a "zero tolerance" approach to corruption, and is always working to strengthen its anti-corruption compliance system and management procedures to eliminate corruption at its source.

Anti-Corruption Organisation System

The Company continues to promote the reform of anti-corruption supervisory system and mechanism and stipulates that the Board is responsible for overseeing and promoting the company's anti-corruption efforts. With Chairman of the Board in charge, Sinopec Supervision Committee was established to formulate anti-corruption and integrity guidelines and key measures, identify compliance risks, convene regular committee meetings, research, deploy key supervision tasks, and oversee the timely rectification of problems found. The Company has set up a Supervision Department to manage and supervise anti-corruption daily, regularly report to the Supervisory Committee and the Sustainability Committee and conduct accountability assessment for the anti-corruption and integrity management at subsidiaries. All subsidiaries have set up supervision institutions or equipped with full-time or part-time employees to carry out anti-corruption activities in accordance with laws and regulations. In March 2022, the company's anti-corruption and compliance management and its performance in 2021 will be reviewed by the Sustainability Committee.

The Company continues to develop its internal supervision system and regularly researches and deploys key supervision tasks, ensuring directors, supervisors, senior management personnel, and staff are properly supervised. The Company's Supervision Department and other institutions are also under the supervision of the Board of Directors, the Board of Supervisors, and staff, effectively standardising their behaviour by optimising the internal supervision and restriction mechanism and processes.

Anti-Corruption Risk Assessment

The Company regularly conducts extensive risk assessments including anti-corruption risk. The Supervision Department regularly reports the overall state of anti-corruption and important matters to the Sustainability Committee and the Board. In 2021, the anti-corruption risk assessment results showed that through comprehensively strengthening the anti-corruption education, continuously improving the anti-corruption compliance system, deepening daily supervision, and organising special governance in relevant fields, the overall risk of the Company had been controlled, the management in relevant fields had become more strict and standardised, and the Company's governance system has been further improved.

Anti-Corruption Statement

The Company strictly forbids its subsidiaries and employees, including labourers and temporary workers, from giving or accepting bribes, or engaging in corruption, fraud, or monopoly behaviours for any reason, in any form and any location. The Company also requires suppliers, contractors, and service providers to follow these requirements. When conducting business overseas, the Company strictly abides by the principles and anti-corruption, anti-commercial bribery, anti-fraud, and anti-monopoly regulations.

Anti-Corruption Policy System

The Company continues to strengthen and improve its anti-corruption and compliance policy system to provide a system that guarantees sustainable and healthy development. In 2021, the investment and operation management system, the supervision system of management personnel's benefits and business expenses, and other relevant systems were revised to effectively reduce the risk of corruption. In addition, employees who are also CPC members also need to strictly abide by party regulations, such as the CPC Code of Integrity and CPC Self-Discipline, the CPC Regulations on Disciplinary Actions, and the CPC Accountability Regulations, and other regulations, and are put under relevant supervision accordingly.

Existing policies

- Sinopec Supervisory Committee Working Rules (Trial)
- Sinopec Regulations on Punishment for Violations of Disciplines and Rules
- Sinopec Supervision and Discipline Measures of Sinopec Discipline Inspection and Supervision Team (Trial)
- Sinopec Opinions on Strengthening Daily Supervision of Discipline Inspection and Supervision Institutions (Trial)
- Sinopec Implementation Measures on Accountability for Non-compliance in Investment Management (2021)
- Sinopec Regulations on Working Procedures for Accountability Investigation (Trial)(2021)
- Sinopec Measures of Disciplinary Inspection and Supervision Agency for Handling Reports and Accusations

Anti-Corruption and Compliance of Supply Chain

The Company has developed a series of systems related to the anti-corruption code of conduct for contractors and suppliers, including Sinopec Management Regulations on the Letter of Responsibility for Business Ethics, Sinopec Management Measures for Market Integrity System of Construction Projects, Sinopec Management Regulations on Bidding and Submission of Tendering for Construction Projects, Sinopec Management Measures for Material Procurement and Resources Supply, etc. The Company has established clear policies and procedures for dealing with conduct that violate anti-corruption regulations. Depending on the severity of the circumstances, the procedures include warning, suspension or cancellation of business cooperation, listing on the "blacklist", reporting to the judicial authorities for criminal liability, etc.

The Company signs the Letter of Responsibility for Business Ethics with contractors and suppliers to promote integrity and transparency in procurement. The Letter of Responsibility for Business Ethics is legally binding as an appendix to the procurement contract and agreement. Additionally, a third-party commercial credit evaluation institution is introduced to evaluate the compliance and trustworthiness of contractors and suppliers in terms of basic qualification, business performance, abnormal

operation, administrative sanction, and a penalty for faith-breaking, among other factors, to provide comprehensive credit ratings and to establish a mechanism of incentive for trustworthiness and punishment for faith-breaking, thereby effectively mitigating business risks. In 2021, 2,735 contractors and suppliers passed the corporate credit certification, bringing the accumulative number to 12,152. In 2021, three suppliers were penalised for violating the Company's regulations on business ethics.

Anti-Corruption Training

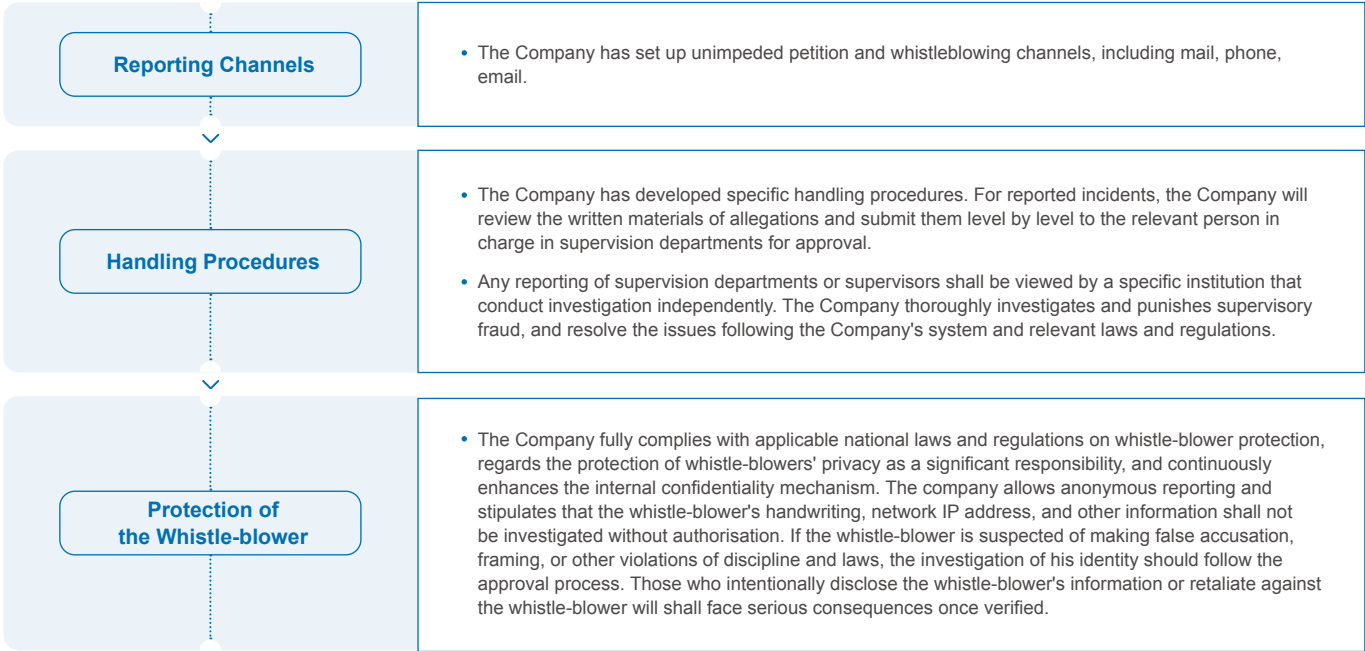
The Company strives to update anti-corruption training methods through anti-corruption and integrity training at different levels and various fields. The combination of integrity training with business training continuously enhances the anti-corruption awareness of all employees. In 2021, the Company and its subsidiaries carried out 2,509 anti-corruption courses, totalling 15,363 hours and maintained a 100% anti-corruption training coverage rate. In 2021, the number of corruption lawsuits filed and concluded against company employees was zero, and 54 people were disciplined for violating the Company's anti-corruption rules.



- In 2021, the Company provides the "overview of the company's anti-corruption management and relevant laws" training to the Board, covering the concept, policies, and methods of the Company's anti-corruption management, and relevant requirements from the national supervision laws and the administrative punishment laws.
- The Company reinforces anti-corruption education throughout new employee orientation, assisting them in developing a bottom-line perspective on integrity.
- The Company held Anti-corruption and Integrity Education Month events to encourage all employees to investigate problems and conduct rectifications based on key anti-corruption issues and enhance their anti-corruption and integrity awareness.
- The Company strives to strengthen the integrity education of the management personnel at all levels through organised cautionary education, reminding talks, and typical case notice.

Indicators	2019	2020	2021
Number of employees participated in anti-corruption trainings (10,000 person-times)	123.8	105.2	118.7
Coverage rate of anti-corruption trainings (%)	100	100	100
Number of disciplinary legal education training education (10,000)	1.7	1.3	1.4
Number of participants in disciplinary legal training education (10,000 person-times)	67.3	85.2	86.9
Total number of public entries in the Business Disclosure Information System (10,000)	462.98	533.78	444.09

Petition and Whistleblowing Mechanism



Tax Management

The Company has formulated and implemented the Sinopec Tax Risk Management Guidelines, requiring strict compliance with the taxation regulations of the place where it operates, rigorous accounting of taxes and charges, and timely tax filing. Additionally, the Company paid close attention to changes in the tax laws and regulations of the jurisdiction in which it operates and analysed its tax risks on a timely basis to ensure tax payment compliance.

The company's annual tax payment information is disclosed through its quarterly, semi-annual, and annual reports to ensure that its stakeholders have timely access to this information. Under the relevant provisions of the British Disclosure Rules and Transparency Rules, the Company disclosed a Resource Country Government Payment Report on the London Stock Exchange website. It made relevant announcements on the Shanghai Stock Exchange and the Hong Kong Stock Exchange subsequently, listing the payments that the Company had made to different governments because of its business activities. In 2021, the Company had no major tax-related litigation or arbitration incident.

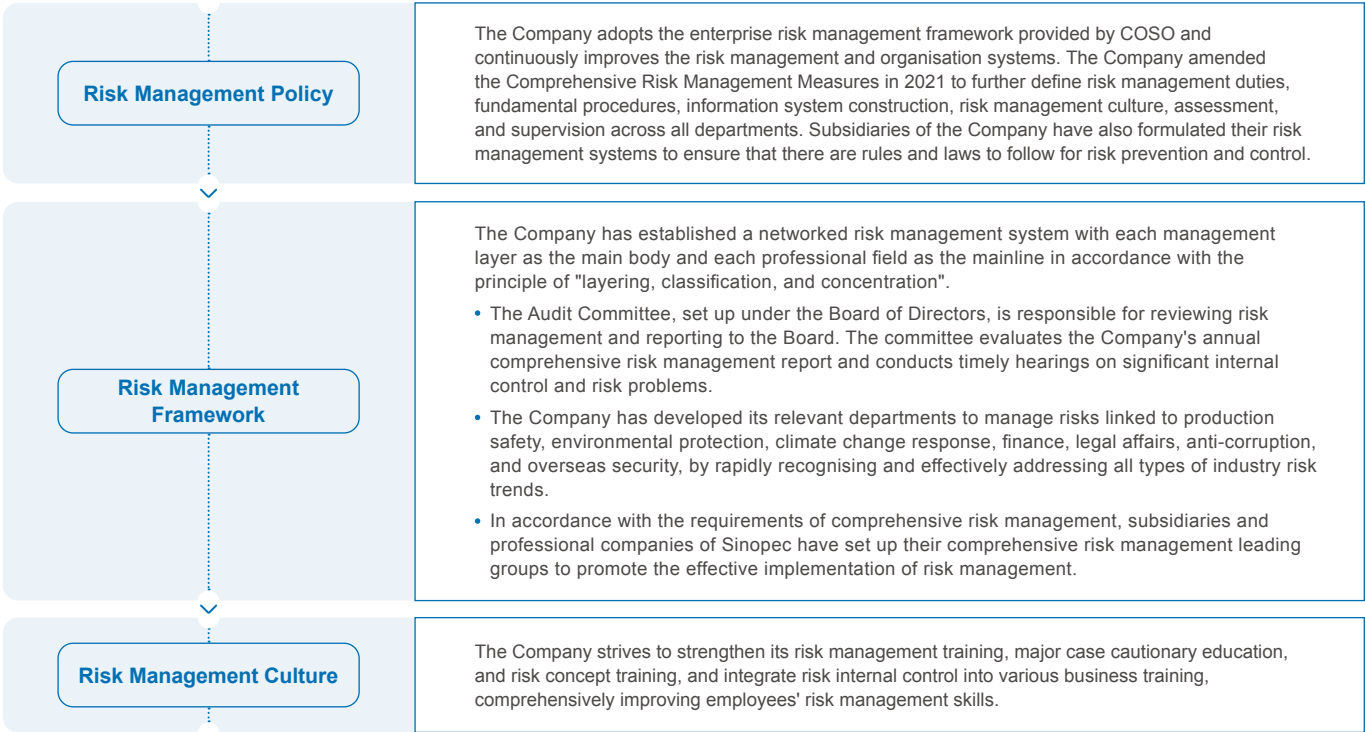
Intellectual Property Protection

The Company attaches great importance to intellectual property protection. It strictly abides by the Civil Code of the People's Republic of China, national criminal law, tort liability law, patent law, trademark law, copyright law, anti-unfair competition law, and other relevant laws and regulations related to intellectual property protection. Based on the current legal norms, the Company amended the Sinopec Measures for Patent Management. It issued the Opinions on Strengthening the Legal Protection of Intellectual Property Rights to effectively standardise the Company's patent management and clarify the general approach, objectives, and specific measures of the legal protection of intellectual property rights. In addition, the Company also prepared and issued the annual list of compliance risks of intellectual property laws in 2021 to prevent and deal with relevant risks effectively.

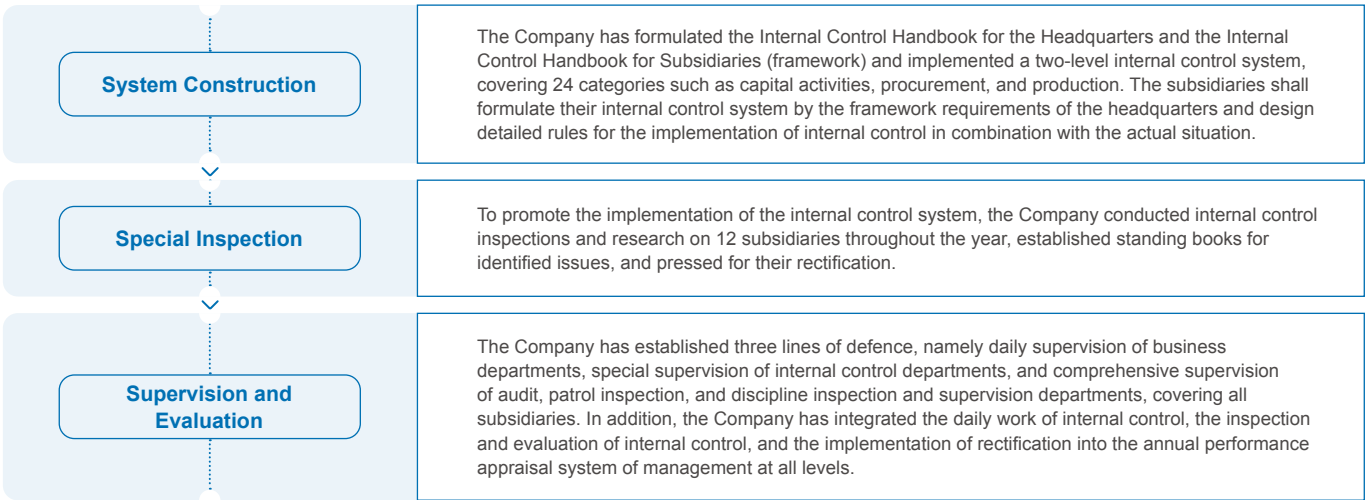
Risk Management and Internal Control

Sinopec Corp. continues to strengthen comprehensive risk management and strives to improve the risk management system, establish risk identification and response mechanism, cultivate risk management culture, and support the Company's sustainable development. The Company carries out comprehensive identification of primary and significant risks and critical points of annual risk management every year and prepares comprehensive risk management reports. In 2021, the Company had no significant risk incident, and its effectiveness of internal control continued to improve.

Comprehensive Risk Management



Internal Control System



Sustainability Management

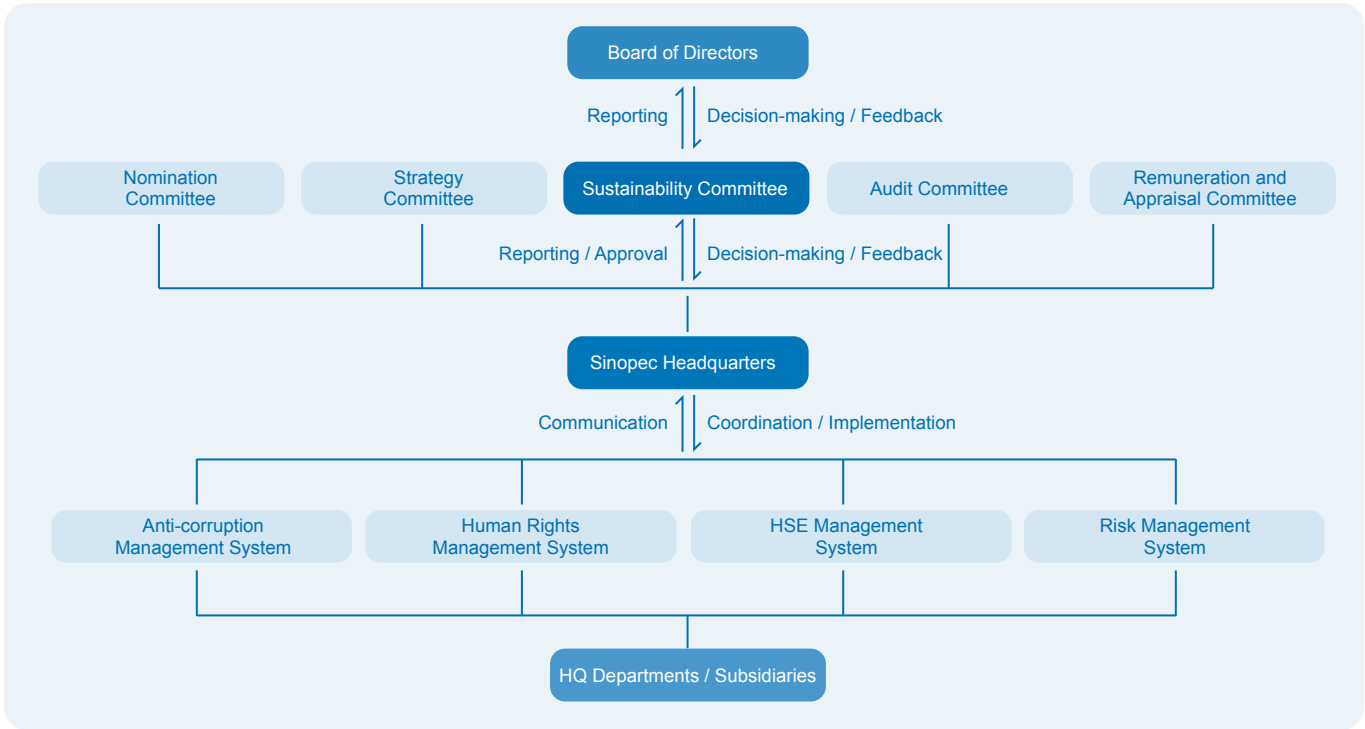
Sinopec Corp. is committed to fully integrating the development concepts of green, safety, low-carbon, and responsibility into the Company's development strategy and its production and operation, continuously improving ESG governance structure and ESG governance policies, and tracking and promoting key ESG performance, working together with stakeholders to create sustainability value.

ESG Governance Structure

The Company continues to promote the integration of ESG and its governance system, improve the ESG governance structure, and form top-down sustainability management and practice system. The Company replaced the CSR Management Committee with the Sustainability Committee in 2021 and expanded its responsibilities, making it directly accountable for sustainability management, and reviewed the important sustainability issues of environment protection and anti-corruption during the year.



- The Board of Directors is the top ESG decision-making body, responsible for the overall planning and coordination of its ESG governance.
- The Sustainability Committee, with the Chairman as the chairperson is responsible for supervising and approving the Company's ESG strategy, targets, and annual plans, and reporting ESG implementation results and major plans to the Board of directors. Both the Strategy Committee and the Audit Committee under the Board of Directors also participate in the deliberation and decision-making of the Company's ESG risk management and other related issues such as the response to climate strategy and protection of health and safety.
- Our headquarters is responsible for the overall coordination and implementation of the Company's ESG management, and functional departments, such as Energy Management and Environmental Protection, Safety Supervision, Human Resources, Enterprise Restructuring, and Legal are responsible for the daily-to-daily management of specific ESG issues.
- Our subsidiaries operate in accordance with the Company's ESG management policies and procedures.



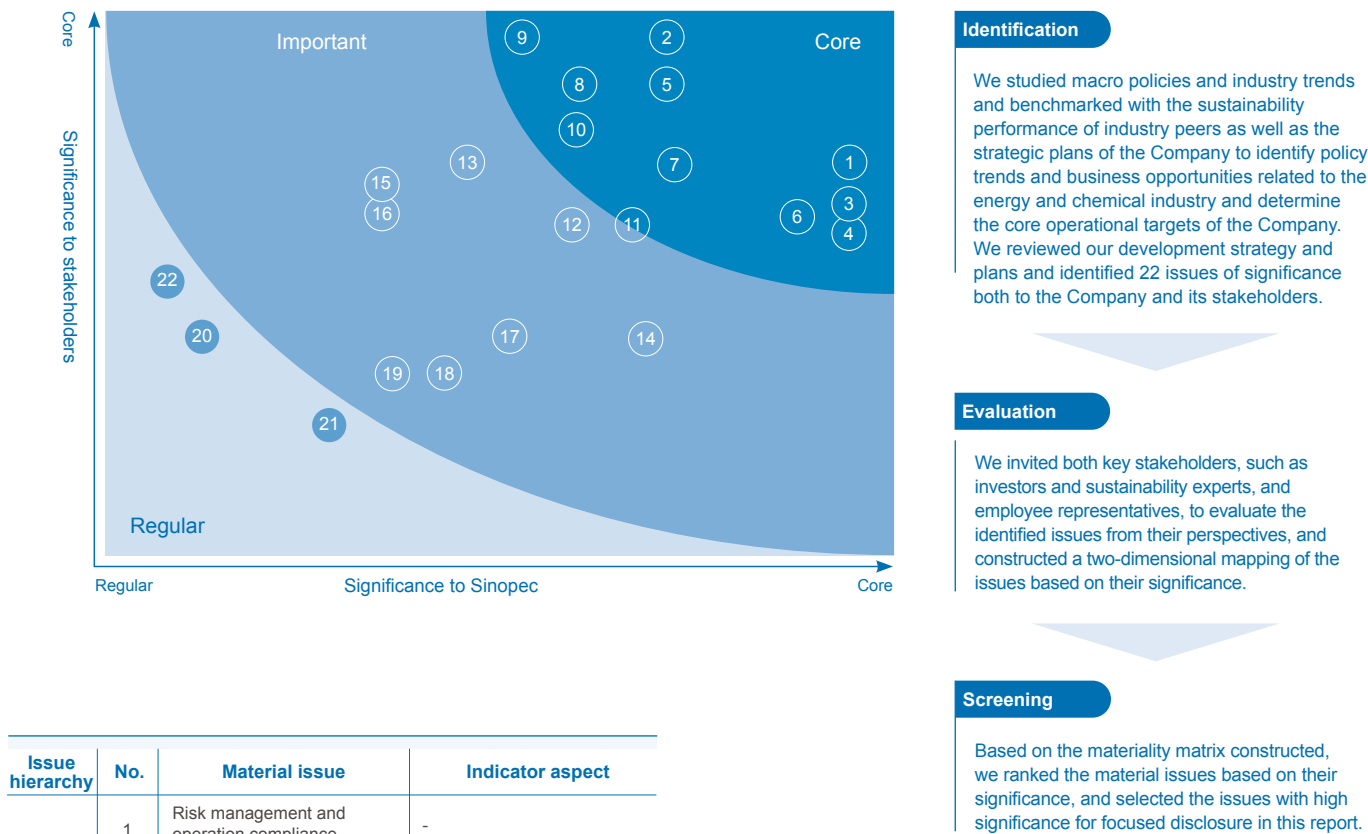
Stakeholder Engagement

Stakeholders of Sinopec mainly include government and regulators, shareholders and investors, customers, employees, communities, etc. The Company has established various channels for regular and special communication with multiple stakeholders to thoroughly understand their demands and expectations.

Stakeholders	Key Communication Topics	Communication Channels
 Government and Regulators	Business ethics and anti-corruption Risk management and operation compliance Invest in new energy Respond to climate change Ensure energy security Taxation & job creation Research and innovation	Daily communication and reporting Discussion and seminar Project approval Government supervision and regulation
 Shareholders and Investors	Business performance Research and innovation Respond to climate change Promote energy transition Accelerate digital transformation Risk management and operation compliance	Information disclosure required by law Performance release and meeting Teleconference and online interaction Investor hotline Investor visit Capital market conference
 Customers	Improve quality of products and services Accelerate digital transformation Invest in new energy Ensure energy security Research and innovation	Daily service communication Customer visits Questionnaire survey Website, WeChat and other online media
 Employees	Workplace health and safety Training and career development Diversity and equal opportunity Respect human rights Covid-19 epidemic prevention and control	Employees' representative meeting Annual commendation Regular trainings Corporate cultural activities Website, WeChat and other online media
 Communities	Community engagement and development Taxation and job creation Responsible supply chain Support common prosperity Respond to climate change Pollution and emission management Promote energy transition Resource recycling and reuse Biodiversity and land use Water resource management	Corporate philanthropy On-site research Community communication activities Media communication Open days Project environmental and social risk assessment Environmental performance monitoring and disclosure Respond to external investigation Media communication

Materiality Analysis

The Company has formulated the materiality analysis process on sustainability issues. Through three main steps of identification, evaluation, and screening, the Company focuses on sustainability issues significant to itself and its stakeholders and provides information disclosure in response to this report. The sustainability issues in 2021 have no significant changes compared with those in 2020. The major changes come from the more in-depth interpretation of the issues under the context of the national development trend and the Company's development focus, such as "digital transformation" and "promoting common prosperity".



Issue hierarchy	No.	Material issue	Indicator aspect
Core	1	Risk management and operation compliance	-
	2	Invest in new energy	A4 Climate change
	3	Respond to climate change	A4 Climate change
	4	Research and innovation	-
	5	Occupational health and safety	B2 Health and safety
	6	Pollution and emissions control	A1 Emissions, A3 Environment and natural resources
	7	Improve corporate governance	-
	8	Business ethics and anti-corruption	B7 Anti-corruption
	9	Improve the quality of products and services	B6 Product Responsibility
	10	Digital transformation	-
	11	Respect human rights	B1 Employment, B4 Labour standards
	12	Promote energy transition	A4 Climate change

Important	13	Ensure energy supply	-
	14	Resource recycling and reuse	A2 Resource use
	15	Support common prosperity	B8 Community investment
	16	Employee training and career development	B3 Development and training
	17	Biodiversity and land use	A3 The environment and natural resources
	18	Water resource management	A2 Resource use
	19	Responsible supply chain	B5 Supply chain management
	20	Community communication and development	B8 Community investment
Regular	21	Taxation & job creation	B8 Community investment
	22	Diversity and equal opportunity	B1 Employment

SDGs Mapping Table

SDGs	Sinopec Corp. Actions in 2021	SDGs	Sinopec Corp. Actions in 2021
	We actively participated in rural revitalisation by dispatching 349 working teams and 925 employee volunteers to rural areas. We provided RMB 581 million in rural development support and procured RMB 949 million of products from poverty areas.		We accelerated constructing a clean and low-carbon energy supply system, exploring new infrastructure and services such as charging and swapping facilities and hydrogen refuelling stations, supporting green transportation and hydrogen energy transportation development. In 2021, we invested RMB 21.1 billion in R&D and obtained 4,853 patents both at home and abroad. We have built six intelligent factories and piloted digitalised and contact-free intelligent gas stations in nearly 20,000 Sinopec service stations.
	We supported the development of specialty agriculture in rural areas. Over 16,175 mu of quinoa were grown in 10 townships of Dongxiang County, Gansu Province, helping 4,964 households grow their incomes.		We strictly forbid the use of child labour and forced labour, and forbid any form of discrimination such as due to gender, region, religion and nationality. We strive to further increase the diversity at our workplace, such as in gender and ethnicity, and fully ensure equal opportunities for employees.
	We protected the health and safety of our employees, and there was no occurrence of clustered Covid-19 infection within the Company during the pandemic. We provide all employees with occupational disease screening, prevention, physical examination, and special intervention for high-exposure personnel. We established the Sinopec mental health (EAP) committee to promote the physical and mental health of our employees. We adjusted and increased our capacities to supply materials for medical supplies to provide material support for the fight against the pandemic and better protect the health of our customers and the public.		We actively cooperate with the development of the new energy vehicle industry and accelerated the construction of new energy vehicle charging and swapping facilities and hydrogen refuelling stations. We spent RMB 100 million to build village roads in Dongshan County, Gansu Province.
	We provided various training for employees, including 46 key training projects for 94 times, centralised training with 5,122 participants, and online training with 6,152,000 accumulative participants, with 51.43 million training hours. We donated RMB 89.63 million to upgrade educational facilities in our targeted poverty areas. Our Sinopec Scholarship programme provided financial aid to a total of 1,560 students from low-income families.		We kept optimising HSE management to ensure workplace safety, occupational health and environmental compliance. We worked together with our suppliers to promoted green procurement and responsible procurement, and disclosed our sustainability performance in our annual sustainability report to improve transparency.
	We uphold gender equality and has established the Female Employees Committee to protect the rights of female employees. We strive to eliminate gender discrimination in recruiting and promotion, and encourage female employees to participate in democratic management of the enterprise. We pay attention to the needs of female employees during pregnancy and maternity, as well as the physical and mental health of female employees.		We promoted carbon emission reduction technologies, and strengthened the monitoring and managing of greenhouse gas emissions. We strive to create the energy conservation and environmental protection industry by promoting the development and industrialisation of CO ₂ resource utilisation technology and building the whole industry chain of CCUS, realising the transformation from traditional energy to clean energy. We continued to implement energy efficiency improvement projects. We carried out 544 energy efficiency improvement projects throughout the year, saving 967,000 tonnes of standard coal and reducing 2.38 million tonnes of carbon dioxide emissions.
	We set annual water consumption targets and committed to reducing our annual industrial fresh water withdrawal by 1% or greater year-on-year. To achieve this, we optimised water sourcing strategy to replace the use of fresh water with unconventional water resources. We invested over RMB 67 million to upgrade water facilities in Dongxiang County to bring tap water to villages in Dongxiang County, Gansu Province.		We conducted site visits to enterprises along the Yangtze River, the Yellow River and other key river basins to protect the environment of the river systems. We maintained our membership in the Alliance to End Plastic Waste (AEPW) to protect the marine environment and marine life. We took meticulous measures to prevent oil spill accidents at sea, recycle and reuse more wastewater, and fully comply with all compliance criteria for affluents.
	We actively invested in new energy businesses to increase the share of natural gas and other clean energy in our energy supplies, with natural gas accounting 43% of oil and gas production in 2021. The total production capacity of our high purity hydrogen generation unit reached 16 thousand normal cubic metres per hour, and our bio-jet fuel capacity reached 100,000 tonnes per year.		We required all new and under-construction projects to pass environmental impact assessment first, identify the eco-environmental sensitivity of projects to avoid eco-sensitive areas. We also conducted ecological environmental environment assessment for decommissioned facilities, and carried out ecological restoration work if needed.
	We strive to support local economic development through investing, paying taxes, creating jobs and increasing localised procurement. We generated over 1,400 job opportunities for migrant workers and new recruits from previous employment history. We also actively recruited female employees, overseas employees and minority employees to ensure equal employment opportunities.		We continued improving compliance management to ensure business integrity, and implemented a "zero tolerance" policy for corruption and violations of business ethics to eradicate all forms of corruption. We also urged our suppliers and contractors to strengthen their safety management and environmental protection efforts.
			We continuously supported UN Global Compact and other global initiatives; actively participated in international organisations and trade associations, and promoted research collaboration. We also continued investing in e-commerce platforms such as EPEC and Sinopec Chememall to achieve win-win development of the industrial chain.

Technological Innovation

Sinopec Corp. is committed to building a technology-leading enterprise. The Company continues to deepen the reform of its technology system, optimise the allocation of technical resources, accelerate the research of core technologies, and strengthen breakthrough basic research, continuously improving innovation efficiency to support and lead the high-quality development of the Company.

Stimulating Innovation Vitality

The Company is continuing to strengthen the reform of its technology system and experiment with new methods of scientific study. The Company strives to establish multi-disciplinary collaborative research teams, implement key research mechanisms, establish incubation companies based on fundamental research projects, and explore dividend and other incentive mechanisms for technology enterprises by integrating high-quality scientific research resources.

Moreover, the Company strengthens the assessment of subsidiaries in the construction of technological innovation system, R&D investment, core technology research and achievement transformation, intellectual property management, formulates annual technological innovation assessment objectives in various fields, encouraging the subsidiaries to carry out scientific and technical research and achievement transformation actively.



🔗 In 2021, Chairman Ma Yongsheng visited the New Material Synthesis Laboratory of Beijing Institute of Chemical Industry, a Sinopec subsidiary

Research on Key Technologies

The Company continues to focus on the research of critical technologies. Over the last three decades, the Company has successfully transformed over 200 significant complete sets of technologies, thereby encouraging the transformation and upgrading of the industrial chain. In 2021, the Company successfully realised nine key research projects in oil and gas exploration and development technology, oil refining technology, chemical material technology, public technology, etc.

In 2021, Sinopec Corp. won six "Science and Technology Advancement Awards" and one "Technological Invention Award" under the "State Science and Technology Award in 2020" issued by the Ministry of Science and Technology.

Science and Technology Advancement Award

the first prize

Development and Industrial Application of Megaton-Scale Steam Cracking and Recovery Technology for Complex Feedstocks

Science and Technology Advancement Award

the second prize

Theoretical Technology and Application of Fine Oil and Gas Exploration in Fault Basin - A Case Study of Jiyang Depression

Science and Technology Advancement Award

the second prize

Key Technology and Application of Efficient Development of Large Complex Carbonate Reservoir

Science and Technology Advancement Award

the second prize

Key Engineering Technology and Industrial Application of EOR in High Water Cut Oilfield

Science and Technology Advancement Award

the second prize

Key Preparation Technology, Complete Set of Equipment and Application of High Thermal Conductivity Oil-based Mesophase Pitch Carbon Fibre

Science and Technology Advancement Award

the second prize

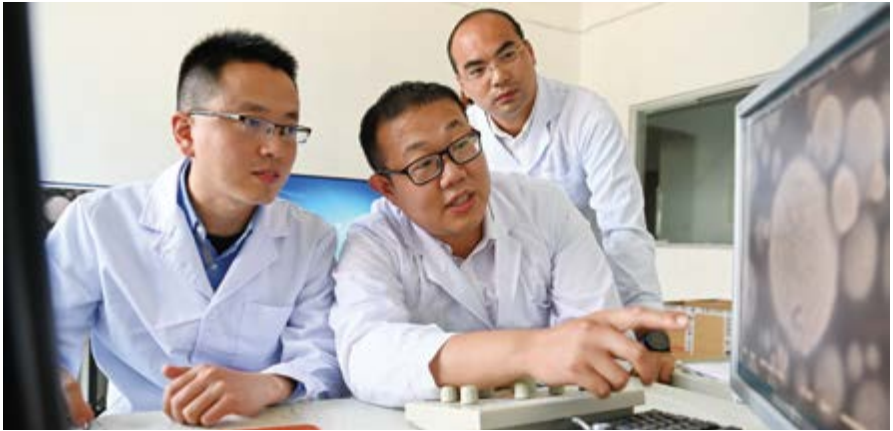
High-end Large-scale Programmable Automation System Based on Wide Area Collaboration and its Application

Technological Invention Award

the second prize

Controllable Coordination Polymerisation of Olefins and Preparation Technology of High-Performance Elastomers

The Company strives to strengthen its leading role in low-carbon technology innovation. In 2021, the Company made a series of technical breakthroughs in CCUS technology, renewable energy-related technologies such as hydrogen energy, energy storage technology, biomass energy, and solar power, as well as new energy vehicle-related technologies such as power battery materials and degradable plastics, effectively promoting the green transformation and upgrading of society.



Indicators	2019	2020	2021
Number of patent applications filed in the year	6,160	6,808	8,045
Number of patent applications granted in the year	4,076	4,254	4,853
Cumulative number of patents granted globally	34,441	38,695	43,563
R&D investment (RMB 100 million)	155	152	211

Enhancing External Cooperation

The Company took proactive steps to integrate into the global innovation network and enhance its innovation capabilities in the open and cooperative innovation ecosystem. By the end of 2021, the Company has successively joined international academic organisations and institutions, including the International Synthetic Rubber Association (ISRP), International Union of Pure and Applied Chemistry - Committee on Chemistry and Industry (IUPAC-COCI), Society of Petroleum Engineers (SPE), and actively participated in variety of related activities. Moreover, the Company further expanded the technical exchanges and cooperation with internationally renowned research institutions to support its technology-leading development.



The Company actively participates in innovation exchange activities

Digital Transformation

Sinopec Corp. has further promoted integrating digital technology, industrial technology, and its core business. With the new model of "data + platform + application," the Company carried out digital transformation centring on the whole industrial chain and promoted management innovation, business innovation, and commercial model innovation through digital technologies, providing innovative energy for high-quality development of the Company.

In 2021, the Company mainly focused on big data and artificial intelligence, established an innovation platform of artificial intelligence joint R&D centre, carried out collaborative research and talent training from the aspects of data mining and utilisation, process simulation and optimisation, intelligent perception, and advanced control, intelligent unmanned system, etc. in the field of energy and chemical industry, and cultivated innovative application achievements of intelligent technology through the in-depth integration of industry, universities, and research institutions.



Sinopec Big Data and Intelligent Algorithm Library

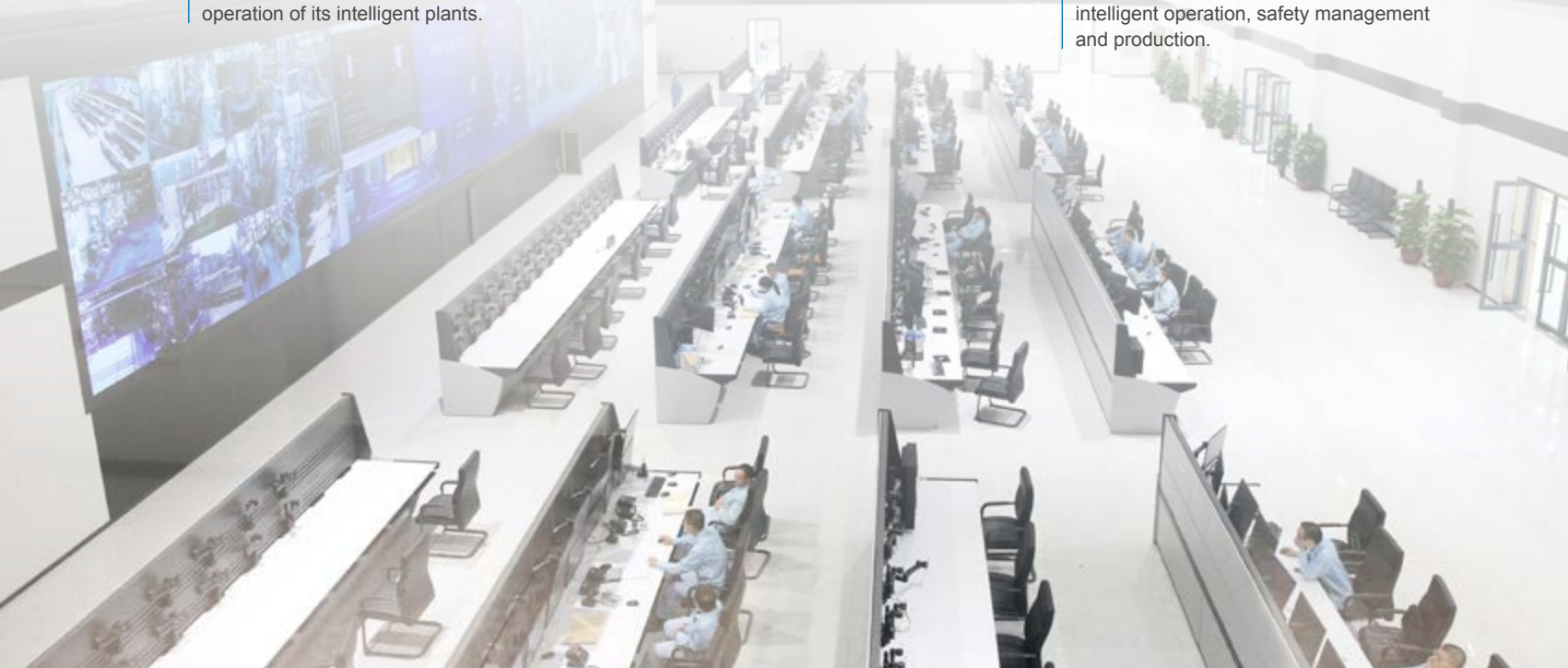
By mining and utilising Sinopec's big data, the Company developed relevant, intelligent algorithms, intelligent monitoring and diagnosis technologies, and a Sinopec Data Mining and Intelligent Algorithm Library, which provides fundamental methods and intelligent applications for the construction and operation of its intelligent plants.

Sinopec Intelligent Optimisation of Global Resources

According to the business requirements of planned scheduling, production scheduling and supply chain management, the Company has developed the Sinopec global resource optimisation model system to maximise the comprehensive benefits of production and operation.

Intelligent Unmanned System

The Company has developed and applied robots for intelligent loading, intelligent cleaning and intelligent inspection, as well as the first intelligent refuelling robot in China. The Company widely uses UAVs to carry out intelligent inspection of oil and gas fields and oil and gas pipelines, to comprehensively improve the level of intelligent operation, safety management and production.



2

Addressing Climate Change

- Climate Action
- Reduce Greenhouse Gas Emission
- Energy Transition



Climate Action

Sinopec Corp. activity implements the green and clean development strategies, sets "net zero" emission of carbon as its primary goal, continues to promote the clean utilisation of fossil energy, scaling-up of clean energy, and low-carbon production process, so as to achieve the high-quality realisation of the carbon peaking and carbon neutrality targets, contributing its bit for the global response to address climate change. Referring to the recommendations from the Task Force on Climate-related Financial Disclosures (TCFD), the Company systematically discloses its governance structure, management strategies, risks and opportunities, and actions and progress related to addressing climate change.

Climate Governance Structure

Pays close attention to the risks and opportunities posed by climate change, the Company has taken the initiative to integrate climate change into its strategic planning, comprehensive risk management system, and daily operation and management; established a climate governance structure consisting of the Board of Directors, senior management, Headquarters and subsidiaries; and clarifies relevant roles and responsibilities to ensure the integration of climate change into the Company's governance system, effectively manage climate risks and enhance the effectiveness of its climate strategy.



⚠️ Qiannan Oil Depot conducts production safety maintenance under extreme weather conditions

Board of Directors	Strategy Committee	- Responsible for reviewing development plans, policies, and systems related to climate change, and providing the Board with suggestions on the strategic positioning and industrial layout of the Company; - Responsible for reviewing and supervising the development plan and business performance in natural gas, hydrogen energy, renewable energy, energy conservation and emissions reduction.
	Audit Committee	Responsible for identifying, assessing, and managing the risks and impacts related to climate change and ecological environment protection, and reviewing the list of major risks and annual evaluation reports.
	Sustainability Committee	- Responsible for supervising the commitment and performance of the Company on key issues such as climate change, and providing suggestions to the Board; - Responsible for reviewing the Company's annual sustainability report and supervising climate-related information disclosure of the Company.
Management Level	Comprehensive Risk Management Implementation Leading Group	Responsible for identifying risks and opportunities related to climate change and relevant countermeasures under the comprehensive risk management system, and reporting to the Board, the Audit Committee, and the Sustainability Committee.
Executive Body	Headquarters and Subsidiaries	- Responsible for implementing the Company's carbon peaking and carbon neutrality strategies, formulating department/subsidiary level carbon peaking and carbon neutrality targets and action plans; - Responsible for implementing the Energy Efficiency Improvement Plan and the Green Enterprise Action Plan, and strictly managing greenhouse gas emissions and energy efficiency targets; - Responsible for the implementation of carbon asset management, carbon mapping, and carbon audits, establishing a dedicated carbon trading team to ensure the fulfilment of the carbon quota of the Company.

Climate Risk Analysis

Risk Factors	Risk Descriptions
Acute risk - extreme weather disasters	The frequency of extreme weather disasters such as rainstorms, floods, and typhoons increase, which may lead to operation interruption and even damage to production and operation facilities, resulting in the decline of the Company's production capacity; and may cause secondary disasters, resulting in endangering personal safety, environmental pollution, and other issues.
Long term risk - chronic natural disasters	Changes in rainfall and extreme fluctuations in weather may lead to higher infrastructure costs of the Company (such as an extension of the construction period and damage to equipment); increased insurance costs for equipment and personnel. The increase or decrease of the average temperature may lead to increase in operating cost, such as the increase in equipment cooling water demand and office refrigeration and heating demand.
Policy risk - carbon emission requirements	The Chinese government has set carbon peaking and carbon neutrality targets. The regulatory authorities are going to impose stricter climate action measures and greenhouse gas emission restrictions, which may increase the cost of carbon emission compliance of the Company.
Policy risk - energy dual control requirements	The government has formulated and implemented the "dual control of energy" policy to strictly control both the intensity and the total consumption of energy, to guide enterprises to optimise energy consumption structure and improve energy efficiency. It may result in an increase of the Company's investment in the transformation of energy facilities, higher operation and maintenance costs, and the phasing out of specific products or equipment.
Legal risk - methane emission control standard	The government plans to implement more comprehensive and robust methane emission control actions. It is expected to reduce methane venting and escape the upstream and downstream of the oil and gas industry by formulating regulations and standards. To meet regulatory requirements, the company may need to increase additional facilities and technical inputs.
Market risk - changes in energy demand	Consumers' attention to climate change and sustainability may encourage consumers to choose low-carbon products, thus reducing the demand for traditional energy products with high carbon emission intensity and increasing the demand for renewable energy.
Technology risk - low carbon technology investment	Technological innovation in the process of transitioning towards a low-carbon and energy-saving economy will increase the Company's R&D investment and investment expenditures in clean energy, new energy, emission reduction technology, and other fields.
Reputation risk	Stakeholders pay closer attention to the Company's response to climate change and energy transformation. If the outcomes do not meet expectations, it may negatively impact the Company's image.

Countermeasures

Effectively work on extreme weather monitoring and early warning, formulate disaster emergency plans, and regularly carry out disaster preparedness and emergency drills.

Carry out facility upgrade and improve disaster protection level; and set up materials reserve for disaster prevention and mitigation.

Encourage enterprises to identify climate vulnerability; optimise energy conservation and environmental protection facilities, improve energy efficiency and water efficiency, and reduce the dependence on natural resources; carry out climate change-related education for employees.

Promote the "Green and Clean" strategy, and the clean utilisation of fossil energy, scaling-up of clean energy, and low-carbon production process, clean purification of fossil energy, large-scale clean energy, and low-carbon production process; improve the concentration of refining and chemical operations, reduce backward production capacity, and build a green refining and chemical industry.

Formulate energy consumption control objectives and dynamically track energy intensity and total consumption control indicators; further implement the Energy Efficiency Improvement Plan to promote energy conservation and efficiency; revise the approval process of energy conservation of investment projects to eliminate energy waste from the source; and carry out energy conservation supervision and energy audit.

Effectively carry out methane emission reduction actions, actively carry out pilot projects of methane recycling and monitoring, and reduce methane emissions through technologies such as methane leakage detection and repair, exhaust air recycling, and closed process transformation.

Rely on the advantages of an excellent sales network, accelerate the construction of hydrogenation station and charging and replacement power station, and actively transform and develop into a comprehensive energy provider of "oil-gas-hydrogen-electricity service"

Carry out technological R&D planning and investment, improve the efficiency of operation and technological R&D; establish a key lab on Carbon Capture, Utilisation, and Storage (CCUS) and actively research on essential technologies such as low-carbon, zero-carbon, and negative carbon technologies; and build a full-scale CCUS industrial chain demonstration project.

Actively pursue green and low-carbon development initiatives, pay close attention to and respond to stakeholder concerns.

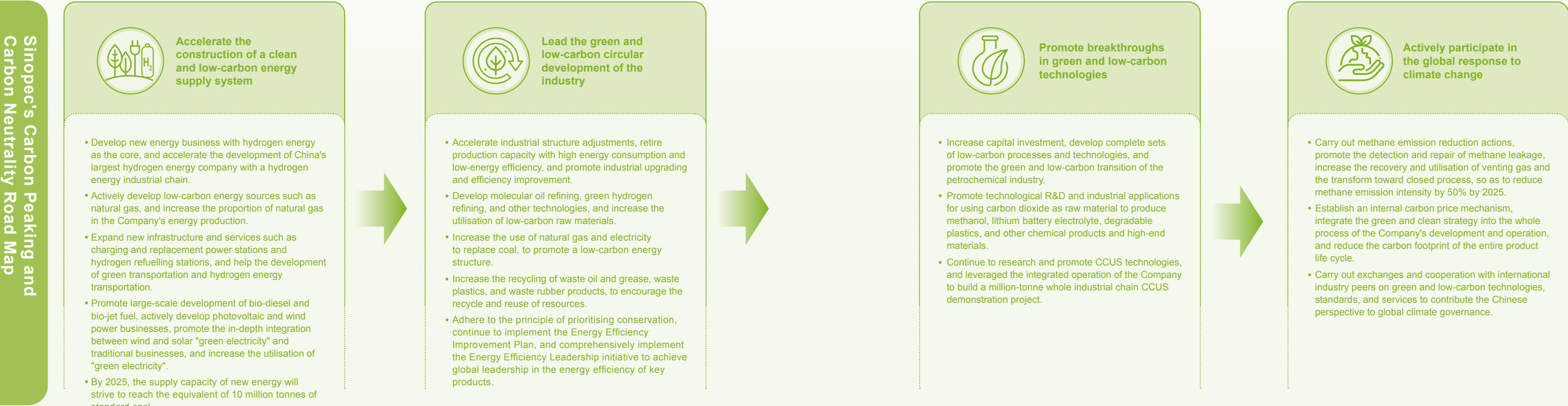
Formulate Sinopec's carbon peaking and carbon neutrality action plans and roadmap, and actively participate in the global climate actions.

Participate in establishing the China Oil and Gas Methane Alliance; and

Sign and issue the Declaration on Carbon Peaking and Carbon Neutrality of the Chinese Petroleum and Chemical Industry.

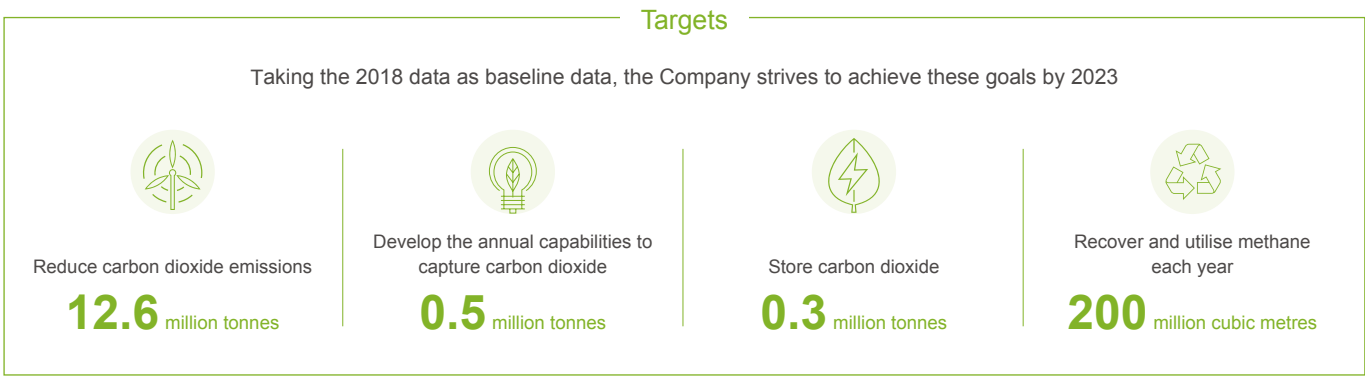
Climate Action Strategies

Sinopec Corp. proactively embraces green transformation, takes "net zero" of carbon emissions as the ultimate goal and strives to accelerate its low-carbon competitiveness.

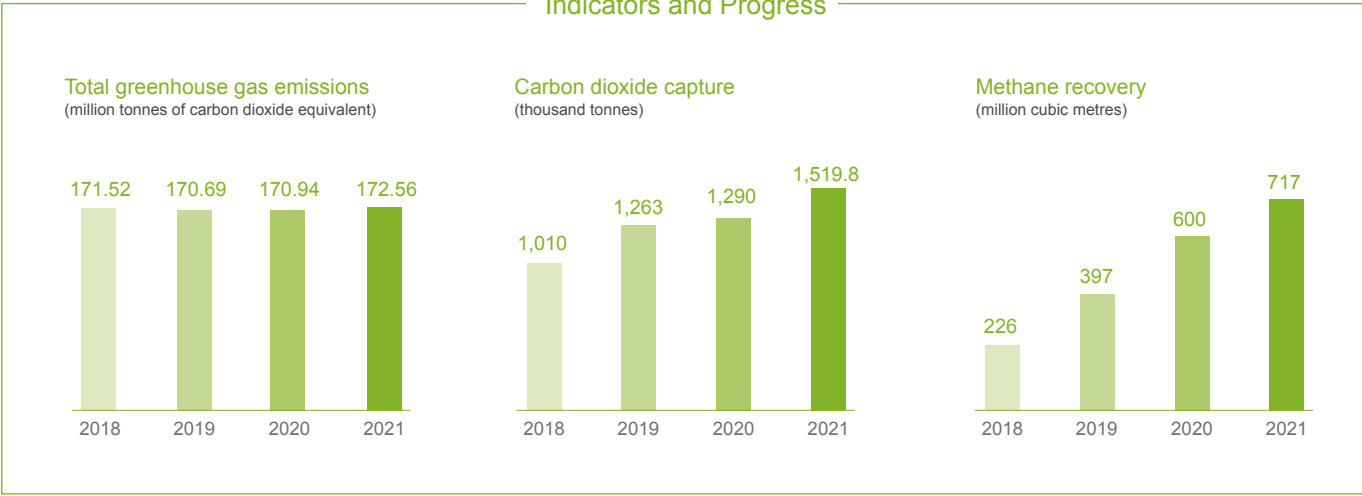


Indicators and Targets

In the Green Enterprise Action Plan formulated in 2018, the Company has set greenhouse gas emission reduction targets for the period of 2018 to 2023 as a scientific guidance for its greenhouse gas emission reduction progress.



Indicators and Progress



Reduce Greenhouse Gas Emission

Sinopec Corp. attaches great importance to greenhouse gas emission management and strives to build a scientific carbon asset management system. It has established a series of management policies, such as the Sinopec Carbon Emission Management Measures, the Sinopec Carbon Emission Trading Management Measures, and the Sinopec Carbon Emission Evaluation Management Measures for Fixed Asset Investment Projects. Based on comprehensive mapping and evaluation of its existing carbon emissions data, Sinopec scientifically coordinates its efforts in energy conservation and carbon reduction, methane emission control, CCUS, and carbon trading, to further reduce greenhouse gas emissions.

Carbon Emission Monitoring and Management

The Company places a high emphasis on carbon mapping and audit and closely monitors annual carbon emissions using data obtained, and incorporates carbon emission reduction measures into its overall production and operation plan. In 2021, the company continued to carry out carbon mapping and carbon audits across all production units.



Product Carbon Footprint

Sinopec Corp. continues to conduct carbon footprint accounting and evaluation of petrochemical products. It has developed product carbon footprint accounting and evaluation methods and accounting models for jet fuel, lubricating oil base oil, polypropylene, and xylene. It has conducted a full-scale assessment of greenhouse gas emissions over the product's complete life cycle, and used from the carbon footprint data to explore optimisation possibilities, so as to support the energy conservation and carbon reduction of the Company. In 2021, Sinopec Corp. drafted the Product Carbon Footprint and Product Category Standards - Petrochemical Products, which has been integrated into the 2021 Carbon Peaking and Carbon Neutrality Industry Standards Formulation and Revision Plan of the Ministry of Industry and Information Technology.

Launch the First Full-Tanker Full Life Cycle Carbon Neutral Petroleum

In 2021, Sinopec Corp. worked together with value chain partners to jointly developed China's first tanker of full life cycle carbon-neutral petroleum. The project involved 30,000 tonnes of crude from Angola that imported and refined by the Company. In order to offset the carbon emission in the whole life cycle of this batch of petroleum, the project carried out third-party verifications to accurately calculate the amount of carbon dioxide generated in the entire life cycle from oil extraction, transportation, storage, refining to product consumption. By implementing energy conservation and emission reduction strategies and purchased Chinese Certified Emission Reduction (CCER), to offset the full life cycle carbon emissions. Among them, Sinopec Corp. undertook the responsibility to offset the carbon emissions from crude oil extraction, storage, refining, shipping of petroleum products, and the use of fuels such as vehicle gasoline, diesel, and liquefied petroleum gas.



"Carbon Neutral" oil certification issued by Shanghai Environment and Energy Exchange

case



Energy Conservation

With the goal of "strictly controlling total energy consumption and improving energy efficiency", Sinopec Corp. actively promotes the Energy Efficiency Improvement Plan, implements various energy-saving and carbon reduction measures, and encourages its subsidiaries to improve energy efficiency and reduce energy consumption. In 2021, the consumption of comprehensive energy per RMB 10,000 of production value of the Company reached 1.015 tonnes of standard coal¹, decreased by 1.3% year-on-year. During the year, the Company launched 544 energy-saving projects, saving 967 thousand tonnes of standard coal of energy, equivalent to a reduction of 2.38 million tonnes of carbon dioxide emissions.

Energy efficiency target

>

Sinopec Corp. has formulated the energy conservation and emission reduction target for the 14th Five-Year Plan, aiming at reducing the consumption of comprehensive energy per RMB 10,000 of production value by 5% by 2025 (with 2020 as the base year).

Focus areas

>

- Strictly control energy consumption increment
- Reduce existing energy consumption
- Implement key energy conservation projects

- Accelerate the development of new energy business
- Consolidate energy conservation management

Social recognition

>

In October 2021, China Petroleum and Chemical Industry Federation released the list of Key Energy Consuming Products Energy Efficiency "Front-runner" Enterprises of the petroleum and chemical industry in 2020, including:

- Qingdao Petrochemical and Guangzhou Petrochemical won the title of Energy Efficiency "Front-runner" Refining Enterprises;
- Zhenhai Refining & Chemical Co., Ltd. and Maoming Petrochemical Co., Ltd. won the title of Energy Efficiency "Front-runner" Ethylene Production Enterprise;
- Hainan Refining and Chemical Co., Ltd. won the title of Energy Efficiency "Front-runner" Xylene Production Enterprise

Shengli Oilfield Developed the Oilfield Energy Control Centre

Shengli Oilfield developed the Oilfield Energy Control Centre energy management system focusing on full life cycle green management, building a whole process digital energy-saving management system to achieve the closed-loop management of automatic monitoring, early warning, energy efficiency evaluation, and the optimisation, improvement, tracking and statistical assessment of energy efficiency in oilfield development and production. In 2021, Shengli Oilfield optimised and upgraded the system, and developed new management functions for more energy sources, such as natural gas, new energy and refined oil products, realising full coverage of energy sources and energy users. With the support of the system, Shengli Oilfield had significantly reduced its energy intensity indicators with a variety of energy-saving and emission reduction measures, saving a total of 76.3207 million kWh of electricity in the whole year. In 2021, Shengli Oilfield's Construction and Promotion of Big Data Based Oilfield Energy Control Centre project was shortlisted in the Computing Innovation and Digital Empowerment side exhibition of 2021 World Computing Conference.



Shengli Oilfield saves electricity in 2021

7,632.07 (10,000kwh)

case

Optimise Energy Management Policy System

Implement Energy Efficiency Targets

Formulated and issued The Letter of Responsibility for Energy and Environment in 2021, clarifying the targets and tasks of energy efficiency improvement, dynamically tracking the energy intensity and total amount control indicators of subsidiaries, and required all subsidiaries to scientifically arrange their annual production plan to ensure the completion of the annual binding targets.

Investment Project Review

Revised the Management Measures for Energy Conservation Review of Sinopec's Fixed Asset Investment Projects to eliminate energy waste from the source and improve energy utilisation efficiency.

Energy Management System

Thoroughly used the energy management system to promote the informatisation of energy management and achieve refined energy management.

Energy Efficiency Supervision and Audit

Implemented the national energy conservation supervision plan, organised energy conservation supervision and audits of six subsidiaries, and issued energy conservation supervision briefings and required subsidiaries to carry out rectifications.

Optimise Energy Structure

The Company actively promotes the structural transition towards clean and low-carbon energy, develops new energy projects, and gradually replaces coal with renewable energy such as wind energy and solar energy. Regarding existing coal powered generation units, the Company continuously implements efficiency upgrades to improve energy efficiency.

Reduced Coal Use

Promoted the low-carbon transition and upgrading of coal-fired power plants by promoting the operation mode of "obtain electricity with heat", replacing coal with natural gas, shutting down small generator units, purchasing thermal power and other measures. Achieve the "coal removal" target at the power plants of two refining and chemical subsidiaries.

New Energy Utilisation

Added indicators on new energy project construction and evaluation to the green enterprise approval and review process with increased weight, to encourage subsidiaries to utilise new energy and reduce the reliance on coal powered power generation and heating.

Increase Green Electricity Use

Increased the amount of "green electricity" purchase at three subsidiaries with suitable conditions, to encourage the use of green electricity and reduce the reliance on coal-powered electricity.

Innovate on Energy-saving and Low-Carbon Technologies

The Company actively develops and promotes innovative energy-saving technologies, focuses on key development of energy-saving methods, technologies and equipment, implement pilot and demonstration projects, and continuously promotes and applies mature and practical energy-saving methods, technologies and equipment, such as integrated regional energy efficiency improvement of oil and gas fields, energy system optimisation, low-temperature heat utilisation, comprehensive energy-saving treatment of industrial cooling water system, and energy-saving upgrade of key energy-consuming equipment.

Note1: The 2021 data was calculated based on constant price in 2020.

Expand New Energy Utilisation and Become an Industry Front-runner in Energy Efficiency

Over the years, through fine management of production and operation, Qingdao Refining and Chemical Co., Ltd. has continued to tap energy-saving potential and actively carried out the Energy Efficiency Improvement Plan. In 2021, after completing the implementation of energy-saving upgrade of equipment and thermal insulation transformation of pipe network, the Qingdao Refining and Chemical Rooftop Photovoltaic Power Generation Project was built with an installed capacity of 867 kWh and annual power generation capacity of 1.017 million kWh, using the technical scheme of regional power generation and nearby grid connection. The project was completed and start operation within the year.



④ Rooftop photovoltaic modules at the Qingdao Refinery and Chemical Complex

case

Carbon Capture, Utilisation and Storage (CCUS)

Sinopec Corp. attaches great emphasis on CCUS, and has intensified R&D investment and implemented key projects focusing on key CCUS technologies and their industry-scale application, aiming at building a demonstration project of the whole CCUS industrial chain. With an early start in CCUS technological research and engineering practice, the Company has developed certain advanced carbon capture technologies, at the forefront in China, and accumulated extensive engineering application experience.

Carbon Capture

The Company started researching on carbon capture technologies in the 1980s, and some of its proprietary technologies, such as low partial pressure carbon dioxide capture, catalytic hot potash de-carbonisation, and steric amine de-carbonisation, are industry leading in China, and among the forerunners globally. In China, there were over 50 sets of devices adopted the low partial pressure carbon dioxide capture technology, and over 40 sets of device adopted the catalytic hot potash method and the steric ammonia de-carbonisation method.

Carbon Transport

The Company started researching on large-scale and long-distance pipeline transportation technology for carbon dioxide in 2009, and had developed technologies such as carbon dioxide pipeline transportation process design, and pipeline leakage research and crack prevention. The Company also took the lead in the compilation of carbon dioxide pipeline transportation industry standards, and has developed the design and construction capability of carbon dioxide transportation pipeline in a variety of specifications.

Oil Displacement and Storage

The Company actively conducted field testing of carbon dioxide high-pressure miscible flooding in oil fields in East China, Shengli, Zhongyuan, and Jiangsu to effectively solve the problem for oil extraction in ultra-low permeability reservoirs. The "coordinated entry-exit and flooding-displacement" carbon dioxide flooding model enabled the effective development of closed small fault-block reservoirs. The Company had built China's first industrial refinery tail gas-oil displacement, recycling, and storage base for high water cut reservoirs in Zhongyuan Oilfield.

Technological R&D

The Company has established the Carbon Capture, Utilisation and Storage (CCUS) Key Laboratory to carry out research on key CCUS technologies, including a carbon capture technology laboratory, a CO₂ oil displacement laboratory, a geological storage laboratory, a carbon capture engineering laboratory, and a carbon footprint laboratory.

In 2021, the Company's refining and chemical subsidiaries continued to implement the recovering and utilisation of high concentration carbon dioxide generated by hydrogen production and synthetic ammonia production devices, capturing 1.5198 million tonnes of carbon dioxide. The Company's oilfield subsidiaries used 307,600 tonnes of carbon dioxide for oil displacement and increased oil extraction by 88,700 tonnes. In addition, in January 2022, the Company successfully completed the construction of the million-tonne CCUS project at Qilu Petrochemical's Shengli Oilfield, making contribution to the development of a safe and reliable domestic CCUS technology system and industrial cluster with low cost and low energy consumption.

In the future, the Company will explore the possibility of establishing CCUS technology R&D centre, develop a carbon dioxide utilisation

technology innovation system in accordance with the "technology development - engineering demonstration - industrialisation" model, focus on the deployment of cutting-edge technology projects and the development of technology reserve, such as CCUS+ new energy, CCUS+ hydrogen energy, and CCUS+ biomass energy; and explore the use of carbon dioxide to generate high-value chemicals and carbon dioxide mineralisation, extend the clean carbon storage industrial chain and promote the development of million-tonne CCUS demonstration bases in other regions. Sinopec Corp. strives to development a technology system based on the research of demonstration projects, so as to lead CCUS development with a complete series technical products and standardised models that can be replicated, promoted to and adopted by others.

The Qilu Petrochemical-Shengli Oilfield Million-ton CCUS Project of Qilu Petrochemical

In July 2021, Sinopec Corp. launched China's first Million-ton CCUS Project, the Qilu Petrochemical-Shengli Oilfield Million-ton CCUS Project, which consists of two parts: Qilu Petrochemical CO₂ Capture Project and Shengli Oilfield CO₂ Displacement and Storage Project. The CO₂ captured by Qilu Petrochemical is transported to Shengli Oilfield through green transportation facilities to be used for oil displacement and storage, which results in an integrated application of carbon dioxide capture, oil displacement, and storage, providing an typical demonstration case for promoting large-scale CCUS project.

For carbon dioxide capture, Qilu Petrochemical built a million ton per year liquid carbon dioxide recovery and utilisation device to recover the carbon dioxide from the tail gas of the coal-based hydrogen production unit, purifying the captured carbon dioxide to 99% purity. For carbon utilisation and

storage, Shengli Oilfield has built 10 unmanned gas injection stations to flood 73 wells nearby with to carbon dioxide, which will increase the fluidity of crude oil and boost crude oil recovery rate significantly. All oil and gas collection and transportation systems are close-loop pipeline systems, which further increase the carbon dioxide storage rate.

Completed on January 29, 2022, the project is expected to reduce carbon dioxide emission by 1 million tonnes per year, which is the equivalent of planting nearly 9 million trees, or driving nearly 600,000 economical-sized cars for a year. The project is also expected to boost crude oil production by nearly 3 million tonnes in the next 15 years. This is the largest CCUS full industrial chain demonstration base and project in China to date, and has a significant demonstration impact on the scale-up of CCUS in China, as well as on increasing China's carbon emission reduction capabilities with an "artificial carbon cycle" model.

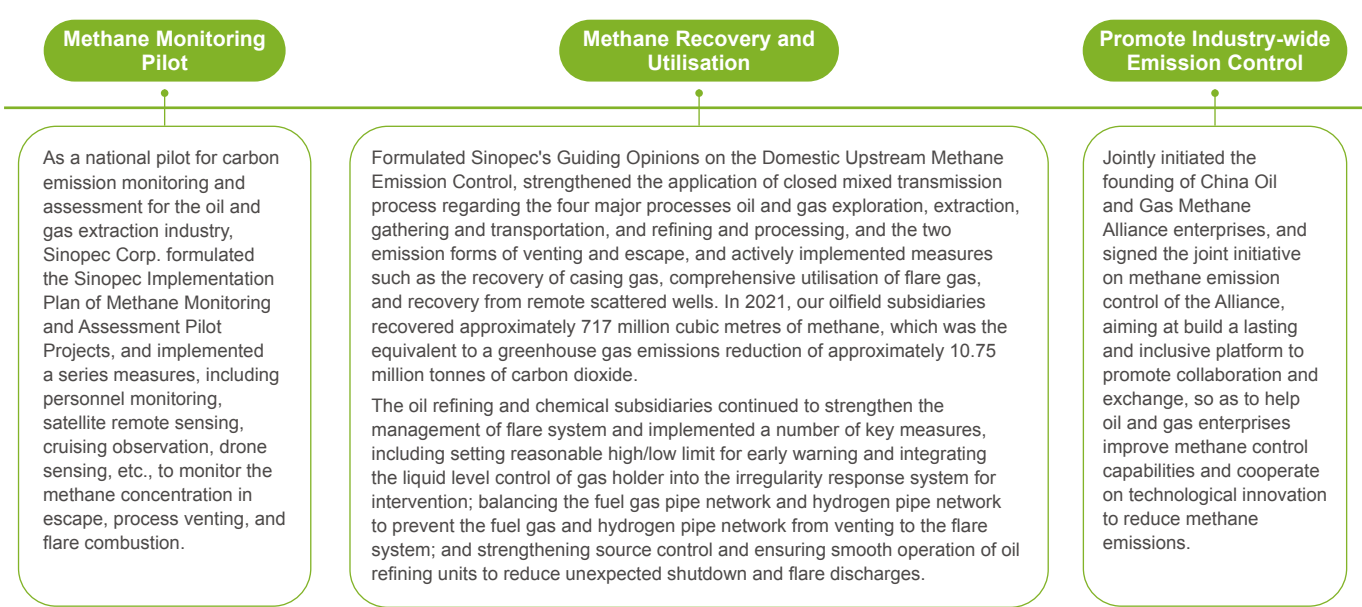


④ Qilu Petrochemical staff inspect the refrigeration unit of the CCUS project

Featured Case

Methane Emission Control

Sinopec Corp. attaches great importance to addressing climate change through controlling methane emissions. The Company has actively implemented methane emission reduction measures, comprehensively promoted measures such as methane leakage detection and repair, venting gas recycling, and closed process upgrade, striving to reduce its methane emissions intensity by 50% by 2025 (taking 2020 as the base year). In 2021, Sinopec Corp.'s methane emission reached 299.90 million cubic metres, while methane recovery reached 717 million cubic metres, with a 19.5% increase year-on-year.



In 2021,

Methane recovered

717 million cubic metres

increase by

19.5% year-on-year



📍 Sino-Korean Petrochemical uses ground-based high-pressure flares and drone monitoring to reduce methane emissions

Participate in Carbon Trading

Carbon trading volume

4.56 million tonnes

Carbon quota fulfilment rate

100%

Sinopec Corp. actively participated in the national carbon emission trading market, developed trading plans and strategies, drafted, and issued the Sinopec Carbon Trading Administration Measures during the year, and further standardised the fulfilment of carbon quotas. The Company leveraged the advantages of its integrated system by making comprehensive arrangement based on carbon quota surpluses and shortages of its subsidiaries, and leveraged its capability expertise and established a dedicated carbon trading team. With scientifically formulated carbon trading plans and centralised management of carbon trading, the Company ensured that all its subsidiaries fulfilled their carbon quotas on schedule. By the end of 2021, Sinopec Corp. had 23 subsidiaries participated in the national carbon trading market, with a carbon trading volume of 4.56 million tonnes and a 100% carbon quota fulfilment rate.

Forest Carbon Sink

Sinopec Corp. fully embraces the green development concept, and integrates facility greening with building green enterprise. The Company encourages all employees to take part in nationwide volunteer tree planting, to both increase the forest reserve and maximises forest's comprehensive effects on carbon reduction, carbon storage, and ecological improvement.

Facility greening activities

- The total amount of current green space is 117.944 million square metres, with a year-on-year increase of 1.3%.
 - During the year, 0.755 million square metres of green space was newly built or restored.
- The greening rate of the industrial area of the
- Company was 27.7%, and the green coverage rate was 30.6%.

Supporting regional ecological protection

- Encouraged subsidiaries to carry out environmental activities in accordance with local conditions, such as facility greening, desert greening, Yangtze River protection and shoreline greening, ecological protection of the Yellow River Basin, joint construction of voluntary tree planting bases, etc.
- In the Yangtze River Basin, Jinling Petrochemical, Yangzi Petrochemical and Baling Petrochemical carried out ecological greening along the river and voluntary tree planting events named "Building the Most Beautiful Yangtze River Banks" and "Protecting the Mother River".

Voluntary tree planting

- A total of 2.012 million trees were planted by employee volunteers during various occasions throughout the year, increased by 309,000 trees year-on-year.
- The newly planted trees were expected to reduce 20,000 tonnes of carbon per year as carbon sink.
- In the Yellow River Basin, Luoyang Petrochemical carried out tree planting activities in the Yellow River Wetland Nature Reserve.
- Huabei Oilfield, Inner Mongolia Petroleum organised their employees to participate in tree planting activities for soil and water conservation in barren mountain and desert areas.
- The Petroleum Engineering Construction Co., Ltd. established a 300 mu charity tree planting base Hangjinqi Banner, Inner Mongolia.

Encouraging employee participation in online support for tree planting

- Employees are encouraged to participate in "cloud tree planting" activities via Ant Forest, online donation, forest adoption, etc. In 2021, our employees donated RMB 1.2 million to plant trees through the National Voluntary Tree Planting Network, China Greening Foundation, local tree planting websites and other online platforms, which was the equivalent to planting 78,000 trees.



📍 Luoyang Petrochemical coexists in harmony with the Yellow River



Energy Transition

Green and Clean Energy Strategy

Sinopec Corp. takes "green and clean" as one of its core development strategies, adheres to ecological priority, green transition, and clean development, promotes the clean utilisation of fossil energy, scaling-up of clean energy, and low-carbon production process, strives to reduce energy consumption and emission intensity, and control and reduce total emissions, and actively develops and provides green, low-carbon, and environment-friendly products, allowing the Company to become an industry model for green, clean, and low-carbon development.

Oilfield subsidiaries

Aiming at achieving the goal of "low-carbon energy for production, and clean energy for consumption", develop and use clean energy such as wind energy and solar energy available onsite, to enhance low-carbon development capabilities of the subsidiaries.



④ Jiangsu Oilfield powers the pumping unit with photovoltaic power

Refining and chemical subsidiaries

Adjusted the heavy oil refining structure, promoted product quality improvement, and developed new green energy-saving materials with high added value and advanced technologies.

Adhering to the principles of "integration of hydrogen and electricity, green hydrogen and carbon reduction", actively implemented centralised wind power and photovoltaic generation projects on refining and chemical industrial facilities, carried out the "large-scale renewable energy power generation - energy storage - hydrogen production with green electricity" project, and gradually promote green power utilisation and green hydrogen refining, so as to achieve in-depth de-carbonisation in the refining and chemical sectors.

Conduct in-depth waste heat utilisation to tap the recovery and reuse potential of waste heating and cooling energy in the production process, which could be used in production, power generation, heating, or refrigeration on the facilities and for nearby users.

④ In September 2021, the hydrogen refuelling station in Yanqing, Beijing was officially put into operation

Marketing subsidiaries

Explored hydrogen energy application scenarios, invested in key processes of hydrogen production, storage and transportation, and filling, and strove to gradually expand the proportion of green hydrogen supply, and take lead in the strategic development of the hydrogen energy industry.

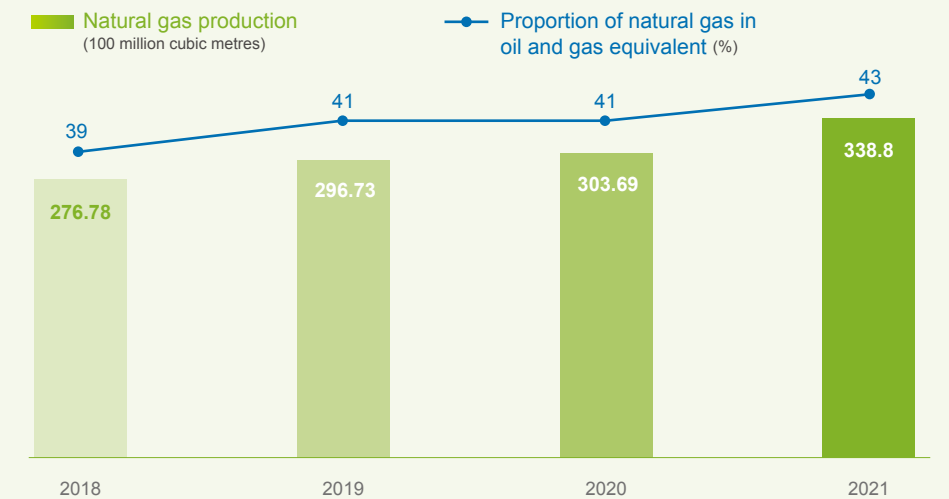
Actively constructed distributed photovoltaic power generation projects, building a total of 1,253 distributed photovoltaic power generation projects cumulatively (including 1,048 completed in 2021) with a total installed capacity of 43.8 MW. Accelerated the deployment of "carbon-neutral" vehicle refuelling stations, including the construction of China's first carbon-neutral gas station in 2021, to speed up the low-carbon development process.

④ In October 2021, Shanghai Petroleum's Qingwei hybrid station was officially completed, which can serve hydrogen vehicles with both 35 MPa and 70 MPa hydrogen fuel cells



Natural Gas

As a fossil energy with low carbon emission intensity, natural gas plays a key role in the energy transition process. Sinopec Corp. is committed to planning and promoting the development of the natural gas business at a strategic level, coordinating natural gas resources and markets, promoting the development of the full-scale industrial chain system of natural gas, and striving to help increase natural gas's share in domestic primary energy consumption. In 2021, the Company's natural gas production reached 1,199.4 billion cubic feet, with an increase of 11.9% year-on-year.



Hydrogen Energy

The development of hydrogen energy is one of the essential paths to achieving the transformation of global energy structure to cleaner and low-carbon models. Sinopec Corp. has extensive industrial experience and competitive advantages in the hydrogen energy sector. Taking hydrogen energy as the main direction for its new energy business, the Company leverages its industry, technology, and network resources to build an integrated and collaborative operation mode, covering hydrogen energy production, hydrogen energy mobility, hydrogen energy technology, and hydrogen energy investment, through independent innovation, collaborative R&D, and strategic investment, building its own whole process industrial chain of hydrogen energy production, purification, transportation, and sales.



2050 Hydrogen Energy Vision



Hydrogen energy mobility

100% of hydrogen produced with non-fossil energy; develop a fully functional and nationwide low-carbon transportation energy supply network to help the national road transportation system achieve carbon neutrality in advance.



Green hydrogen refining

100% of the hydrogen used by refineries is blue hydrogen or produced with non-fossil energy, and help Sinopec Corp. achieve its carbon neutrality target with high quality through green hydrogen refining.

Progress and Achievements of Hydrogen Energy Business

Hydrogen Supply

- As of the end of 2021, eight hydrogen supply centres had been built to provide high-purity hydrogen for fuel cells, with a capacity of 16,000 standard cubic metres/hour.

Hydrogen Refuelling Station

- Actively promoted the deployment of hydrogen refuelling stations by relying on over 30,000 refuelling stations nationwide, and taking into consideration regional city cluster development plans, market needs and application scenarios, and the opportunity of the Beijing Winter Olympic Games and the construction of Xiong'an New Area.
- Built and operates 74 hydrogenation stations, with a total hydrogen refuelling capacity of about 45 tonnes/day, making the Company the global leader in number of hydrogen refuelling stations.
- In 2021, the Company had provided refuelling service to about 2,000 hydrogen fuel vehicles with an annual hydrogen filling volume over 800 tonnes.

Green Hydrogen Production

- Completed the first proton exchange membrane (PEM) hydrogen production demonstration project in Yanshan Petrochemical with a capacity 30 standard cubic metres/hour.
- Actively promote the R&D of megawatt PEM hydrogen production facilities and hundred kilowatt Solid Oxide Electrolyser Cell (SOEC) hydrogen production facilities.

In the next five years, Sinopec Corp. will accelerate the development of new energy business with hydrogen energy as the core, firmly promote the rapid development of the whole hydrogen energy industrial chain in two major fields of hydrogen energy mobility and green hydrogen refining. The Company will further strengthen cooperation with leading enterprises in new energy and hydrogen energy manufacturing, plan and layout hydrogen refuelling stations or gas-hydrogen hybrid stations, and strive to build China's leading hydrogen energy enterprise and an industry forerunner of commercial demonstration projects.

④ In October 2021, Shanghai Petroleum's Qingwei hybrid station was officially completed, which can serve hydrogen vehicles with both 35 MPa and 70 MPa hydrogen fuel cells



Sinopec Clean Hydrogen at Bird's Nest

On February 4, 2022, at the opening ceremony of the Beijing Winter Olympics, hydrogen provided by Sinopec Corp. was used as fuel for the main torch of the venue, fully reflecting the green and low-carbon concept of the event. Unlike the previous winter Olympics, which used liquefied natural gas or propane as torch fuel, for the first time, the main torch of the Beijing Winter Olympics and the domestic relay torch all used hydrogen energy provided by Sinopec. This was an arrangement that truly representing the combination of the Olympic spirit with "green" and "environmental protection" concepts.

Ever since becoming the official oil and gas partner of the Beijing Winter Olympics in July 2018, Sinopec Corp. accelerated the low-cost development and utilisation of hydrogen energy and started the construction of a new hydrogen energy supply project for the Beijing Winter Olympics through its subsidiary, Yanshan Petrochemical. In March 2020, the hydrogen new energy device successfully produced high-quality hydrogen, which met all national standards and requirements for hydrogen fuel cell vehicle hydrogen, and successfully passed the inspection by the Winter Olympic Organising Committee.

Meanwhile, Sinopec Corp. also provided high-quality hydrogen fuel for hydrogen vehicles for the Winter Olympic Games. The extensive use of hydrogen fuel cell vehicles during the Beijing Winter Olympics made this Game the world's largest demonstration project of utilising hydrogen fuel cell vehicles, both reducing pollutant emissions and reflecting the principles of green, low-carbon and sustainability of the Beijing Winter Olympics. Sinopec Corp. built four Winter Olympics hydrogen refuelling stations, accumulatively serving 12,600 trips of various Winter Olympics vehicles, filling 148 tonnes of hydrogen.



Photovoltaic Project

Sinopec Corp. has thoroughly implemented the "Photovoltaic+" action, fully combined rooftop photovoltaic power generation at gas stations with energy conservation, carbon reduction, and brand marketing. The Company promoted the construction of Building Integrated Photovoltaic (BIPV) on the spare space on rooftop of more than 30,000 gas stations in China, developed distributed photovoltaic power generation, and built "Carbon Neutral" gas stations. The Company plans to build 7,000 distributed photovoltaic power generation stations by 2025, generating power to serve both the energy needs of the stations and the charging needs of electric vehicles. As the end of 2021, Sinopec Corp. has built 1,253 photovoltaic power generation stations with a total installed generation capacity of 43.8 MW.

Built **1,253**
photovoltaic power generation
stations

Plans to build **7,000**
distributed photovoltaic power generation
stations by 2025

Promote the Construction of Carbon Neutral Gas Stations

The Company carried out the "Photovoltaic +" action and build distributed photovoltaic power generation units on rooftop of gas stations, with a number of carbon neutral gas stations completed, such as the Jiaze Station in Changzhou City, Jiangsu Province, and Liuhua Station in Baise City, Guangxi Autonomous Region. The generated power not only fully offset the implied carbon dioxide emission of the purchased power of the gas station, but also partially contribute to additional reduction of carbon emissions. These stations have already passed the certification by professional authorities of its carbon neutrality.



Ⓐ Rooftop photovoltaic power generation unit at Jiaze refuelling station in Changzhou, Jiangsu generates 127,000 to 147,000 kWh of electricity annually

Biomass Energy



Bio Jet Fuel

Established bio jet fuel production facility to produce bio jet fuel from renewable resources such as catering waste oil, animal grease and vegetable oil, etc., with a production capacity of 100,000 tonnes/year. In the future, the Company will continue to strengthen R&D investment to develop low-cost and high-efficiency production technology, and reduce the production cost of bio jet fuel.



Bio-diesel

Continued to expand the supply of bio-diesel in Shanghai and other cities. The blending capacity of B5 bio-diesel reached over 400 thousand tonnes, and could cover more than 240 gas stations in Shanghai. The Company has made the plan to build a 100,000 tonnes/year bio-diesel project during the 14th Five-Year Plan period.



Ethanol Gasoline

Promoted ethanol gasoline for vehicles based on market trends. A total of 14.925 million tonnes of ethanol gasoline was sold in 2021.

Charging and Replacement Station

Sinopec Corp. fully grasps the development opportunities of new energy vehicles, strives to participate in the development of new energy vehicle-related businesses with a high starting point and high standards. The Company cooperated closely with leading enterprises of the industry and leveraged the location advantages of its gas stations to speed up the expansion of charging and replacement capacity, added fast charging, super-charge equipment and facilities in gas stations to help solve the charging challenge for electric vehicle owners. Regarding battery replacement, Sinopec Corp. continued to lead the industrial development and technological progress of the industry, cooperated with relevant enterprises to build C-end and B-end battery replacement stations, and actively promoted the power bank service. In the next several years (2021-2025), the Company plans to build 5,000 charging and replacement refuelling stations.

Charging and replacement

- Cooperated with mainstream new energy vehicle enterprises, and accelerated the rolling-out of charging and replace stations. By the end of 2021, the Company had built 1,212 charging stations, 83 replacement stations and 4,867 charging piles.
- Established and supported world's first fully intelligent power exchange station (Beijing Chaoying).

New energy vehicle lightweight design

- Developed a series of environmentally friendly lightweight non-metallic materials with outstanding performance, some of which met international advanced standards and were well recognised by well-known automotive enterprises.
- Produced nearly 400,000 tonnes of special automotive component materials for 35 car brands, and trial produced 29 automotive parts at over 40 automotive and components companies.



Ⓐ Demonstration charging station at Shanghai Petroleum Xinjing refuelling station provides charging service to taxis

Protecting the Environment

The ecological environment supplies the materials, energy, and living space necessary for human society to thrive and develop, and it is also the home that we collectively protect. Following the concept of green and ecological development, Sinopec Corp. is committed to practicing environmental governance, promoting ecological protection, and contributing to building a beautiful China. The Company has kept improving the environmental management system, making committed efforts to prevent and control pollution, and continuously improving its environmental protection performance, contributing our bit to facilitate the ecological development and harmonious coexistence of mankind and nature.

- **Strengthening Environmental Management**
- **The Green Enterprise Campaign**
- **Water Resources Management**
- **Land Resource Management**
- **Control of Atmospheric Pollutants**
- **Solid Waste Management**
- **Prevention of Hydrocarbon Leakage**
- **Biodiversity Conservation**

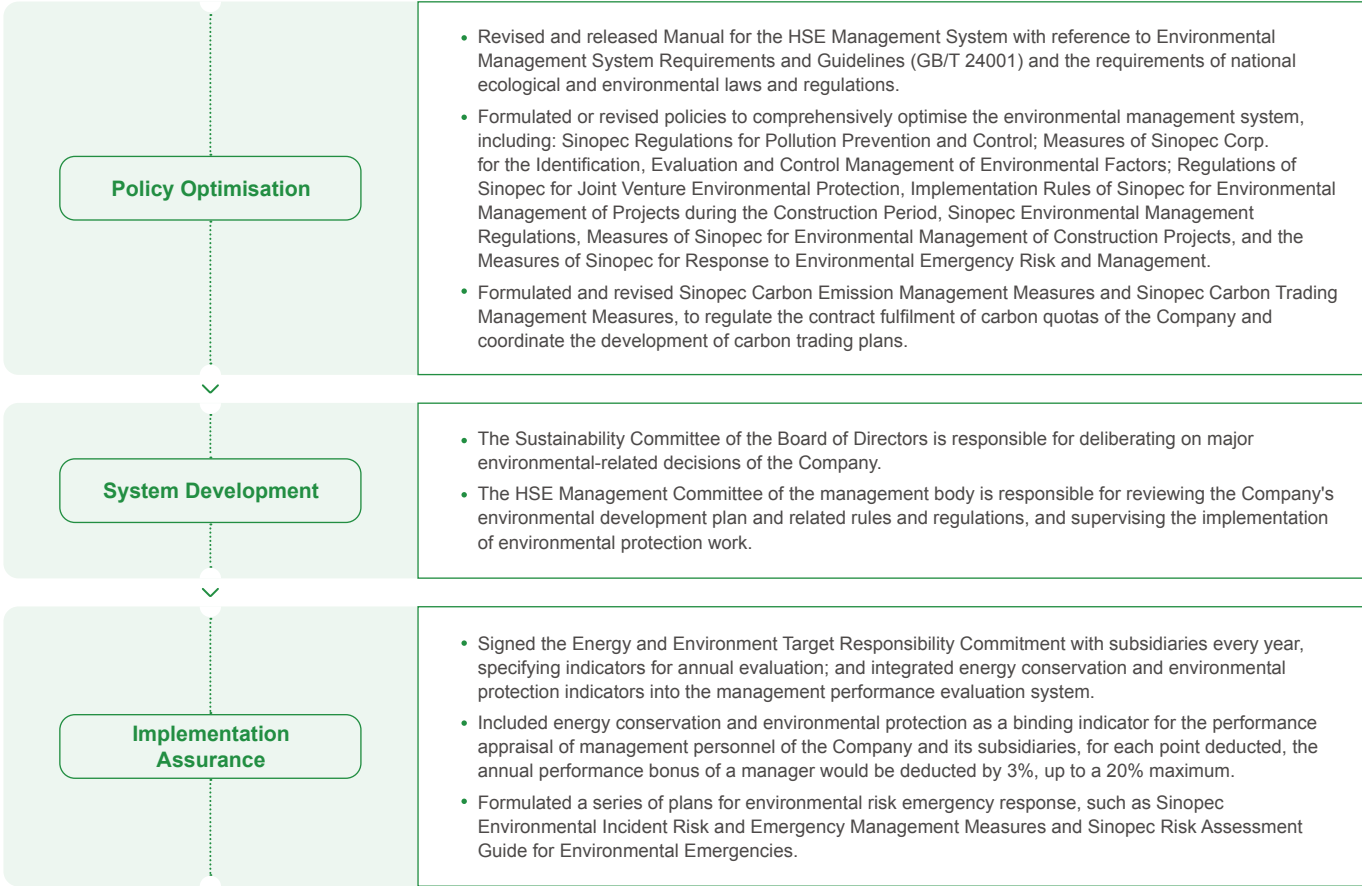
Strengthening Environmental Management

Sinopec Corp. strictly implements laws and regulations related to environmental protection, makes strengthened efforts in developing environmental policies and management system, and has integrated environmental management into all aspects of its daily operations. In 2021, the Company made in-depth integration of Requirements and Guidelines for the Environmental Management System and the green and clean strategy, revised and released Manual for the HSE Management System, further emphasising the guidelines regarding its environmental protection efforts. The Company also formulated Sinopec Programme for Strengthening Environmental Protection, 2021-2023, for the purposes of pushing forward the construction of the environmental performance assessment system, enhancing supervision over the management of subsidiaries, maintaining the continuous progress and sound performance of its environmental protection efforts, and ensuring the harmonious coexistence between the Company and the natural environment. In 2021, the Company's environmental expenditure reached RMB 11 billion.

Environmental Management System

The Company continued to promote the construction of HSE (health, safety, and environment) management system, and optimised the policies and system documents related to environmental protection, which provided the necessary guarantees in terms of policies, guidelines, implementation, evaluation and assessment, to ensure the smooth operation, auditing and continuous improvement of the environmental management system. In 2021, a total of 25 subsidiaries of the Company had passed the third-party certification of the ISO14000 environmental management system.

The Company issued the "Energy and Environmental Responsibility Commitment" to its subsidiaries every year, specifying their emission reduction targets and governance tasks, and incorporating them into the annual assessment, and the Sinopec Programme for Strengthening Environmental Protection, 2021-2023 to guide its subsidiaries to carry out pollution prevention and control, and improve the effectiveness of environmental activities.



Management of Environmental Impact

Focusing on the goal of "zero pollution", the Company makes every effort to regulate project construction and production operations. It built a policy system covering the entire process from project entry to project exit, carried out in-depth life-cycle management of the environmental impact, and effectively avoided and reduced the adverse effects on the ecological environment and local communities.

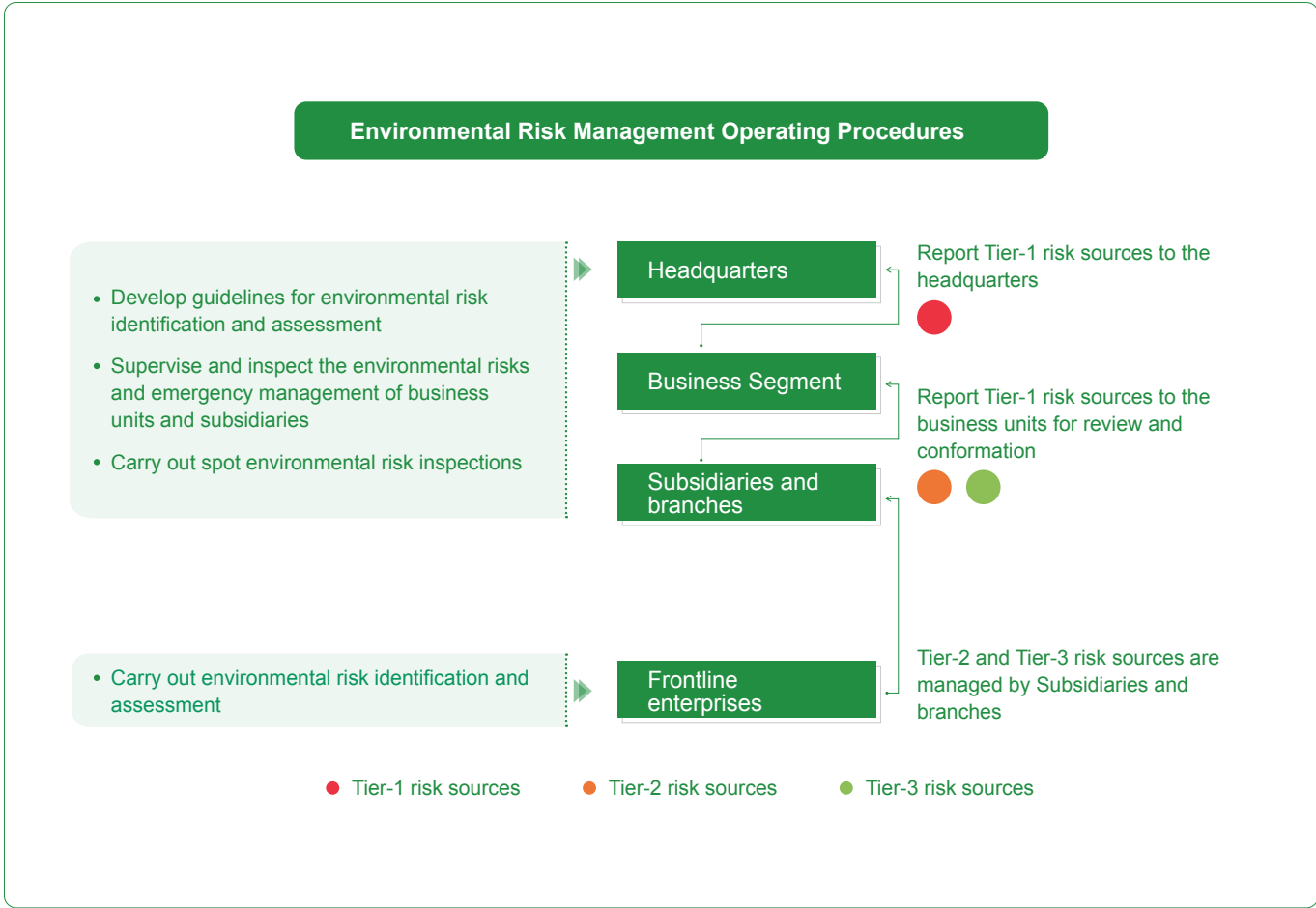


Maoming Petrochemical staff inspects the environmental monitoring facilities



Environmental Risk Management

The Company has formulated a tired environmental risk management plan, integrated environmental risks into the comprehensive risk management system, implemented a dynamic environmental risk monitoring mechanism, and achieved the management and downgrading of significant environmental by implementing environmental risk control accountabilities, optimising ecological risk management procedures, clarifying control processes for different risk tiers, and carrying out environmental risk supervision, inspection and rectification activities.



Water Resources Management

The Company attaches great importance to water resources management, and has formulated and implemented Sinopec Measures for Water Resources Conservation, striving to reduce the total amount of fresh water withdrawal for industrial use by no less than 1% per year, comprehensively optimise water consumption structure, increase sewage and wastewater reuse, promote the application of water conservation technology, strengthen the management of water pollution prevention and control facilities, and vigorously promote pollution prevention and control. The Company conducts comprehensive inspections of its discharge of water pollutants in accordance with the requirements of the state pollution prevention and control campaign as well as relevant standards to ensure compliance with wastewater discharge standards. In 2021, all business units and subsidiaries of the Company reached their annual targets for comprehensive wastewater treatment with a 100% compliance rate.

In 2021,

The comprehensive compliance rate of wastewater have reached **100%**

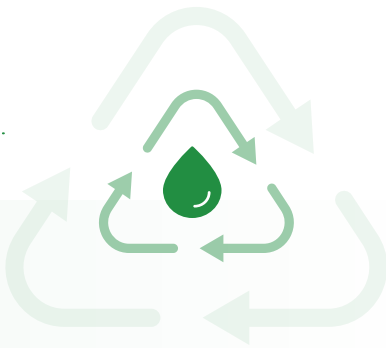


Water Conservation

Industrial water use amount decrease

by **1.1%** year-on-year

The Company follows the relevant national laws and regulations on water resources management, applies for water permits in compliance with the requirements of laws and regulations, actively takes water conservation and alternative measures to reduce source water intakes, and makes every effort to minimise losses and waste in water consumption. The Company has committed in the Green Enterprise Campaign to reducing the total amount of fresh water withdrawal for industrial use by no less than 1% per year. In 2021, the Company's fresh water withdrawal for industrial use amounted to 636.16 million cubic metres, down by 1.1% year-on-year.



Conservation of Source Water to Reduce Withdrawal

- Adhered to the principle of determining production volume with the water use plan, strictly prohibited the construction and expansion of new projects with high water consumption in areas with stressed water resources to ensure compliance with laws and regulations regarding water withdrawal, and strengthened the internal water withdrawal permit management system.
- Carried out in-depth water conservation transformation in oilfields and refining subsidiaries, enhanced R&D and innovation of water conservation technologies, equipment, materials, and techniques, held training for water resources management personnel while strengthening team building, and enhanced employees' awareness raising on water conservation.
- Optimised water use structure and gave priority to using recycled water, rainwater, mine water, brackish water, and other non-conventional water resources. Several subsidiaries started using municipal reclaimed water or treated mine water as substitutes to reduce freshwater consumption, while subsidiaries in coastal areas were encouraged to use seawater resources to do so.
- Carried out water balance testing and regularly inspection of water supply pipelines to eliminate leakage; upgraded aged or leaking pipelines to reduce water loss due to leakage.
- Improved the management of water use information, optimised online monitoring system for water use to collect and monitor the real-time water withdrawal data online.

Using Recycled Water to Improve Water Efficiency

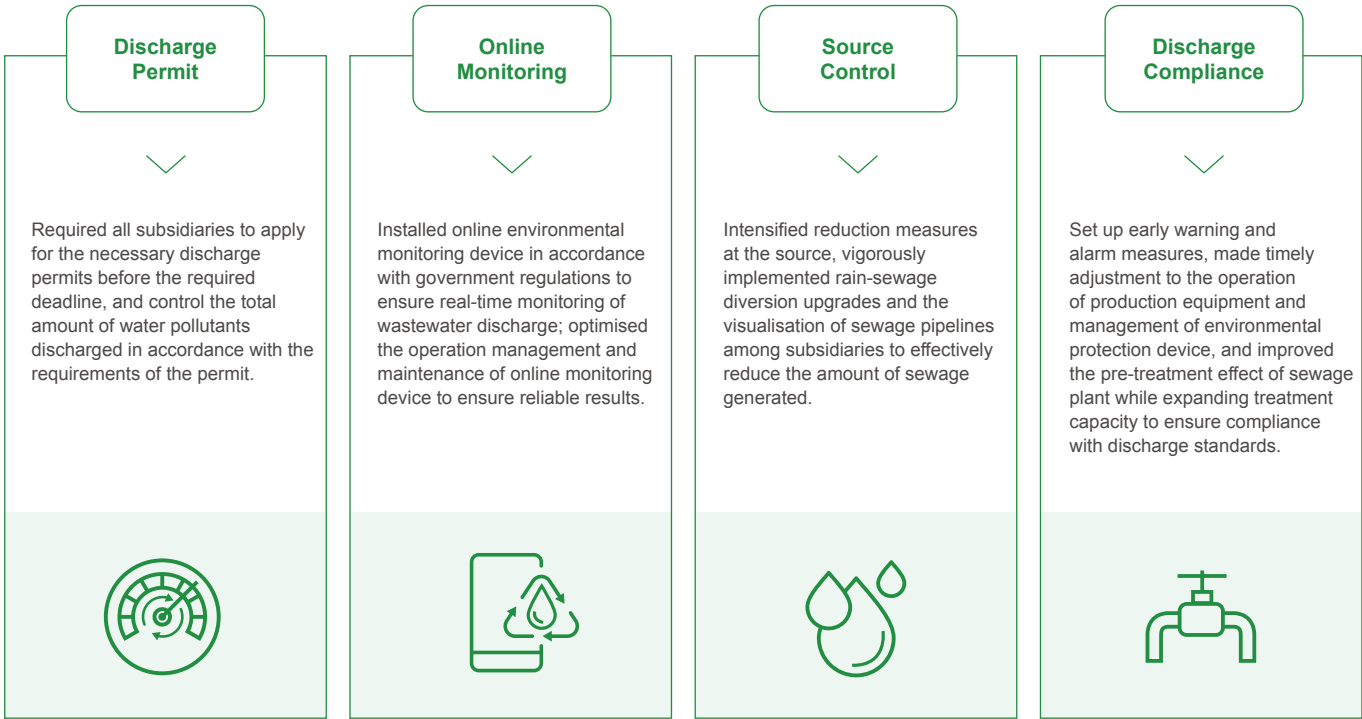
- Optimised the operation of the water circulation system, used reclaimed water and reused water as replenishment water to reduce freshwater use, and built condensate recovery systems to increase the reused rate of condensate.
- Developed and applied a proprietary water-saving technology that reduced industrial water use and improved reuse rate of stripped and purified water by using purifying and reusing sulphur-containing wastewater.

Wastewater Reuse to Reduce Discharge

- Promoted subsidiaries at all levels to reuse sewage and wastewater, built appropriate sewage treatment facilities according to the quality of sewage inflow and improved sewage treatment and utilisation.
- Cooperated with research institutions to overcome technological bottlenecks and increase sewage reuse rate with the high-concentration saltwater desalination treatment system and solution developed.
- Guided subsidiaries to conduct rainwater and sewage diversion upgrade, visualized sewage pipe network upgrade, and sewage plant upgrade.

Strengthening Sewage Treatment

The Company kept strengthening the prevention and control of water pollution risks and conducted comprehensive inspection of its discharge of water pollutants in accordance with the requirements of the national pollution prevention and control campaign as well as relevant standards. Problems identified were rectified in a timely manner to ensure compliance. The Company implemented environmental protection and upgraded treatment projects, issued Guidance on the Management of Rainwater and Sewage Facilities at Plants in Refining and Chemical Enterprises to guide subsidiaries to implement rainwater and sewage diversion upgrade, and to continuously carry out visualisation and transformation of sewage pipe networks and upgrading of sewage plants, so as to optimise the pre-treatment effect of sewage plant while expanding treatment capacity to ensure compliance with discharge standards.

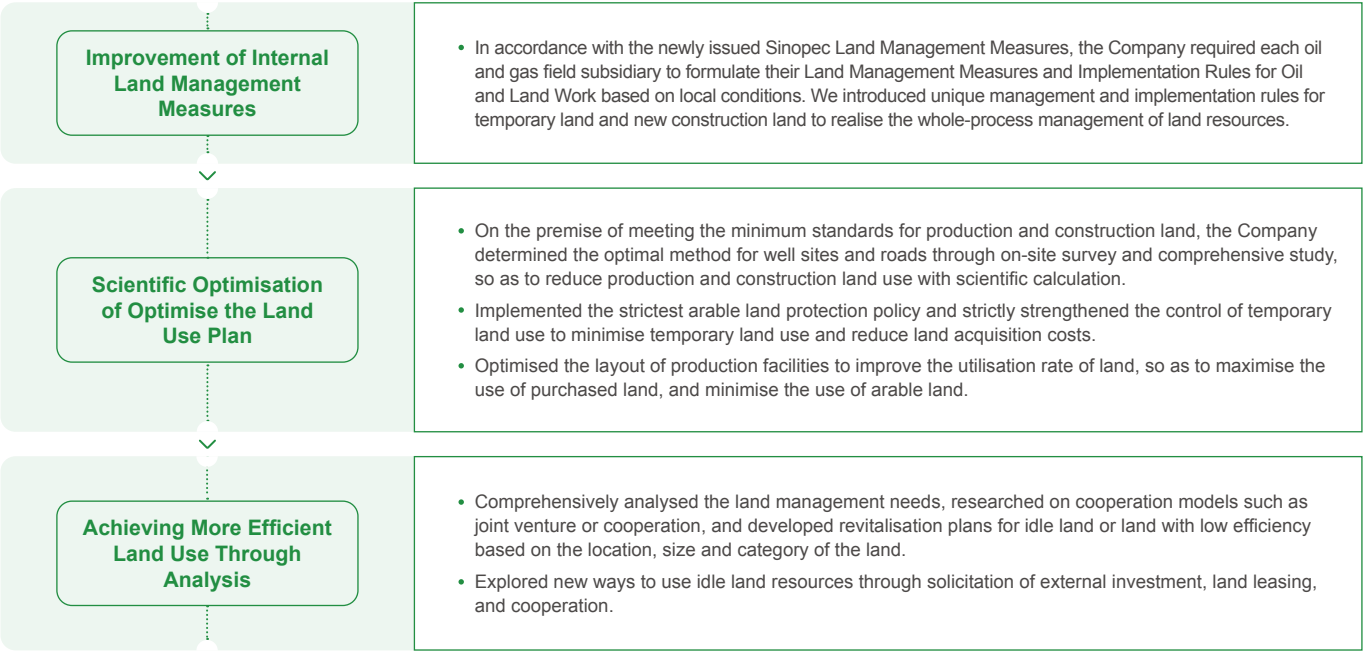


Groundwater Management

In 2021, the Company developed the corporate standard Technical Specification for Groundwater Investigation and Evaluation of Land for Corporate Use. We organised subsidiaries at all levels to continuously carry out self-monitoring of groundwater in conjunction with the preliminary survey results of land for corporate use, as an effort to implement the system for the investigation of potential soil pollution hazards and to meet the corporate self-monitoring requirements. After completing the groundwater investigation and administrative filing of land for corporate use, the Company screened for soil pollution hazards at solid waste sites and production facilities within a 1-kilometre range of the Yangtze River water system and a 10-kilometre range of the Yellow River water system, and cleaned up and disposed of 85,600 tonnes of solid waste in solid waste landfills.

Land Resource Management

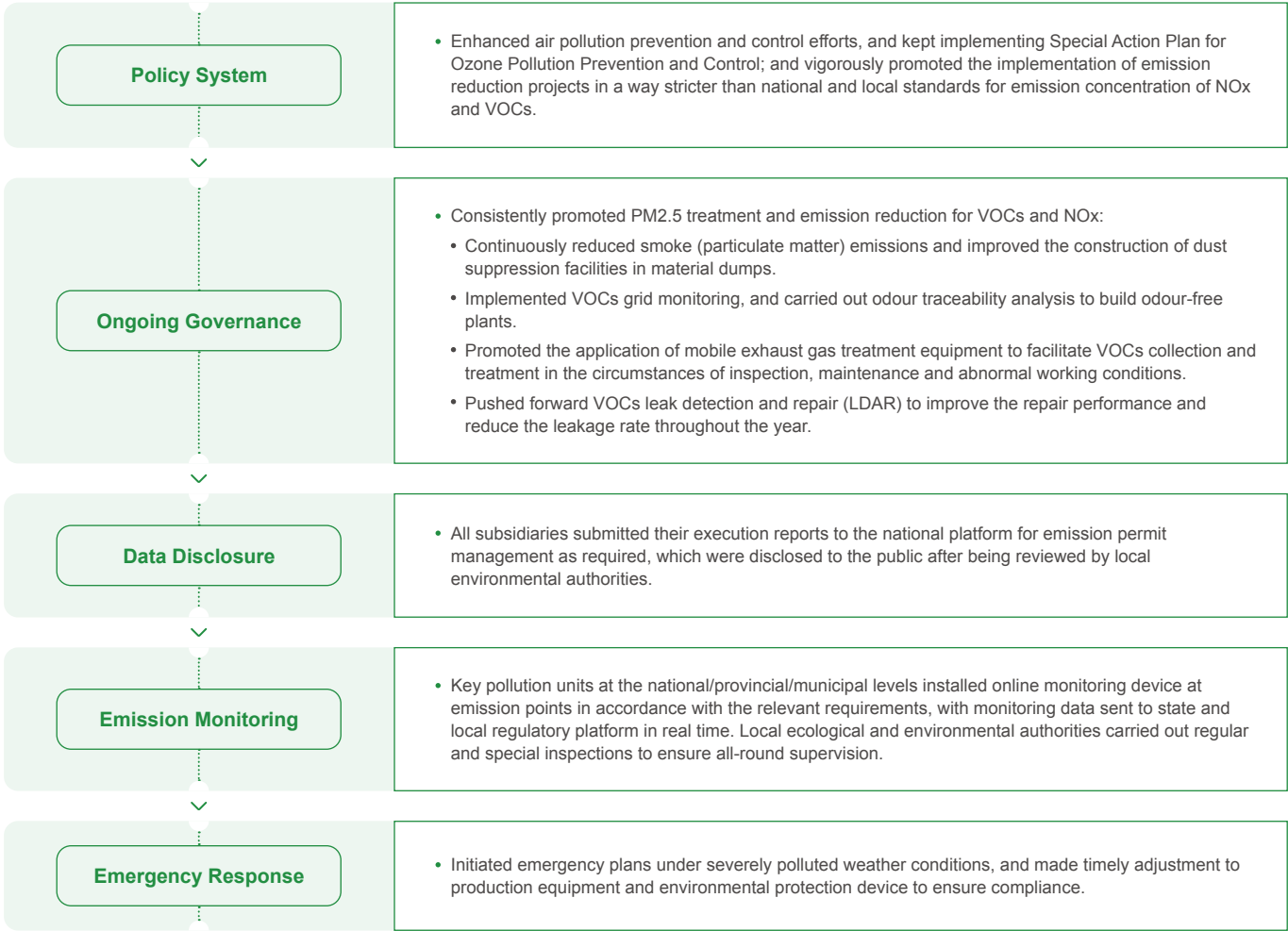
Sinopec Corp. consistently implements the principle of "intensive, efficient and green land use." In compliance with the requirements of national land-related policies, the Company has required all subsidiaries to formulate land management rules following the actual business characteristics, clarifying the content, procedures, and responsibilities of land resource management, in a bid to realise the closed-loop management in the whole life cycle of land resources.



④ Huadong Petroleum Engineering Company's Shengye 2 platform minimises land use during the construction process

Control of Atmospheric Pollutants

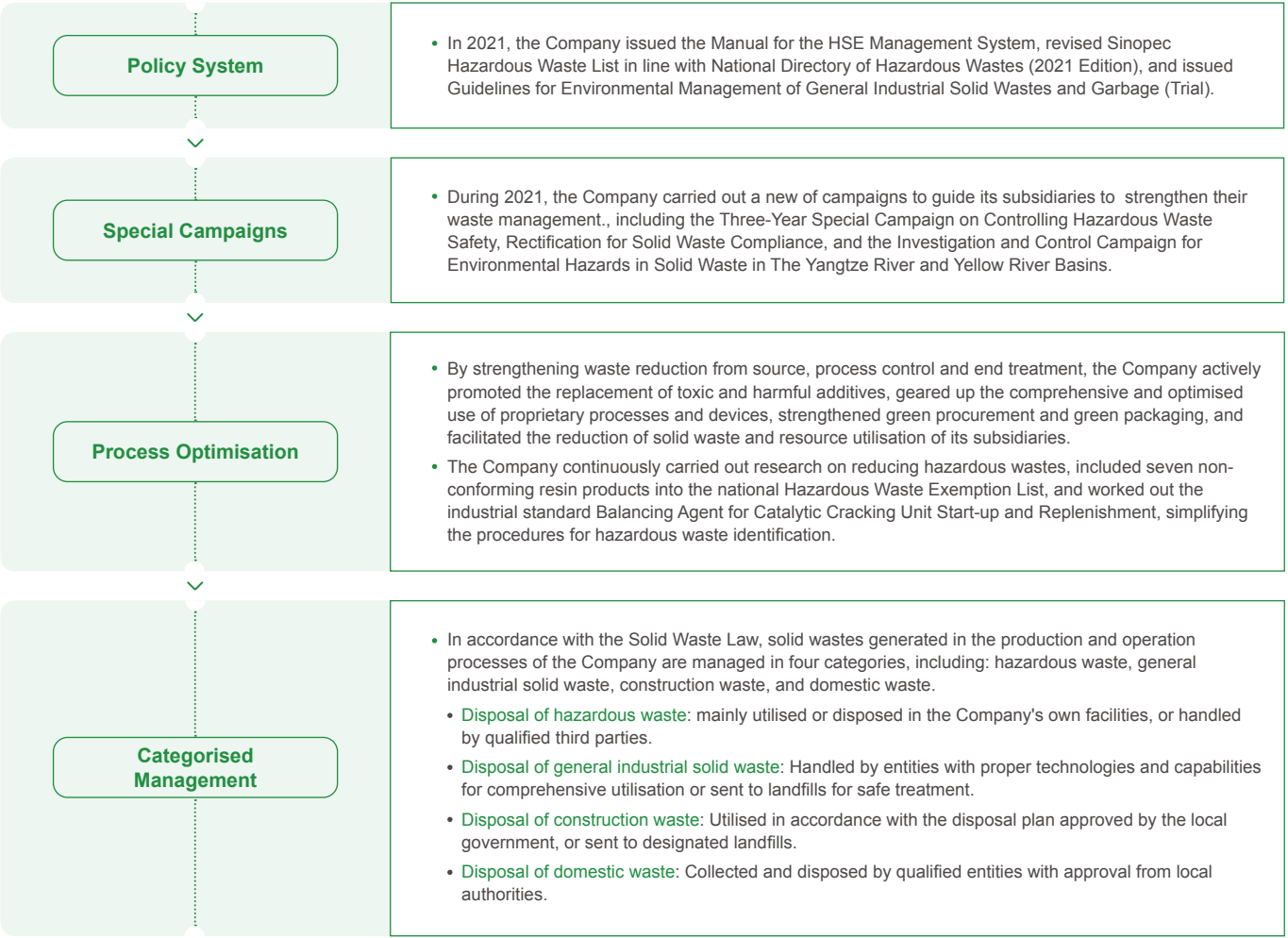
The Company strictly abides by national and local policies, laws and standards related to air pollution prevention and control. It has formulated and strictly implemented the Sinopec Regulations for Pollution Prevention and Control, and actively followed the requirements of regulatory authorities to continuously promote emission reduction of air pollutants and prevent leakage. In 2021, all business units and subsidiaries of the Company reached the annual target for comprehensive control of exhaust gas, with a compliance rate of 99%.



Indicators	2019	2020	2021
Sulphur dioxide (SO ₂) emissions (thousand tonnes)	64.6	61.9	59.3
Nitrogen oxide (NOx) emissions (thousand tonnes)	95.9	92.0	88.3

Solid Waste Management

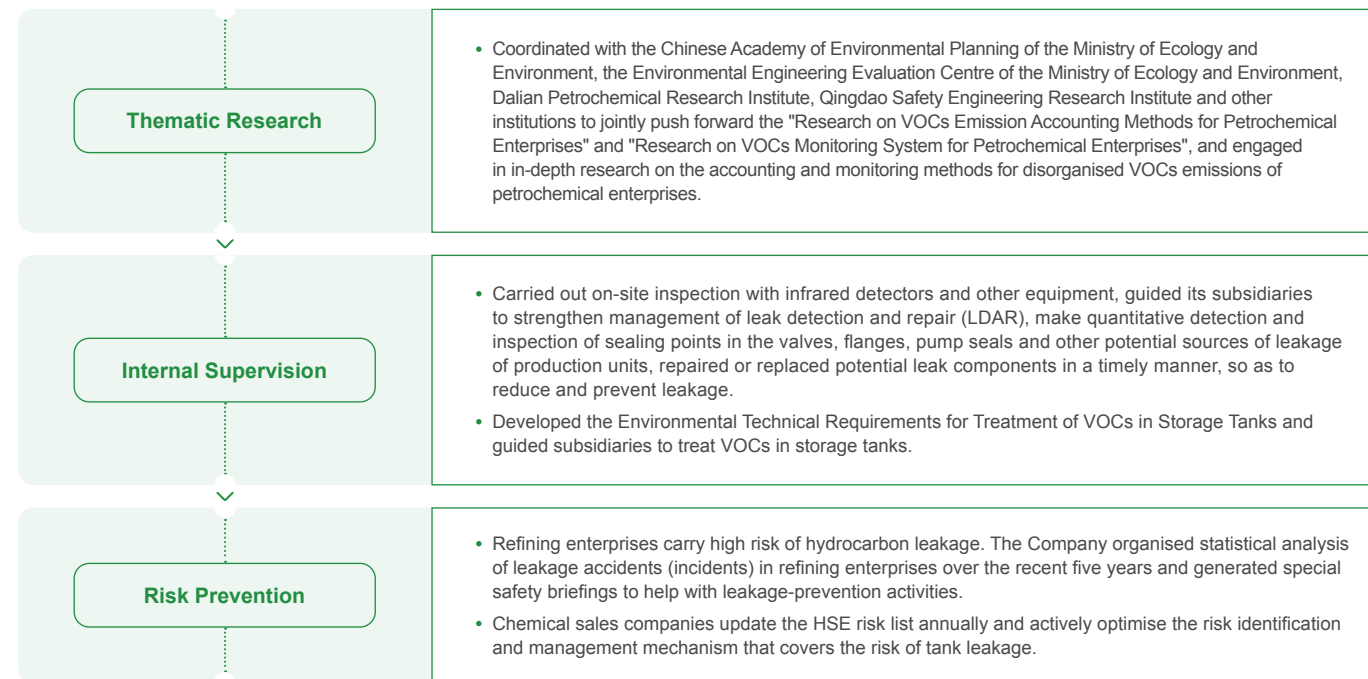
The Company strictly abides by the requirements of the new Solid Waste Law. Adhering to the principle of "reduction of use, conversion into resources and harmless treatment" for solid waste disposal, the Company kept promoting the reduction and recycled use of solid waste. To actively improve its capability to treat solid waste among its subsidiaries, the Company strengthened the whole-process management of solid waste, requiring the 100% disposal rate for hazardous waste, and included solid waste management into the energy and environmental responsibility evaluation over subsidiaries.



Indicators	2019	2020	2021
Amount of non-hazardous solid waste (1,000 tonnes)	2,115.32	1,710.8	1,931.6
Amount of hazardous waste (1,000 tonnes)	642.3	731.1	461.0
Compliance rate of solid waste disposal (%)	100	100	100
Percentage of hazardous solid waste disposed properly (%)	100	100	100

Prevention of Hydrocarbon Leakage

The Company has formulated the Sinopec Pollution Prevention and Control Management Regulations and Manual for the HSE Management System, which clarify the means of controlling various pollutants including hydrocarbons and the risk identification mechanism for potential leakage hazards, to effectively prevent the risk of hydrocarbon leaks or spills.



④ Cangzhou Refinery staff conducts VOCs inspections

Biodiversity Conservation

In strict compliance with the Environmental Protection Law and the United Nations Convention on Biological Diversity, the Company continuously improves the biodiversity protection policy and management rules to complete the ecological management system. It has formulated and issued Sinopec Environmental Management Regulations and Sinopec Ecological Management Measures to regulate the ecological protection work during construction, production, and operation. It also urges subsidiaries at all levels to avoid crossing the prohibited development areas as delineated by the ecological red line while requiring them to improve the supervision mechanism for ecological protection and restoration and protect the quality of ecological environment and biodiversity, to facilitate the sustainable development of the industry and society.

The Company required all construction projects involving ecologically sensitive areas to adopt strict ecological protection and restoration measures. When carrying out feasibility studies and environmental impact assessments for projects with ecological impact, related parties shall, with regards to the site (route) selection, layout, and scale of construction projects must strictly comply with the "Three Lines and One List" regulation as well as the general requirements for relevant planning and environmental impact assessment. Meanwhile, the Company required its suppliers to work on ecological protection strictly. It proposed that a construction unit be responsible for environmental protection during the project. It shall implement all environmental measures and requirements in line with the contract during the construction period.

In 2021, the Company further improved its ecological monitoring and evaluation system and the environmental monitoring network. It engaged in ecological monitoring on a pilot basis in eight subsidiaries. It continuously tracked the ecological environment quality around the Puguang Gas Field, with a total of more than 34,000 entries of monitoring data and 2,800 comparison photos obtained so far from 73 ecological monitoring points deployed in 2021. The ecological tracking results show that the ecology of each development area in the Puguang Gas Field has retained its natural environmental functions. Throughout the year, there was no major incident involving the Company that was harmful to biodiversity.

Sinopec Environmental Management Regulations (Sinopec Production [2020] No.222)

"Strictly in compliance with state environmental protection requirements, project construction, operation and decommissioning (relocation) shall have their respective ecological protection plans formulated and implemented, shall take effective measures to reduce the disturbance to the ecological environment, shall carry out the necessary ecological assessment, monitoring, restoration, and statistic studies as required, to protect biodiversity and ensure ecological safety."

Sinopec Ecological Management Measures (Sinopec Energy [2019] No.288)

"All units shall strictly manage their production and operation, reduce the disturbance of production and operation to the ecological environment, protect biodiversity, and ensure ecological safety." The Management Measures also specify the environmental protection requirements for each project construction and operation stage and require biodiversity protection into the annual energy and environmental performance evaluation.



An aerial night photograph of an industrial facility, likely a refinery or chemical plant. The image shows several large, cylindrical storage tanks illuminated by bright lights. A long pier extends from the land into the water, where a large ship is docked. The ship's deck is also brightly lit. The overall scene is dark, with the lights from the facility and the ship providing the primary illumination. The right side of the image is partially covered by a large, curved orange graphic element.

4 Strengthening Safety Management

Sinopec Corp. adheres to the safety concept of "safety comes from design, management and accountability", strictly follows the requirements of laws and regulations including the Production Safety Law and takes safety management to be the foundation of corporate production and operation. Under the guidance of the HSE management system framework, Sinopec Corp. has strengthened the identification and prevention of safety risks, actively carried out the rectification of major safety hazards, and developed an emergency management system, to provide safety assurance for the sustainable development of the Company.

- **Safety Management System**
- **Production Safety**
- **Contractor Safety**
- **Logistics Safety**
- **Information Security**
- **Security**

Safety Management System

HSE Management System

Sinopec Corp. strictly builds a strong safety defence line, considers safety to be a critical aspect of its operations, and is committed to developing a first-class corporate safety management system. By continuously promoting and improving the development of the HSE management system, Sinopec Corp. consistently optimises its safety management and performanzce, so as to create a healthy, safe, environmentally friendly, and comfortable working environment for employees.

The HSE management approach system formulated and implemented by Sinopec Corp. includes five key components with 30 factors covering occupational health, production safety, security, and environmental protection. The system is centred account effective risk management and follows the PDCA mode of "plan, do, check and act", Sinopec Corp. integrates the closed-loop management of risks into the entire production and operation process, to achieve the whole process systematic management and control of risks.

Target

Zero casualty, zero pollution, zero accident

Guidelines

Organisation leads, and all employees participate; manage and control risks, and strength the fundamentals

Concepts

Safety first, environmental protection foremost, ensure physical and mental health of employees, and strict, detailed, effective and consistent implementation

Important Practices of HSE Management System in 2021

Improved System Guidance

- Revised and issued the HSE Management System Manual of Sinopec to provide basis and guidance for the Company and relevant business units to establish and implement HSE system, provide strict safety standards for the production and operation activities of all managers and employees, and clarify the fundamental policies to promote the systematic, standardised and scientific management of HSE issues.

Carried Out Systematic Audit

- Improved internal audit quality and promoted compliance audit, with focuses on the suitability, adequacy, and effectiveness of the corporate system regarding risk identification and control, laws and regulations identification, contractor management, change management, etc.
- Improved internal audit rules, improved audit standards and methods, established an auditor expert database, and carried out a system-wide comprehensive risk factor audit and special audits for specific key factors, laying a solid foundation for implementing the HSE accountability system and improving the intrinsic safety and environmental protection of the Company.

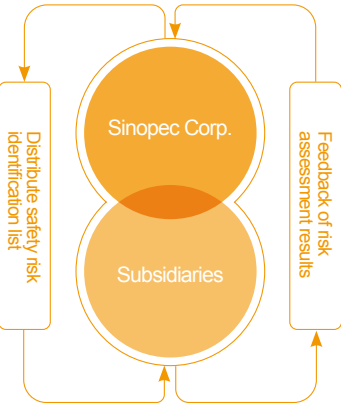
Improved Safety Performance

- Set up nine professional sub-committees at the Headquarters level, and integrated systematic requirements into production, operation and professional management, establishing a systematic operation mechanism.
- The HSE Committee held monthly and quarterly meetings to fully summarise and analyse key HSE tasks and arrange for the implementation of key items, ensuring the effective operation of the HSE management system.
- Implemented the requirements of "paying close attention to sub-committees and professional management in place", established a dynamic monitoring mechanism for the systemic factor performance indicators covering all levels, built an HSE management system information platform to monitor the real-time operation of the system.

Strengthened Professional Capabilities

- Improved and optimised the quantitative evaluation criteria for management staff on HSE management capabilities, required newly appointed top management staff at all subsidiaries to debrief on their HSE performance and complete the HSE management capabilities evaluation, and started piloting the requirement for newly appointed management staff overseeing HSE management to debrief on their performance.
- Integrated matrix management into the whole operation process of HSE management system, ensured all key HSE personnel had the required training and certification, established and optimised assessment mechanism, so as to realise the integrated management of safety, business and key factors, and improve the safety awareness and safety management capabilities of employees.

Safety Risk Identification and Mitigation



Sinopec Corp. continues to optimise its safety risk identification mechanism, identifying and assessing safety risks through a two-way cycle mode that operates both "bottom-up" and "top-down" to eliminating safety vulnerabilities. Sinopec Corp. has established a dual prevention mechanism of hierarchical management and control of safety risks and troubleshooting of safety hazards and continued to promote the use of risk assessment management platform to achieve the systematic, regular, standardised, and informationalised identification and assessment of risks.



Yangtze Petrochemical conducts the Youth "Woodpecker" Campaign to identify safety hazards

Strengthened Risk Identification, Prevention and Control

- Organised top-down comprehensive safety risk identification and assessment annually, and compiled safety risk identification list for each level. Subsidiaries reported risk assessment results along the management chain of command, and the reported safety risk lists were optimised to generate a list of major risks requiring special attention for the Company.
- Standardised risk lists using the self-developed quantitative integrated Petrochemical HSE Assessment & Management System (PHAMS) , integrating risks identified through various methods into the risk library in standardised format, to achieve the quantitative management of risks and ensure the dynamic monitoring of risk scores.
- Developed and put in use risk checklists (RC-sheet) for main devices, facilities, and stations, providing grass-roots employees with the tool to achieve more comprehensive risk identification, and produce more accurate basic data for risk downgrading and mitigation.

Carried Out Screening and Rectification of Key Safety Hazards

- Implemented the Production Safety Law and strengthened the identification and rectification of major safety hazards to ensure strict compliance. Implemented the "Green Channel" mechanism to speed up project approval while ensuring the timely rectification of safety hazards.
- Carried out special rectification campaigns of large oil and gas storage bases to rectify safety hazards, and safety risk assessment of outdated refining and chemical facilities to speed up their upgrading.

Strengthened Early Warning for Safety Risks and Hazards

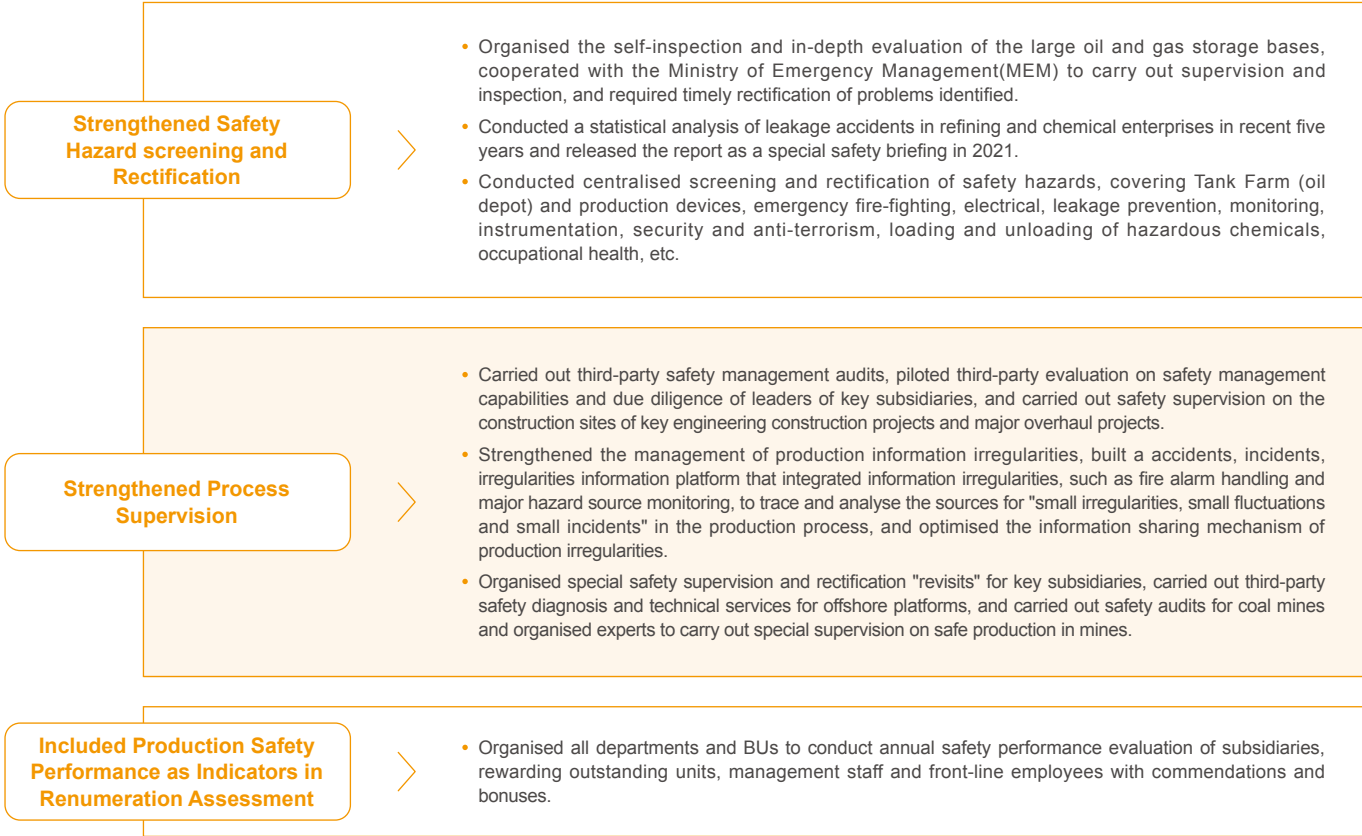
- Used information management platform to manage accidents, incidents, irregularities, developed risk control measures based on past irregularities and accidents, and issued early warning in real-time.
- Collected and added typical cases both home and abroad to database with analysis for group-wide sharing; produced accident and incident prevention training videos for special operations, and strengthened safety education and safety awareness among all employees.

Strengthened Safety Supervision

- Set up a safety supervision team, working under the direction of the safety director and the safety supervision department to implement comprehensive and full-time safety supervision for the production, operation, and construction sites of the Company, issuing weekly safety supervision updates and monthly special analysis of supervision issues, and ensuring the following-up and rectification of problems found.

Production Safety

Sinopec Corp. attaches great importance to production safety, strictly abides by and implements laws and regulations such as the Production Safety Law Interim Measures for the Investigation and Treatment of Hidden Dangers of Production Safety Accidents, Implementation Guidelines for The Investigation and Treatment of Hidden Dangers of Hazardous Chemical Companies, and has formulated rules and regulations such as the Management Regulations on The Dual Prevention Mechanism of Hierarchical Management and Control of Production Safety Risks Investigation and Treatment of Hidden Dangers of Sinopec, to strengthen safety risk management and the identification and prevention of safety hazards, and prevent and avoid production safety accidents from happening.



Yangtze Petrochemical carries out the daily training activities on technical indicators to meet the "100-day No Accident" target

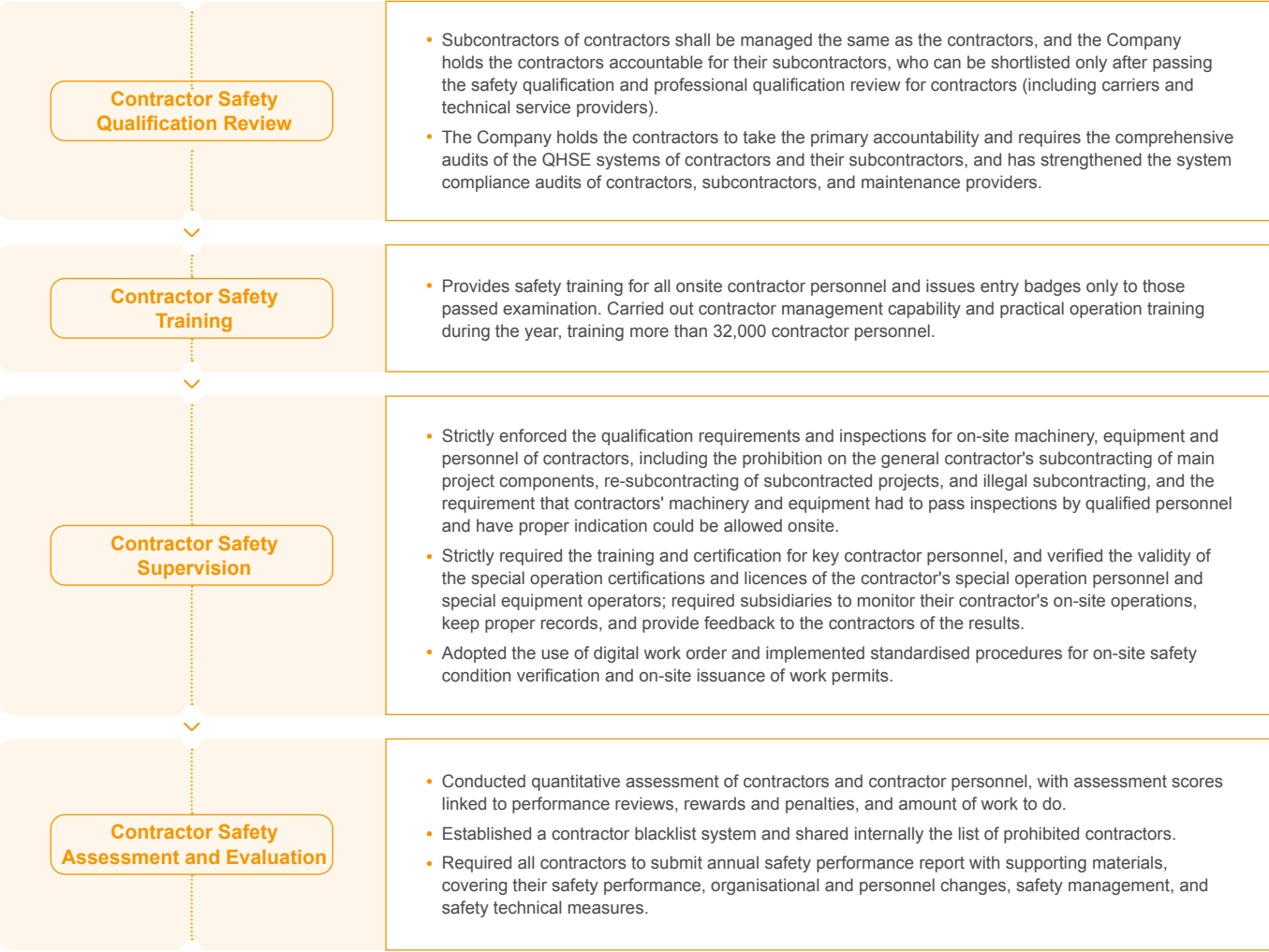


Northwest Oilfield conducts comprehensive winter emergency response drill

Contractor Safety

Sinopec Corp. focuses on increasing contractors' safety skills, safety awareness, and business subcontracting management, and encourages contractors to improve their safety management capabilities to prevent safety accidents from happening.

In 2021, Sinopec Corp. revised its contractors management measures thoroughly, comprehensively promoted the review of contractors' QHSE systems, actively explored the management mode of contractors' self-discipline and self-improvement model, strictly required related training and certification for key personnel of contractors, and gradually built a strategic contractor pool.



There were three incidents of contractor safety accidents occurred in 2021. The Company thoroughly analysed the causes of accidents, required its contractors to strengthen their on-site safety management and management of key personnel, and seriously dealt with violations with a "zero tolerance" principle.

Indicators	2019	2020	2021	2022 Target
Proportion of contractors passing occupational health and safety management system certification (%)	100	100	100	100

Logistics Safety

Sinopec Corp. is well aware that logistics is a critical link in production and sales processes, as well as an important factor in ensuring the effective operation of the Company. In 2021, the Company continued to strengthen HSE management of its logistics service providers, requiring its carriers to improve their management capabilities.



Information Security

In strict compliance with network security, data security, and personal information related laws and regulations, the Company has developed a network security management policy and standard system centred on Sinopec Network Security Management Measures, with the issuing of management measures such as Sinopec Network Security Level Protection Management Measure, Sinopec Network Security and Informatization Assessment Regulation, Sinopec Information Security Notification Management Regulation, as well as technical specifications such as User Management and Identity Authentication, Network Equipment Security Baseline and Internet Application Security Protection.

The Company has established a Network Security and Informatisation Leading Group to lead the centralised coordination of network security efforts, review medium and long-term network security plan, annual plan, and key work, guide, coordinate, supervise and inspect the network security work of business units, and ensure the implementation of various network security tasks and responsibilities. The Company has also established a corporate network security evaluation system, with evaluation results directly related to the performance evaluation of Sinopec subsidiaries. In 2021, the Company had no instance of major network security incidents.

Key Protection Measures for Network and Data Security

Network security risk management	Compliance review of data security management system	Monitoring and coping with network attack risk
Focused on project initiation, launch, and completion review of new projects and required network security as a must, continuously monitored the security risks in existing information systems and rectified security vulnerabilities in information system.	Included data security indicators in corporate network security evaluation and assessment to ensure data security compliance, and review the effectiveness of data security protection at system launch and acceptance stages.	Achieved accurate, automatic blocking and automatic unblocking of internet attacks with SOPs based on SOAR technology.
Internal and external security audit	Penetration test	Network security notification and emergency support mechanism
Conducted annual self-reviews and network security inspections and quarterly internal audits on ordinary IT controls; carried out third-party three-level system evaluation annually and general IT control audit twice a year.	Sinopec Security Response Centre (SSRC) carried out penetration tests on centralised, Internet application systems and newly-built information systems, identified security risks and conducted timely rectifications, and tested its threat detection capabilities, achieving better protection of network security of the Company.	Provided regular disclosure on network security trends and various safety rectification, continuously tracked and revisited the rectified security risks to achieve closed-loop management. SSRC dynamically monitored the Company's network, actively identified security hazards and vulnerabilities, analysed network attacks in real-time, and promptly responded to the threats of network irregularities.

Security

Adhering to the overseas security concept of "people-oriented, prevention first and safe development", Sinopec Corp. continued to optimise its overseas security management system and operation mechanism, and strengthen risk assessment and control, risk prevention and assurance, emergency response and relief under the severe and complex overseas environment and the pandemic. The Company maintained the "zero death" overseas security performance for 14 consecutive years. In 2021, the online security assessment rate and pass rate of the Company reached 100%.

Actions in 2021				
Revised three system policies, including Sinopec Overseas Security Management Measures, Sinopec Special Emergency Plan for Overseas Security Incidents and the Regulations on the Management of Physical and Mental Health of Overseas Employees.	Published two issues of Overseas Security Risk Assessment Report, and organise relevant business units to carry out online assessment of overseas security risks, with an online assessment rate and pass rate of 100%.	Published 126 issues of various publications on risk tracking, risk alert and online situation analysis, such as the Annual Information Report on Country Risk (2020) and Country Risk Alert.	Organised 78 overseas security trainings in 2021, training 1,447 employees in total.	There was no clustering infection of Covid-19 at overseas project sites, and the Covid-19 vaccination rate of overseas employees holding Chinese passports reached 97.37%.



5

Respecting Human Rights and Cultivating Talent

Sinopec Corp. is committed to building a talent team to be future leaders through a talent-driven development strategy. The Company fully implements the principle of respecting and protecting human rights in the whole process of human resources management, actively encourages employees to participate in the Company's business decision-making, protects the legitimate rights and interests of employees, and fully respects their rights to express their ideas and participate corporate affairs. As part of its ongoing efforts to strengthen occupational health management, the Company strives to create a workplace conducive to physical and mental health for employees. It keeps providing support and assistance for employees in need and tries its best to solve the practical difficulties encountered by them in life. In addition, the Company consistently optimises its human resources layout and the talent cultivation mechanism, and strives to grow together with employees and enable them to realise their own values through competitive incentive mechanisms, sound training programmes, and smooth career development channels.

- Respecting and Protecting Human Rights
- Occupational Health
- Talent Development
- Employee Training and Growth
- Employee Care

Respecting and Protecting Human Rights

Sinopec Corp. has adopted the laws and regulations related to human rights protection, the National Human Rights Action Plan of China and international human rights conventions as the basic principles and references for its own human rights management and practice, and refrains from any disregard and violation of human rights. We strictly abide by China's Regulation on Prohibiting the Use of Child Labour and relevant laws and regulations in overseas markets where we operate, to prohibit the use of child labour. We respect the employees' right of personal freedom and the right to take leave, and prohibit the use of forced labour. We respect the rights and interests of female employees and ethnic minority employees, and strictly prohibit any form of discrimination, such as due to gender, ethnicity, religion and nationality. The Company's human rights requirements are fully applicable to Sinopec's employees, contractors and suppliers. In 2021, there were no incidents of child labour or forced labour.

In addition, the Company respects and protects the rights and interests, as well as occupational health and safety of employees, contractors and suppliers in accordance with the requirements of the Labour Law of the People's Republic of China and relevant laws and regulations where it operates, striving to build stable and harmonious labour relations.



Yunnan Yuxi Petroleum enhances the cohesion of employees through team building activities

Protecting Labour Rights

Sinopec Corp. strictly abides by laws and regulations, such as the Labour Law of the People's Republic of China, the Labour Contract Law of the People's Republic of China, and the Trade Union Law of the People's Republic of China, follows international conventions such as the International Covenant on Economic, Social and Cultural Rights, the Convention on the Elimination of Employment and Occupational Discrimination and the National Human Rights Action Plan as important references, and upholds the principles of equal consultation and harmonious collaboration during daily operations, ensuring proper protection of employees' rights and interests and decent work for all employees.

The Company follows the principles of "equality, voluntariness and consensus" and signs written labour contracts with employees, which specifies the content and location of work, working hours and rules for leaves and vacations, remuneration, labour protection, occupational hazard protection and other terms in accordance with relevant laws and regulations. In addition, the Company has formulated a supporting labour management system for employees to ensure that labour contracts are strictly fulfilled and employees' rights and interests are properly protected.

In 2021, all the directly affiliated units of the Company actively organised collective negotiations. Articles of the collective contracts and special contracts were collectively negotiated within human resources and other administrative departments based on extensive solicitation of opinions from employee representatives, then voted and approved by the employee representative conference before the official signing of the contracts between labour union representatives and management representatives, ensuring that the contracts truly reflect the needs of employees and protect their rights and interests. In addition, the Working Committee of the labour union of the Company formulated and issued the Notice on Strengthening Democratic Management in the Three-Year Action to Deepen Reform, which stipulates that major matters involving the vital interests of employees must be deliberated and passed by the Workers Congress, and that the employee representative conference mechanism shall be established group-wide as the main channel for strengthening democratic supervision by employees.

Diversity and Equal Opportunity

Sinopec Corp. is committed to building a diverse and equal opportunity workplace, actively recruiting female, overseas and ethnic minority employees to increase workforce diversity, and providing equal opportunities and environment for all employees, providing them with an encouraging and supportive workplace to support their personal growth and career development.

The Company upholds the principle of gender equality, and ensures that female employees enjoy equal labour rights and social security benefits as their male counterparts. The Company also strictly implements the policies regarding female employees' pregnancy and maternity leaves, nursing breaks, and regular physical examinations. In addition, the Company has established a Female Workers Committee of the labour union to provide special protection for female employees. To effectively protect the rights and interests of female employees from the source, the Company requires all labour contracts and collective contracts to contain provisions for protecting the rights of female employees in order to be valid and effective. Regarding its operation, the Company attaches importance to and strengthens the supervision and inspection of labour safety and health of female employees in the production process, and continuously improves their work environments and conditions.

Employee Communication and Participation

Sinopec Corp. has established and consistently optimises the employee representative conference mechanism, encouraging employees to fully participate in the democratic management of the enterprise and actively contribute their wisdom and strength to the Company. In 2021, the Company held a total of 176 group-wide employee representative conferences and received more than 7,700 proposals from employee representatives on production safety, environmental protection, corporate management, production and operation, salary and benefits, and employee training, of which 3,432 were shortlisted for further review. The Company further optimised the working mechanism of closed-loop feedback for handling employee proposals, with 99.7% of the proposals handled with results. For the proposals not shortlisted, the Company would provide a timely written feedback to their submitters in explanation.

The Working Committee of the labour union of the Company actively explores ways to optimise employee complaint handling mechanism, so as to "solve minor complaints and boost synergy" and ensure that "solving minor complaints in workshops and general complaints in secondary units, and solving major complaints with the supervision of employee representative conference" with a tiered closed-loop handling mechanism

including collection, processing, solving and feedback. In 2021, labour union organisations at all levels further implemented the long-term mechanism of paying visits to employees to solve practical issues for them, with a total of 17,000 problems identified through employee visits, of which 16,000 were solved. In addition, the labour union has also established contract persons at the grassroots level and regularly organises employee representatives to conduct inspections and surveys to understand the demand of front-line employees and help them solve difficulties in a timely manner.

In 2021,

Proposals from employee representatives
more than **7,700**

Help employees resolve difficult matters
16,000



Henan Oilfield employees check on employee representative conference results through their mobile phones

Occupational Health

Sinopec Corp. strictly abides by the Safety Production Law of the People's Republic of China, the Occupational Diseases Prevention and Control Law of the People's Republic of China, and other relevant laws and regulations, ensures the comprehensive prevention and control of occupational diseases, actively manages employee health by integrating big health concepts with HSE management. The Company keeps deepening its mental health care for employees by comprehensively strengthening EAP programmes to provide employees in need with psychological assistance and counselling, ensuring that all employees can work and live healthily, both physically and mentally.

Management of Hazard Risks for Occupational Diseases

The identification, prevention and control of occupational disease hazards is an important module of the Company's HSE management. In 2021, the Company strengthened and refined its efforts the accountability system in this regard in order to strictly control occupational health risks and prevent their occurrences, putting forward the "100% in four areas" targets for health management, namely "100% detection of occupational disease hazards, 100% effective prevention and control, 100% coverage of occupational health examinations, and 100% intervention of high-risk personnel". The Company issued the Notice on Further Strengthening and Standardising Occupational Health Management to continuously strengthen the identification of occupational hazard risks and standardise the detection and monitoring of hazard factors, in addition to the efforts in the improvement of the working environment and better maintenance of equipment and facilities that are related to occupational diseases and emergency rescue. The Company clarified the management requirements for controlling serious occupational hazards in production operations, and standardised the monitoring of occupational health and the management of reporting on irregularities. The Company also attaches great importance to employees' labour protection, and has made new progress in developing protection standards and protective gears and equipment.

Upholding the concept that "exceeding requirements means hazards", the Company continuously strengthened the rectification of incidents of non-compliance with requirements through measures such as regularly following-up of rectification results, experience sharing from pilot enterprises, and the promotion of advanced management techniques and measures by producing training materials and online video lectures. The Company carried out a special study on the control of excessive noise, formulated the Guidance on the Management of Noise Hazards in Petrochemical Enterprises to strengthen the identification, analysis and assessment of noise hazards, and implemented the pilot research on noise control in chemical fibre device and petroleum engineering enterprises.

Management of Employees' Occupational Health

The Company actively facilitates the development of the employee health management system, requiring all department and management units to give priority to ensure employee health, as well as requiring all employees to take the primary responsibility to protect their own health. The Company has set up an Occupational Health Subcommittee under the HSE Committee to take the lead in coordinating the management of employee health. It also clearly defined the responsibility for health management in the HSE responsibility system for headquarters departments. In addition, the Company has listed "100% coverage of occupational health examinations, and 100% intervention of high-risk personnel" as key performance indicators for production safety.

In 2021, the Company carried out a series of occupational disease control and occupational health management activities, such as quality inspections of labour protection gears, video trainings on occupational health training, the Occupational Diseases Prevention and Control Law awareness week, and the Occupational Health Master event, etc. Through these events, the health awareness of all employees was further heightened, and the number of non-production deaths continued to decline. The Company also organised training courses for occupational health management personnel for deputy directors overseeing HSE management and division heads for occupational health of subsidiaries, covering laws, regulations and policy requirements on occupational disease prevention and control, occupational health caring, occupational disease management, management of individual protective gears, detection and daily monitoring of occupational disease hazards, and application of ventilation and noise reduction technologies, etc. In addition, the Company comprehensively upgraded its health management measures, and strengthened the screening and other intervention measures for personnel at high health hazard exposures.

Regarding the prevention and control of Covid-19, the Company has established an Epidemic Prevention and Control Leading Group and an Epidemic Prevention and Control Leading Office, and strictly enforced epidemic prevention and control measures in an all-round way both home and abroad. The Company also strove to provide a safe and secure working environment for employees through measures such as flexible arrangements for working, business travel and vacations, prioritising video conferencing and telecommuting, and well-organised epidemic prevention measures, including home observation, isolation, and nucleic acid testing. In 2021, there was no incident of Covid-19 infection in the Company.

In 2021,

Rate of occupational health check-ups

100%

Care for Employees' Mental Health

Mental health is an important factor for ensuring employees' safety and health. The Company continued to explore operating modes of the Employee Assistance Programmes (EAP) and formally established the Sinopec Mental Health (EAP) Working Committee in 2020. In 2021, the Company further strengthened EAP management and expanded the coverage of EAP service, allowing more employees and their family members, including those overseas, to have psychological counselling support.

Comprehensive Upgrade of Health Management

The Company organised a health screening to identify high-risk health personnel, which included those suffering from Level-III high blood pressure, stroke, peripheral artery disease, coronary heart disease, pulmonary heart disease and other cardiovascular and cerebrovascular diseases, kidney disease, etc., as well as those with a body mass index (BMI) over 30, and those with other occupation prohibitions. The Company also established health files and personalised health intervention measures based on screening results. In addition, the Company actively promoted the pilot project of group health

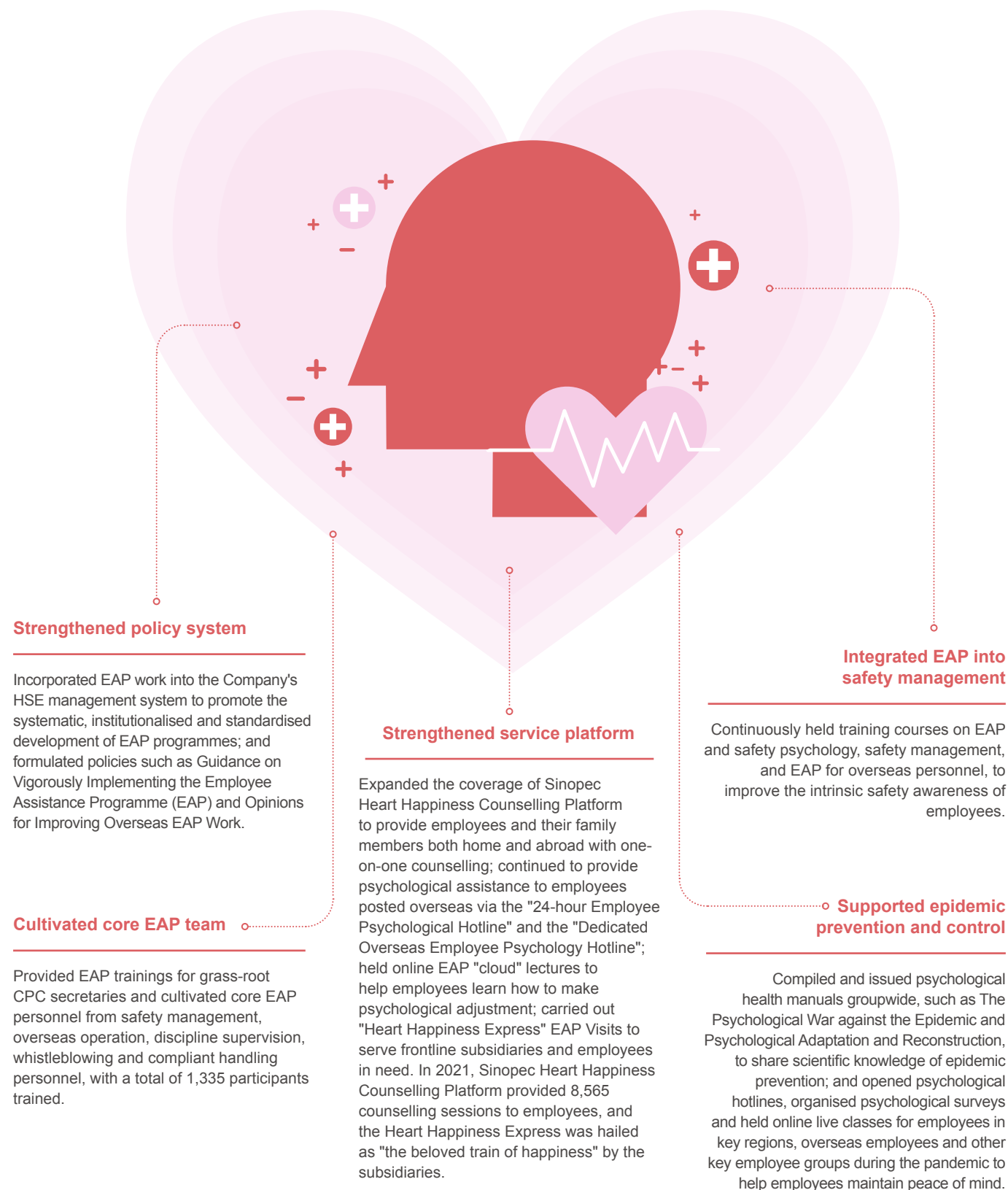
management and explored new management approaches, and upgraded medical first-aid facilities and equipment for groups with high health risks, including developing and issuing technical specifications for the procurement of automatic external defibrillators (AEDs), installing AEDs other emergency rescue equipment in workplace, promoting video training on CPR and AED use, and sharing successful treatment cases and experiences, so as to enhance its first-aid protection capability for groups with high health risk.

case



⚠️ Puquang Gas Field sends health personnel to measure blood sugar of front-line workers

Enhancing EAP Management



Talent Development

Talent is the cornerstone of enterprise development and one of its core competitiveness. Sinopec Corp. attaches great importance to human capital management, keeps implementing the talent-driven growth strategy, and strives to grow together with employees.

Human Resources Risk Management

Sinopec Corp. attaches great importance to contain the risk of talent loss. The Company systematically and comprehensively monitored the talent loss data in recent years to identify the patterns and root causes, and adopted a series measures to prevent and control the risk of talent loss, including providing greater room for growth, more targeted and effective incentives, the cultivation of a more supportive talent ecology with the implementation of its talent-driven strategy.

The Company formulated Sinopec Medium and Long-term Talent Development Plan in the 14th Five-Year Plan Period, and continuously optimised the cultivation mechanism and innovation environment for technological talent, focusing on high-end talent, development channels, and incentive mechanism. The Company has implemented the training plan for strategic scientists and the "Future Scientists" training plan, improved the assessment and incentive measures, and issued Opinions on Strengthening the Incentive and Supporting Mechanism for Scientific and Technological Innovation. In 2021, a number of outstanding talents of the Company won national honorary titles, including two newly elected Academicians of the Chinese Academy of Engineering, a winner of the Li Siguang Geoscience Field Award, a winner of the Chinese Skills Award, and four winners of the National Technician title. The Company also honoured a total of 80 outstanding experts, 100 winners of the Min Enze Young Scientific and Technological Talents Award, and 20 outstanding Sinopec Craftsmen.

In 2021, the Company formulated the Interim Measures on Tenure System and Contractual Management for Managers of Sinopec Directly Subordinate Enterprises and five other institutional documents to improve the selection and recruitment procedures of professional managers; formulated Sinopec Guidance on Medium and Long-term Incentives and the supporting rules, and promoted their implementation at different levels in subsidiaries, achieving remarkable results in the development of a market-oriented employment mechanism.

Recruitment and Talent Loss

The Company implements a differentiated talent attraction strategy, and has built three-dimensional talent attraction channels in addition to a more open and flexible talent attraction mechanism. Focusing on the strategic objectives of enterprise development and the needs for advancing key technologies, the Company sticks to the approach of targeted talent attraction focusing on high-level talent from home and abroad through the national high-level talent attraction programme and Sinopec's "Double Hundred Plan". For talents in urgent needs and shortages, the Company resorts to job market to attract mature professional talents. For its strategic talent reserve, the Company focuses its efforts on attracting outstanding college graduates.

Through a series of positive talent retention and utilisation initiatives, the Company's employee turnover rate has shown a continuous downward trend in recent years, and the brain drain problem has been gradually reversed. In 2021, the Company's employee turnover rate was 0.64%, down by 0.05 percentage points year-on-year.

Salary and Benefits

The Company keeps improving the employee compensation and welfare system, and pays social insurance and housing fund in full and on time in accordance with the relevant national and local policies and regulations for pension, medical care, work injury, maternity, unemployment, etc. It has established a company-wide corporate annuity system and organised its subsidiaries to establish a supplementary medical insurance mechanism according to their own conditions. It strictly implements policies and regulations related to employee welfare including maternity leave, parental leave and other issues. In terms of salary allocation, the Company implements a parallel incentive policy of salary-based and non-salary-based incentives, and has constructed a multi-dimensional salary system, including position (basic) salary, performance bonus, and medium and long-term incentive, based on the position, competence and performance of employees.

Employee Training and Growth

Sinopec Corp. keeps pushing forward the talent-driven growth strategy in an in-depth manner. It provides rich training programmes and diversified development opportunities for different types of employees, and vigorously created vertical and horizontal development space for employees, so that all types of talents can grow and succeed in the Company.



Guangzhou Petrochemical Water Department organises on-site training on the new thermal water system

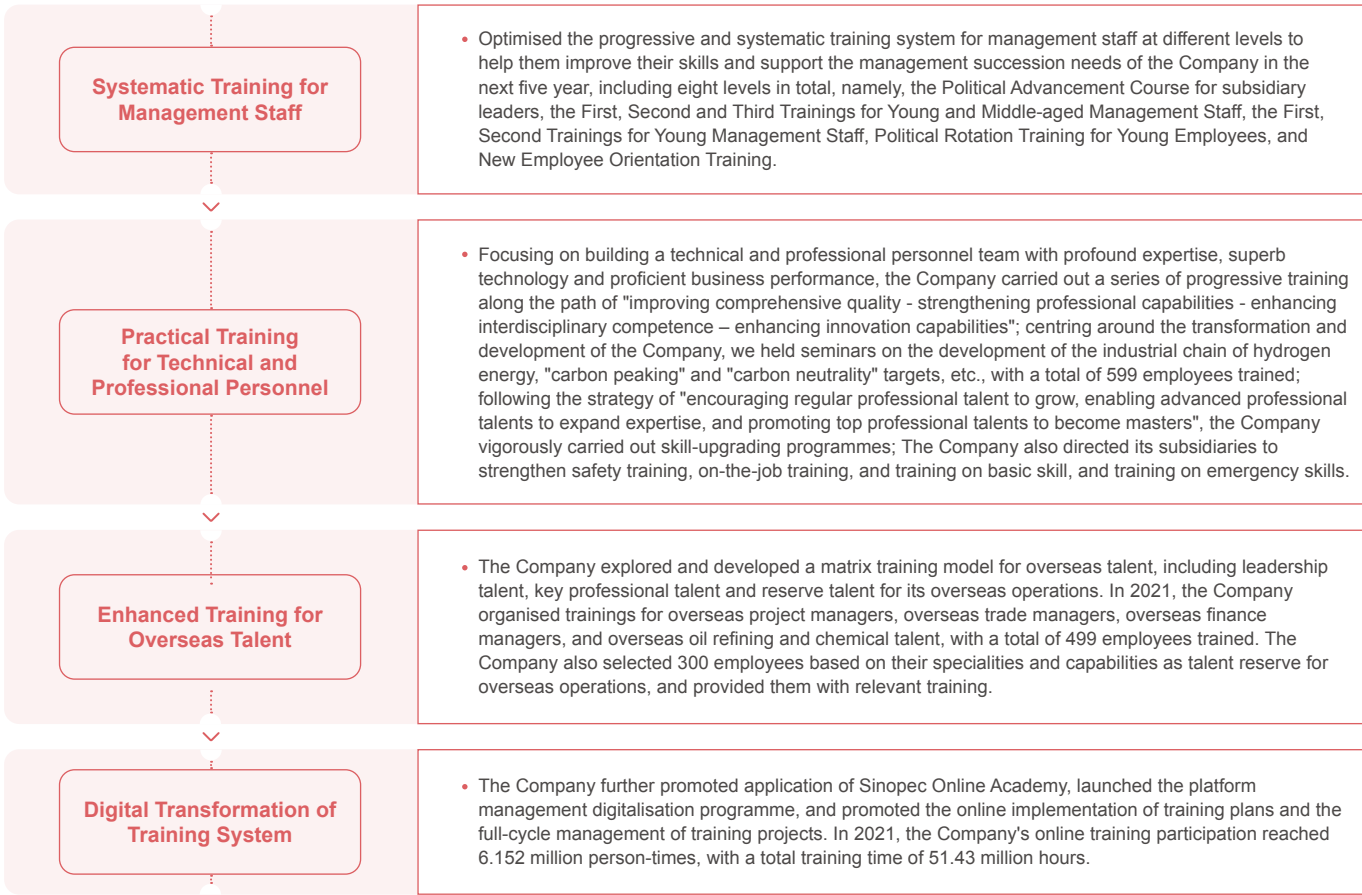


Zhongyuan Oilfield technicians share knowledge and experience

The Company continued to promote the reform of professional title evaluation and vocational skill level recognition, revised Sinopec Regulations for Professional Title Evaluation, Sinopec Regulations for Vocational Skill Level Recognition and other supporting policies; implemented the Skill Enhancement Program, Skill Competition Program and Skill Innovation Program to explore new modes of business competition and promote the shift of competition subject from elites to all staff, so as to motivate all employees to achieve better personal growth. In 2021, the Company declared and hosted 3 class-two national level competitions, 4 class-one competitions and 6 class-two competitions at the group company level; and it completed evaluation of senior titles of 308 persons (at the professor level) and 961 senior technicians. In addition, the Company built a joint training model for talents in schools and enterprises, pushed forward the joint training programs with universities, which also actively promoted diversified training approached.

Employee Training

The Company keeps improving the high-quality education and training system for employees, consistently optimises key training programmes for management staff, technical and professional personnel, and overseas talent. The Company also actively promotes the digital transformation of its training system. In 2021, the Company organised a total of 94 training sessions under 46 key programme with a participation of 5,122 people person-times.



Career Development

In order to promote the cultivation of various talents, the Company revised and improved Sinopec Expert Management Measures and Sinopec Measures for the Selection and Management of Senior Skill Positions, and continued to push ahead the construction of talent growth channels and improved the vertical and horizontal development mechanism of talents. In terms of vertical promotion, we continued to raise the "ceiling" for the growth of talents, expanded the fields of expert positions, raised the expert level and set up more positions. In terms of horizontal development, we broke down the barriers of horizontal development across professional sequences, promoted the cross-transferring of positions among the three sequences, and formulated the policy for mutual recognition of professional skill levels and corresponding titles. In 2021, the Company selected and hired three Chief Scientists for the first time, in addition to ten Chief Experts, 71 Senior Experts and 49 top Skilled Professionals.

Performance Appraisal

An effective performance appraisal mechanism plays an important role in motivating employee growth and improving the overall efficiency of the Company. Sinopec Corp. implements annual performance appraisal for the leadership team of various units (departments). At the beginning of each year, the Company organises these personnel to sign an annual performance appraisal responsibility commitment to specifies the performance indicators and targets; in the next March, their performance is evaluated mainly in such aspects as the performance indicators, professional indicators, key tasks and other binding indicators.

In terms of medium- and long-term incentives, the Company conducts performance appraisal for management staff on an annual basis, drafting the commitment letter for management staff specifying the relevant performance appraisal responsibilities in accordance with their employment status and work division. Appraisal indicators, targets and weights are set in accordance with the overall performance at the Company and the business they oversee, and calculated in strict accordance with how they are completed to produce their final appraisal scores and results. The annual remuneration of management staff is tied to their performance appraisal results.

In 2021, the Company included key ESG indicators as binding indicators into the annual performance assessment for leadership team of business units and subsidiaries, including indicators on production safety, anti-corruption, energy conservation, environmental protection, response to climate change, quality management, and operational compliance, etc. Among them, production safety indicators include but are not limited to penalties for safety violations, contractor safety, etc.; energy conservation, environmental protection and response to climate change indicators include but are not limited to greenhouse gas emissions, pollutant discharges and emissions, energy efficiency management, penalties for environmental violations, etc. Management staff who have failed to meet the appraisal targets will have their comprehensive appraisal score deducted accordingly. In case of particularly significant safety, environmental and quality accidents or incidents, the comprehensive appraisal results will be directly reduced to "unqualified". In addition, the Company has linked the annual performance bonus of the leadership team to their appraisal result on response to climate change. For each point deducted, a certain percentage of his/her annual performance bonus will be reduced accordingly, up to 20% of the total amount.

Employee Care

The Company carried out a group-wide survey on its employee support and assistance efforts, focusing on 40 units which were the main recipients of assistance. The survey investigated the detailed information on the employees in difficulties and their difficulties, and the sources and use of assistance funds. The Company also completed the allocation of assistance funds to subsidiaries with employees in particular difficult conditions. In 2021, the Company provided assistance, totalling RMB 176.8591 million assistance (including in-kind assistance), for 116,867 people through labour unions at various levels. Its subsidiary Yanshan Petrochemical revised its Implementation Measures for Yanshan Petrochemical Assistance Fund, which expanded the scope of assistance to cover 30 serious diseases and increased the upper limit of assistance to RMB 200,000, so as to providing "meaningful support for those in real difficulties".



Fulfilling Social Responsibility

- Contributing to Social Philanthropy
- Sustainable Value Chain
- Community Communication and Engagement
- Product and Service Management

Contributing to Social Philanthropy

Supporting Rural Revitalisation

Invested and facilitated the distribution for poverty alleviation

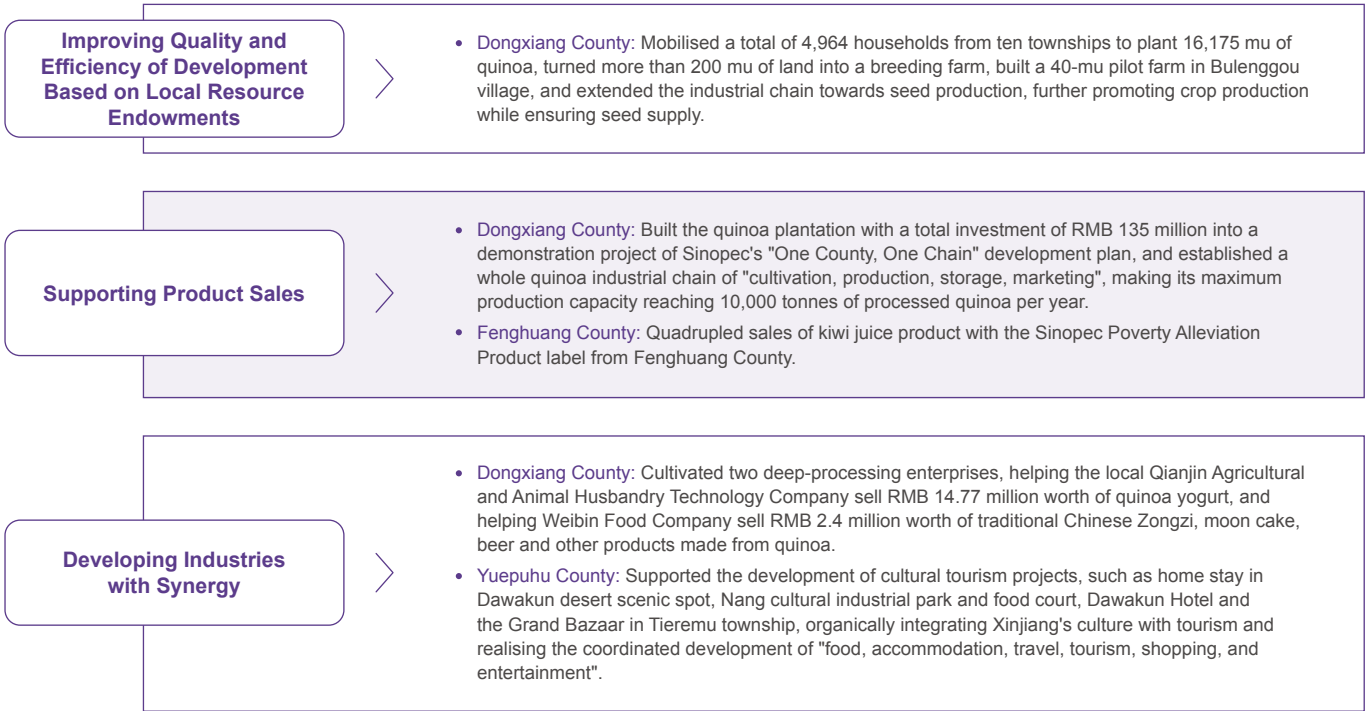
RMB **581** million

"One County, One Chain", poverty alleviation through industrial development

Upholding the principle of common prosperity, the Company strives to promote social equity and establish a social contribution system to improve people's livelihood and well-being. Following years of development, the Company has established five significant areas of social commitment, with poverty reduction, social welfare, brand public welfare, serving the society, and environmental preservation at their core. The Company strives to improve people's lives, address their concerns, enhance their sense of happiness and benefit, and contribute to social development.

In 2021, the Company issued the 14th Sinopec Five-Year Plan for Rural Revitalisation, formulated and implemented the Sinopec Implementation Plan for Education Support, and the Sinopec Implementation Plan for Rural Revitalisation through Product Consumption. Centring on the theme of "five revitalisations", the Company focused on three key fields of industry, education, and consumption. It accelerated the implementation of rural redevelopment by promoting poverty alleviation projects led or participated in by the Company at a high level. During the year, the Company dispatched 349 teams and 925 grassroots officers to villages to undertake the poverty alleviation tasks in eight counties and 610 villages. The Company invested and facilitated the distribution of RMB 581 million for poverty alleviation, trained 37,524 grassroots volunteers, and assisted in marketing RMB 949 million worth of products from targeted poverty areas, resulting in the six targeted counties' poverty alleviation indicators reaching new highs.

In 2021, the Company gave full play to its advantages and put forward the "one county, one chain" poverty alleviation plan through industrial development to help poverty-stricken areas improve industrial quality, efficiency and market competitiveness, accelerate the upgrading of rural industries, build a high-quality agricultural industrial chain with a certain scale, and cultivate a number of brand products with market competitiveness.



Poverty alleviation through education support for bright future

Poverty alleviation through product marketing for stable income growth

The Company invested RMB 300 million to construct over 300 schools, significantly enhancing basic education in the designated poverty support areas. With the strategic transformation from poverty alleviation to rural revitalisation, Sinopec Corp. maintained its support in focus, capital, and employee volunteers, and continued to support the high-quality development of education, providing students with a more conducive learning environment and educational resources.

In contrast to traditional donations for infrastructure and faculty development, Sinopec's education support is distinguished by systematic promotion and comprehensive implementation of programmes. The Company works to improve local education on three levels: campus, teachers, and students. It focuses on the two dimensions of hardware and software and gives fully play to the resources supplied by renowned universities and central state-owned enterprises in China. The Company applied an education support mechanism of "Assistance, Promotion, and Advancement" in Dongxiang County, donated 37,000 books to targeted schools, and customised winter uniforms for 579 students. In Yuepuhu County, 60 students and 23 classes were paired up with donors and received RMB 200,000 worth of stationery, sporting goods, desks, and chairs. In Yingshang County, various education support activities were conducted, including one-on-one student assistance, book donation, and teacher-in-residence. In addition, the Company also organised 42 primary school students from Dongxiang County and Bange County to take the "Ice and Snow of the Winter Olympic" special flight to Beijing to participate in the Beijing Winter Olympic Camp named "Lighting Up Hopes".

The Company innovated the working mode and produced the "Pure Land" products under the "Baoyuansheng" brand and introduced specialty products from Naqu, Tibet to market. Since the "Baoyuansheng" Cordyceps Sinensis entered the market in the second half of 2021, its had already registered RMB 28 million in sales. Moreover, the Company also encouraged trade unions, logistics, and other departments to purchase poverty alleviation goods, totalling RMB 409 million in procurement. Supported by the sales of rural revitalisation products and Easyjoy's famous specialty products, the total sales of poverty alleviation products reached RMB 631 million in 2021.



Guizhou Qiandongnan Petroleum Branch Company Kaili Oil Depot staff helps local villagers to harvest rice

Expanding Public Welfare Activities

Sinopec Corp. seeks to fulfil its social responsibility by focusing on the objective of "refuelling for a better life", leveraging its commercial and resource advantages, implementing diverse public welfare and charity projects, and giving back to society. Adhering to the spirit of "dedication, fraternity, mutual-assistance, and progress", the Company encourages employees to participate in voluntary activities. It continues to carry out public welfare projects such as "Sinopec Lifeline Express", "Warm Stations Programme", "Sanitation Workers' Stations Programme", "Driver's Home Programme for Truck Drivers", and "Spring Bud Project for Young Girls" to offer love and warmth to society. From individuals to groups, enterprises to communities, and special events to everyday behaviours, Sinopec's volunteerism has developed into a distinct "Sinopec Culture" that is carefully understood and actively embraced by all employees.



Note: data is for the end of year 2021.

The "Sinopec Lifeline Express" project has donated more than RMB **178** million in 17 years, brought light and hope to more than **47,000** cataract patients in poverty from 39 regions of 18 provinces, and contributed to building 21 Sinopec cataract treatment centres.



"Sinopec Lifeline Express" mobile ophthalmic hospital

The "Warm Station" has served over **4.2** million homebound migrant workers and nearly **50** million spring festival travellers, with over **45,000** volunteers.



"Warm Stations Programme" Helping home bound migrant workers

The "Sanitation Workers' Stations Programme" has set up stations for sanitation workers in **2,617** Sinopec service stations across the country, with nearly **5,000** volunteers.



"Sanitation Workers' Stations Programme" Respecting and caring for sanitation workers

The Company has established **1,402** Drivers' Homes, serving more than **200,000** truck drivers per day and benefiting **3** million truck drivers.



"Driver's Home Programme for Truck Drivers" Providing warm services for drivers

The "Lifeline Express" is equipped with complete and advanced ophthalmic medical equipment. It is a mobile ophthalmic railway hospital specialised in charitable medical services and donated by enterprises in mainland China. In addition, it is also an important national project for blindness prevention and treatment. The "Lifeline Express" provides cataract patients in 18 provinces and 41 regions with free vision restoration surgery.

In 2021, "Lifeline Express" came to Henan Province, Qinghai Province and Shandong Province and cured 2,808 cataract patients.



The "Warm Stations Programme" provides free refuelling services for people who drives back to hometown at Sinopec service stations. Moreover, the Company provided free goods and facilities such as hot porridge, ginger soup, access to rest rooms and nursery room, and epidemic prevention supplies for them, making their way home warmer.

In 2021, Sinopec Corp. continued to provide 238 "Warm Stations" in Guangdong, Guangxi, Hunan, Jiangxi and Guizhou, and delivered 10,000 free Chinese New Year goodie bags to the families of motorcyclists and truck drivers who remained in cities without going home during the holidays.



The "Sanitation Workers' Stations Programme" is integrated with the main business of Sinopec. Taking Sinopec service stations as the platform, the Company equipped the stations with air conditioning, microwave oven, thermos, locker, books and newspapers, Internet connection and other basic facilities to provide cooling, heating, water, hot meal, Internet access, newspaper-reading, rest areas and other services for sanitation workers.

During the winter of 2021, the Company provided tea, hot soybean milk, warm ginger tea, hand warmer, hand cream and other services for sanitation workers, builders, couriers and traffic police, providing a warm resting harbour for sanitation workers after work.



Based on the needs of truck drivers, the Company began to build Driver's Homes by taking its advantage of the wide distribution of Sinopec service stations in 2019, offering accommodation, catering, laundry, and other services. The Driver's Home has become a warm, comfortable, and reassuring "Home on the Road" for many truck drivers.

In 2021, the company established 1,402 Driver's Homes, making the number increased by 2.44 times compared with last year. In addition, while providing the offline services through Driver's Homes, the Company also launched an online platform to provide truck drivers with more than 10 online services such as accurate navigation, vehicle insurance, and freight logistics platform sharing, offering all-round services for truck drivers.

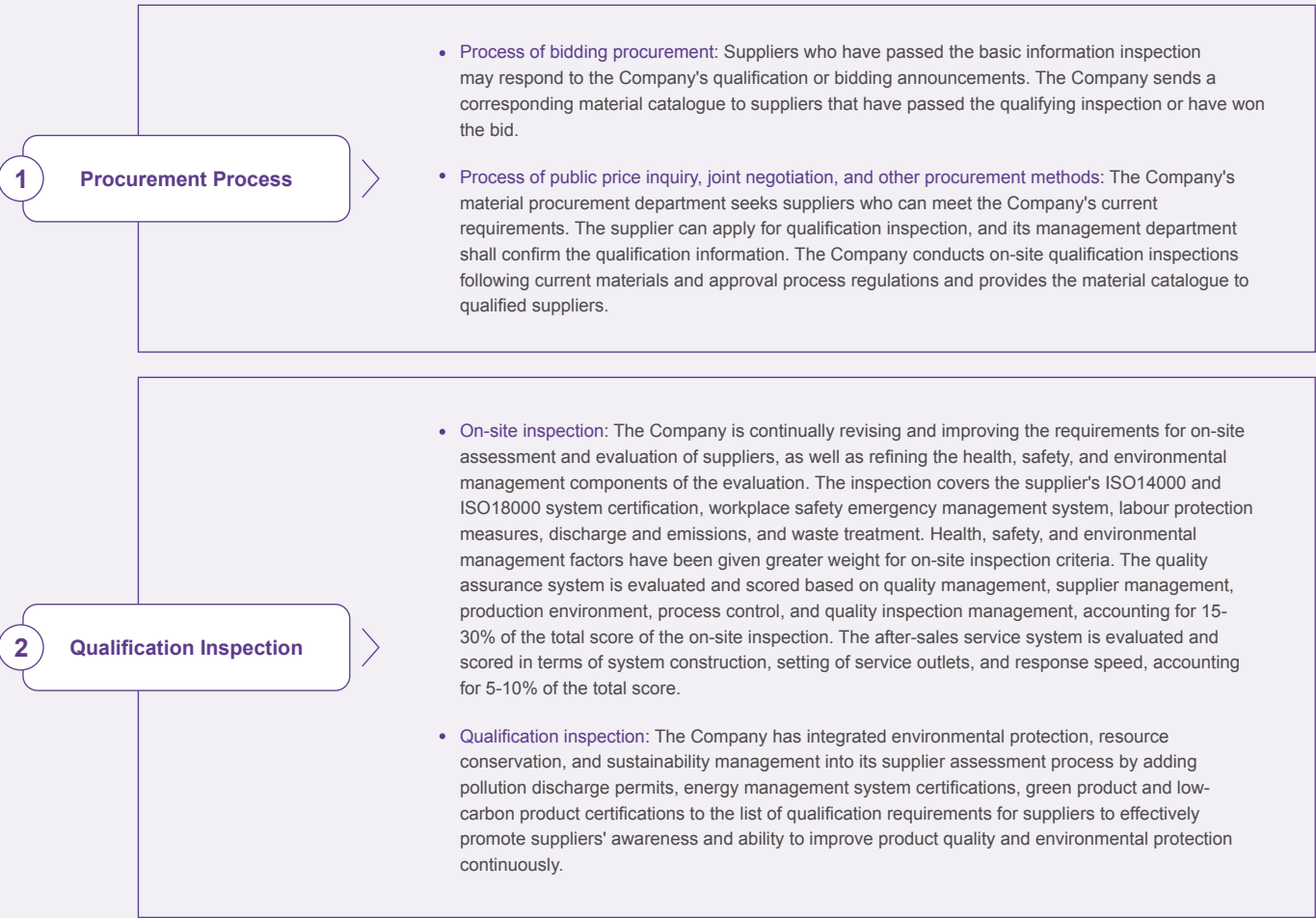


Sustainable Value Chain

Supplier Management

Sinopec Corp. continues to promote supply chain management, adheres to the values of safe, timely, green, and cost-effective procurement, and incorporates sustainability concepts into a compliant, green, and responsible procurement system. The Company has built a risk identification and management method covering supply resources, purchase price, etc., and released a series of supplier social and environmental risk prevention rules.

The Company is committed to promoting the awareness and ability of suppliers to improve product quality and protect the environment by integrating environmental protection requirements in the process of the supplier qualification inspection. The Company carries out an assessment and evaluation of suppliers regarding environmental protection, resource conservation, and sustainable development and urges suppliers to continuously improve product quality and practice the concept of green development. Based on the existing management measures for green procurement, the Company formulated and issued the Sinopec Green Material Procurement Catalogue (2021 Edition) to promote the quality and efficiency of green procurement comprehensively. As of the end of 2021, 25,072 suppliers have passed the qualification inspection, an increase of 3,626 from the previous year.



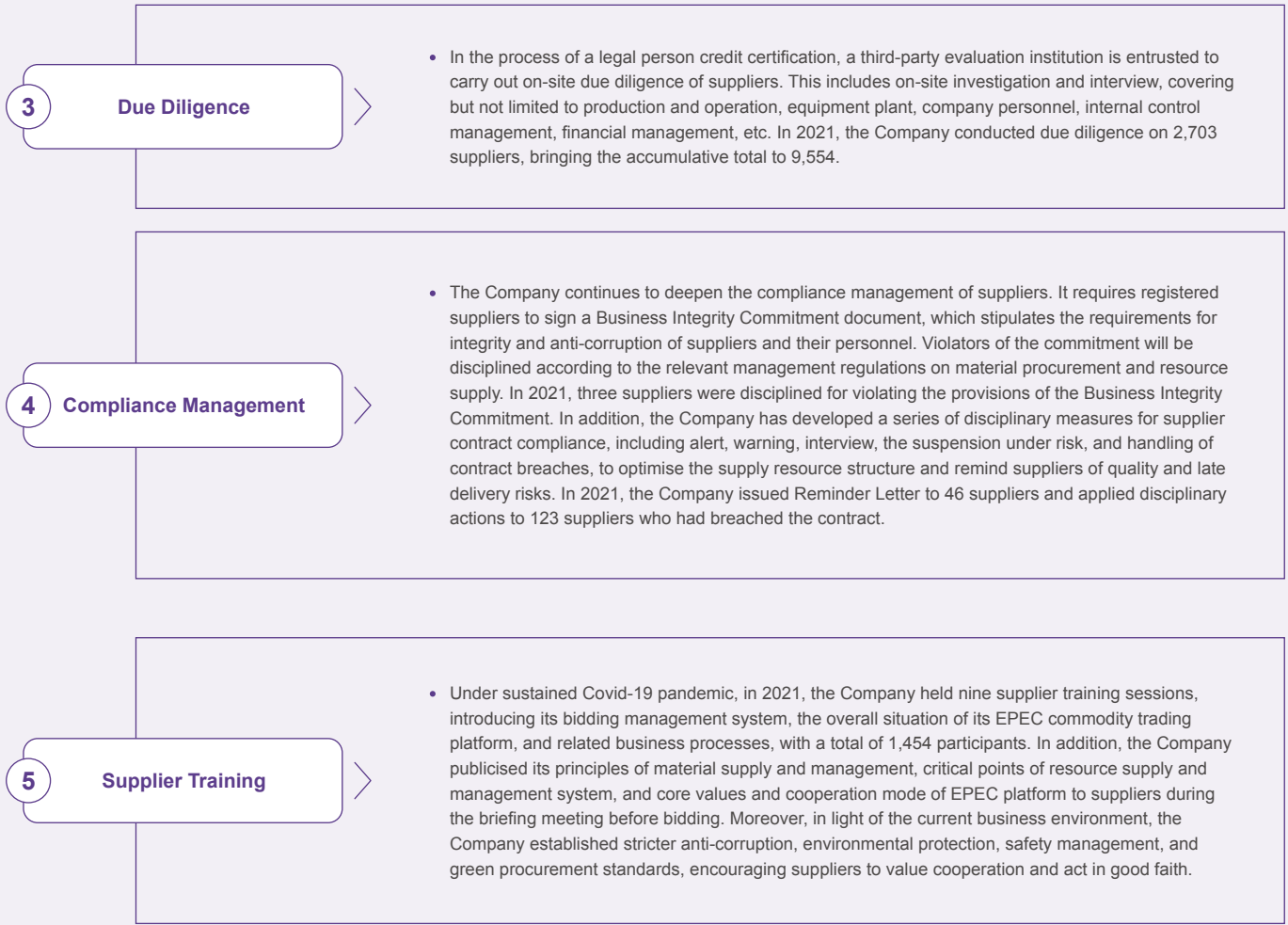
Strengthening mutually beneficial cooperation with suppliers through EPEC

"EPEC" platform gives full play to the Company's role as the core enterprise of the supply chain, focuses on procurement standardisation, manufacturing digitisation, logistics transparency and information interconnection, and works with related parties to continuously deepen the "Sunshine Action" of the supply chain. As of the end of 2021, 69 companies had joined the "Sunshine Action".

Focusing on the steady and mutually beneficial cooperation with suppliers, the Company invited more than 20 suppliers to participate in major new energy equipment seminars during the industrial products exhibition held by EPEC in 2021, guiding

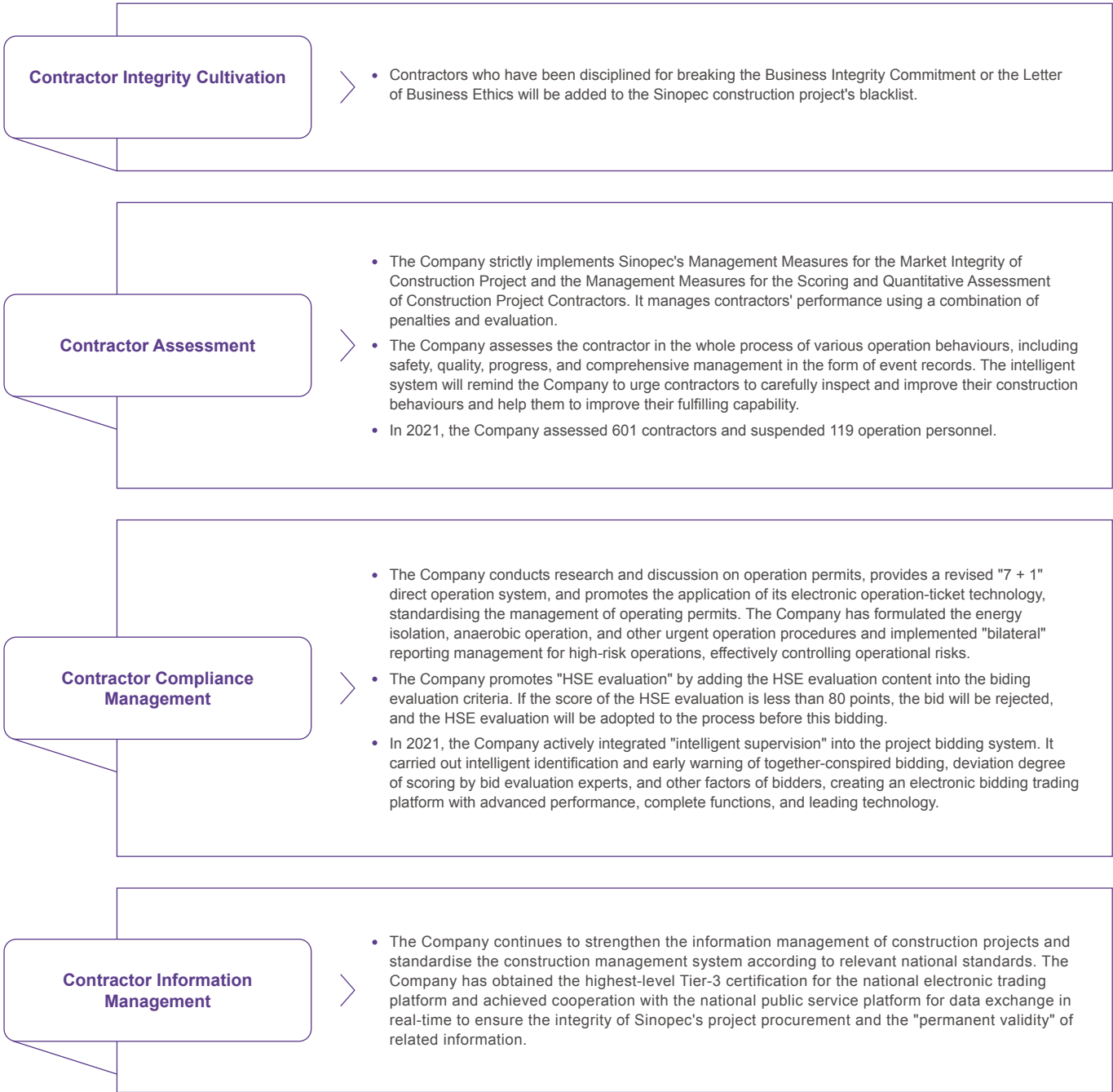
suppliers to pay attention to the demand and development trend of new energy such as hydrogen energy and geothermal energy, to focus on transformation and upgrading, carbon reduction and consumption reduction, and to accelerate the building of low-carbon competitiveness. In 2021, EPEC was rated as the first batch of national demonstration enterprises for supply chain innovation and application, with 3.33 million kinds of online goods and 268,000 registered users. In 2021, EPEC has achieved annual transaction amount of RMB 531.2 billion and helped 543 enterprises to obtain financial support of RMB 25.3 billion through factoring financing.

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Contractor Management

In 2021, the Company continued to develop its comprehensive management of contractors, revising the management measures applicable to contractors thoroughly by formulating the *Sinopec Contractors Management Regulations on Engineering Construction, Inspection, and Maintenance*, and continued to promote the preparation of the *Sinopec Contractors Assessment Measures for Engineering Construction, Inspection, and Maintenance*, which further clarified the primary responsibilities of contractors and established a contractor self-management mechanism.

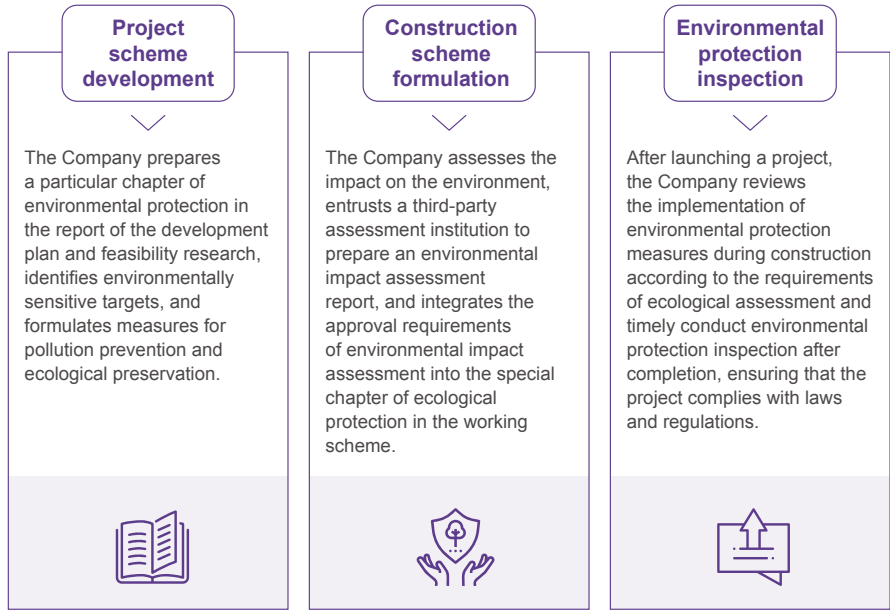


Community Communication and Engagement

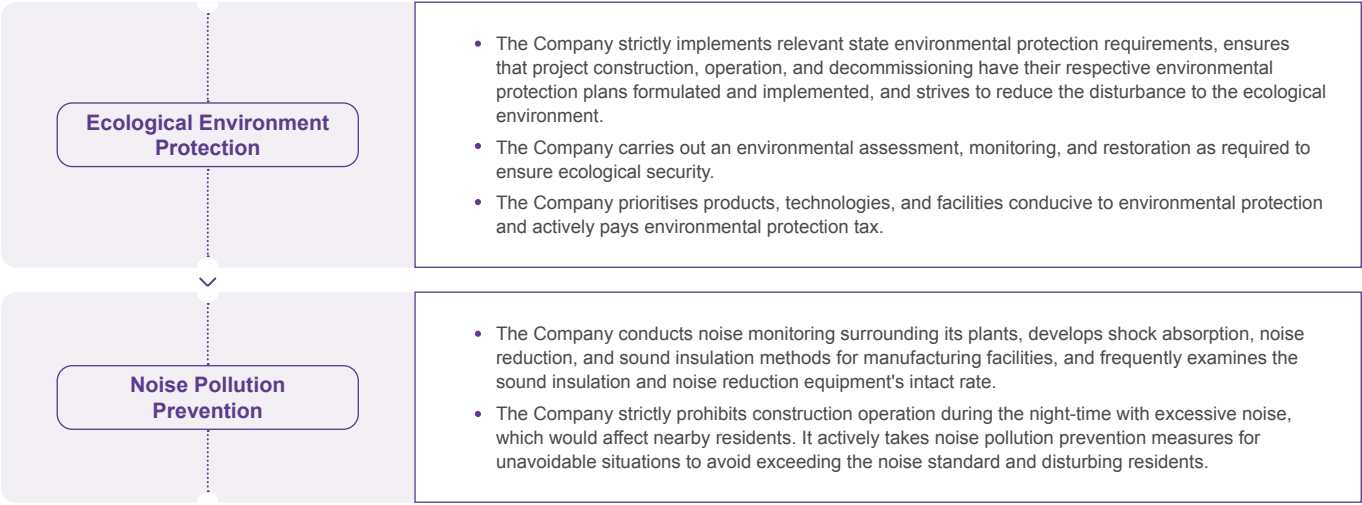
Assessment of Impact on Community

Sinopec Corp. is committed to enhancing collaboration with stakeholders, establishing an effective mechanism for public communication and engagement, responding promptly to community concerns, identifying, assessing, and resolving risks of conflict between communities and the Company, and fully respecting the cultural customs and behaviour of the local community while minimising the impact on the local environment, ecology, and society.

The Company has formulated social impact assessment procedures covering the critical stages before a project is implemented, such as project scheme development, construction scheme formulation, environmental protection inspection, etc.



In addition, the Company has formulated a series of environmental protection management systems such as the Management Measures of Ecological Protection and Pollution Prevention and Control Management Measures. Adhering to the idea of taking into account the interests of local communities and residents, the Company takes targeted actions to reduce its influence on the ecological environment and to avoid and regulate noise pollution.

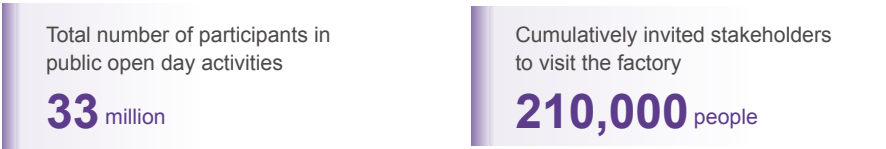


Community Communication Mechanism

The Company has established an environmental information disclosure system following national and local regulations to disclose environmental information and accept social supervision promptly. The principal means of information disclosure is by constructing pollutant discharge signboards outside the stations where pollution sources are released and explaining to the public the main processes, main types, and discharge volume of pollutants. Moreover, according to the requirements of local governments, all subsidiaries of the Company have established a complaint collection, handling, and feedback mechanism with the local community and the public, to timely report the major environmental complaints to the relevant departments of the headquarters and promote rectification through the joint working mechanism.

In 2021, the Company demonstrated innovative achievements in the domains of environmental protection, energy conservation, emission reduction, cost reduction, and efficiency enhancement through offline and online activities, including "online exhibiting" and "online live broadcasting". In addition, in combination with voluntary activities, the Company publicises knowledge about the oil and gas sector and safety on campus and in the community through voluntary activities, thereby increasing the content and format of the "Open Day" events. In 2021, the Company held 678 "Open Day" events, with 33 million participants. Since the first "Open Day" in 2014, all subsidiaries of the Company have carried out events in more than 100 cities in China and have invited 210,000 people, including community residents, students, media representatives, and government officials, to visit the plants, winning respect and recognition for Company.

In 2021,



④ Zhejiang Taizhou Petroleum Branch Company organised open day event for the public

Community Participation Programme

The Company attaches importance to the joint development of itself and the local community, actively responds to local development strategies, and makes full use of its advantages to support local urban construction and economic and social development.

Deepening Cooperation with Local Community



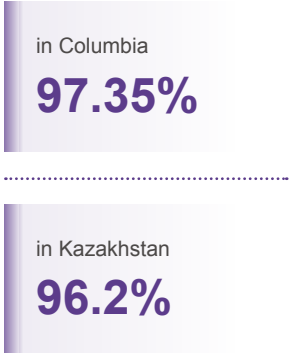
④ Shengli Oilfield optimises the environment nearly its well to better integrate with local urban environment

Promoting Community Development

When conducting business overseas, the Company is committed to paying taxes in accordance with applicable laws and regulations, promoting local hiring, adhering to international standards of safety, health, and environmental protection, respecting indigenous cultures, actively participating in public welfare undertakings, and promoting the livelihood and environmentally sustainable development of local communities.



Employee localisation ratio



Overseas community development practice of Sinopec

- Mansarover in Columbia**

Mansarover provided administrative and technical training to the local water authority, literacy and primary education to youth, women, and the elderly living in neighbouring oil field areas, and developed annual training plans for local communities on social, environmental, and cultural issues.
- CIR in Kazakhstan**

KOA Company, a joint venture under the CIR project, has formulated a "green office" plan for environmental protection and implemented the plan together with ECO NETWORK LLP, a local environmental protection company. The proceeds from the sale of waste will support the "green school" charity project.
- Block 18 in Angola**

In 2021, as a member of the block partner group, our company in Angolan implemented the photovoltaic power generation assistance programme together with other partners, providing 140,000 KW and 120,000 KW photovoltaic energy to the Caboledo Quicama Child Health Care Centre and Benfica Kididi Child Health Care Centre respectively.
- UDM in Russia**

UDM has set up a coordination department for regional relations responsible for strengthening communication with the local government and communities according to the work of its centre, and creating a harmonious atmosphere in the oil region.

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Product and Service Management

Sinopec Corp. is committed to continuously improving the quality of its products and services based on the tenets of "high quality, sufficient quantity, and customer satisfaction".

Quality Management

The Company strictly abides by the Product Measurement Law of the People's Republic of China, the Measurement Law of the People's Republic of China, the Standardisation Law of the People's Republic of China, and other laws and regulations. The Company has formulated internal regulations, such as the Measures for Quality Management of Refined Oil Products and Natural Gas and the Risk Management Regulations on the Quality of Refined Oil Products and Natural Gas, constantly promoting its product quality management mechanisms. Fifteen marketing subsidiaries of the Company have obtained third-party certification for their ISO9000 quality management systems. The remaining 22 subsidiaries have passed the Company's certification process.

The Company takes targeted measures to construct its indicator system, supplier management system, quality inspection, and control system to ensure product quality comprehensively. In 2021, more than 33,000 batches of samples of the Company accepted random external review at the national, provincial, and municipal levels and were all qualified. In 2021, there were no known incidents involving product recalls. Moreover, the Company is committed to adhering to new regulations and policies, consistently improving the quality of oil products, and promoting pollution reduction.

Sinopec actively improves oil quality in support of pollution control

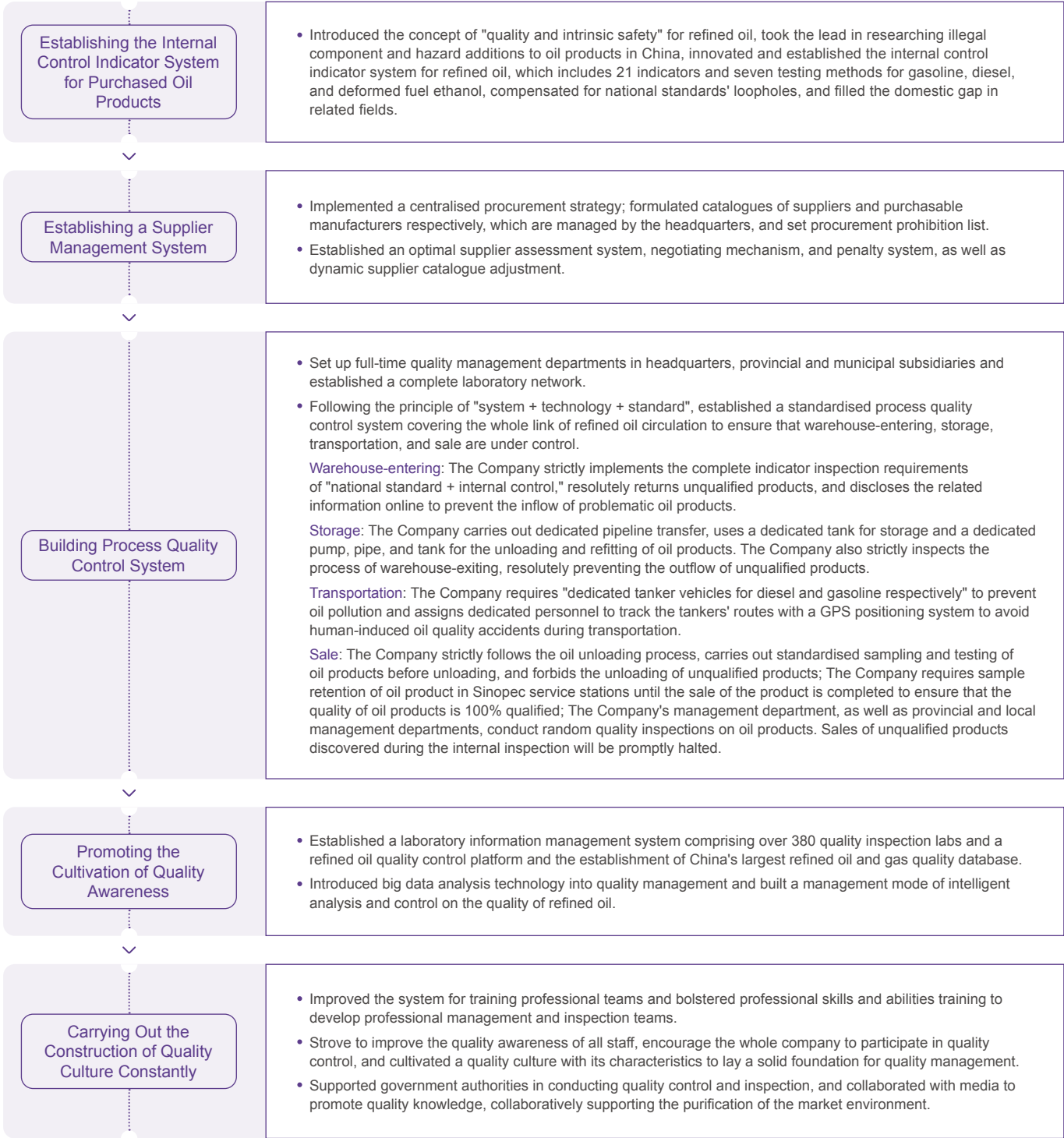
In July 2021, the Municipality Government of Beijing launched the "Beijing VIB" standards, which further standardised the allowed range of olefins, aromatics and distillation of gasoline, as well as the allowed range of polycyclic aromatic hydrocarbons and distillation of diesel, and added allowed values of some harmful substances (silicon and chlorine of gasoline), requiring all-round supply of the "Beijing VIB" oil before February 1, 2022. On December 7, 2021, 55 days prior to the deadline, Sinopec completed the replacement of "Beijing VIB" oil products required by the Beijing Municipal Government

at 517 service stations and 5 oil depots in Beijing to fully supply "Beijing VIB" gasoline and diesel. The usage of "Beijing VIB" oil can reduce the emission of particulate matter of gasoline vehicles by 20% to 30%, the emission of hydrocarbons by 10% to 15%, and the emission of carbon monoxide by 6% to 10%. For diesel vehicles, the emissions of particulate matter can be reduced by 20%, and the emission of nitrogen oxides by 10%. Such achievement will play an important role in improving air quality and realising the coordinated emission reduction of fine particulate matter (PM2.5) and ozone.



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Guarantee Quality and Safety



Rights and Interests of Customer

The Company strictly abides by the Law of the People's Republic of China on the Protection of Consumers' Rights and Interests and the Anti-Unfair Competition Law and values the opinions and suggestions of customers and consumers. The Company has established a sound closed loop of "handling, settlement and return visit" to solve customer complaints to ensure that t customers complaints are followed and solved timely. The Company is committed to correctly resolving the issues and fully protecting consumers' rights and interests.

The Company places a focus on consumer privacy protection. The Board of Directors, as the primary regulator of customer privacy protection, strictly adheres to the requirements of applicable laws and regulations, such as the Personal Information Protection Law of the People's Republic of China, the Data Security Law of the People's Republic of China, and the Regulations on Classified Protection of Network Security. The Board also revised and issued the Sinopec Network security Notification Management Measures, requiring the Company to ensure the complete life-cycle security protection of essential data, adhere to the principles of lawfulness, fairness, and necessity, and collect and use personal information in strict accordance with relevant national laws and regulations.

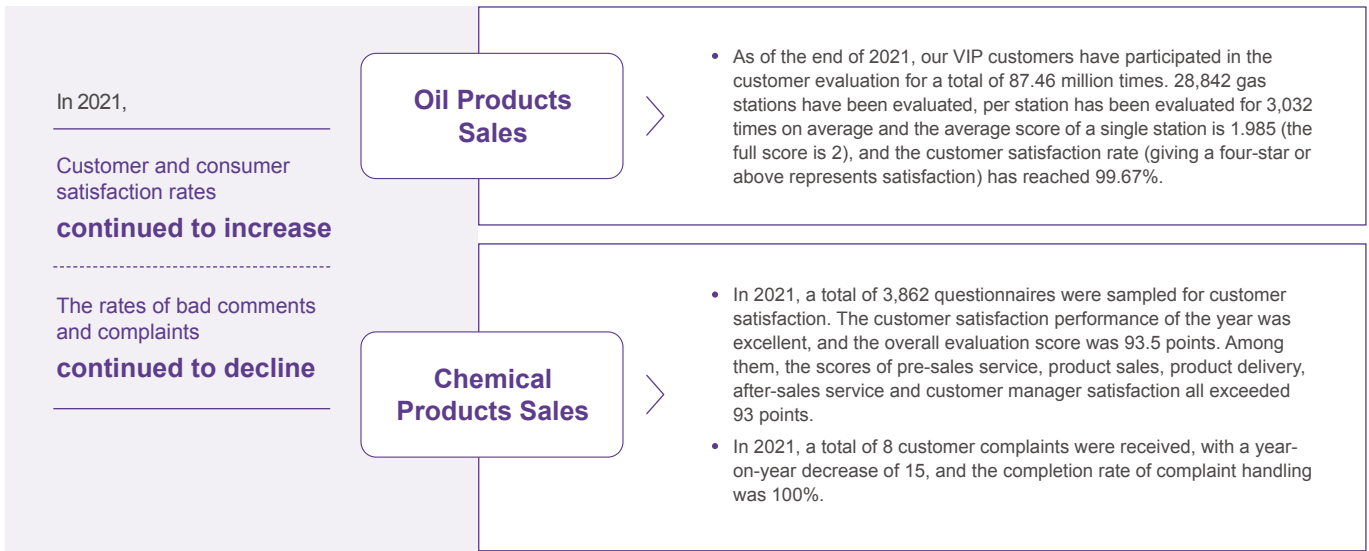
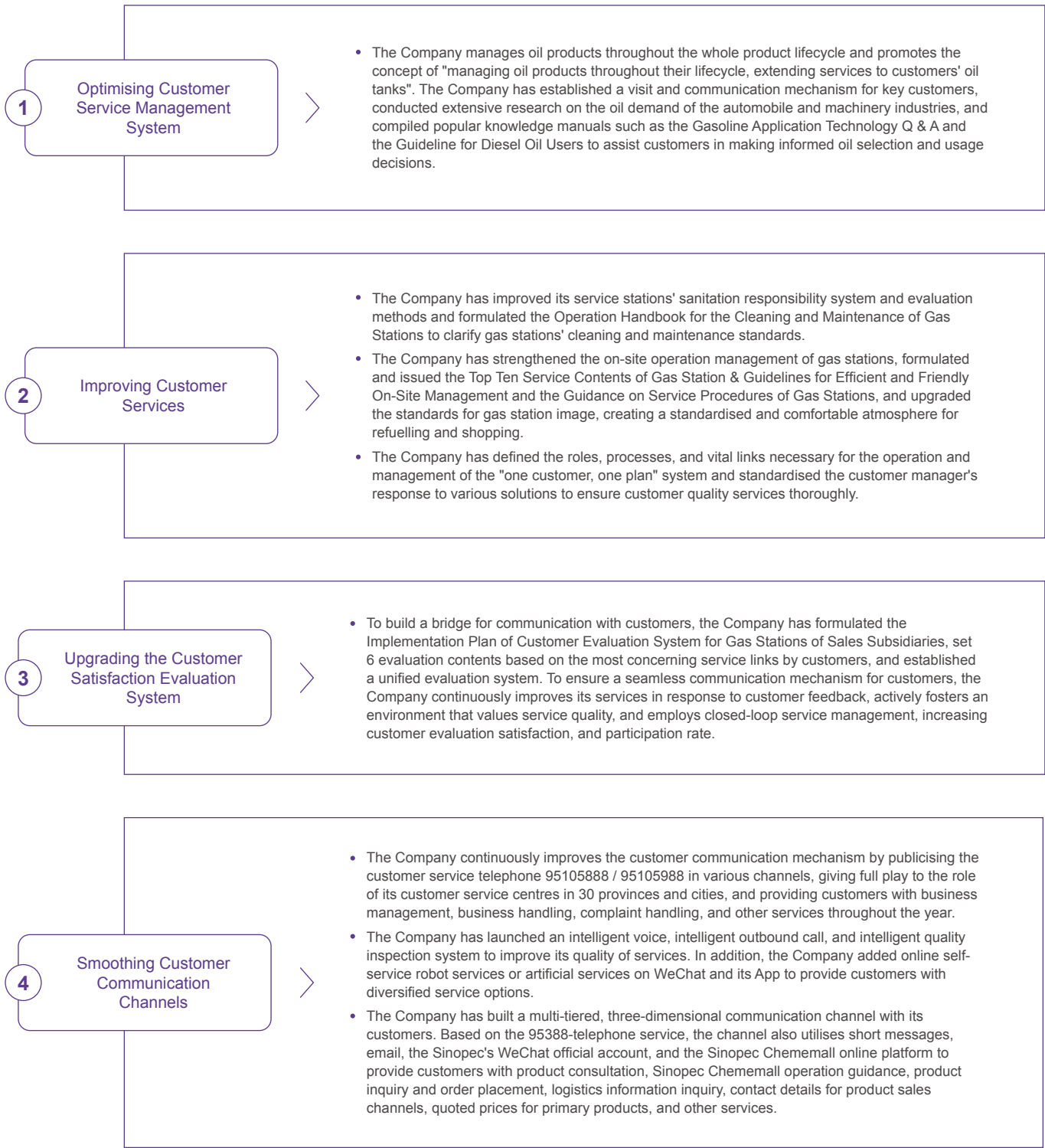
The company adheres to the principles and regulations of lawfulness and integrity, clarity and rationality, accessing information only when necessary, openness and transparency, accuracy and integrity, and security guarantee, and complies with the legal and regulatory requirements for network security, data security, and personal information protection, ensuring the security of personal information related to the Company's online business. The Company has built an integrated security protection system, including identity management, password-related services, data-leakage prevention, document security management, and email data security to ensure data security protection. By the principle of accessing information only when necessary, the Company carries out personal information protection and provides technical protection measures such as desensitisation, monitoring, and audit.

Service Improvement

Adhering to the concept of "customer-centred", the Company carries out customer service in an all-around way, focuses on improving high-quality service, and implements targeted policies around multiple optimisation schemes to enhance the quality of service and customer experience comprehensively.



Change Petroleum improves customer service with the "100-day Service Improvement Contest" Campaign



Service Innovations

The Company actively innovates its business model, diversifies its offerings, and promotes business form integration by focusing on consumer demands. The Company also seeks to accelerate the transformation and development of informatisation, integrate platform construction into its informatisation project, and develop an interconnected and efficient customer service platform, thereby providing practical support for the development of a new service model and business format with customers as the centre and the Internet as the carrier.

Sinopec's' EasyJoy actively develops new retail formats

Shopping Festival

In response to the characteristics of different seasons and customers' consumption habits, EasyJoy is committed to meeting the diversified needs of customers by creating four shopping festivals, including "EasyJoy Shopping Festival", "New Year Shopping Festival", "Car-Owner Festival" and "Beverage Shopping Festival". The "EasyJoy Shopping Festival" was held simultaneously with the 18th China ASEAN Expo in Nanning, Guangxi, to introduce special local products from ASEAN and Guangxi to all China and domestic products to ASEAN. 18,200 EasyJoy stores across the country carried out "EasyJoy Shopping Festival" simultaneously, more than 900 SKUs of goods were introduced in various marketing activities.

High-value ecosystem of "people, car, life"

EasyJoy actively expands new business forms with diversified services by building a high-value ecosystem of "people, car, life". The Company has established an "EasyJoy Coffee" joint venture to build the first gas station-based coffee brand in China. The Company has built more than 8,700 auto service outlets of gas stations to provide customers with one-stop car service of car purchasing, car keeping, car using and car replacement, as well as car washing service with an average of more than 400,000 times a day. The Company has also set up more than 1,200 catering stores. The Company also provides truck drivers with intimate services such as food, resting, bathing, laundry, safe parking and road rescue through its Driver's Home.

New platform, new mode

Taking the new online platform of "Sinopec Refuelling" as the main entering access, EasyJoy has built a centralised national membership platform and improved its new retail business mode of "Internet + refuelling station + convenience store + third party", providing "easy to buy car", "easy car delivery" and other "one touch" intelligent services. The platform has obtained more than 30 million registered membership. The Company also launched online businesses such as EasyJoy mall, integral mall and WeChat Applet, and built an online membership system to accelerate the development of a comprehensive online service platform.

case

Key Performance

Environmental Performance

GHGs emissions and management

Indicators	2019	2020	2021
GHGs emission (million tonnes CO ₂ -equivalent) ^{Note1}	170.69	170.94	172.56
Direct GHGs emission	125.68	128.58	148.38
Indirect GHGs emission	45.01	42.36	24.18
Oil & gas exploration and production segment	23.18	24.42	22.47
Refining and chemicals segment	144.93	144.32	148.34
Marketing segment	2.58	2.20	1.75
GHGs emission intensity ^{Note 2}	57.71	81.22	62.96
CO ₂ capture (thousand tonnes)	1,263	1,290	1,520
Methane recovery (million cubic metres)	397	600	717

Indicators	2019	2020	2021
Methane emission (million cubic metres)	-	283.56	299.90
Oil & gas exploration and production segment	-	245.98	269.88
Refining and chemicals segment	-	23.75	10.01
Marketing segment	-	13.83	20.01

Note 1: The Company conducts GHGs emission (direct and indirect) accounting and verification according to ISO14064-1:2006 standards, covering six gases including carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydro fluoro carbons (HFCs), per fluorinated compounds (PFCs) and sulphur hexafluoride (SF6).

Note 2: GHGs emissions intensity (tonnes CO₂-equivalent / RMB million) = Greenhouse gas emissions / revenue (RMB million)

Energy and resources^{Note1}

Indicators	2019	2020	2021
Consumption of crude oil (million tonnes)	1.21	1.07	1.07
Consumption of natural gas (billion cubic metres)	4.14	3.78	4.06
Consumption of purchased electricity (billion kWh)	32.26	30.83	33.80
Consumption of coal (million tonnes)	14.77	15.00	35.00
Fresh water withdrawal for industrial use (million cubic metres)	650.36	643.20	636.16
Fresh water withdrawal for industrial use intensity ^{Note2}	219.87	305.60	232.10

Note1: The consumption of certain energies increased in 2021 due to the change in scope of statistics as the result of asset acquisition of the Company, the increase of the scale of production and operation of the Company, and the release of new production capacities.

Note 2: Fresh water withdrawal for industrial use intensity (cubic metre/RMB million)= Fresh water withdrawal for industrial use/ revenue (RMB million)

Emissions, effluents, and wastes

Indicators	2019	2020	2021
Sulphur dioxide (thousand tonnes)	64.6	61.9	59.3
Nitrogen oxides (thousand tonnes)	95.9	92.0	88.3
COD (thousand tonnes)	19.0	18.6	18.2
Ammonia and nitrogen (thousand tonnes)	1.96	1.92	1.88
Solid waste (thousand tonnes) ^{Note 1}	2,115.32	1,710.8	1,931.6
Solid waste intensity ^{Note 2}	0.72	0.81	0.70
Weight of disposed hazardous waste (thousand tonnes) ^{Note 3}	642.3	731.1	461.0
Hazardous waste intensity ^{Note 4}	0.22	0.35	0.17

Note 1: The total amount of general industrial solid waste entrusted by the Company to a third party for disposal.

Note 2: Solid waste intensity (tonne/RMB million)= amount of solid waste/revenue (RMB million)

Note 3: The total amount of hazardous waste entrusted by the company to third-party qualified institutions for disposal.

Note 4: Hazardous waste intensity (tonne/RMB million)= amount of hazardous waste/revenue (RMB million)

Social Performance

Employment and Training

Indicators	2019	2020	2021
Total number of employees	402,206	384,065	385,751
Male employees	-	257,053	262,108
Female employees	-	127,012	123,643
Employees below 30 years of age	-	40,076	41,029
Employees between 31 and 50 years of age	-	254,948	243,706
Employees over 51 years of age	-	89,041	101,016
Number of employees newly hired during reporting period	-	16,011	21,062
Number of employees turnover during reporting period	-	13,963	11,797
Turnover rate (%)	0.8	0.69	0.64
Turnover rate of male employees (%)	-	-	0.56
Turnover rate of female employees (%)	-	-	0.87
Turnover rate of employees below 30 years of age (%)	-	1.5	3.10
Turnover rate of employees between 31 and 50 years of age (%)	-	0.5	0.56
Turnover rate of employees over 51 years of age (%)	-	0.3	0.16
Collective contract coverage (%)	100	100	100
Social insurance coverage (%)	100	100	100
Enterprise annuity coverage (%)	80.57	80.59	81.48
Percentage of employees with labour union membership (%)	100	100	100
Percentage of ethnic minority employees(%)	3.7	3.8	4.0
Percentage of female employees (%)	33.8	33.1	32.1
Percentage of female employees in management (%)	12.38	12.59	12.91
Investment in vocational training (10,000 RMB)	850.21	875.04	890.56
Vocational training coverage (%)	78.2	85.7	87.3
Total amount of vocational training (hours)	10,190,302	12,853,165	14,637,601
Average training hours of employees (hours)	25.34	33.47	35.71
Average training hours of male employees (hours)	49.48	52.61	55.28
Average training hours of female employees (hours)	49.83	53.53	55.64
Average training hours of senior management staff (hours)	40.57	52.21	59.15
Average training hours of mid-level management staff (hours)	41.62	48.65	55.37
Average training hours of grassroots employees (hours)	50.26	45.62	52.81
Vocational training participation (person-time)	985,612	1,536,501	1,725,129
Online training participation (person-time)	5,014,143	1,259,800	6,152,170
Total amount of online training (hours)	101,903	27,721,300	51,432,900
Training participation rate of male employees (%)	33.95	36.85	39.26
Training participation rate of female employees (%)	34.84	35.62	38.27
Training participation rate of senior management staff (%)	81.18	95.6	95.77
Training participation rate of mid-level management staff (%)	44.61	92.5	93.63
Training participation rate of grassroots employees (%)	35.77	85.6	87.38

Workplace Health and Safety

Indicators	2019	2020	2021
Employee occupational health examination coverage (%)	99	99.9	99.9
Health examination and health record coverage (%)	99	99.9	99.9
Number of newly diagnosed cases of occupational diseases	15	10	10
Number of accidents reported	1	3	2
Number of deaths due to production safety accidents	1	3	2
Total recorded accident (Incident) rate (per 200,000 working-hours)	-	0.1062	0.1147
Fatal accident rate (per 200,000 working-hours)	-	0.00072	0.00071
Number of working days lost due to work injuries	-	-	-
Number of production safety emergency drills (10,000)	59	58	58
Number of participants in production safety emergency drills (10,000 person-times)	343	329	331

Supply chain

Indicators	2019	2020	2021
Number of suppliers passed qualification assessment	18,646	21,446	25,072
Number of suppliers from mainland China	-	-	23,294
Number of oversea suppliers	-	-	1,778
Percentage of suppliers qualified by QHSE management system (%)	31.1	31.3	30.6
Number of suppliers qualified by the quality management system (ISO 9000)	9,312	10,327	11,952
Percentage of suppliers qualified by the quality management system (ISO 9000) (%)	49.9	48.2	47.7
Number of suppliers qualified by the environmental management system (ISO 14000)	6,463	7,412	8,511
Percentage of suppliers qualified by the environmental management system (ISO 14000) (%)	34.7	34.6	34.0
Number of suppliers qualified by the occupational health and safety management system (ISO 18000)	6,108	7,044	7,999
Percentage of suppliers qualified by the occupational health and safety management system (ISO 18000) (%)	32.8	32.8	31.9
Percentage of procurement from the top 5 suppliers	5.3	5.7	5.1
Percentage of procurement through tender (%)	84.2	85.2	86.0
Percentage of procurement by open tender (%)	96.1	97.1	96.7

Independent Assurance Report

毕马威华振通字第 2200025 号

Independent Limited Assurance Report

To the Board of Directors of China Petroleum and Chemical Corporation:

We were engaged by the Board of Directors of China Petroleum and Chemical Corporation (the "Company") to provide limited assurance on selected 2021 key data in the Company's 2021 Sustainability Report for the year ended 31 December 2021.

I. Key data

In this report, limited assurance procedures were performed on the following selected key data of the Company's 2021 Sustainability Report:

- GHGs emission (million tonnes CO₂-equivalent)
- Direct GHGs emission (million tonnes CO₂-equivalent)
- Indirect GHGs emission (million tonnes CO₂-equivalent)
- CO₂ capture (thousand tonnes)
- Consumption of crude oil (million tonnes)
- Consumption of natural gas (billion cubic metres)
- Consumption of purchased electricity (billion kWh)
- Consumption of coal (million tonnes)
- Weight of disposed hazardous waste (thousand tonnes)
- Number of accidents reported
- Number of deaths due to production safety accidents
- Total recorded accident (incident) rate (per 200,000 working-hours)
- Fatal accident rate (per 200,000 working-hours)
- Total number of employees
- Employee turnover rate (%)
- Percentage of female employees (%)
- Number of patients cured under the Lifeline Express Programme

毕马威华振通字第 2200025 号

Independent Limited Assurance (Continue)

Within the scope of our work, we only performed procedures on selected 2021 key data at the Head Office, Sinopec Marketing Co., Limited Beijing Branch and Sinopec Shanghai Petrochemical Company Limited, we have not conducted work at other entities. We have not performed any procedures with respect to 2020 and earlier periods or any other information included in the 2021 Sustainability Report.

II. Responsibilities of the Board of Directors

The Company's Board of Directors is solely responsible for the preparation of the key data of the 2021 Sustainability Report in accordance with basis of preparation of the key data ("basis of preparation") attached to this assurance report.

The Board of Directors is also responsible for designing, implementing and maintaining the internal controls that enable the preparation and presentation of 2021 Sustainability Report that is free from material misstatement, whether due to fraud or error.

III. Responsibilities of the certified public accountants

Our responsibility is to carry out a limited assurance engagement and to express a conclusion based on the work performed. We conducted our work in accordance with the International Standard on Assurance Engagements 3000: Assurance Engagements other than Audits or Reviews of Historical Financial Information.

We have complied with our independence requirement and other relevant ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, and we have complied with the applicable requirements of the International Standard on Quality Control 1 with respect to maintaining a comprehensive quality control system.

Our independent limited assurance report has been prepared solely for the Company in accordance with the terms of our engagement. Our work has been undertaken so that we might report to the Board of Directors of the Company those matters we have been engaged to report in this independent limited assurance report and for no other purpose. We do not accept or assume responsibility to any party other than the Company for our work, for this independent limited assurance report, or for the conclusion we have reached.

毕马威华振通字第 2200025 号

Independent Limited Assurance (Continue)

IV. Summary of procedures performed

A limited assurance engagement on the 2021 Sustainability Report consists of making inquiries, primarily of persons responsible for the preparation of information presented in the sustainability report, and applying analytical and other procedures, as appropriate. Our procedures include:

- Assessing the risk of material misstatement of selected 2021 key data relating to the sustainability report, whether due to fraud or error;
- Conducting interviews with relevant staff at the Company who are responsible for providing the information in the sustainability report;
- Performing analytical review procedures on the selected 2021 key data relating to the sustainability report;
- Checking relevant documents of selected key data relating to the sustainability report on a sample basis;
- Recalculating 2021 selected key data relating to the sustainability report;
- Reading the information presented in the sustainability report to determine whether it is in line with our overall knowledge of, and experience with, the sustainability performance of the Company; and
- Perform other procedures deemed necessary.

The extent of the evidence gathering procedures performed in a limited assurance engagement is less than that for a reasonable assurance engagement, and therefore, a lower level of assurance is provided. In addition, our work was not undertaken for the purpose of expressing an opinion on the effectiveness of the Company's systems and procedures.

V. Inherent limitation

We draw attention of the readers that currently there are no generally accepted practices to evaluate and measure non-financial information, therefore there are different measurement methods, which may impact the comparability among entities.

VI. Conclusion

Based on the procedures performed and the evidences obtained, nothing has come to our attention that causes us to believe that the selected 2021 key data contained in the Company's Sustainability Report for the year ended 31 December 2021 is not prepared, in all material respects, in accordance with the basis of preparation.

KPMG Huazhen LLP

Beijing, China
25 March 2022

Basis of Preparation of Key Data

GHGs emission (million tonnes CO₂-equivalent):

GHGs emission disclosed herein refers to the sum of direct GHGs emission and indirect GHGs emission produced by the production operation subsidiaries of China Petroleum & Chemical Corporation.

Direct GHGs emission (million tonnes CO₂-equivalent):

Direct GHGs emission disclosed herein refers to direct GHGs emission from fixed emission source, mobile emission source, process emission source and escape emission source produced by the production operation subsidiaries of China Petroleum & Chemical Corporation.

Indirect GHGs emission (million tonnes CO₂-equivalent):

Indirect GHGs emission herein refers to indirect greenhouse gas emissions resulting from the consumption of purchased electricity, purchased heat (steam), etc by the production operation subsidiaries of China Petroleum & Chemical Corporation.

CO₂ capture (thousand tonnes):

CO₂ capture herein refers to the total amount of carbon dioxide captured by refinery enterprises of China Petroleum & Chemical Corporation in carbon dioxide recovery work.

Consumption of crude oil (million tonnes):

Consumption of crude oil herein refers to total end-use crude oil consumed by industrial subsidiaries of China Petroleum & Chemical Corporation.

Consumption of natural gas (billion cubic metres):

Consumption of natural gas herein refers to total end-use natural gas consumed by industrial subsidiaries of China Petroleum & Chemical Corporation.

Consumption of purchased electricity (billion kWh):

Consumption of purchased electricity herein refers to the difference between total consumption of electricity of industrial subsidiaries of China Petroleum & Chemical Corporation and their self-generated electricity.

Consumption of coal (million tonnes):

Consumption of coal herein refers to total coal consumed by industrial subsidiaries of China Petroleum & Chemical Corporation.

Weight of disposed hazardous waste (thousand tonnes) :

Weight of disposed hazardous waste herein refers to the total weight of hazardous waste entrusted for process and disposal, which is collected in the Environmental Protection Information System of China Petrochemical Corporation.

Number of accidents reported:

Number of accidents reported herein refers to the number of General Grade A and higher accidents that occurred of China Petroleum & Chemical Corporation. A General Grade A accident means an accident in which some person died.

Number of deaths due to production safety accidents:

Number of deaths due to production safety accidents herein refers to the number of permanent employees that are eventually confirmed dead in General Grade A accidents of China Petroleum & Chemical Corporation.

Total recorded accident (incident) rate (per 200,000 working-hours):

Total recorded accident (incident) rate (per 200,000 working-hours) herein refers to the number of accidents (incident) that occurred of China Petroleum & Chemical Corporation, per 200,000 working-hours.

Fatal accident rate (per 200,000 working-hours):

Fatal accident rate (per 200,000 working-hours) herein refers to the number of employees that died in General Grade A accidents of China Petroleum & Chemical Corporation, per 200,000 working-hours.

Total number of employees

Total number of employees herein refers to the total number of employees who has signed full-time employment contracts with China Petroleum & Chemical Corporation, excluding dispatched employees.

Employee turnover rate (%):

Employee turnover rate herein refers to the proportion of the number of employees whose labor contracts were terminated by China Petroleum & Chemical Corporation for personal reasons (excluding ordinary employees such as gas station operators).

Percentage of female employees (%)

Percentage of female employees herein refers to the proportion of the number of female employees who has signed full-time employment contracts with China Petroleum & Chemical Corporation, excluding dispatched employees, to total number of the employees.

Number of patients cured under the Lifeline Express Programme:

Number of patients cured under the Lifeline Express Programme herein refers to the number of patients who have undergone rehabilitation surgery in the Lifeline Express Programme, which was launched by China Healthy Express Foundation in reporting year and supported by China Petroleum & Chemical Corporation.

Report Content Indexes

HKEX ESG Reporting Guide Content Index

Subject Areas, Aspects, General Disclosures and KPIs			Pages
A: Environmental			
Aspect A1: Emissions	General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste.		30-31,38,48-49, 52-54,56-58
	KPI A1.1	The types of emissions and respective emissions data.	96-97
	KPI A1.2	Direct (Scope 1) and energy indirect (Scope 2) greenhouse gas emissions (in tonnes) and, where appropriate, intensity (e.g., per unit of production volume, per facility).	31,96
	KPI A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g., per unit of production volume, per facility).	57,97
	KPI A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g., per unit of production volume, per facility).	57,97
	KPI A1.5	Description of emissions target(s) set and steps taken to achieve them.	30-45
	KPI A1.6	Description of how hazardous and non-hazardous wastes are handled, and a description of reduction target(s) set and steps taken to achieve them.	57
Aspect A2: Use of Resources	General Disclosure: Policies on the efficient use of resources, including energy, water and other raw materials.		34,52,55,57
	KPI A2.1	Direct and/or indirect energy consumption by type (e.g., electricity, gas or oil) in total (kWh in '000s) and intensity (e.g., per unit of production volume, per facility).	97
	KPI A2.2	Water consumption in total and intensity (e.g., per unit of production volume, per facility).	53
	KPI A2.3	Description of energy use efficiency target(s) set and steps taken to achieve them.	34-36
	KPI A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency target(s) set and steps taken to achieve them.	97
	KPI A2.5	Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.	N/A ^{Note1}
Aspect A3: The Environment and Natural Resources	General Disclosure: Policies on minimizing the issuer's significant impacts on the environment and natural resources.		30,48
	KPI A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	29-39,40-45,48-51
Aspect A4: Climate Change	General Disclosure: Policies on identification and mitigation of significant climate-related issues which have impacted, and those which may impact, the issuer.		2,28-31
	KPI A4.1	Description of the significant climate-related issues which have impacted, and those which may impact, the issuer, and the actions taken to manage them.	29

Note 1: The indicator is not applicable since the main products sold by the Company are energy and chemical products.

Subject Areas, Aspects, General Disclosures and KPIs			Pages
B. Social			
Employment and Labour Practices			
Aspect B1: Employment	General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equity opportunity, diversity, anti-discrimination, and other benefits and welfare.		70
	KPI B1.1	Total workforce by gender, employment type (for example, full- or part- time), age group and geographical region.	98
	KPI B1.2	Employee turnover rate by gender, age group and geographical region.	98
Aspect B2: Health and Safety	General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards.		62-64,72-73
	KPI B2.1	Number and rate of work-related fatalities occurred in each of the past three years including the reporting year.	99
	KPI B2.2	Lost days due to work injury.	N/A ^{Note2}
	KPI B2.3	Description of occupational health and safety measures adopted, and how they are implemented and monitored.	62-64,72-73
Aspect B3: Development and Training	General Disclosure: Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.		76-77
	KPI B3.1	The percentage of employees trained by gender and employee category (e.g. senior management, middle management).	98
	KPI B3.2	The average training hours completed per employee by gender and employee category.	98
Aspect B4: Labour Standards	General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child and forced labour.		70
	KPI B4.1	Description of measures to review employment practices to avoid child and forced labour.	70
	KPI B4.2	Description of steps taken to eliminate such practices when discovered.	70,85-86

Note 2: The indicator is not applicable, because the Company has calculated and disclosed the total recorded accident (incident) rate per 200,000 working-hours and the fatal accident rate per 200,000 working-hours in accordance with the OSHA standards instead.

Subject Areas, Aspects, General Disclosures and KPIs			Pages
B. Social			
Operating Practices			
Aspect B5: Supply Chain Management	General Disclosure: Policies on managing environmental and social risks of the supply chain.		84-86
	KPI B5.1	Number of suppliers by geographical region.	99
	KPI B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, and how they are implemented and monitored.	84-85
	KPI B5.3	Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored.	84-85
	KPI B5.4	Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.	84
	General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress.		91-92
	KPI B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	91
	KPI B6.2	Number of products and service related complaints received and how they are dealt with.	95
	KPI B6.3	Description of practices relating to observing and protecting intellectual property rights.	16
	KPI B6.4	Description of quality assurance process and recall procedures.	91-92
Aspect B6: Product Responsibility	KPI B6.5	Description of consumer data protection and privacy policies, and how they are implemented and monitored.	93
	General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to bribery, extortion, fraud and money laundering.		12-14
	KPI B7.1	Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.	15
	KPI B7.2	Description of preventive measures and whistleblowing procedures, and how they are implemented and monitored.	14-15
	KPI B7.3	Description of anti-corruption training provided to directors and staff.	15
Community			
Aspect B8: Community Investment	General Disclosure: Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests.		87-90
	KPI B8.1	Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport).	80-83
	KPI B8.2	Resources contributed (e.g. money or time) to the focus area.	80-83

UNGC Ten Principles Index

Scope	UNGC's Ten Principles	Pages
Human Rights	Businesses should support and respect the protection of internationally proclaimed human rights; and	70-71
	Make sure that they are not complicit in human rights abuses.	70-71
Labour	Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;	70-72
	The elimination of all forms of forced and compulsory labour;	70
	The effective abolition of child labour; and	70
	The elimination of discrimination in respect of employment and occupation.	70
Environment	Businesses should support a precautionary approach to environmental challenges	48-51
	Undertake initiatives to promote greater environmental responsibility; and	48-59
	Encourage the development and diffusion of environmentally friendly technologies.	40-45
Anti-Corruption	Businesses should work against corruption in all its forms, including extortion and bribery.	14-16

TCFD Index

TCFD recommended disclosures		Pages
Governance: Disclose the organisation's governance around climate-related issues and opportunities.		
a) Describe the board's oversight of climate-related risks and opportunities.		28
b) Describe the management's role in assessing and managing climate-related risks and opportunities.		28
Strategy: Disclose the actual and potential impacts of climate-related risks and opportunities on the organisation's business, strategy and financial planning where such information is material.		
a) Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long term.		29
b) Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy and financial planning.		29,30,31
c) Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.		30-31
Risk Management: Disclose how the organisation identifies, assesses and manages climate-related risks.		
a) Describe the organisation's processes for identifying and assessing climate-related risks.		28-29
b) Describe the organisation's processes for managing climate-related risks.		30-31
c) Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organisation's overall risk management.		17-18,28-29
Metrics and Targets: Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.		
a) Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process		30-31,96
b) Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 GHG emissions, and the related risks.		29-31,96
c) Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets.		30-31,41-45



北京2022年冬奥会官方合作伙伴
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No. 22 Chaoyangmen North Street
Chaoyang District Beijing 100728 PRC
Tel: 86-10-59960028
Fax: 86-10-59960386
Website: <http://www.sinopec.com/listco/en>



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