



中国石化  
SINOPEC

# 2023

## Environmental, Social and Governance Report

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SINOPEC ENGINEERING (GROUP) CO., LTD.

Stock Code: 2386.HK



# About This Report

This Report is the eleventh Environmental, Social and Governance ("ESG") report ("Report") of SINOPEC Engineering (Group) Co., Ltd. ("the Company") since its going public. This Report introduces our social responsibility practices and performance in economic, social and environmental dimensions.

## Report Information

**Reporting Subjects:** SINOPEC Engineering Group Co., Ltd. together with our subsidiaries and branches ("the Group", "SEG", "we" or "us").

**Reporting Period:** This Report covers our business activities from 1 January 2023 to 31 December 2023 (hereinafter referred to as "Reporting Period"), with some content from beyond the stated Reporting Period in order to enhance the comparability and continuity of this Report.

**Content Scope:** This Report covers the important matters and performance of the Group in the environmental, social and governance aspects during the Reporting Period.

**Sources of Information:** The information in comes from policies and internal data of the Company and our subsidiaries. Some of the operational and financial data of this Report are cited from the Company's 2023 Annual Report. In the event of any discrepancy in data between this Report and the 2023 Annual Report, the information in the 2023 Annual Report shall prevail. Unless otherwise specified, the amount disclosed in this Report is denominated in RMB.

**Report Availability:** This Report is available in electronic and in printed versions. The electronic version can be downloaded and browsed on the website of the Stock Exchange of Hong Kong at [www.hkexnews.hk](http://www.hkexnews.hk) and the News and Announcements section of SINOPEC Engineering (Group) Co., Ltd. at [www.segroup.cn](http://www.segroup.cn).

## Compilation Guidelines

This Report is compiled based on *Environmental, Social and Governance Reporting Guide* of the Stock Exchange of Hong Kong Limited (the "HKEx"). It also refers to *Guiding Opinions on Performance of Social Responsibility by Central State-Owned Enterprises* issued by State-owned Assets Supervision and Administration Commission of the State Council of PRC, *Global Reporting Initiative Sustainability Reporting Standards 2021 (GRI Standards 2021)* issued by the Global Sustainability Standard Board (GSSB), *Social Responsibility Guide (ISO26000)* issued by International Organisation for Standardisation, *Guidelines for the Compilation of Corporate Social Responsibility Reports for Chinese Enterprises (CASS-CSR5.0)* of Chinese Academy of Social Sciences, and considering *International Financial Reporting Sustainability Disclosure Standard 1: General Requirements for Sustainability-Related Financial Disclosures (IFRS S1)* and *International Financial Reporting Sustainability Disclosure Standard 2: Climate-Related Disclosures (IFRS S2)* issued by International Sustainability Standards Board (ISSB).

## Disclaimer

This Report includes forward-looking statements. Other than historical facts, all events which may or will happen in the future and their description (including but not limited to, preconditions, goals, estimates and commercial plans) are included in the forward-looking statements. Due to the influence of external changing factors, the factual development result or trend in the future may be different from such statements. The forward-looking statements of this Report were made in March 2024. Unless otherwise required by the regulatory authorities, SINOPEC Engineering (Group) Co., Ltd. undertakes no obligation or responsibility to update these forward-looking statements.

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## Chairman's Statement



On behalf of the Board of Directors of SINOPEC Engineering (Group) Co., Ltd., I would like to extend my sincere gratitude to our esteemed shareholders and stakeholders for their unwavering support.

The year 2023 heralds a new chapter in the Company's pursuit of high-quality development. Of the course of the year, we have been steadfastly implementing measures to achieve high-quality development, streamlining our production and business operations with a renewed focus on delivering "superior products, exceptional brands, innovative leadership, and modern governance".

**We are constantly refining our corporate governance and vigorously implementing actions to pursue high-quality development as a listed company.** The Board of Directors of the Company strictly complies with state laws and regulations, fulfil the responsibilities entrusted by *Articles of Association* and the shareholders' meeting, and ensure implementation of resolutions made at the shareholders' meeting. We have fully executed our strategic, decision-making, and risk prevention duties, focusing on new missions and tasks, undertaking top-level design, and defining a high-quality development strategy centred on "strengthening the strategic coordination and integration, consolidating the advantages of the traditional main business, driving technological innovations continuously, leading new-type industrialisation of the industry, promoting the internationalisation of enterprise operation, and realising the diversification of value creation". During the Reporting Period, the Company, as well as one of our subsidiaries, successfully obtained the ISO37301 Compliance Management System certification and passed relevant third-party audits, leading the industry in compliance management. We made greater efforts to communicate with and engage external stakeholders, including organising our first large-scale reverse roadshow, accelerating our value realisation by listening to external suggestions with an open attitude.

**We strive to lead industry technological transformation with a focus on innovation-driven growth.** We proactively integrate our capabilities into the science and technology innovation system of China with encouraging innovation mechanisms and motivated innovation talent, injecting new momentum into sustainable growth and driving high-quality development through innovation. During the Reporting Period, we concluded the project of sorting out the refining and chemical industry chain and technology chain with the formulation of *SEG Technological Industry Chain (First Edition)*, laying a solid foundation for more targeted efforts to "extending, supplementing, and strengthening" the industry chain subsequently. Within this period, we filed 797 new patent applications and were granted 462 new patents. We had also made significant achievements in 34 national research projects, 37 key research projects, and 20 major special projects that we participated, with 33 achievements recognised with provincial and ministerial level awards for science and technology progress, exceptional design, and quality engineering. We actively promote the integrated development of wind, solar, electricity, and hydrogen with traditional energy sources, continuously contributing to the development of clean energy. We also made efforts to promote a series of breakthroughs in green, low-carbon, and environmental protection technologies, leading the technological progress of the industry.

**We are committed to implementing the green and clean strategy, and continuously promoting low-carbon development.** We place great emphasis on green operations, and strive to deepen our understanding of green and clean development. We are constantly improving our environmental management capabilities and advancing the construction of green enterprises. During the Reporting Period, all of our 11 entities have passed the third-party audit for the ISO14001 Environmental Management System certification, and 22 new sites received Green Sites recognition. We are dedicated to reducing pollutant emissions, having adopted a series of pollution reduction and control measures, and continuously enhancing our environmental pollution treatment capabilities and management. In addition, we have conducted extensive research on energy and carbon management research, implementing a number of projects, such as energy contract management, energy-saving and carbon reduction solutions, low-temperature heat utilisation, carbon emission factor accounting, Carbon Peaking and Carbon Neutrality related research, etc., so as to provide our clients with comprehensive services in the green and low-carbon field.

**We cultivate a culture of health and safety to build a solid foundation for high-quality development.** Upholding intrinsic safety as a top priority, we have formulated and vigorously implement a robust QHSE management system, ensuring a safe, healthy, and comfortable workplace for employees and building a strong line of defence for safety management with a variety of measures, including safety hazard identification and inspection, safety capacity building, accountability mechanism for major safety incidents, project safety supervision, and employee occupational health management. Other than a champion in construction efficiency, our ExxonMobil Huizhou Ethylene Project also was won the "Global Project Safety President's Award" from the project owner. During the Reporting Period, all 11 entities of the Group had passed the third-party audit for ISO45001 Occupational Health and Safety Management System certification. We conducted a total of 323 safety training sessions, with 32,000 participants and 66,000 hours of training completed. With all these efforts, we have built a solid foundation of safety for high-quality development that protects the physical and mental well-being and safety of our employees.

**We highly value talent cultivation and actively practice corporate social responsibility.** We strive to achieve the mutual growth of both our employees and our enterprise, recognising our employees as valuable assets. Adhering to the principle of equity in employment, we are committed to valuing employee diversity, providing employees with equity and care, creating a comfortable work environment, listening to employee voices, and fostering a harmonious and friendly work atmosphere. Adhering to a talent-oriented strategy, we attach great importance to talent cultivation and development, and has established a multi-level and multi-dimensional training system to help employees achieve self-improvement. We are committed to giving back to society, fostering harmonious community relations, fully respecting cultures of where we operate, promoting local employment, and making continuous contributions to build better communities. We actively fulfil our social responsibilities and support common prosperity by participating in rural revitalisation and consumption assistance, educational aid, and other social welfare undertakings, with a total of 1,033,500 RMB donated during the Reporting Period.

**We adhere to quality leadership and focus on digitalisation.** Striving to be a consistent creator of "model projects" and "boutique projects", we attach great importance to quality and all of our 11 entities have obtained the ISO9001 Quality Management System certification and passed the relevant third-party audits during the Reporting Period. In 2023, we had won two National Excellent Design Awards, ten National Quality Project Awards, three National Quality Awards, six National First-class Welding Awards, and four national QC Group recognitions. Our digital delivery capabilities continue to grow with concrete achievements, such as the breakthroughs in smart factory design projects in Tianjin Nangang Refining & Chemical Integration Project and Zhenhai Refining & Chemical Integration Project, and the successful acceptance of digital delivery projects like Zhongke Refining&Chemical Integration Project and Gulei Refining&Chemical Integration Project. We are continuously deepening our intelligent application scenarios, with the development and upgrade iterations of intelligent sites for projects, and have completed the development and upgrading of smart sites for projects such as the projects in Yangzi and Yizheng, and achieving initial results in pilot projects for intelligent operation and maintenance in coal gasification and equipment anti-corrosion.

Dear Friends, we strongly believe that a cleaner, greener, and low-carbon petrochemical industry carries the strong aspirations of people around the world for a better life and will provide a more robust impetus for global development. Looking forward, we are fully committed to upholding the concept of sustainable development, integrating ESG into all aspects of our corporate strategic planning and production operations, strengthening top-level design for ESG governance, strengthening our management foundations, so as to achieve long-term, sustainable development in the face of the global economic and environmental challenges.

In 2024, with the unwavering dedication of our Board of Directors, management team, and staff, and with the generous backing of our shareholders and society, we will persist in propelling high-quality development, strive to pioneer a new era of industrialisation for our industry, and create greater shared value for our shareholder, clients, society, and employees!

**JIANG Dejun**  
Chairman of the Board  
Beijing, China  
March 15, 2024

## Board of Directors' Statements on ESG Governance

The Board of Directors of SINOPEC Engineering (Group) Co., Ltd. promises the Company will strive to follow *Environmental, Social and Governance Reporting Guide* issued by the Stock Exchange of Hong Kong, and continuously optimise our environmental, social and governance (ESG) mechanism, strengthen the Board's role in supervising and participation on ESG related issues, and vigorously integrate ESG considerations into the Company's major decision-making processes and various business practices.

### Board of Directors' Role in ESG Governance

The Board of Directors bears the ultimate responsibility for the Company's ESG governance. The ESG Committee under the Board of Directors is responsible for studying and overseeing the Company's commitment and performance on key ESG issues, 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 ESG Committee is composed of 6 directors, with Chairman of the Board serves as the chairperson of the Committee. The ESG 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. In 2023, the ESG Committee of the Board held 2 meetings.

### ESG Management Policy and Strategy

The Company attaches great importance to the significant impact that ESG risks may have on the Company. Every year, the Company updates our ESG issue database based on ESG risk analysis, macro policies and trends, and feedback from stakeholders and experts. Then the ESG issues are prioritised based on stakeholder surveys and expert evaluation results, providing guidance to prioritise the focus of the Company's ESG governance efforts.

### Review of the Progress of ESG Targets

The Company has established a high-quality development target management mechanism, covering major ESG performance indicators such as greenhouse gas emissions, resource consumption, pollutant discharge, occupational health and safety, and anti-corruption, and will regularly review to check whether these indicators meet our targets. The Company also integrates key ESG performance indicators such as safety, environmental protection, and operation compliance as the KPIs for key management staffs as well as our subsidiaries, so as to contribute to the achievement of our ESG objectives. In order to ensure the reliability of the Company's key ESG performance indicators, the Company engaged Grant Thornton LLP to conduct an independent assurance on the Report and issued an independent assurance opinion on 16 ESG key performance indicators of the Company.

The Board of Directors of SINOPEC Engineering (Group) Co., Ltd.

15 March 2024

## About Us

### Company Profile

SINOPEC Engineering (Group) Co., Ltd. is a leading energy and petrochemical engineering company in China with strong international competitiveness. We provide both domestic and overseas clients with comprehensive solutions across a range of industry sectors, including petroleum refining, petrochemicals, coal chemicals, natural gas processing, oil and gas storage and transportation, clean energy, environmental protection and energy conservation, inorganic chemicals, and pharmaceutical chemicals. We are an integrated service provider for the entire industry chain and lifecycle in the energy and chemical industry, and can offer end-to-end services, including engineering research, technology licencing, engineering consulting, engineering design, material procurement, equipment manufacturing, engineering construction, project management, and EPC (Engineering, Procurement, and Construction) general contracting.

For over 70 years, the Group has successfully delivered hundreds of high-quality, modern plants on schedule, with complex processes, advanced technology, and enormous investments, to clients in over 20 countries and regions worldwide. Our commitment to providing high-quality, efficient, and all-around services has earned us the trust of our clients and established the Group as a reputable and influential brand in the industry.

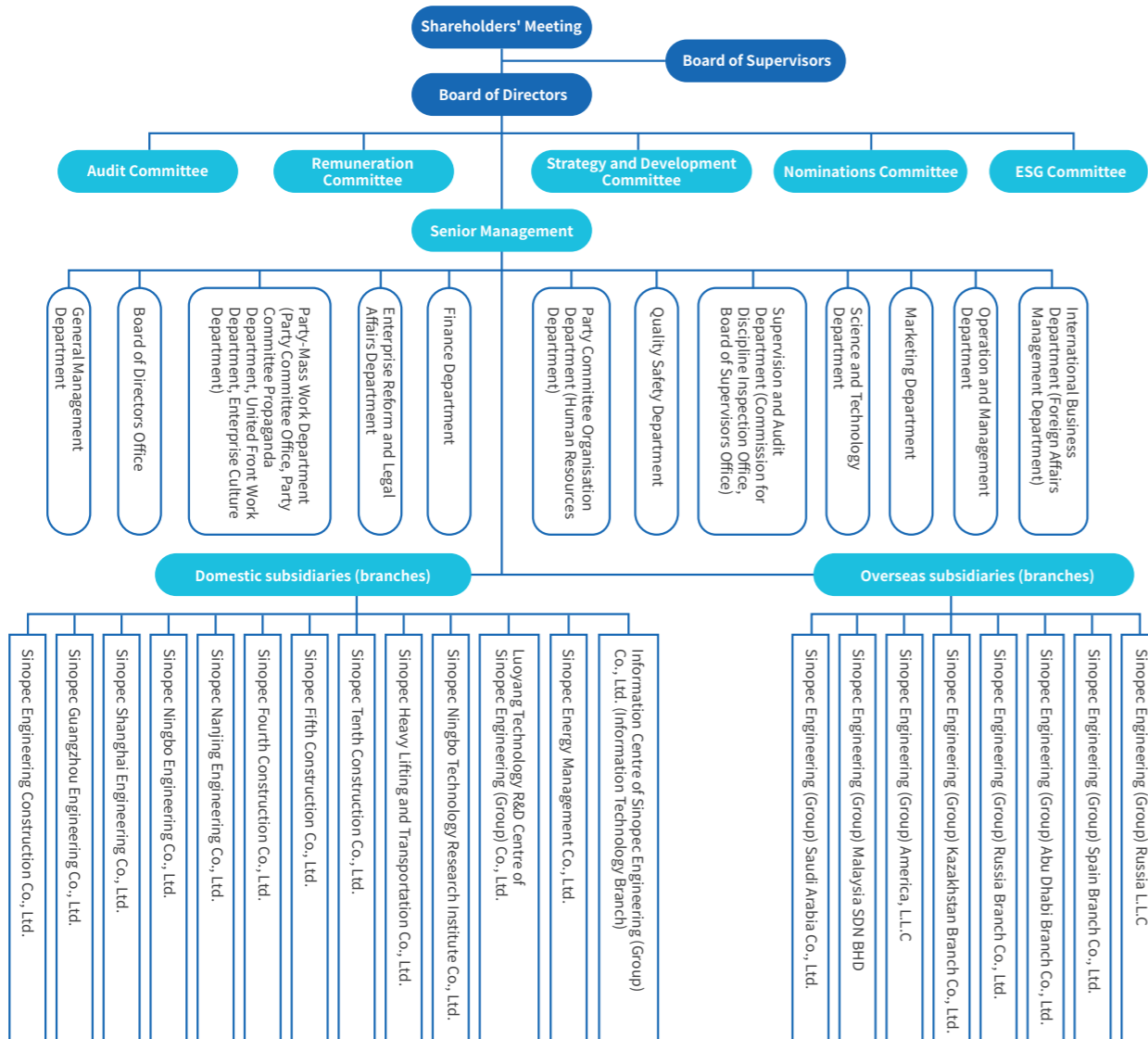
The Group boasts excellent engineering consulting capabilities. We leverage our advantages in system, talent, and experience to provide clients with full-life-cycle services, such as pre-consulting, park planning, energy optimisation, operations, maintenance, engineering optimisation, cloud services, and employee training.

The Group is widely recognised for the robust technological R&D and engineering implementation capabilities. We possess a broad spectrum of core technologies with intellectual property rights in crucial fields such as petroleum refining, ethylene and downstream processing, aromatics, coal chemicals, and natural gas processing. As a leading engineering company in China with complete sets of technologies with intellectual property rights, we have the capability to design and construct refineries with an annual oil capacity of over 10 million tonnes, annual ethylene capacity of over 1 million tonnes, or annual aromatics capacity of over 1 million tonnes.

The Group is a pioneer and leader in the construction of digital intelligence engineering in the petrochemical industry. We have established a cross-disciplinary, integrated, and collaborative design platform, and compiled the national standard for the digital delivery of engineering in the petrochemical industry, alongside corresponding implementation rules. Moreover, we have successfully achieved the simultaneous construction and delivery of physical and digital plants for domestic refining and petrochemical integration projects, laying a foundation for the extension of digital engineering construction into intelligent plant construction, the creation of a high-level digital engineering value chain, and the realisation of real-time monitoring of equipment manufacturing, visual simulation of construction, and real-time diagnostic intelligent manufacturing of plant operations.

The Group has 11 wholly-owned enterprises in China: SINOPEC Engineering Construction Co., Ltd., SINOPEC Guangzhou Engineering Co., Ltd., SINOPEC Shanghai Engineering Co., Ltd., SINOPEC Ningbo Engineering Co., Ltd., SINOPEC Nanjing Engineering Co., Ltd., SINOPEC Fourth Construction Co., Ltd., SINOPEC Fifth Construction Co., Ltd., SINOPEC Tenth Construction Co., Ltd., SINOPEC Heavy Lifting and Transportation Co., Ltd., SINOPEC Energy Management Co., Ltd., and SINOPEC Ningbo Technology Research Institute Co., Ltd., as well as two branches: Luoyang R&D Centre of SINOPEC Engineering (Group) Co., Ltd., and Information Centre of SINOPEC Engineering (Group) Co., Ltd.

## Organisational Structure



## Economic Performance

Indicators	Unit (RMB)	2023	2022	2021	2020	2019
Total assets	Billion	80.968	78.682	72.918	71.465	67.874
Revenue	Billion	56.221	53.028	57.760	52.353	52.261
Profit before taxation	Billion	2.764	2.762	2.592	3.011	2.827
Total taxes and fees	Billion	2.521	2.663	2.276	1.683	2.548
Annual dividend pay-out	Billion	1.518	1.452	1.386	1.328	1.417
Amount of new contracts	Billion	80.252	72.525	63.150	63.014	52.319

## Development Strategies

The Company deeply advances the business strategy of "optimising the existing, seeking growth, strengthening the foundation, and controlling risks", forming a high-quality development strategy of "strengthening the strategic coordination and integration, consolidating the advantages of the traditional main business, driving technological innovations continuously, leading new-type industrialisation of the industry, promoting the internationalisation of enterprise operation, and realising the diversification of value creation".

The Company adheres to the development vision of "creating the world's leading technology-oriented engineering company", taking "building an integrated service provider for the whole industry chain and the whole life cycle in the energy and petrochemical industry" as its development orientation, taking "engineering innovation and value creation" as its development engine, comprehensively implementing the six development strategies.

**Value-Oriented.** Maximise the Company's overall value and ensure consistent value for shareholders, client, society, and employees. Strengthen the integration of external resources and the maximise of internal resources, continuously expand the high-end core links of the energy and chemical industry chain and the engineering service business chain, constantly improve the Company's development quality and efficiency, and enhance shareholders' value. Focus on clients needs, continuously strengthen the one-stop service capacity building throughout the life cycle from project tracking to project operation, provide diversified engineering services with industry-leading performance, create high-end service advantages, and achieve win-win situation along with clients. Serve the society with high-quality projects, green projects and safety projects, and earnestly fulfil our social responsibilities. Provide a platform for employees to realise their own value and enhance employee value.

**Innovation-Driven.** Put innovation at the core of the Company's overall development and adhere to the concept of innovation-driven development. Develop new competitive advantages through innovation-driven development, and strengthen the long-term driving force of development. Turn technology into productivity and improve the quality and efficiency of development, use high-tech and advanced applicable technologies to transform and upgrade traditional industries, reduce consumption and pollution, and provide engineering and technical services for changing the development model of excessive consumption of resources and environmental pollution.

**Green & Clean.** Promote the technological innovation and industrialisation development of deep decarbonisation in the industry, formulate low-carbon regulations and relevant technical standards, accelerate the low-carbon transformation of petrochemical industry, and enhance the green and low-carbon competitiveness. Make the traditional energy utilisation process more energy-saving, consumption-reducing, emission-reducing and low-carbon through technologic innovation and engineering innovation so as to contribute to green development. Promote the coupling development of new energy sources such as wind energy, solar energy, geothermal energy and nuclear energy with traditional energy sources, reduce the carbon emissions of the industry while ensuring profitability, and promote the sustainable development of the energy and petrochemical industry. Create green enterprises and green construction sites while helping clients to realise green development.

**Talent-Based.** Firmly establish the strategic position of talent leading development. Attach equal importance to educational training and hands-on experience, and earnestly strengthen personnel training and echelon construction. Accelerate the market-oriented talent selection and employment mechanism; adhere to the performance-oriented principle, and constantly optimise the evaluation system in line with the characteristics of different types of talents; adhere to the market-oriented reform direction and continuously improve the incentive mechanism of salary distribution; adhere to the talent-oriented concept, and vigorously create a sound and favourable environment to support talent innovation and entrepreneurship. Create a talent team for the high-quality development of the Company.

**Global-Targeted.** Based on the domestic market, open up the overseas market, coordinate markets and resources at home and abroad, promote each other and develop in a coordinated manner. Focus on the strategic target market and accelerate the formation of the strategic pattern of the Company's global market. Based on system construction and personnel training, accelerate the establishment of a diversified management and standard system to meet the needs of the implementation of international projects, and enhance the internationalisation level of talents and the localised operation capability of projects.

**Fusion Symbiosis.** Realise integration and symbiosis between projects and nature, integration, and win-win situation for the Company and stakeholders, integration and symbiosis between all subsidiaries of the Company integration and sharing between the Company and its employees, and integrated development of traditional energy business and new energy business. Establish multi-dimensional cooperative relations with clients, research institutes, manufacturers, and other stakeholders, innovate cooperation models, and create a mutually beneficial and win-win business environment. Establish a mechanism of orderly competition and coordinated development featuring both division of labour and cooperation, and create group-based scale advantages and integrated synergy effect. Establish an enterprise ecosystem where employees and the Company are integrated and symbiotic, so that employees and the Company can grow together and benefit from the Company's development achievements.

# 01

## Corporate Governance

Supporting the United Nations Sustainable Development Goals:

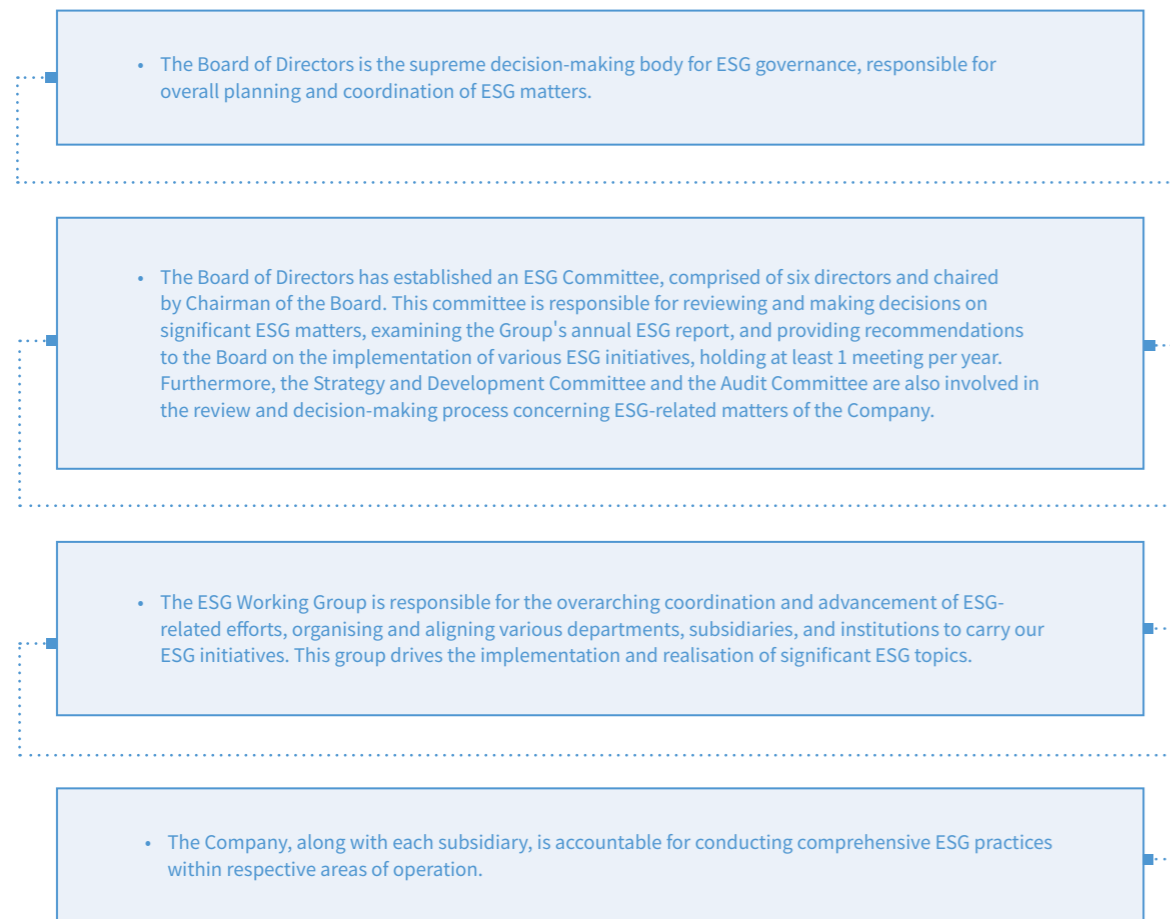


- The proportion of female directors is 9%
- Independent non-executive directors comprise 36% of the Board
- The Company has passed a third-party supervisory audit for the ISO37301 Compliance Management System certification, and the subsidiary Engineering Construction Co., Ltd. has obtained the ISO37301 Compliance Management System certification

# ESG Management

The Group is committed to deeply integrating ESG principles with corporate governance system, continuously refining the ESG governance structure to establish a top-down sustainable development management and practice system.

The Group incorporates ESG concepts into development and daily operations, building a co-creation and win-win ecological value system with stakeholders such as governments, shareholders, employees, clients, and partners. This effort promotes the construction of the Company's ESG culture and strives to create comprehensive value across economic, social, and environmental dimensions.



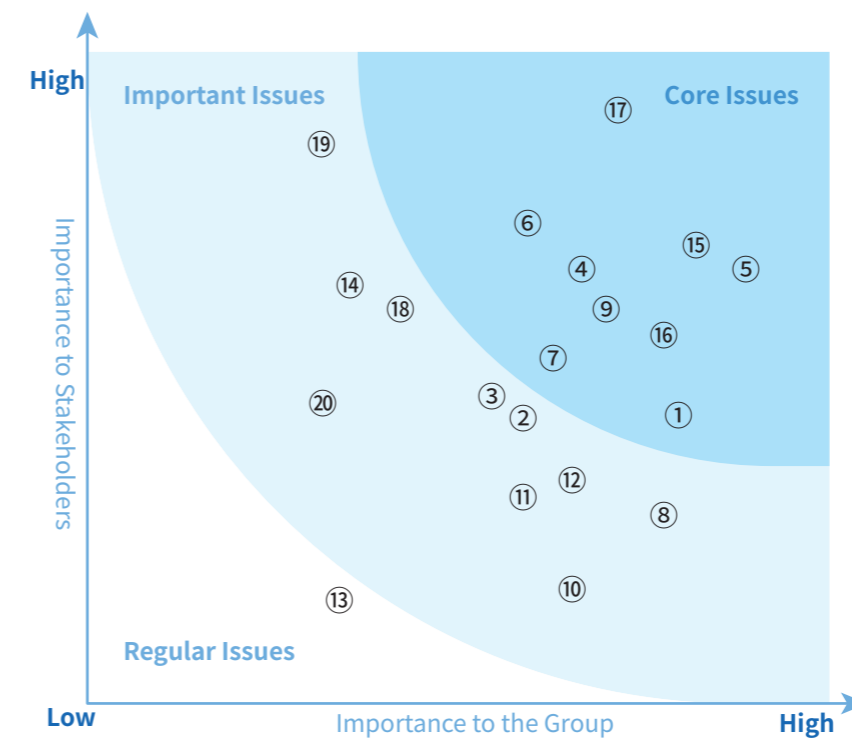
During the Reporting Period, the Group improved the mechanism for ESG information submission and collaboration with subsidiaries, standardising ESG information collection tools and organising ESG-specific training for subsidiaries to enhance the Group's ESG management and disclosure levels.

# Materiality Analysis

In 2023, the Group continued to carry out the identification and significance assessment of ESG material issues.

<b>Identification</b>	The Group identifies sustainable development issues relevant to the refining and engineering industry, considering national policies, industry trends, sustainability benchmarks within the sector, and our development strategies and planning documents. This process has determined 20 sustainable development issues of significance to both the group and stakeholders.
<b>Evaluation</b>	Investors and sustainable development experts, along with internal employee representatives, are invited to evaluate the importance of these issues. This results in a two-dimensional assessment of issue importance.
<b>Screening</b>	Based on the assessment results, a materiality analysis matrix is constructed, from which issues are ranked by their level of importance. Issues deemed to be of substantial material importance are then prominently disclosed in the Report.

- ① Optimising the ESG management mechanism
- ② Industrial ecosystem construction
- ③ Intelligent factory construction
- ④ Addressing climate change risks
- ⑤ Management of emissions and discharges
- ⑥ Energy consumption and resource management
- ⑦ Protection of the environment and natural resources
- ⑧ Equal employment opportunities and labour compliance
- ⑨ Workplace health and safety
- ⑩ Employee training and development
- ⑪ Ensure employees' salaries and benefits
- ⑫ Manage supply chain environmental and social risks
- ⑬ Priorities to green products in procurement
- ⑭ Fair procurement
- ⑮ Innovation-driven development
- ⑯ Quality guarantee of engineering projects
- ⑰ Anti-corruption supervision and management mechanism
- ⑱ Anti-corruption warning education
- ⑲ Support rural revitalisation
- ⑳ Participation in social welfare





## Stakeholder Engagement

The Group proactively identifies stakeholders and through effective communication methods, clarifies the expectations and demands of seven types of stakeholders. These demands are then transformed into sustainable development actions and solutions, thereby strengthening the Group's capacity building, and benefiting a broader group of people.

Stakeholders	Material Communication Issues	Communication Channels
 <b>Government and Regulations</b>	<ul style="list-style-type: none"> <li>Taxation compliance</li> <li>Compliance management</li> <li>Anti-corruption management</li> <li>Greenhouse gas emissions management</li> <li>Waste management</li> <li>Efficient resource use</li> </ul>	<ul style="list-style-type: none"> <li>Regular reporting</li> <li>Project approvals</li> <li>Government supervision</li> <li>Statistical reports</li> </ul>
 <b>Shareholders and Investors</b>	<ul style="list-style-type: none"> <li>Production and operation status</li> <li>Climate change response</li> <li>Risk management</li> <li>Scientific and technological innovation</li> </ul>	<ul style="list-style-type: none"> <li>Annual reports and other legal reports</li> <li>Performance announcements</li> <li>Capital market meetings</li> <li>Websites, hotline calls, visits, roadshows, etc.</li> </ul>
 <b>Employees</b>	<ul style="list-style-type: none"> <li>Protection of employee rights</li> <li>Professional training and development</li> <li>Compensation and welfare</li> <li>Occupational health and safety</li> </ul>	<ul style="list-style-type: none"> <li>Trade union organisations and staff representative meetings</li> <li>Visiting research</li> <li>Regular training</li> <li>Corporate culture activities</li> </ul>
 <b>Partners</b>	<ul style="list-style-type: none"> <li>Honesty and fulfilment of commitments</li> <li>Cooperation and mutual benefit</li> </ul>	<ul style="list-style-type: none"> <li>Regular business interactions</li> <li>Regular visits</li> <li>Strategic cooperation negotiations</li> </ul>
 <b>Clients</b>	<ul style="list-style-type: none"> <li>Product and service quality</li> <li>Client privacy protection</li> <li>Business ethics and transparency</li> </ul>	<ul style="list-style-type: none"> <li>Visits and promotional activities</li> <li>Client service hotlines</li> <li>Questionnaires</li> <li>Online interactions via official websites and WeChat</li> </ul>
 <b>Communities</b>	<ul style="list-style-type: none"> <li>Community communication and participation</li> <li>Rural revitalisation support</li> <li>Social welfare participation</li> <li>Natural resource protection</li> </ul>	<ul style="list-style-type: none"> <li>Public welfare and charitable activities</li> <li>Community communication events</li> <li>Public open day</li> <li>Environmental project assessments</li> <li>Response to external investigation</li> </ul>
 <b>Industry Organisations and Media</b>	<ul style="list-style-type: none"> <li>Corporate information transparency</li> <li>ESG management mechanisms</li> <li>Equal employment</li> </ul>	<ul style="list-style-type: none"> <li>Media communications</li> <li>Press releases</li> <li>ESG report disclosure</li> </ul>

## Board of Directors

The Company continuously optimises the composition of the Board of Directors, strengthens the Board and our committee system and focuses on the role of independent non-executive directors to lay a solid foundation for the Company's sustainable development. The shareholders' meeting approves the Company's *Articles of Association* and *Board Meeting Rules*, forming legally binding regulations on the composition, powers, and procedural rules of the Board and committees. By the end of 2023, the composition of the Board of Directors of the Company is as follows: Mr. JIANG Dejun, Mr. XIANG Wenwu, Mr. ZHANG Xinming, and Ms. XIE Yanli as Executive Directors; Mr. LI Chengfeng, Mr. YU Renming, and Mr. WU Wenxin as Non-Executive Directors; Mr. XU Zhaozhong, Mr. DUAN Xue, Mr. YE Zheng, and Mr. ZHAO Jinsong as Independent Non-Executive Directors.

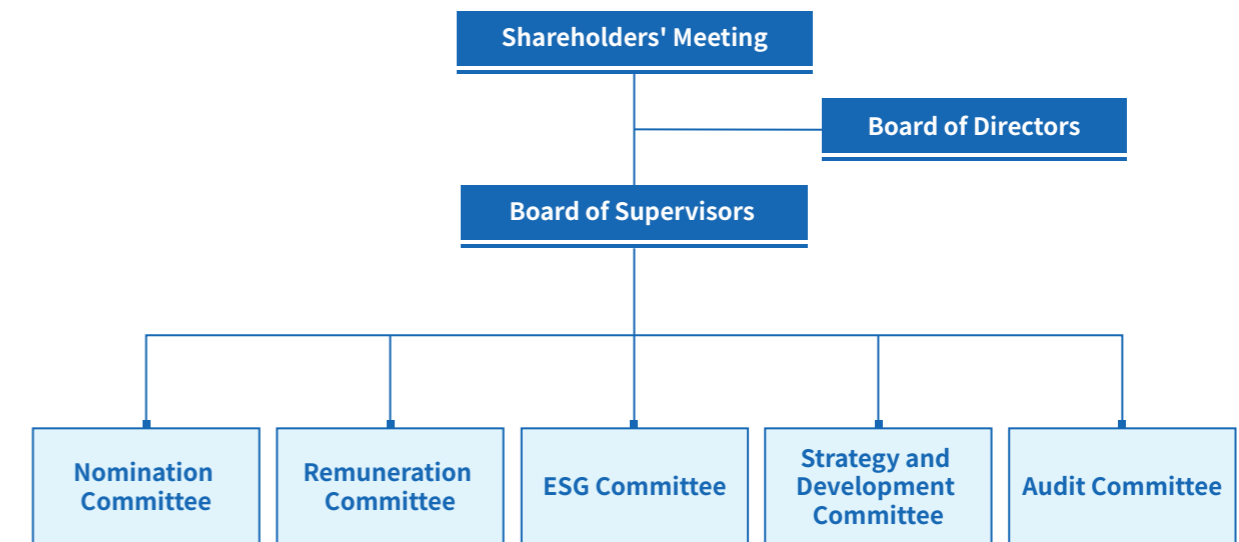
The Board of Directors conducted elections, enhancing the system and working mechanisms to promote diligence and responsibility among Board members, protecting the interests of the Company and all stakeholders. Regular Board reports are prepared and released with the annual report.

The Company has established *Board Member Diversity Policy*, stipulating that nominations and appointments of Board members must be based on the skills and experiences necessary for the effective operation of the Board, while also considering the goals and requirements for Board diversity. Considerations for diversity include, but are not limited to, professional experience, skills, knowledge, service tenure, region, culture, educational background, gender, and age. Current Board members come from various fields, with rich work experience covering petrochemical engineering, engineering construction, process safety, ecological environmental protection, energy saving and carbon reduction, accounting, finance, and management, facilitating scientific decision-making. By the end of 2023, female directors accounted for 9% of the Board.



Female Director Proportion  
**9%**

Governance Structure of the Company



The Board of Directors is the core of corporate governance. The Company continues to perfect the composition of the Board and specialised committee system, emphasising the role of independent non-executive directors to solidify the foundation for corporate governance.

The Board is the decision-making body of the Company. In 2023, the Company held 7 Board meetings. Board members fully leveraged their professional skills, exercised directorial powers in a regulated manner, and propelled the Company towards high-quality development.

## Independence of the Board

The Company has established a comprehensive system for independent non-executive directors, rigorously selecting independent non-executive directors from renowned individuals and industry experts domestically and internationally, in strict accordance with the election procedures and qualification requirements specified in the Company's *Articles of Association*. This ensures that the proportion of independent non-executive directors on the Board is not less than one-third. The Company mandates that nominators of independent non-executive directors should express their opinions on the nominees' qualifications and independence, and nominees must publicly declare that there are no relationships with the Company that could affect their independent and objective judgment.

As of the end of 2023, the Board of Directors of the Company has four independent non-executive directors, accounting for 36% of Board members. Independent non-executive directors are fully involved in the work of five dedicated Board committees. Among these, the roles of Chairperson of the Remuneration Committee, the Audit Committee, and the Vice Chairperson of the Nomination Committee and the Strategy and Development Committee are all held by independent non-executive directors.

Independent non-executive directors fulfil their duties diligently in accordance with the Company's *Independent Non-executive Directors Work Rules*. When expressing independent opinions on corporate affairs, they pay special attention to major related transactions, annual profit distribution plans, the appointment and dismissal of senior management, and issues that may harm the interests of minority shareholders. In addition to exercising the general powers of directors, Articles of Association also grant independent non-executive directors' special powers to ensure the effective protection of shareholders' rights, especially those of minority shareholders. Independent non-executive directors, being separate from the Company's management and other interests, can more independently perform supervisory roles and provide objective advice for relevant decisions.

## Board Committees

To effectively exert the functions of the Board of Directors and improve the quality of decision-making of the Board of Directors, the Company has established five special committees under the Board of Directors, namely, the Strategy and Development Committee, the Audit Committee, the Nomination Committee, the Remuneration Committee and the ESG Committee. The members of the Board committees are directors of the Company.

Board Committee	Committee Responsibilities	Activities
<b>Strategy and Development Committee</b>	Be responsible for studying the Company's long-term development strategy, major capital expenditure and investment and financing decisions, etc.	<ul style="list-style-type: none"> <li>Consists of 3 executive directors, 3 non-executive directors and 2 independent non-executive director.</li> <li>Convened 1 meeting during the Reporting Period.</li> </ul>
<b>Audit Committee</b>	Be responsible for making suggestions on the employment, renewal, dismissal and audit fees of the independent auditors of the Company; Review the financial statements that the Company submits to the Board of Directors, and check the Company's financial policies, internal audit system, internal control system, risk management system, etc.	<ul style="list-style-type: none"> <li>Consists of 4 independent non-executive directors.</li> <li>Convened 2 meetings during the Reporting Period.</li> </ul>
<b>Nomination Committee</b>	Be responsible for recommending to the Board of Directors on the appointment or re-appointment of directors and the succession plan of directors, especially the chairperson and general manager of the Company, hunt for people with suitable qualifications to serve as directors and select and nominate people to serve as directors or offer advice to the Board of Directors on this.	<ul style="list-style-type: none"> <li>Consists of 2 executive directors and 4 independent non-executive directors.</li> <li>Convened 2 meeting during the Reporting Period.</li> </ul>

Board Committee	Committee Responsibilities	Activities
<b>Remuneration Committee</b>	Study the remuneration structure and policies of all directors, supervisors and senior management of the Company and make recommendations to the Board of Directors or determine the remuneration and benefits of individual executive directors and senior management members with the authorisation of the Board of Directors or make recommendations to the Board of Directors. The remuneration of directors shall be determined in accordance with relevant national laws and regulations and the Company's relevant remuneration management regulations.	<ul style="list-style-type: none"> <li>Consists of 4 independent non-executive directors.</li> <li>Convened 1 meeting during the Reporting Period.</li> </ul>
<b>ESG Committee</b>	Make recommendations to the Board of Directors on major decisions related to ESG development; Supervise the implementation and progress of the Company's ESG development strategy and plan; Supervise the Company's commitment and performance on key issues such as climate change, ensuring health and safety and fulfilling social responsibilities, and make suggestions to the Board of Directors; Pay attention to the important information of ESG development related to the Company's business, study ESG development-related issues, and make suggestions to the Board of Directors; Review the annual ESG report of the Company and make recommendations to the Board of Directors.	<ul style="list-style-type: none"> <li>Consists of 3 executive directors and 3 independent non-executive directors.</li> <li>Convened 2 meeting during the Reporting Period.</li> </ul>

## Conflicts of Interest

The Company is fully aware of the potential for conflicts of interest among Board members, supervisors, senior management, employees, shareholders, and clients. To ensure the healthy development of the Company and protect the rights and interests of all stakeholders, the Company requires relevant personnel to adhere to the principle of integrity at all times during the execution of their duties. They must actively identify and fully understand potential conflicts of interest, maintaining an impartial and objective stance. Additionally, they should avoid placing themselves in situations where personal interests could potentially conflict with their duties to the Company, always prioritising the Company's best interests above all else and eliminating any unauthorised actions, use of Company resources for personal gain, or activities that could harm the rights and interests of stakeholders.

Furthermore, the Company's Board of Supervisors assumes the responsibility for oversight and inspection, composed of supervisors elected by the shareholders' meeting and those democratically elected by the Company's employees. The Board of Supervisors supervises and inspects the Company's business activities in accordance with laws, regulations, and *Articles of Association*, ensuring that the Board of Directors and management properly and fully execute their duties, and urging them to rectify any issues when necessary.

## Senior Management Compensation

The Group has developed and implemented *SEG Management Personnel Compensation Management Measures* and *SEG Management Personnel Business Performance Assessment Measures*. These measures adhere to the principle of combining short-term and medium-to-long-term incentives, implementing a tenure system and contractual management for the management team. A compensation management mechanism closely links management personnel compensation with assessment and evaluation results, aligning it with the risks and responsibilities assumed. This mechanism strengthens positive incentives, closely linking individual interests of the management team with the long-term healthy development of the Company, thereby creating a shared interest community between the enterprise and management members.

In the assessment indicators for the management team, we have included multiple ESG key topic indicators such as QHSE/HSE system management, public security, safe production, energy conservation and environmental protection and quality management. This ensures the correlation between the Company's ESG performance and management compensation, emphasising the management team's focus on the Company's sustainable development management.

The composition of management compensation includes basic salary, grade salary, allowances, annual performance bonuses, and tenure incentive income, with annual performance bonuses constituting no less than 60% of the annual compensation. Based on *Interim Measures for the Tenure System and Contractual Management of Management Personnel*, we have established a compensation recovery mechanism for management personnel. If significant violations, failure to perform or incorrectly perform duties occur within their areas of responsibility during their tenure, causing significant economic losses to the Company, the corresponding annual performance bonuses and tenure incentive income for the relevant period may be reclaimed depending on the circumstances.

## Investor Engagement

The Company regularly disclose key information, enhancing the quality and timeliness of disclosures to ensure fair access to information for investors. During the Reporting Period, we released performance results through Earnings Release Conference, participated in conference call and face-to-face meetings, and responded to capital market. We hosted hundreds of investors and analysts from around the globe, bolstering their confidence in the Company's development.

### Case

#### The Company Conducts the First Large-Scale Reverse Roadshow

On November 3, 2023, the Company successfully organised the first large-scale reverse roadshow in Tianjin, inviting over 50 domestic and international securities analysts and institutional investors to visit the project sites in Tianjin Binhai New Area and held a discussion forum. This event showcased the Company's industry-leading comprehensive strength and positive image, and further enhanced our influence in the capital market.



Hosting the Reverse Roadshow

# Compliance and Risk Management

## Compliance Management

### Strengthening Compliance Management

The Group continuously enhances compliance management efforts. In 2023, the Company has passed a third-party supervisory audit for the ISO37301 Compliance Management System certification, and the subsidiary Engineering Construction Co., Ltd. has obtained the ISO37301 Compliance Management System certification.

In 2023, building on the foundation of the Compliance Management System certification, the Company's focus was on further optimising and enhancing compliance management by revising and completing the compliance laws and regulations checklist, compliance obligations and risks checklist, and the significant process compliance control checklist. This ensured that the rates for legal review of regulations, legal review of contracts, and legal review of significant decisions all reached 100%. The Company updated compliance management processes, specifying the methods, timelines, and outputs for compliance evaluation and reporting, and developed a compliance report template to detail specific management content. Through operational processes, the awareness of compliance and management systems among managers and employees significantly increased, and system participation improved.



<b>Management Actions</b>	<ul style="list-style-type: none"> <li>Completed the revision of the internal control manual in 2023, dynamically perfected the major matters checklist according to the new version of the internal control authority guidelines, and adjusted approval processes for corporate guarantee, contract management, etc.</li> <li>Conducted evaluation of the effectiveness of the corporate legal construction and compliance management system, receiving an A-grade enterprise rating from Sinopec Group.</li> <li>Carried out targeted system revision work, with a total of 34 regulations revised and 18 abolished throughout the year.</li> <li>Refine the international management system, carry out standardisation work for overseas institutions, and focus on the compliance management of overseas institutions.</li> <li>Regularly conducted operational training on the system, verifying online and offline system ledgers.</li> </ul>
<b>Training Implementation</b>	<ul style="list-style-type: none"> <li>Continued to strengthen legal publicity and education, and organised to disseminate important laws and regulations within the Company's business areas.</li> <li>Organised special training on compliance risks and controls for overseas construction projects and compliance training for senior management.</li> <li>Conducted legal publicity work, and actively participated in external legal forums and courses.</li> </ul>

**Anti-corruption Management**

The Group strictly adheres to anti-corruption-related laws and regulations such as *Criminal Law of the People's Republic of China*, *Company Law of the People's Republic of China*, *Supervision Law of the People's Republic of China*, *Law on Administrative Penalties for Public Employees of the People's Republic of China*, *Several Provisions on the Integrity of Leaders in State-Owned Enterprises*, *Measures for Investigating the Responsibility of Violations of Regulations and Investments by Central Enterprises (Trial)* and other relevant laws and regulations, as well as regulations applicable to the business location aimed at preventing bribery, extortion, fraud, and anti-money laundering, resolutely opposing corruption and unfair competition.

The Group has formulated and implemented management systems such as *SEG Anti-Fraud Management Rules*, *SEG Integrity Risk Prevention and Control Measures*, *SEG Compliance Management Guidelines for Business Partners*, *SEG Anti-Foreign Corruption and Anti-Commercial Bribery Compliance Management Guidelines*, and *SEG Anti-Foreign Corruption and Anti-Commercial Bribery Compliance Risk Checklist*, providing corresponding guidance and risk lists. These measures incorporate compliance and corruption risk management into the business process risk control matrix. In 2023, we revised *SEG Working Rules of the Supervisory Committee*, further improving the anti-corruption management system. In March 2023, the ESG Committee of the Board reviewed the Company's anti-corruption efforts and performance for the 2022.

**2023 Anti-Corruption Highlights**

Organised the anti-corruption and integrity education month, conducting integrity talks from the top-down, promptly reporting typical cases; focused on key points to deliver integrity reminders, issued pre-holiday integrity alerts to eliminate festive corruption.



Carried out specialised compliance inspections on directly managed units and joint inspections on key engineering projects, continuously driving lawful and compliant operations.

Released a five-year inspection work plan, conducting high-quality patrols, reinforcing the strength of inspection personnel, and closely monitoring the rectification of issues.

**Reporting Channels and Whistle-blower Protection**

The Group places great importance on the construction of reporting mechanisms and continuously perfects the whistle-blower protection system. We encourage employees, clients, suppliers, subcontractors, and other external stakeholders to report any illegal or inappropriate activities. A variety of channels for reporting issues related to integrity, including hotlines, mailboxes, and email addresses, are established to receive reports on violations and disciplinary actions from multiple sources. The whistle-blower's mailbox is positioned in an area not covered by surveillance cameras to protect the privacy of the whistle-blower.

The Group continuously improve internal confidentiality mechanisms, formulating methods for handling complaints and accusations, and enhancing protection for whistle-blowers. Strict confidentiality is maintained regarding the names, workplaces, addresses, and other related information of the accusers. In cases of anonymous reports, it is stipulated that one must not independently verify the whistle-blower's handwriting, IP address, or other information. Should there be a need to trace the identity of the whistle-blower using the relevant methods, it must be conducted after undergoing an approval and review process. Any intentional leakage of whistle-blowers' information or retaliation against whistle-blowers, once verified, will be dealt with severely. Reporting methods include mailbox reporting, telephone reporting, and mailbox letter reporting.

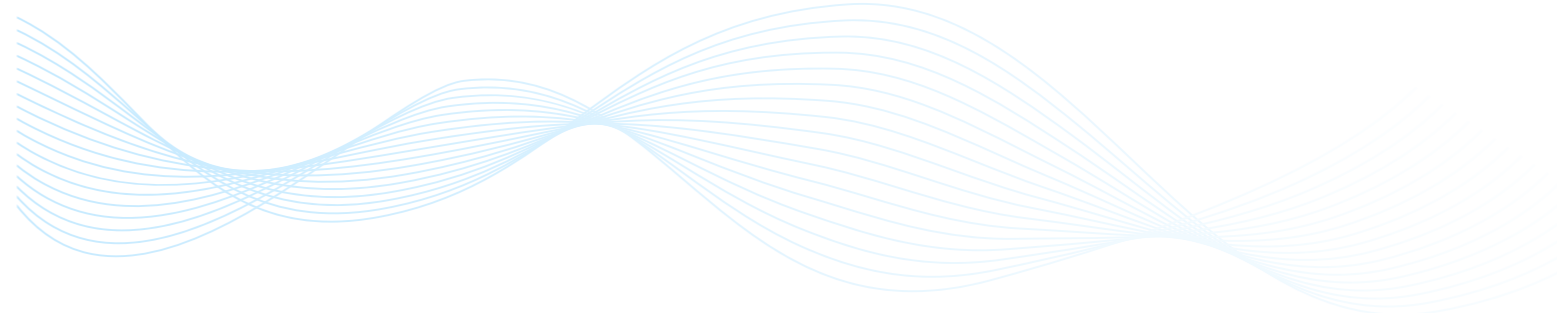
Our *Integrity and Compliance Management Handbook* clearly states that the Group will never tolerate any retaliatory actions against those who report suspected illegal or non-compliant behaviours and actions that may pose a risk to the Company's operations. Individuals who retaliate against whistle-blowers will face severe penalties.

**Business Ethics**

The Group, in accordance with current Chinese laws and regulations, international rules such as *United Nations Convention against Corruption*, the World Bank's *Integrity Compliance Guidelines*, and drawing on business ethics, social morality, and industry standards, has developed and implemented *Integrity and Compliance Management Handbook*, *Code of Business Ethics*, and *Employee Code of Conduct*. These documents regulate the behaviour of the Company and employees in business operations, exercising authority, and other activities. The ESG Committee of the Board, as the highest regulatory body for business ethics and anti-corruption management, is responsible for the related management work from a supervisory and management level. The Company has passed the third-party supervisory audit for the ISO37301 Compliance Management System certification, which included a relevant annual review of the Company's business ethics.

*Integrity and Compliance Management Handbook* combines positive guidance with a negative list, focusing on corporate governance and operations, safety, environmental protection, employee health and security, anti-commercial bribery and anti-corruption, consumer or client rights protection, opposition to unfair competition, finance and assets, social responsibility and employee rights, intellectual property and data information, international operations and investment, and business partners, providing requirements and suggestions for relevant companies and employees.

*Code of Business Ethics* specifies requirements on honesty and trustworthiness, self-discipline, confidentiality, and respect for others, emphasising the punishment of violations. Detailed training plans related to business ethics are developed, and regular training courses are held to emphasise the importance of integrity, cleanliness, confidentiality, and respect for others. Through training, distribution of employee handbooks, and other methods, employees are encouraged to internalise the contents of *Code of Business Ethics* as their own professional ethics. Additionally, a comprehensive supervision mechanism is established to deal seriously with violations of business ethics.



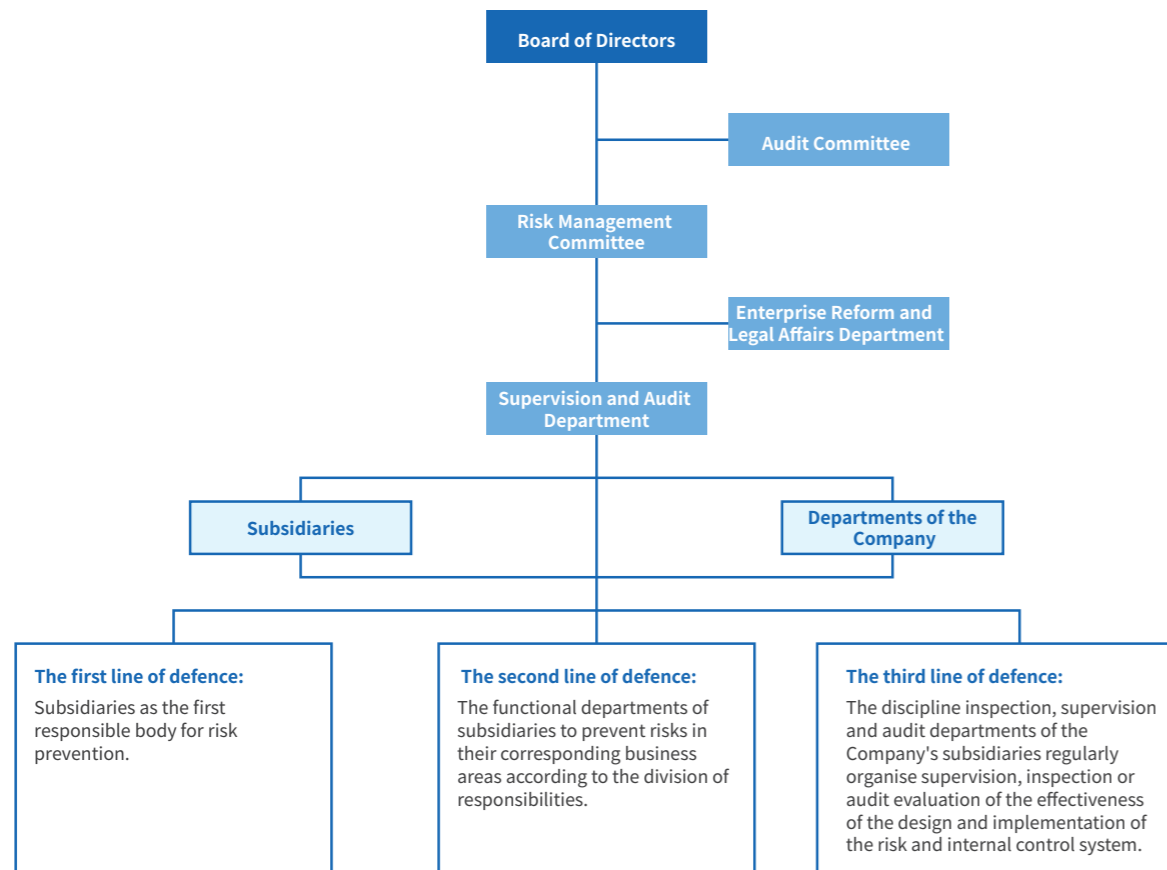
## Risk Management

The Group has established a comprehensive risk management and internal control system. We have formed a Risk Management Committee, comprising the Chairman, senior executives, and heads of functional departments, responsible for constructing, operating, and deciding on significant risk management matters within our risk and internal control management system. Similarly, each subsidiary has established a Comprehensive Risk Management Leadership Team, accountable for assessing the robustness and effectiveness of the enterprise's risk and internal control management system.

The Group promptly identifies, analyses, and evaluates risks in various professional domains throughout the production and operation process. Risk management is integrated with the internal control system, QHSE management system, and integrity risk prevention and control system, among others. Appropriate measures and solutions are proposed and solidified in key internal control points, forming a comprehensive risk management system that ensures comprehensive coverage and control over significant risk factors.

The Group has established a Critical Business Risk Control System, formulating and executing *SEG Critical Business Risk Control Manual*. This enhances the tracking and monitoring system for significant risk events and indicators, perfecting mechanisms for early detection, early warning, and early resolution of risks. Annual risk identification is carried out to evaluate primary risks, with critical risks being monitored quarterly, special inspections, and internal audits conducted for regular surveillance, and risk control conditions evaluated to ensure the effective operation of the risk management mechanism. This promotes the improvement of the decision-making process and continuously enhances the level of risk management. The Group adopts the three lines of defence in the international best practices of risk management to ensure the effective operation of the risk management mechanism.

In 2023, the Group continued to strengthen critical business risk control. We regularly monitored changes in significant operational quantitative risk indicators, enhanced the penetration and application of risk indicators downwards, and the use of early warning results; strengthened the effectiveness of internal controls, published and implemented a new version of the internal control manual. We promoted the establishment and perfection of risk and internal control systems for overseas institutions; to standardise the operation of overseas institutions, we developed and published a series of core system norms, such as *Overseas Institution Standardisation System Framework*, creating specific management system lists for different types of overseas institutions, continuously enhancing the effectiveness of overseas institution risk management.

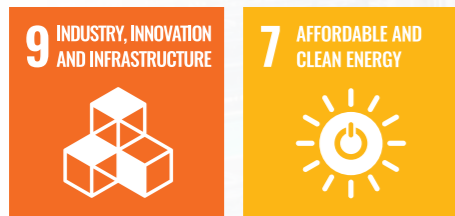


Risk Category	Countermeasures
<b>Safety Risks</b>	<ul style="list-style-type: none"> <li>Implement dynamic management throughout the whole process and enable risk identification and control to intersect the whole process of production and operation business such as design, procurement construction, manufacturing, and research and development.</li> <li>Conduct special safety inspections at the Group, comprehensively investigate risks in the safety system and operational links, and carry out reviews and continuous improvements.</li> <li>Conduct the hierarchical management of risks based on severity, including critical risks, significant risks, moderate risks, and low risks.</li> <li>Evaluate the safety risks caused by extreme environmental and extreme weather conditions in the production and operation links.</li> <li>Include the risk management work in the scope of safety performance assessment of the Company.</li> </ul>
<b>Procurement Risks</b>	<ul style="list-style-type: none"> <li>Establish procurement risk report and early-warning system, annual risk report, and irregular special risk report system.</li> <li>Manage the material procurement risks by classification, regularly improve and update the procurement risk list, track and monitor the risk management.</li> <li>Continuously supervise, inspect and improve the effectiveness and efficiency of procurement risk management.</li> </ul>
<b>Overseas Security Risks</b>	<ul style="list-style-type: none"> <li>Conduct risk identification, risk analysis, risk evaluation, and risk classification of the public security of countries (regions) where overseas institutions and projects are located.</li> <li>Inspect the risk assessment of overseas institutions and projects of the units dispatched by the Company on ad hoc basis, and take the inspection results as the basis for year-end performance assessment.</li> </ul>
<b>Market Development Risks of Overseas Projects</b>	<ul style="list-style-type: none"> <li>Collect and analyse risk events in accordance with economy, culture, laws, security, credit standing of clients and bidding methods to determine the risk level of the project.</li> <li>Carry out project bidding quotation and risk management throughout the whole process of execution stage, and compile project risk assessment reports through identifying, analysing and assessing risks and dealing with results.</li> <li>Strictly implement Sinopec Group's guarantee procedures to prevent market development risks from penetrating upwards.</li> </ul>
<b>Legal Risks</b>	<ul style="list-style-type: none"> <li>Formulate the relevant systems, evaluation standards, and assessment methods for the management of legal risks, and prepare risk management reports.</li> <li>Establish, update, and maintain the legal risk database.</li> <li>Identify, evaluate, prevent, and control legal risks, and implement the legal risk responsibility system for key posts related to the business process.</li> </ul>
<b>Probity Risks</b>	<ul style="list-style-type: none"> <li>Analyse, study, and evaluate the probity risk information, and give "red, yellow and blue" risk early warning for possible corruption.</li> <li>Sort out the functions and powers of risk-related posts, and study the possible probity risks of the posts.</li> <li>Propose prevention and control measures with strong pertinence, operability and practicality as per the manifestation, cause and rating of probity risk points.</li> <li>Adjust and improve the content and level of and measures for probity risks according to the self-examination, inspection and evaluation.</li> </ul>

# 02

## Technological Innovation

Supporting the United Nations Sustainable Development Goals:



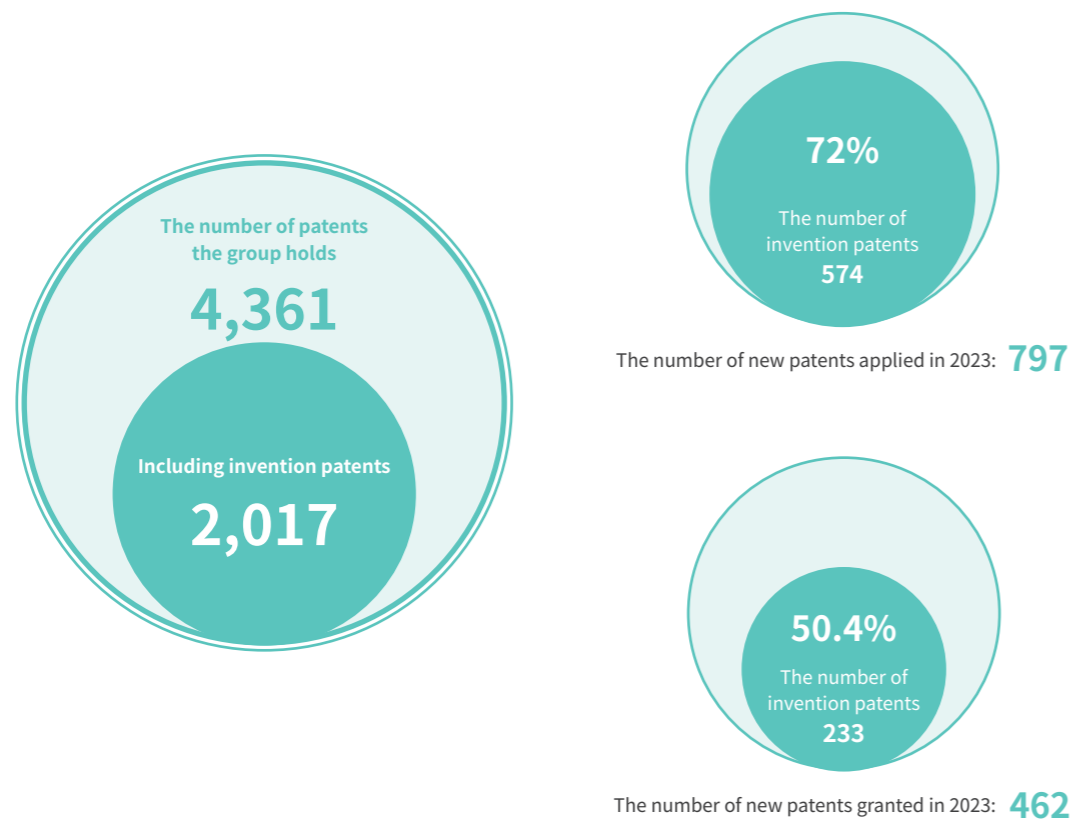
- A total of 797 new patent applications were filed, including 574 invention patents; 462 patents were newly authorised, including 233 invention patents
- The Group undertook 34 national-level topics, 37 major research projects, and 20 significant special projects

# Technological Innovation Management Mechanism

## Intellectual Property Protection

The Group places great emphasis on the protection of intellectual property rights, strictly adhering to *Patent Law of the People's Republic of China*, *Copyright Law of the People's Republic of China*, and other laws and regulations related to intellectual property protection applicable in our operating sites, continuously improving the intellectual property protection management system. We have formulated and implemented management regulations such as *SEG Regulations on Intellectual Property Protection Management*, *SEG Patent Management Methods*, *SEG Proprietary Technology Management Methods*, etc. In the Reporting Period, we revised *SEG Regulations on Intellectual Property Protection Management*, perfecting the management of overseas intellectual property rights. In 2023, there were no incidents of infringement litigation within the Group.

During the Reporting Period, the Group filed 797 new patent applications, of which 574 were invention patents, accounting for 72%; 462 patents were newly authorised, including 233 invention patents, accounting for 50.4%. As of the end of 2023, the Group holds a total of 4,361 patents, including 2,107 invention patents.



Case

### Engineering Construction Co., Ltd. Honoured as a "National Intellectual Property Demonstration Enterprise"

The subsidiary Engineering Construction Co., Ltd. was recognised by the National Intellectual Property Administration as a "National Intellectual Property Demonstration Enterprise", which is the highest honour and evaluation given by the nation for corporate intellectual property management work.

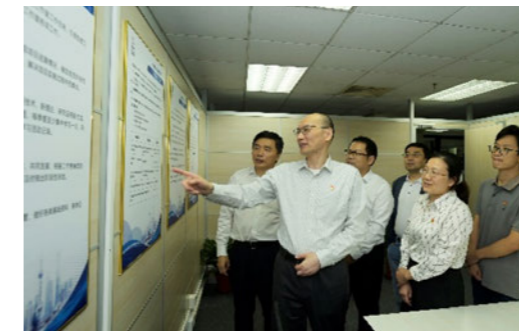
## Enhancing the Innovation Mechanism

The Group vigorously implements an innovation-driven strategy. During the Reporting Period, we executed the "challenge and leadership" management method, to develop employee innovation studios, stimulating innovation vitality, mobilising innovative potential to the greatest extent, and improving innovation efficiency.

Case

### Harnessing Employee Wisdom to Stimulate Innovation Vitality

- The subsidiary Engineering Construction Co., Ltd. established the "Carbon Pathfinder" innovation studio. During the Reporting Period, the "Carbon Pathfinder" innovation studio actively participated in the first methane emission reduction roundtable conference of the oil and gas industry and held a technical exchange meeting with Sinopec Oilfield Equipment Institute (Hydrogen Equipment Corporation), accelerating the application of hydrogen energy R&D technology.
- The subsidiary Shanghai Engineering Co., Ltd. established the "Yang Jianping Innovation Studio", "Intrinsic Safety Innovation Studio", and "Li Yanming Innovation Studio".
- The subsidiary Ningbo Engineering Co., Ltd. successively established 9 innovation studios, including the Zhejiang Province Model Workers and Craftsmen Innovation Studio, Sinopec's Demonstration Employee Innovation Studio, and Ningbo City Model Workers Innovation Studio.
- The subsidiary Fourth Construction Co., Ltd. set up employee innovation studios, including a total of 8 studios such as Model Workers Innovation Studio and Masters Innovation Studio. In 2023, the Skill Talent Innovation Studios led by Zhang Zhenlian and Qian Baineng became one of the first batch of Sinopec's Skill Talent Innovation Studios. Meanwhile, Fourth Construction Co., Ltd. was selected as a national-level training base for highly skilled talents.



Shanghai Engineering Co., Ltd. Employee Innovation Studio



Ningbo Engineering Co., Ltd. Actively Creates An Innovation Studio Alliance



Zhang Zhenlian Innovation Studio Conducting Research Discussions

# Technological Leadership

The Group strengthens technological innovation, utilising advanced technology to forge green and efficient productivity. We ensure every technology and facility we develop or participate in embodies the characteristics of green, efficient, and low-carbon development.

Continuously increasing efforts in scientific and technological research, the Group leverages our specialisation to actively undertake significant national technological projects and key technological tasks of Sinopec, driving industry development. In 2023, the Group completed the refinement of the refining and chemical industry chain and technology chain, releasing *Company Technology Industry Chain (First Edition)* to lay the foundation for precise "chain extension", "chain supplementation", and "chain strengthening" initiatives in the future. During the Reporting Period, we undertook 34 national-level topics, 37 major research projects, and 20 significant special projects with smooth progress, receiving 33 times provincial and ministerial level scientific and technological progress awards, excellent design, and quality engineering awards. Among these, topics such as "Development and Industrial Application of Complete Shale Gas Liquefaction Technology" won the second prize in Sinopec Scientific and Technological Progress Awards, and "Development of Intensified Engineering Technology for Large-scale Fixed Bed Hydrogenation Reaction Process" won the third prize; A multi-tube ethylene cracking furnace" received a National Patent Silver Award.

Case

### Successful First-Time Start-up of China's Largest Heavy Oil Catalytic Residue Thermal Cracking Unit

In June 2023, the world's first 3 million tonnes per year high-efficiency heavy oil catalytic Residue Thermal Cracking (RTC) industrial demonstration unit, designed and built by several subsidiaries of the Group, was successfully commissioned at Sinopec Anqing Petrochemical Company, marking a leapfrog development in China's catalytic residue thermal cracking technology and providing revolutionary technological support for the transformation and upgrade of refining and chemical enterprises.

This project is a key core process in the structural adjustment project of Sinopec Anqing Petrochemical Company's refining and transformation work, solving the challenge of efficiently and low-cost transforming heavy oil resources into chemical base materials. It represents China's first successful practice of transitioning a traditional refinery to chemical production. As the industrial catalytic RTC technology with the highest propylene yield globally, the RTC technology has effectively filled the gap in China's use of inferior heavy oil for propylene and ethylene production, laying a solid foundation for the sustainable development of the industry in the future.



Heavy Oil Catalytic Residue Thermal Cracking Unit of Sinopec Anqing Petrochemical Company

Case

### Successful First-Time Start-Up of CHP Process Epichlorohydrin (CHPPO) Unit

Epichlorohydrin is an important basic chemical raw material, representing a large "family" of epoxides widely used in polymers such as polyurethane, polyester fibre, as well as in the synthesis of drugs and fine chemicals.

In January 2023, the 150,000 tonnes per year CHP process epichlorohydrin (CHPPO) unit, EPC contracted by the subsidiary Shanghai Engineering Co., Ltd., was successfully started up for the first time, smoothly producing qualified epichlorohydrin with a purity of 99.99%. The successful start-up of this unit marks the first large-scale industrial demonstration application of our CHP process epichlorohydrin technology.



CHP Process Epichlorohydrin Unit

### Development and Industrial Application of Moving Bed Propylene Dehydrogenation (PDH) Complete Technology

The "Zhenhai Refining & Chemical 600,000 tonnes per year Moving Bed Propane Dehydrogenation (PDH)" unit, for which the subsidiary Guangzhou Engineering Co., Ltd. is responsible for process package preparation, engineering development, and engineering design, has completed its detailed design and is scheduled to commence operation in 2025. The successful development of the moving bed propane dehydrogenation technology will fill the domestic gap in PDH technology, providing technical support for the chemical transformation of refineries.



Zhenhai Refining & Chemical 600,000 Tonnes per Year Propylene Dehydrogenation First Unit

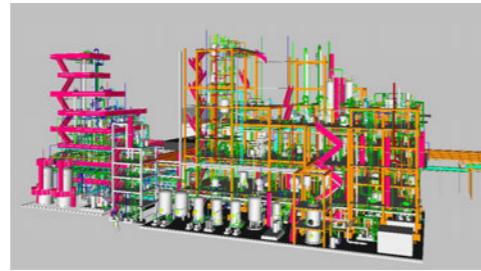


Case

**Completion and Handover of Medical Polyglycolic Grade Acid New Material Pilot Plant**

Polyglycolic Grade Acid (PGA) is a polymer material with excellent degradation performance, boasting superior biocompatibility, capable of degrading into water and carbon dioxide in the human body. It has been widely recognised by the biopharmaceutical industry and applied in manufacturing surgical sutures, drug delivery carriers, and transplantation scaffolds.

In November 2023, the pilot plant for medical-grade PGA new materials at Sinopec Yangzi Petrochemical Co., Ltd. was successfully completed and handed over. This facility utilises the thousand-tonne medical PGA technology developed jointly by subsidiaries Engineering Construction Co., Ltd., Sinopec Shanghai Research Institute of Petrochemical Technology Co., Ltd., and Yangzi Petrochemical Co., Ltd. It enables the production of high-end medical-grade polyglycolic acid from high-quality and cost-effective raw material coal-based ethylene glycol, achieving a major technological breakthrough and significant economic benefits.



Medical PGA New Material Project of Yangzi Petrochemical Co., Ltd.

**Major Breakthrough in Helium Purification Technology**

Helium is an indispensable material for high-end manufacturing. Due to the extremely similar physical and chemical properties of neon and helium, the removal of neon in helium purification technology presents a significant challenge.

A joint research team led by the subsidiary Engineering Construction Co., Ltd. successfully developed a new technology for efficient helium extraction from the tail gas of natural gas (shale gas) liquefaction plants and applied it to the Chongqing Fuling project, resulting in the establishment of an industrial 5N helium plant. In November 2023, the neon removal unit of the Chongqing Fuling BOG helium project was put into operation, reducing the neon impurity content from nearly 10ppm to below 3ppm and successfully producing 5N high-purity helium gas that meets national standards.



Chongqing Fuling BOG Helium Project

# Green Engineering Technology

## Green Environmental Protection Technology

Technological innovation plays a crucial role in environmental protection and addressing the climate crisis. The Group views technological innovation as a key engine for driving business growth and exerting social influence. As demands for green environmental protection from clients, industries, and society increase, the Group commits to moving towards more sustainable engineering construction methods, employing greener and more environmentally friendly engineering technologies to support global sustainable development.

Case

**Actively Advancing the Development of Eco-friendly Epichlorohydrin Technology**

The 50,000 tonnes per year Eco-friendly Epichlorohydrin Complete Technology adopted a direct epoxidation process of allyl chloride to synthesise epichlorohydrin, a green and efficient new epichlorohydrin synthesis technology.

The subsidiary Shanghai Engineering Co., Ltd. was responsible for the project's process optimisation and engineering design. Compared to the traditional glycerol method, this technology eliminates the production of a large amount of chlorinated wastewater and calcium chloride waste, with an estimated reduction of 95% in "three wastes" emissions, while consuming less raw material, thus achieving significant economic and social benefits.

**Development and Construction of Heavy Oil Gasification Integrated with Waste Liquid Synergetic Treatment Technology**

With increasing environmental protection requirements and ongoing optimisation of industrial structure, "solvent de-asphalting + oil asphalt gasification" has become an important method for utilising residual oil.

The subsidiary Ningbo Engineering Co., Ltd., through heavy oil gasification technology and accompanying transformation and syngas purification technologies, has realised efficient utilisation of de-oiled asphalt to supply hydrogen and syngas to refineries. It also provides a reliable technological solution for creating a "waste-free factory", achieving the internal recycling of aqueous waste liquid, oily waste liquid, and other wastes through synergistic disposal in a gasifier.

**Establishment of a Green Remediation Technology and Equipment System for In-Service Petrochemical Sites**

The subsidiary Fifth Construction Co., Ltd. has successfully established a technology system for the remediation and management of organic pollution sites and safe development and utilisation technology system over a four-year research period. Focusing on the complex hydrogeological conditions of petrochemical sites along the Yangtze Economic Belt, unclear pollution identification, insufficient pollution risk monitoring and early warning methods, and lack of targeted pollution treatment technologies, key technologies for green, low-consumption in-situ remediation of operational petrochemical pollution sites and related equipment were developed and demonstrated at multiple clients units, achieving a reduction in pollution source area.

This technology enables large-scale in-operation petrochemical pollution sites in China to simultaneously produce, control, and remediate, forming a promotable and replicable pollution control model for operational petrochemical sites, with the overall technology reaching an internationally leading level and receiving the first prize of Sinopec's Technology Progress Award in 2023.



Green Remediation Technology and Equipment System at the Sino-Korean (Wuhan) Petrochemical Demonstration Site

Case

**First Overseas Industrial Application of Fluidised Bed Methanol to Gasoline (FMTG) Technology Developed by the Group**

The Chilean HIF (HIF Innovación de Combustibles) Company's Haru Oni demonstration project factory, jointly constructed by the subsidiary Guangzhou Engineering Co., Ltd. and the research and development centre, successfully produced qualified green synthetic gasoline. Compared to traditional fossil fuels, this product reduces carbon emissions by about 90%, aiding in the decarbonisation of the transportation industry.

Located in Chile, the project utilises local abundant water and wind resources to produce green hydrogen, recovers carbon dioxide from the air, synthesise methanol, and then produces green gasoline. Since March 2021, units participating in the project from SEG have successively completed the design, procurement, manufacturing integration, installation, and commissioning of four sets of pilot plants for methanol to gasoline, helping the client produce green synthetic gasoline.



The Letter of Appreciation from HIF Client

Successful Commissioning of the Green Methanol to Gasoline Project

**Reuse and Clean Processing of General Solid Waste**

The subsidiary Fifth Construction Co., Ltd. undertook the clean-up and disposal project of the general solid waste landfill site at Yanshan Petrochemical Company. The project, by classifying general solid waste for disposal, utilised the classified solid waste for incineration power generation and the production of four types of environmental protection utilisation products: environmental bricks, sintered bricks, crushed stones, and manufactured sand. The project disposed of 670,000 tonnes of general solid waste with low disposal cost, high efficiency, and a 100% solid waste reuse rate. It established an integrated technical model for solid waste cleaning, classification, and disposal, solving the technical difficulty of high disposal costs for solid waste.



Environmentally-friendly Bricks, Manufactured Sand, and Sintered Bricks During the Production Process

**Development of Clean Energy**

Globally, environmental issues and climate change have become unavoidable challenges, and accelerating the energy transition and reducing reliance on fossil fuels have become urgent. The Group actively supports the development of clean energy and continuously promotes the technological progress of the LNG and hydrogen energy new energy industries.

LNG

Liquefied Natural Gas (LNG) is a clean and efficient energy source and an important energy product for optimising energy consumption structure. The Group insists on leading the development of clean energy with innovative technology, continuously improving LNG receiving station construction, LNG production, and natural gas purification technology, and steadily enhancing the construction capability of LNG projects, committed to promoting energy transformation and green development.

In 2023, the Group undertook LNG projects in Tianjin, Shandong, and other areas, including the participation of the subsidiary Engineering Construction Co., Ltd. and Tenth Construction Co., Ltd. in the operation of the largest LNG storage tank in China.

Case

**New Breakthrough in Ultra-Large Volume LNG Storage Tank Research and Construction Technology**

In November 2023, the first 270,000 cubic meter LNG storage tank in China, constructed by the subsidiaries Engineering Construction Co., Ltd. and Tenth Construction Co., Ltd., was officially put into operation. With a diameter of 100.6 meters and a height of 55 meters, this storage tank is the largest by volume, the fastest built, and the first completed ultra-large liquefied natural gas storage tank in China, also currently the world's largest prestressed concrete full containment tank, marking the Group's research and construction technology as among the global leaders. After the storage tank became operational, it can meet the gas needs of 2.16 million households for 5 months during the heating season, significantly enhancing the natural gas supply guarantee capacity in North China.



The First 270,000 Cubic Meter Liquefied Natural Gas (LNG) Storage Tank

Hydrogen Energy

Hydrogen energy is one of the pathways to transform the global energy structure towards cleaner and lower carbon emissions. The Group actively promotes the development of the entire hydrogen energy technology, implements green hydrogen demonstration projects, and deepens the construction of wind and solar hydrogen production industries, supporting the development of renewable energy and continuously contributing to clean energy.

Case

**China's First Megaton Green Hydrogen Project – The Xinjiang Kuche Green Hydrogen Demonstration Project Fully Operational**

Designed and constructed by the subsidiary Guangzhou Engineering Co., Ltd., China's first megaton photovoltaic green hydrogen demonstration project in Xinjiang Kuche successfully produced hydrogen, achieving full-chain integration from green hydrogen production to utilisation. This marks the first time that China has realised a full industrial chain integration for a megaton green hydrogen refining project. The project has a hydrogen production capacity of 20,000 tonnes per year, providing a replicable and extendable model for the development of the photovoltaic green hydrogen industry in China.



Xinjiang Kuche Green Hydrogen Demonstration Project

**Integrated Wind-Solar Hydrogen Production and Transmission Demonstration Project in Inner Mongolia Ulanqab**

The subsidiary Engineering Construction Co., Ltd. undertook the preliminary work for the integrated wind-solar hydrogen production and transmission demonstration project in Ulanqab, Inner Mongolia. The project will effectively utilise the wind and solar resources of Ulanqab City to produce hydrogen, which will be transmitted over a thousand kilometres through a hydrogen pipeline to consumption units in the Beijing-Tianjin-Hebei region. The project not only substitutes the existing grey hydrogen production capacity using natural gas but also provides transportation hydrogen for the Beijing-Tianjin-Hebei region, promoting the region's low-carbon progress. Once completed, the project will save 2.05 million tonnes of standard coal per year and achieve a carbon emission reduction of 4.728 million tonnes per year.

**Megawatt-level Renewable Electricity Water Electrolysis Hydrogen Production Project Promotes Green Transportation Transformation, Providing Hydrogen for Fuel Cells**

In 2023, the subsidiary Guangzhou Engineering Co., Ltd. completed the design work for the PEM hydrogen production unit of the megawatt-level renewable electricity water electrolysis hydrogen production demonstration project. This project uses wind and solar power from oil fields to electrolyze water to produce hydrogen, which will then supply hydrogen for fuel cell vehicles. The project innovates the green hydrogen technology of megawatt-level renewable electricity PEM water electrolysis, breaking through the process flow of megawatt-level renewable electricity PEM water electrolysis hydrogen production and connecting the full industrial chain of green hydrogen preparation, hydrogen storage and transportation, and hydrogen refuelling.



Megawatt-level Renewable Electricity Water Electrolysis Hydrogen Production Project

Case

**Advancement of Hydrogen Purification and Supply Technology for Fuel Cell Vehicles Promotes the Development of the Hydrogen Energy Application Industry Chain**

The subsidiary Guangzhou Engineering Co., Ltd. participated in developing a complete set of hydrogen purification and supply technology for fuel cell vehicles, which has reached an international advanced level. By the end of 2023, the complete set of hydrogen purification and supply technology for fuel cell vehicles had been successfully implemented in enterprises such as Sinopec Shanghai Gaoqiao Petrochemical Co., Ltd. and Sinopec Maoming Petrochemical Company, achieving industrial application.



Hydrogen Purification and Supply Technology for Fuel Cell Vehicles Project

# 03

## Green and Low-Carbon

Supporting the United Nations Sustainable Development Goals:



- 11 entities have passed the third-party supervisory audit for the ISO14001 Environmental Management System certification, accounting for 100% of the Group's operating revenue
- 9 subsidiaries have been awarded "Sinopec Green Enterprise", and 92 construction sites have been recognised as "Green Sites"
- The Group has held 45 corporate-level environmental protection themed activities
- The overall energy consumption intensity per revenue has decreased by 5.67%, compared to the previous year

# Environmental Management

## Environmental Management Framework

The Group has established an HSE Management Committee, chaired by the Chairman and with the General Manager serving as the Executive Deputy Chairperson. The Safety Director and heads of subsidiaries are members of the committee. As the decision-making body for environmental policies, the HSE Management Committee is responsible for approving the Group's environmental development plans and related regulations, coordinating the resolution of environmental issues, and overseeing the performance of environmental work responsibilities.

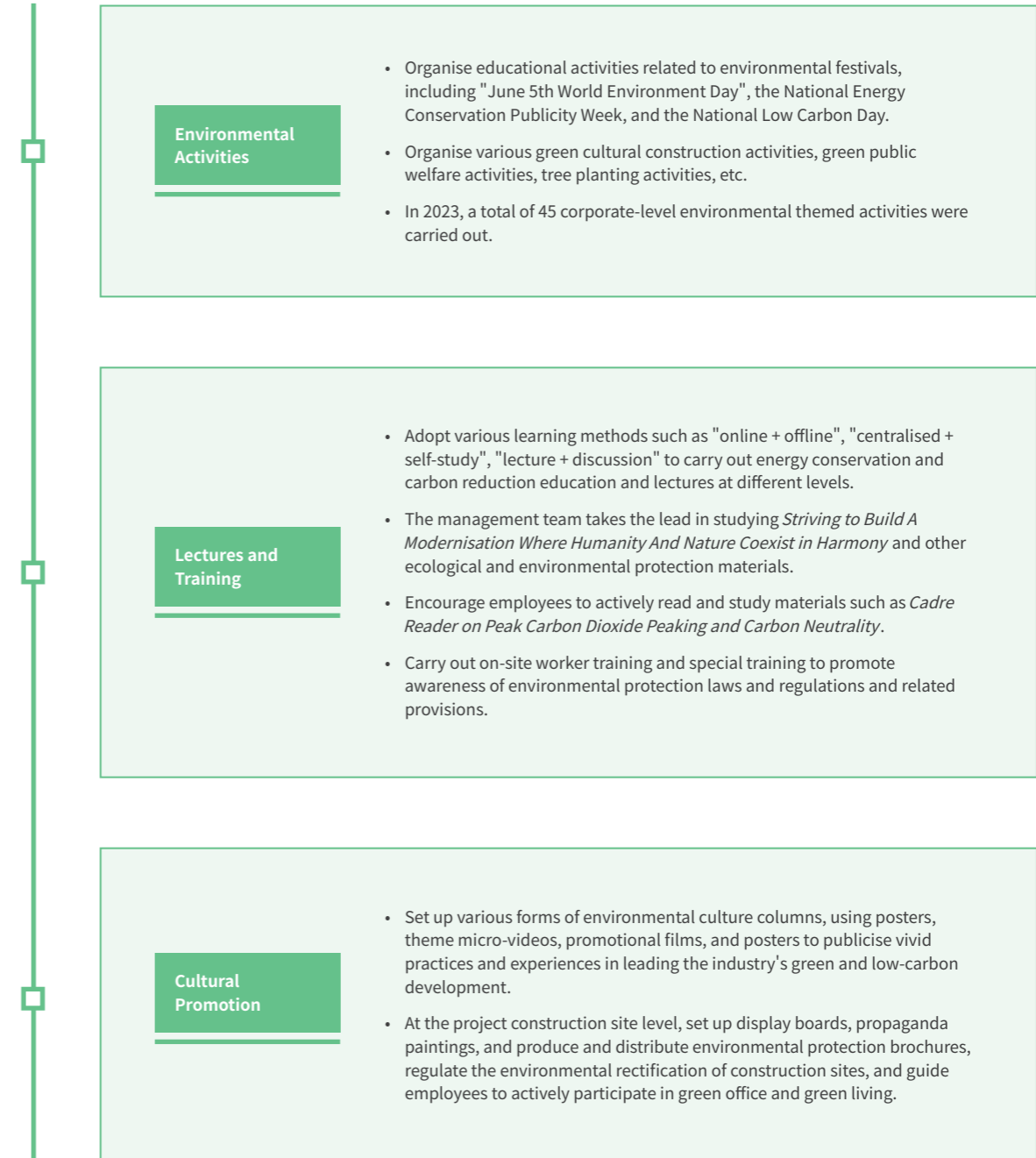
The Group adheres to the green and low-carbon development concept, continuously improves the environmental management system, and has established a three-tier environmental work management framework consisting of the "ESG Committee of the Board- HSE Committee of the Management - Executive" to ensure attention and supervision of environmental issues from the Board to the executive level, forming a comprehensive and effective environmental management system.

Board Level	An ESG Committee has been established to oversee critical environmental issues, integrate environmental issues into other Board decisions in conjunction with other committees of the Board, and implement top-level supervision of environmental issues.
Management Level	The HSE Management Committee handles critical HSE issues, development planning, and related regulations of the Group, coordinating the resolution of environmental problems. The committee has an office as a permanent institution for daily operations, responsible for approving the Group's environmental regulations and supervising the performance of HSE work responsibilities.
Executive Level	The Quality and Safety Department is responsible for overall coordination, supervision, and the corporate environmental management departments, and project environmental work persons-in-charge are responsible for the implementation of environmental work in their projects.

Furthermore, the Group has conducted identification of laws, regulations, and standards related to ecological protection, energy saving, water saving, low carbon, etc., and formulated compliance system documents. In 2023, we revised *SEG HSE System Environmental Audit Rules*, setting 15 inspection points covering the entire process from leadership, commitment and responsibility, planning, support, operation, performance evaluation, and improvement. Additionally, we actively carry out external management system certification and audits to ensure that the environmental management system meets the requirement. By the end of 2023, 11 entities of the Group had passed the third-party supervisory audit of the ISO14001 Environmental Management System certification.

## Promoting Environmental Awareness

We employ diversified methods to promote environmental concepts, actively cultivate employees' green consciousness and environmental awareness, continuously enhance all staff's awareness of green development, and create a strong green culture atmosphere.



## Green Operations

The Group integrates the concept of green operations into engineering design, on-site construction, daily office work, and daily life, adopting multiple measures to promote resource conservation, recycling, and efficient use, reduce energy consumption, decrease emissions, and achieve green, clean, and efficient development.

While realising our green operations, we are committed to promoting the green transformation of the industry, actively providing high-end think tank support for the green, clean, and efficient development of the industry, carrying out low-carbon energy-saving, pollution control, and other engineering technical research, promoting the implementation of clean production, and helping refining and chemical enterprises enhance their green and low-carbon competitiveness.

<b>Green Design</b>	<ul style="list-style-type: none"> <li>Implement green design concepts, fully consider environmental protection content, green construction goals, and improve the efficiency of energy, water resources, and land resources utilisation at the source of the petrochemical plant life cycle.</li> <li>In the design stage of construction projects, dig deep into the potential of resource recycling from the whole process, adopt new processes, new technologies, new equipment based on the principle of "optimal overall energy use", achieve waste heat recovery, cascade utilisation of excess pressure, maximise the utilisation rate of resources and energy, and reduce the consumption of water, electricity, and other resources.</li> <li>Design solid waste reduction devices, wastewater/gas treatment devices, and reduce the emission of "three wastes" from the source, among which the engineering application of zero discharge technology for wastewater has significantly reduced the consumption of fresh water.</li> </ul>
<b>Green Construction</b>	<ul style="list-style-type: none"> <li>Ensure environmental protection at the construction site, explore reasonable lifting equipment turnover and planning, improve the turnover rate, reduce secondary transportation.</li> <li>Establish a perfect energy resource management mechanism on the construction site, regulate the quantity and transport range of materials, and implement recycling, such as the efficient use of uncontaminated industrial wastewater to achieve resource conservation.</li> <li>Classify, collect, store, and dispose of solid waste, hazardous waste, construction waste, and domestic waste at the project construction site, reducing the amount of solid waste generated.</li> <li>The construction site will give priority to the use of energy-saving, efficient, and environmentally friendly construction facilities, equipment, and tools, and timely eliminate backward facilities and equipment, and maintain energy-consuming equipment and tools.</li> <li>Call on subcontractors to participate in activities of saving energy, saving water, saving materials, and saving land.</li> <li>Implement an intelligent management mode to save on paper tickets generated by quality inspection, welding material distribution, safety inspection, etc.</li> </ul>
<b>Green Office</b>	<ul style="list-style-type: none"> <li>Advocate water and electricity conservation, use water-saving devices.</li> <li>Reasonably set the air conditioning temperature in the office area, and recycle the cooling and heating capacity of air conditioning.</li> <li>Promote paperless and electronic office practices, using OA paperless office systems and remote meeting systems.</li> <li>Encouraging the reduction of resource wastage, and minimising the purchase of disposable products.</li> </ul>
<b>Green Living</b>	<ul style="list-style-type: none"> <li>Promote green travel.</li> <li>Advocate the "Clean Plate Campaign" to conserve food resources.</li> <li>Carry out voluntary tree planting activities.</li> <li>Cultivate green culture and conducting carbon reduction learning activities.</li> </ul>

## Green Enterprise Actions

The Group actively participates in "Green Enterprise Action", fully embracing the concept of green development. In 2023, 9 subsidiaries were awarded the title of "Sinopec Green Enterprise", with 6 ranked as Grade A green enterprises and 3 as Grade B. We completed the acceptance of 92 Green Sites, with 25 sites recognised as Excellent Green Sites. By the end of 2023, 3 factories were recognised as Green Factories.

Since the implementation of the "Green Enterprise Action" in 2019, the Group has actively engaged in optimising work around development, energy, production, services, technology, culture. By 2023, the first phase of the action was successfully completed, meeting the present targets and significantly enhancing the green management level, green development awareness, and green brand image of SEG.

The second phase of the "Green Enterprise Action" will focus on enhancing the Group's green competitiveness. We strive to create benchmark green enterprises and models at the grassroots level, pushing the "Green Enterprise Action" to a comprehensive upgrade and continuously empowering SEG to enter a new phase of green and high-quality development.



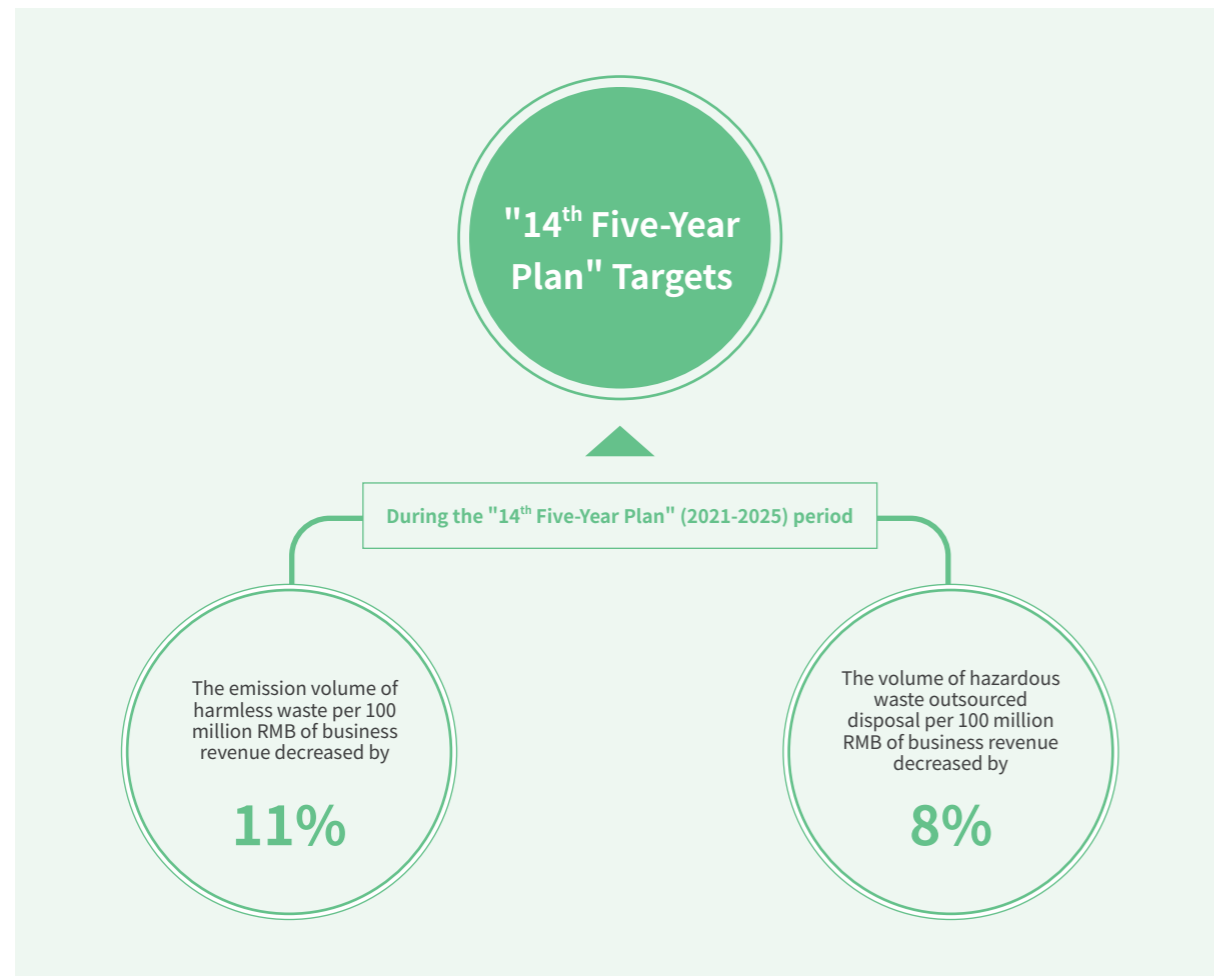
# Pollution Emissions Reduction

The Group strictly adheres to national laws and regulations, including *Environmental Protection Law of the People's Republic of China*, *Air Pollution Prevention Law of the People's Republic of China*, *Water Pollution Prevention Law of the People's Republic of China*, *Solid Waste Pollution Environment Prevention Law of the People's Republic of China*, and *Environmental Noise Pollution Prevention Law of the People's Republic of China*, and other laws and regulations related to reducing pollution emissions in project operation locations.

To standardise emissions such as atmospheric pollutants, waste, wastewater, and greenhouse gases, and reduce pollutants during operations, the Group has formulated a series of regulatory documents, including *SEG Environmental Protection Management Regulations*, *SEG HSE Risk Control and Hidden Danger Inspection and Management Regulations (Trial)*, and *SEG Solid Waste Environmental Management Guide for Engineering Projects (Trial)*.

In 2023, subsidiaries actively implemented a series of pollution reduction and control measures. The subsidiary Guangzhou Engineering Co., Ltd. participated in the joint construction of the Fossil Energy Low-Carbon Energy Saving Pollution Control Engineering Technology Research Laboratory; Fourth Construction Co., Ltd. revised emergency plans for heavily polluted weather and refined VOCs and particulate matter reduction measures and Heavy Lifting and Transportation Co., Ltd., used solid waste such as gravel and spoil as backfill materials for foundations and subgrades.

Furthermore, the Group innovated a series of environmental protection technologies. During the Reporting Period, technologies such as high-density sedimentation tanks, ASPEN software simulation of wastewater treatment processes, efficient lysis and hot water hydrolysis decoupling technology (HCTC) + anaerobic process, non-harmful research on heavy alcohols, and VOCs regenerative thermal oxidation process technology were applied in projects such as Hainan Refining 1 million tonnes per year ethylene and refinery revamping and expansion, South Port Ethylene, sludge modification anaerobic coupling resource technology development, EO/EG unit by-product heavy alcohol harmless disposal, Jinan Refining, etc., aiding clients in reducing emissions of atmospheric pollutants, wastewater, waste, and sludge.



The Group takes different measures for various types of pollutant emissions in engineering construction to specifically reduce environmental pollution.

Types of Pollutants	Countermeasures
Atmospheric Pollutants	<p>The construction process generates atmospheric pollutants including dust and volatile organic compounds (VOCs). Dust originates from blasting, sandblasting, rust removal, welding smoke, grinding, cutting operations, while VOCs come from anti-corrosion and painting operations.</p> <p><b>Dust Control</b></p> <ul style="list-style-type: none"> <li>Source Control: Planning enclosed workshops for sandblasting and shot blasting operations in prefabrication yards, prohibiting open-air blasting operations.</li> <li>Dust Collection: Equipping prefabrication yard workshops with ventilation and dust removal equipment, adsorption equipment to absorb generated dust. Setting up smoke purifiers for welding smoke, grinding dust, and cutting dust; dust collectors for shot blasting processes; and environmentally friendly recycling sandblasting machines with dust recovery systems for sandblasting processes. Enclosed, shielding, and flushing measures are taken at construction sites to control dust-prone areas and related equipment.</li> <li>Dust Monitoring: Regularly monitor the emission rate and concentration at the discharge ports of ventilation and dust removal equipment, and timely record monitoring data.</li> </ul> <p><b>VOCs Management</b></p> <ul style="list-style-type: none"> <li>Implement control measures for operations as much as possible in an enclosed environment for paint preparation, spraying, drying, and other anti-corrosion painting operations, while also setting up VOCs collection and treatment facilities to collect and combust VOCs generated during operations for compliant discharge.</li> <li>In 2023, the Group comprehensively carried out VOCs hidden danger governance work, developed on-site atmospheric pollution hidden danger governance plans for pilot projects, and conducted governance work on two pilot projects at subsidiaries Ningbo Engineering Co., Ltd. and Tenth Construction Co., Ltd., both achieving good results.</li> </ul>
Waste	<p>Waste generated during operations mainly includes general solid waste, domestic garbage, and hazardous waste. General solid waste primarily originates from construction entities and contractors in the process of constructing, renovating, expanding, and demolishing various buildings, structures, pipelines, etc., as well as from daily office work; domestic garbage comes from the daily lives of employees; hazardous waste mainly arises from construction, development, and daily office activities.</p> <p><b>General Solid Waste Disposal</b></p> <ul style="list-style-type: none"> <li>Recycle waste wood products, waste paper, waste steel, and waste non-ferrous metals</li> <li>Recycle waste mechanical products and transportation equipment</li> <li>Dispose of waste plastic products, waste composite packaging materials, waste batteries, waste electrical and electronic products, construction waste, and other wastes through third-party companies.</li> </ul> <p><b>Domestic Waste Disposal</b></p> <ul style="list-style-type: none"> <li>Handled by municipal departments.</li> </ul> <p><b>Hazardous Waste Disposal</b></p> <ul style="list-style-type: none"> <li>All disposed of by third-party companies in compliance with regulations.</li> </ul>
Wastewater	<p>Generated from construction activities, including operational wastewater and sewage from construction projects. Operational wastewater mainly comes from ground flushing, vehicle, and machinery equipment washing, while construction project sewage mainly originates from the daily lives of construction personnel.</p> <p><b>Operational Wastewater Disposal</b></p> <ul style="list-style-type: none"> <li>All recycled and disposed of in compliance with regulations.</li> </ul> <p><b>Construction Project Sewage Disposal</b></p> <ul style="list-style-type: none"> <li>Discharged according to the client's designated locations and methods.</li> </ul>

Types of Pollutants	Countermeasures
Noise	<ul style="list-style-type: none"> <li>Rational layout of construction sites and scheduling of operations.</li> <li>Setting up hard enclosures at the construction site and project boundary to control noise.</li> <li>Using low-noise, environmentally friendly construction tools and taking effective measures to reduce construction noise, with units involved in boundary noise conducting noise monitoring as required to ensure compliance.</li> </ul>
Radioactive Pollution	<ul style="list-style-type: none"> <li>Implement the national laws and regulations for radiation safety license and record-keeping system, strengthen storage and usage management.</li> </ul>

Case

**Implementing environmental hidden danger management to ensure compliance with waste gas emissions standards**

The subsidiary Tenth Construction Co., Ltd. constructed an enclosed painting workshop at the Zhenhai base project department, adopting dry filtration processing technology and activated carbon adsorption processing technology. These methods efficiently removed paint mist particles and absorbed organic components from the waste gases, effectively eliminating VOCs components from the emissions.



VOCs Gas Treatment Project

**Water recycling used for green irrigation**

The subsidiary Nanjing Engineering Co., Ltd. equipped five camps in a project in Saudi Arabia with sewage treatment systems and organised professional training for operators by the manufacturer to ensure the treated wastewater's PH value, TDS, etc., met discharge standards. Additionally, the treated wastewater was directly used for green irrigation within the camps, achieving resource utilisation.



Sewage Treatment Equipment within the Camp

Case

**Source control and waste reduction management in the South Port Ethylene Project**

The subsidiary Fourth Construction Co., Ltd., optimised the bevelling type for thick-walled alloy steel pipes by having the manufacturer complete the bevelling at both ends, eliminating the need for on-site bevelling. This change reduced the need for 48,000 on-site bevelling, saving 30% on welding materials. Additionally, TEKLA software was used to optimise cutting processes, reducing secondary cutting and waste generated, saving 30 tonnes of welding materials.



South Port Ethylene Process Corridor Module Construction

During the Reporting Period, the Group's operations produced 3.52 tonnes of SOx, 71.56 tonnes of NOx, and 2,457.60 tonnes of VOCs. The operations generated 556.83 tonnes of hazardous waste, with a 100% outsourced treatment rate; non-hazardous waste amounted to 86,129.54 tonnes, with a 19.87% reuse rate.

Case

**Exemplary Environmental Practices of the Kuwait Project by Fifth Construction Co., Ltd.**

The subsidiary Fifth Construction Co., Ltd. strictly adhered to local environmental protection regulations in its construction project in Kuwait, paying close attention to the management of hazardous chemicals and waste to reduce environmental risks. Adhering strictly to local environmental laws and regulations as well as the demands of the client, the company carried out environmental management practices. Measures for the hazardous chemical warehouse include installing thermometers, air conditioning, and leak prevention facilities. Gravel was laid on the painting ground to prevent soil contamination and was recycled and disposed of post-construction. In collaboration with local organisations, temporary hazardous waste collection bins were set up and regularly cleaned. Its exemplary management practices were included in the case collection of Application of The Ten Principles of the UNGC in the Infrastructure Sector under the 'Belt and Road' Initiative - A Corporate Practice Guidebook: Environmental Principles.



The Ten Principles of the UNGC in the Infrastructure Sector under the 'Belt and Road' Initiative - A Corporate Practice Guidebook: Environmental Principles



# Biodiversity Conservation

The Group strictly adheres to *Environmental Protection Law of the People's Republic of China*, *Administrative Measures for Environmental Protection*, and the relevant environmental protection regulations of the project operation locations. We conduct annual studies and risk identification of laws and regulations, carry out QHSE compliance evaluations, and actively fulfil our environmental protection responsibilities.

In the construction of projects, we fully consider the potential impacts on biodiversity and natural resources, actively avoid ecological red bottom lines and environmental safety baselines, implement effective measures for ecological protection and soil and water conservation, strengthen vegetation protection and restoration, and minimise impacts on the project operation locations. We innovate in ecological restoration technologies, promoting soil remediation and biodiversity protection, contributing wisdom and strength to global ecological governance.

To reduce ecological and environmental impacts, the Group has developed *SEG Environmental Protection Management Regulations*, *SEG HSE Risk Control and Hidden Danger Inspection and Management Regulations (Trial)*, and *SEG Environmental Protection Management Guidelines for Prefabrication Sites of Engineering Projects (Trial)* among other management systems, and complies with a series of measures formulated by Sinopec, including *Sinopec Greening Management Regulations*, *Sinopec Ecological Environment Incident Management Measures*, and *Sinopec Ecological Environment Incident Accountability Management Measures*, to standardise the conduct of related work.

Before the Project	<p><b>Conduct identification and impact assessment of environmental factors</b></p> <ul style="list-style-type: none"> <li>Strictly comply with the national ecological red bottom line system, land intensive and economical use rules, and marine functional zoning planning.</li> <li>Identify and evaluate the environmental factors and impacts of construction work areas and office areas, ensuring the conclusions of environmental impact assessments are correct and reasonable.</li> </ul> <p><b>Construction site selection avoids environmental impacts</b></p> <ul style="list-style-type: none"> <li>Construction operations prioritise wasteland and inferior land to improve land use efficiency, avoid occupying farmland, and as much as possible avoid community populations and wildlife habitats.</li> </ul>
During the Project	<p><b>Reduce the project's environmental impact</b></p> <ul style="list-style-type: none"> <li>During construction, prevent the leakage of strong light, fuel, mud, etc., and avoid related ecological impact risks, strengthen environmental protection and ecological restoration during pipeline construction.</li> </ul> <p><b>Wildlife protection</b></p> <ul style="list-style-type: none"> <li>During construction, it is strictly forbidden for staff to destroy animal dens, hunt, feed, or intentionally disturb wildlife, to avoid affecting the ecological sensitive periods of animals.</li> <li>Promptly rescue trapped wildlife.</li> </ul>
After the Project	<p><b>Restore damaged ecology</b></p> <ul style="list-style-type: none"> <li>For environmental damage caused by construction, fully restore to the original state after construction, including vegetation restoration and soil and water conservation.</li> <li>For issues of surface vegetation destruction caused by construction operations, develop vegetation restoration plans; for construction in temporarily occupied farmland, grassland, forestland, etc., stratify soil excavation, retain topsoil for temporary land surface vegetation restoration, and restore to the original state after construction.</li> </ul>

Furthermore, the Group actively promotes the development and storage of soil and groundwater remediation technologies, has formed a comprehensive site technology system including bioremediation and phytoremediation, advocates Nature-Based Solutions (NBS), and promotes the construction of "clear waters, blue skies, and pure land".

Case

### Sinopec Beihai Refining & Chemical Company's Old Factory Area Soil Remediation Project Completed and Put into Operation

The subsidiary Guangzhou Engineering Co., Ltd. carried out soil remediation in the polluted site of the old factory area of Sinopec Beihai Refining & Chemical Company. After meeting the standards, the land was transformed from industrial use to residential and commercial mixed use, ensuring the health of surrounding residents and students.

### Fifth Construction Co., Ltd. Actively Promotes the Dahuangbao Wetland Soil and Groundwater Remediation Project

The subsidiary Fifth Construction Co., Ltd. actively advanced the Dahuangbao Wetland soil and groundwater remediation project, the first of its kind in a national nature reserve. Adopting a "remediation + control" overall technical route, it carried out soil and groundwater pollution remediation while minimising the construction process's impact on the ecological environment.

Dahuangbao Wetland, one of Tianjin's four major wetland nature reserves, is located on an important bird migration route and serves as an important habitat for various rare and endangered bird species. In recent years, due to human activities and climate change, the reserve faces significant issues such as wetland degradation, water shortage, and incomplete key area ecosystems. In 2023, the subsidiary Fifth Construction Co., Ltd. completed the remediation of shallow polluted soil, control construction work of deep polluted soil, and groundwater pumping treatment.

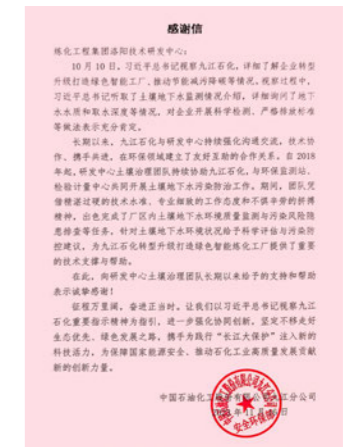


Dahuangbao Wetland Reserve Soil And Groundwater Remediation Project

### Technological innovation supports soil and groundwater pollution prevention and control in the Yangtze River Economic Belt

Groundwater is a key element maintaining the river and lake ecosystems in the Yangtze River basin. Conducting pollution prevention and control of groundwater resources in the Yangtze River basin could promote the improvement of biodiversity issues in the basin.

In 2023, R&D centre completed the research, development, and upgrade of new technologies, equipment, and materials in the field of petrochemical site soil and groundwater pollution control and remediation, providing robust technical support for pollution management at petrochemical sites.



Soil And Groundwater Pollution Prevention And Control Efforts Recognised by the Client

# Energy Conservation, Emission Reduction, and Climate Change Risk Management

## Energy Management

The Group strictly complies with laws and regulations related to energy conservation, including *Energy Conservation Law of the People's Republic of China*, *Promotion Law on Cleaner Production of the People's Republic of China* and *Energy Conservation Regulations for Civil Buildings* etc. We have established management systems such as *SEG Environmental Protection Management Regulations*, *SEG Environmental Information and Environmental Protection Statistics Management Regulations*, and *Sinopec Energy Management Co., Ltd. Contract Energy Management Project Management Methods*. We also adhere to *Sinopec Contract Energy Management Project Management Methods*, strictly managing internal energy consumption.

Leveraging the complete industrial chain advantage in engineering construction, the Group actively promotes the research and application of new energy, new technologies, and new equipment, dedicating efforts to create green projects and green factories. Moreover, we phase out the use of coal-fired boilers, and promote clean and efficient gas boilers.

Additionally, we commit to promoting the energy transformation of the industry, focusing on energy management services, and energy conservation and emission reduction technology research, continuously providing the industry with advanced technologies and high-quality services to help clients achieve efficient energy use.

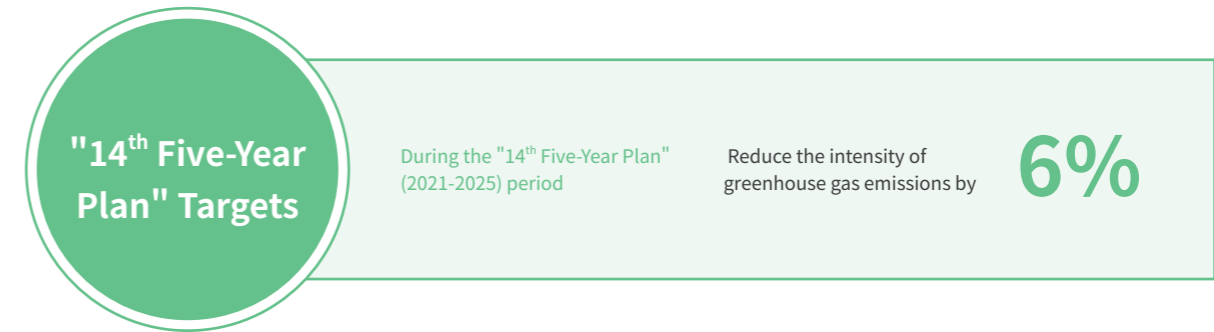
Energy Management Services	<ul style="list-style-type: none"> <li>The subsidiary Energy Management Co., Ltd. has implemented 48 contract energy management projects, offering clients energy-saving and low-carbon diagnosis, energy system optimisation, and contract energy management services across various fields such as low-temperature heat optimisation, lighting renovation, circulating water transformation, and compressor renovation, saving clients 270,000 tonnes of standard coal per year.</li> <li>The subsidiary Shanghai Engineering Co., Ltd. utilising advanced technology for consumption reduction and inventing multiple recycling methods, provides integrated energy-saving solutions for pharmaceutical bases, achieving green recycling.</li> <li>The subsidiary Engineering Construction Co., Ltd. has established a "whole plant low-carbon planning - process low-carbon design - phase-by-phase low-carbon evaluation - expert diagnostic service" full lifecycle green and low-carbon system. The custom-made energy-saving and carbon reduction solutions are provided for clients. By the end of 2023, they offered energy conservation and carbon reduction diagnostic services to several refining and chemical enterprises, such as molten salt thermal storage coupled with petrochemical heating integration, offering high-level energy-saving and carbon reduction consultancy services to the refining and chemical enterprises.</li> </ul>
Energy Conservation and Emission Reduction Technology	<ul style="list-style-type: none"> <li>The subsidiary Guangzhou Engineering Co., Ltd. supported the construction of a refinery project that fully recovers the low-temperature residual heat of the aromatics complex. After completion, it is expected to save 100,000 tonnes of standard coal per year.</li> <li>The subsidiary Shanghai Engineering Co., Ltd. conducted research and application of low-temperature heat comprehensive utilisation technology. Through thermal coupling optimisation between units, the utilisation rate of residual heat recovery was improved, fully utilising the low-temperature residual heat of the new epoxy unit to heat the supplementary water for the thermal power furnace of the water affairs chemical water, increasing the steam generation of the furnace and reducing the unit's energy consumption.</li> </ul>

During the Reporting Period, the Group's energy consumption was 46,478.66 tonnes of standard coal, with an energy consumption intensity of 82.67 tonnes of standard coal per 100 million RMB, marking a decrease of 5.67% compared to the previous year. For detailed energy consumption data, please refer to the Performance section.

## Climate Change Risk Management

Climate change is a global responsibility and challenge. As an important engineering service provider and technology patent holder in the petrochemical industry, the Group places high importance on the impact of climate change, actively undertaking Carbon Dioxide Peaking and Carbon Neutrality related work.

During the Reporting Period, the Group's GHG emissions was 111,136.88 tonnes of CO<sub>2</sub> equivalent, with a GHG emissions intensity was 197.64 tonnes of CO<sub>2</sub> equivalent per 100 million RMB, with a decrease of 0.40% compared to the previous year. For detailed greenhouse gas emission data, please refer to the Performance section.



The Company's Board of Directors is responsible for supervising and managing climate-related issues and work. The ESG Committee primarily identifies climate-related issues and advises the Board of Directors while overseeing the implementation of the Group's climate change response plan. Referring to *International Financial Reporting Standards Sustainability Disclosure Standard S2: Climate-related Disclosures (IFRS S2)* and identifying and reporting on the Group's main risks under the climate change context. Future actions will include further developing ESG-related action plans to address environmental and climate risks.

Risk Type	Climate-related Risks and Impacts	Countermeasures
Physical Risks	<p><b>Acute Risk</b></p> <p>Increased frequency of extreme weather events such as heavy rain, floods, and typhoons may cause interruptions to project construction, damage to project materials, disruptions to transportation routes leading to delays in material delivery, thereby extending the project delivery cycle and corporate financial turnover period. This could expose projects to performance risks.</p>	<p>Conduct emergency drills regularly, and develop contingency plans in advance for potentially affected projects, including material reserves, personnel deployment, and safety protection.</p> <p>Continuously optimise supply chain management to enhance the resilience of the supply chain against extreme climate events.</p>
	<p><b>Chronic Risk</b></p> <p>Includes long-term climate change risks, such as global temperature rise leading to sea-level rise, indirectly causing water scarcity, potentially impacting the safety and maintenance costs of our completed/under-construction projects.</p>	<p>Actively engage in planning and design to improve the intrinsic safety level of designs against climate change, and reduce potential financial costs.</p>

Risk Type	Climate-related Risks and Impacts	Countermeasures
Transition Risks	<p><b>Policy and Legal Risk</b></p> <p>China's implementation of a quota system for carbon emissions may increase the carbon emission compliance costs for the Group if it is included among the key emitters in the national carbon emissions trading market.</p>	<p>Actively conduct carbon trading research, perfect internal carbon inventory mechanisms, and prepare in advance for coverage by the emissions trading market.</p> <p>Explore carbon emission factor accounting for petrochemical enterprises' public utilities, improve transparency and credibility of carbon emission data disclosure, and aid in establishing industry carbon accounting standards.</p>
	<p><b>Reputation Risk</b></p> <p>Stakeholders are increasingly concerned about the Group's response to climate change and natural resource consumption. Failure to meet expected energy conservation and environmental protection targets in deliverables could negatively impact the Group's image.</p>	<p>Continuously strengthen research on energy conservation and environmental protection technologies, setting internal management targets on various environmental issues to reduce the likelihood of related adverse events.</p> <p>Proactively understand the negative environmental incidents published on regulatory websites and take them as warnings. Should any related incidents occur within the Group, the Investor Relations Department and the Publicity Department are responsible for providing explanations to investors and the public to minimise the impact on public opinion.</p>
	<p><b>Market Risk</b></p> <p>Under the pressure of the Paris Agreement and Carbon Dioxide Peaking and Carbon Neutrality targets, the consumption level of fossil energy is gradually decreasing, posing market risks to traditional businesses.</p>	<p>Actively expand into new energy businesses, enhance analysis of emerging markets and research and development of new technologies, and strengthen the coupling of traditional refining technologies with new energy. Increase communication efforts to build market confidence.</p>
	<p><b>Technology Risk</b></p> <p>As the global energy transition accelerates, the limitations of traditional technologies and equipment in low-carbon development are increasingly evident. The lack of maturity in low-carbon technologies may lead to risks of energy inefficiency, high equipment update costs, and unreliability of technology.</p>	<p>Actively research and promote low-carbon technologies, improve the maturity and reliability of technology. Through technological innovation, reduce equipment.</p> <p>Establish partnerships with universities, scientific research institutions, and others to jointly promote the research and development and application of low-carbon technologies. Through cooperation, resources and technological achievements are shared to accelerate the maturation process of low-carbon technologies.</p>

To better facilitate collaboration on carbon reduction efforts and address climate change risks across the refining and engineering industry and our value chain, we are actively engaged in methodological exploration, research, and standard construction work.

Methodological Exploration and Research	<ul style="list-style-type: none"> <li>Undertook the construction of Sinopec's carbon asset management system and the establishment of a carbon labelling system, exploring the accounting of emission factors for public utilities in refining enterprises, contributing to the establishment of carbon accounting standards.</li> <li>The subsidiary Energy Management Co., Ltd. authored and published the second volume of Carbon Dioxide Peaking and Carbon Neutrality series, <i>Carbon Footprint Assessment in the Petrochemical Production Process</i>, to explore directions for industry carbon reduction. Simultaneously, they actively researched effective measures to respond to the Carbon Border Adjustment Mechanism (CBAM), exploring the establishment of carbon labels for export products to align with international carbon footprint evaluations.</li> <li>The subsidiary Energy Management Co., Ltd. applied for the software copyright of the "Bio-Aviation Kerosene Industrial Process Carbon Emission Calculator", advancing the construction of the carbon accounting system.</li> <li>The subsidiary Engineering Construction Co., Ltd. actively participated in over ten dual-carbon research projects based on multi-energy integration, such as research on the deep coupling application of high-temperature gas-cooled reactor technology and the petrochemical industry, providing support for the industry's low-carbon development.</li> <li>The subsidiary Engineering Construction Co., Ltd. established the "Carbon Pathfinders" innovation studio, actively participated in the first methane emission reduction roundtable conference in the oil and gas industry, co-hosted hydrogen energy R&amp;D technology exchange meetings, and conducted in-depth research on carbon-neutral paths, assisting in comprehensive and systematic carbon reduction.</li> <li>R&amp;D Centre led the "Research and Application of Corrosion and Thermal Insulation Integrity Management System for Refining Enterprises" project, achieving full lifecycle management of corrosion and thermal insulation design, procurement, construction, and acceptance. This research outcome has significant energy-saving, carbon reduction, economic, and social benefits.</li> </ul>
Standard Construction	<ul style="list-style-type: none"> <li>The subsidiary Energy Management Co., Ltd. complied "Product Carbon Footprint Product Category Rules for Petrochemical Products" industry standard, "Petrochemical Industry Carbon Footprint Database Construction Specification" group standard, and "Lubricant Product Carbon Footprint Standard Draft", contributing to the construction of China's carbon footprint system.</li> <li>Participated in the compilation of <i>Petrochemical Industry Carbon Footprint Database Construction Specification</i> and <i>Sinopec Carbon Footprint Accounting Method for Petrochemical Product Production Stages</i> group standards, actively building the petrochemical industry's Carbon Dioxide Peaking and Carbon Neutrality standard system and standardising the industry's low-carbon development.</li> </ul>

# 04

## Occupational Health and Safety Management

Supporting the United Nations Sustainable Development Goals:



- 11 entities have passed the third-party supervisory audit for the ISO45001 Occupational Health and Safety Management System certification, covering 100% of subsidiaries
- Safety training was conducted 323 times, amounting to 66,000 hours
- Approximately 230 safety training sessions were held for subcontractors



# Occupational Health and Safety Management Mechanism

## Occupational Health and Safety Management Framework

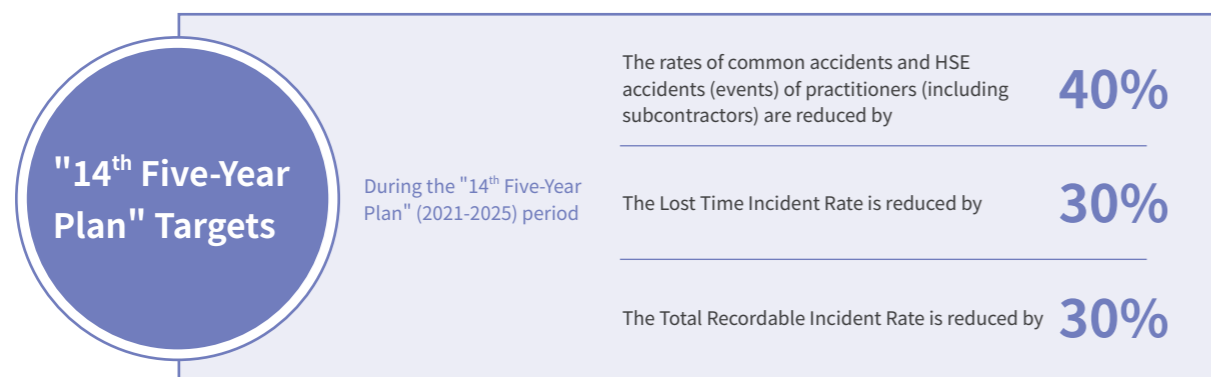
The Group is committed to comprehensively improving the Company's safety levels and employees' safety awareness, effectively organising and managing safety work. The Group has established a three-tier safety management framework: "ESG Committee of the Board - HSE Committee of the Management - Execution".

<b>Board Level</b>	The Company pays attention to critical safety issues, and incorporated safety considerations into other decision-making processes of the ESG Committee, in collaboration with other committees under the Board.
<b>Management Level</b>	The Company established the HSE Management Committee responsible for making decisions on critical HSE issues of the Group. The HSE Management Committee has an office as a permanent body to carry out its daily work. The office is responsible for examining and approving the Company's HSE related rules and regulations, and supervising the performance of HSE duties.
<b>Execution Level</b>	The Quality and Safety Department of the Company is responsible for overall planning, coordination, and supervision, while the Occupational Health and Safety Management Department of subsidiaries and the Occupational Health and Safety Head of project department are responsible for implementing environmental protection work for their respective projects.

## HSE Management System

The Group places great importance on the construction of the HSE management system, striving to continuously improve the level of safety and occupational health management, enhance the scientific and normative nature of HSE management work, reduce HSE risks, and build an HSE management system with characteristics of SEG. By strengthening information collection, transmission, and analysis, implementing the PDCA (Plan Do Check Act) cycle in system operation, and enhancing process assessment at all stages of system operation, we aim to improve management effectiveness. In 2023, the Group conducted safety system effective operation problem tracing, focused on addressing weaknesses within the system, and comprehensively improved serious violations, equipment safety, and "three basics" work, strengthening system construction.

Additionally, the Group actively carries out occupational health and safety management system certification and audit work, auditing the Company, proposing suggestions and risk warnings for identified issues, and urging subsidiaries to rectify and ensure compliance with the occupational health and safety management system. By the end of 2023, 11 entities of the Group had passed the third-party supervisory audit for the ISO45001 Occupational Health and Safety Management System certification.



<b>Safety Risk Identification and Investigation</b>	<ul style="list-style-type: none"> <li>Establish an HSE risk level control and hidden danger investigation and management dual prevention mechanism, clearly define risk identification responsibilities and dynamic control requirements, and establish a risk list library.</li> <li>Implement work permit management for high-risk operations, apply risk analysis tools, standardise the identification, control, and investigation and management of production process HSE risks, prevent and reduce accidents, and improve intrinsic safety levels.</li> <li>Compare domestic and foreign QHSE management performance differences to enhance risk prevention capabilities and build safety competitiveness.</li> </ul>
<b>Enhancing Safety Construction Capability</b>	<ul style="list-style-type: none"> <li>SEG Project 'Three Basics' Work Safety Standardisation Team Construction Guide is formulated to standardise and unify team safety standardisation construction.</li> <li>Uniform inspection standards for property sites are established, standardising the HSE management work of 9 categories and 269 property sites.</li> <li>Strengthen coordination among Engineering (E), Procurement (P), and Construction (C) to provide guarantees for risk reduction and safety quality in new industrialisation, focus on personnel skill improvement and equipment performance upgrading, and ensure the implementation of source safety basics.</li> <li>Adopt factory and modular processes, develop new tools, gradually reduce the number of workers, high-altitude operations, and cross operations, and reduce construction safety risks.</li> <li>Actively explore intelligent safety monitoring technologies, develop new platforms, technologies, and equipment, and promote the construction and application of intelligent construction sites, intelligent violation identification, and electronic fence devices.</li> </ul>
<b>Critical Safety Production Contracting System</b>	<ul style="list-style-type: none"> <li>At critical risk contracting sites, management implemented four steps, including at least one site inspection, one special meeting, one special report, and solving one issue.</li> <li>Enhanced leadership influence, proposed principal requirements for the management's safety knowledge, capabilities, and actions, and created "Safety Observation Cards".</li> </ul>
<b>Conducting Project Safety Inspections</b>	<ul style="list-style-type: none"> <li>Formulated <i>Critical Operational Risk Control System Construction and Advancement Plan Based on the Project Contract's Entire Lifecycle</i>, conducting safety inspections or HSE management system audits on critical risk control projects.</li> <li>Issued a list of serious violations, managing behaviours such as wearing safety belts at heights and protective measures for cross-operations, ensuring safe construction.</li> <li>Utilised on-site, online, self-inspections, and mutual inspections, and filled out "Safety Management Inspection Confirmation Table for the Entire Process of Inspection and Repair Projects", achieving supervision of multiple large-scale repair projects.</li> <li>In key engineering projects, form safety and quality supervision teams, and dispatch safety and quality experts to reside on-site for oversight and inspections; simultaneously, intensify the safety supervision of projects during peak construction periods.</li> </ul>
<b>Occupational Health Management</b>	<ul style="list-style-type: none"> <li>Health protection capability building: Organised on-site first aid training, focusing on the use of Automated External Defibrillators (AEDs), theory and practical operation of cardiopulmonary resuscitation, as well as office health care techniques.</li> <li>Occupational Health Platform Construction: provided staff services such as video consultations, referrals within Beijing, and appointments with renowned doctors; advance the management of the Video Visits Health Platform to facilitate employees' routine medical needs and health consultations.</li> <li>Caring for Employee Health: Establish employee health cabins, equipped with emergency medicines and blood pressure monitors for free use by employees; offer mental health counselling services, implementing the Employee Assistance Program (EAP) for psychological guidance through both online and offline methods, safeguarding the physical and mental health of employees; provide customised medical check-up plans for employees of different age groups, establish a list of high-risk individuals for medical examinations, and fully implement pre-departure health checks and evaluations for employees on overseas projects.</li> </ul>

Occupational Health and Safety Management Policies of the Company (Examples)

**Safety Management**

- SEG Regulations on Emergency Management
- SEG Management Regulations on HSE Risk Control and Hidden Danger Investigation (Trial)
- SEG Safety Management Regulations on High-risk Operations
- Regulations on Emergency Management
- Management Regulations for Production Safety Accidents (Incidents)
- Safety Management Regulations for Production Change

**Occupational Health**

- SEG Management Measures for Employee's Health
- SEG Management Regulations on Labour Protection Fees
- SEG Management Regulations on Personal Labour Protection Articles
- Management Regulations on Construction Sites Labour Protection Articles

Case

**Fifth Construction Co., Ltd. Conducts Safety Technology Research**

The subsidiary Fifth Construction Co., Ltd. has developed 37 safety technologies, including intelligent safety helmets, new scaffolding, and confined space supervision platforms. At the same time, it innovatively developed new technology and equipment for "mechanical cleaning + waste treatment", replacing manual labour with robots and has cleaned over 4,800 oil tanks.

Furthermore, Fifth Construction Co., Ltd. has employed "cold demolishing and intelligent" technologies to create an intelligent dismantling business, utilising AR and AI technology to establish an intelligent demolition command platform. This provides a comprehensive safety guarantee solution offering "full information perception, unified early warning, intelligent linkage, and precise command". Using 5G technology for remote control operations of unmanned machinery and multifunctional firefighting robots ensures a demolition process with "zero accidents, zero injuries and zero pollution", achieving the utmost in environmental protection and safety management. In 2023, Fifth Construction Co., Ltd. completed the dismantling and asset disposal of 12 sets of installations for companies including Sinopec Hubei Chemical Fertilizer Company, Sinopec Maoming Petrochemical Company, Sinopec Anqing Petrochemical Company, ZTHC Energy Co., Ltd., Sinopec Shijiazhuang Refining & Chemical Company, Sinopec Guangzhou Petrochemical Company, China International United Petrochemical & Chemical Co., Ltd., and Tahe Refining & Chemical Company.



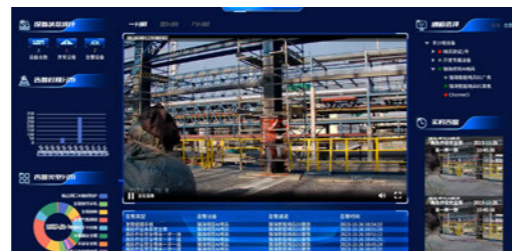
Firefighting Tank Demolition Operation



AR Real-Scene Command Platform

**Technology Empowers Safety Management, Advanced Tools Reduce Safety Risks**

The subsidiary Nanjing Engineering Co., Ltd. deepens the construction of "Smart Sites". The company has successively set up smart site studios in projects such as Zhenhai Phase II and Maoming Isopentyl Acid, utilising "digitalisation + intelligent supervision" technology. This approach interactively displays real-time data of personnel, machinery, and the environment. Moreover, this technology enables real-time supervision and closed-loop handling of violations in high-risk areas through AI smart identification. This creates an intelligent discovery alarm for violations, allows safety personnel to review violations, and enables backend supervision personnel to form full process closed-loop management opinions, aiding in a comprehensive upgrade of safety management.



AI Violation Inspection

During the Reporting Period, the Group maintained relatively safe and stable operations, with one reported incident, zero work-related employee deaths, and a 200,000-hour fatality rate of 0; there were 19 work-related injuries among employees, with a 200,000-hour accident or incident rate of 0.02%.

Training and Dissemination

The Group continuously strengthens the construction of a safety production culture, fostering a positive safety culture atmosphere. This is achieved through enhanced propaganda, education, and training, which in turn steadily improves the safety skills of employees. In 2023, the Group engaged 32,000 person-times in safety training, conducting 323 sessions and accumulating 66,000 hours.

Safety Culture Dissemination	<ul style="list-style-type: none"> <li>The Group organises competitions related to safety skills and knowledge, such as the safety quality business competition, grassroots safety officer business competition, strongest engineer business competition, and safety skills competition. These competitions ignite employees' enthusiasm for learning and enhance their safety skills.</li> <li>The Group holds special events like Safety Month, Sinopec Warning Day, and Occupational Disease Prevention Law Publicity Week to raise employees' awareness of labour safety protection and occupational health.</li> </ul>
Safety Education and Training	<ul style="list-style-type: none"> <li>The Group conducts safety training covering aspects such as HSE laws and regulations, rules and regulations, safety production responsibility system, safety control of high-risk operations, work permits, emergency and first aid, and accident case analysis.</li> <li>We carry out end-of-work five-minute summaries and post-shift meetings, pre-operation training, and other safety education and training efforts to enhance employees' awareness of safe operations.</li> <li>A "five-minute safety education before meetings" mechanism has been established, creating an atmosphere of full participation in safety work, and enhancing the overall safety awareness.</li> </ul>

Case

**The Safety Education Training VR Laboratory Goes Into Operation**

The subsidiary Tenth Construction Co., Ltd. collaborated with the VR team from China University of Petroleum (East China) on the VR training platform development project. Together worked on confined space operation safety education VR scene models, among other tasks, successfully establishing a safety education training VR laboratory.



Safety Education Training VR Laboratory

# Occupational Health and Safety Management of Subcontractor

The Group places high importance on the safety management of subcontractors, stipulating the implementation of an integrated safety management approach for subcontractors within the HSE management system. This approach ensures that subcontractors are managed and supervised to the same standards as the Group's employees, through strategic subcontractor system audits, top-level contracting, regular checks and supervision, and safety scoring. These measures aim to enhance the safety management level of subcontractors and prevent safety accidents.

Subcontractor safety training is integrated into the management system for our own employees, employing methods such as comparative incentives, hands-on safety trainings, and other safety training activities. These include three-level safety education upon site entry, special safety training and briefings before special operations, safety activities on each Monday, and daily pre-shift safety shout-outs. Training covers safety and environmental bans, risk analysis, work permits, supervision and management, accident case studies, emergency response, first aid methods, etc. In 2023, approximately 230 safety training sessions were conducted for subcontractors.

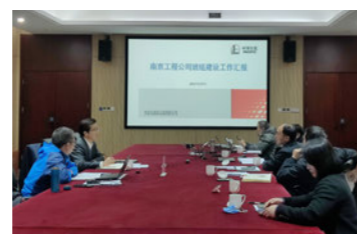
## Subcontractor Occupational Health and Safety Management Mechanism

- The heads of subsidiaries and projects take on subcontractor safety risks.
- Quantitative indicators are set for critical factors such as the ratio of key personnel, including project manager, construction manager, technical manager, safety manager and team leader, entrance interview rates, subcontractor team formation rates, and safety officer allocation rates for precise management.
- Subcontractors are included in the comprehensive health management category and are managed to the same standards as Group employees.
- Implement a three-check system for subcontractor employees' occupational health. Subcontractor employees must undergo professional occupational health examinations before entering the site, ensuring comprehensive occupational hazard notification.
- Safety education, training, and culture dissemination cover subcontractor employees.
- Subcontractors undergo meticulous management supervision and auditing, supervising and rectifying related issues, and urging subcontractors to establish self-improvement and self-monitoring constraint mechanisms.
- Strategic subcontractors undergo HSE system audits, achieving full coverage every three years.

## Case

### Establishing Safety Performance Allowance Mechanisms to Motivate Team Construction

In 2023, the subsidiary Nanjing Engineering Co., Ltd. innovatively implemented a safety performance allowance mechanism for the leaders of subcontractor teams. This involved conducting quantitative assessments for the safety performance of construction teams. Stimulate the team leaders' motivation for strengthening team construction, achieving zero accidents and serious violations within the teams.



Team Safety Construction Research Meeting

### Strengthening Subcontractor Health Management to Safeguard Subcontractor Employees' Health

The subsidiary Guangzhou Engineering Co., Ltd. adopted various measures such as pre-entry medical examinations and detailed supervisory assessments to ensure the health and safety of subcontractor employees. This included mandatory occupational health examinations before site entry to ensure employee health and setting up weekly, monthly, and bi-annual project HSE inspections, along with quarterly construction manager supervisory assessments. These measures aimed at detailed supervisory assessments, root cause analysis, and supervision of corrective actions, significantly enhancing the subcontractor's occupational health management capabilities.



Delivering Supplies to Subcontractor Employees

# Security

## Security Management

The Group strictly adheres to *Sinopec Overseas Security Management Measures* and *Sinopec Overseas Security Risk Assessment Standard (Trial)*, and other relevant measures, laws and regulations, and has established *SEG Overseas Security Management Regulations*. For our overseas projects, the Group has set up an HSE management mechanism coordinated by the HSE Committee, which oversees the safety management of overseas projects. Additionally, we have developed a comprehensive, system-wide project risk control mechanism that includes risk identification, analysis, and quantitative assessment for significant overseas projects.

Security Assurance	<ul style="list-style-type: none"> <li>• The Group closely monitors safety risks in operation locations and implements <i>Sinopec Overseas Security Facilities and Security Forces Deployment Guidelines</i>. We employ ten security companies in Saudi Arabia, Algeria, Malaysia, and other locations, and equips them with security facilities and equipment, ensuring the safety of overseas institutions, projects, and employees.</li> </ul>
Overseas Employee Safety and Health Assurance	<ul style="list-style-type: none"> <li>• The Group prioritises the life safety and physical health of our overseas employees, organising overseas security training and emergency drills. In 2023, we conducted 16 practical drills and 11 tabletop exercises on armed terrorist attacks, sudden illnesses, traffic accidents, fire and firefighting, and food poisoning, among others.</li> <li>• The Group provides employees with safety materials, issues customised, timely national security manuals and first aid kits, and offers comprehensive safety assurances to overseas employees.</li> <li>• The Group monitors the physical and mental health of overseas employees through medical examinations, insurance, health consultations, and opens psychological health consultation services and online medical consultations. In countries where conditions allow, it collaborates with local SOS to establish clinics.</li> <li>• The Group offers overseas employees a beautiful and comfortable office environment, healthy dining options, a variety of leisure activities, and regularly organises family care activities to enhance employees' sense of belonging and cohesion, helping each employee maintain health and vitality at work.</li> </ul>

## Security and Human Rights

The Group strictly adheres to the relevant laws and regulations of the countries in which we operate, ensuring that security personnel employed in overseas projects comply with relevant international laws and local regulations. The Group is committed to prohibiting any form of discrimination, harassment, and violence, protecting the legal rights and interests of employees and local communities.

The Group exercises oversight over security personnel in overseas projects through regular meetings, scheduled or unscheduled on-site supervision, or video inspections, managing their work discipline, comprehensive quality, and service quality. Additionally, the Group provides comprehensive dissemination and training for security personnel, covering topics such as human rights awareness, conflict management, emergency handling, restrictions on the use of force, and recording and reporting procedures. This ensures that security personnel are fully aware of how to protect project facilities and employee safety without infringing on the rights of local community residents.

# 05

## Employee Relationship

Supporting the United Nations Sustainable Development Goals:



- Female employees account for 27.21%, a relatively high level among engineering and construction enterprises
- The Company boasts 1 academician of the Chinese Academy of Sciences, 2 academicians of the Chinese Academy of Engineering, and 7 national masters of engineering survey and design
- Employee training covered a total of 43,258 person-times, with an average training duration of 52.6 hours per person



# Rights Protection

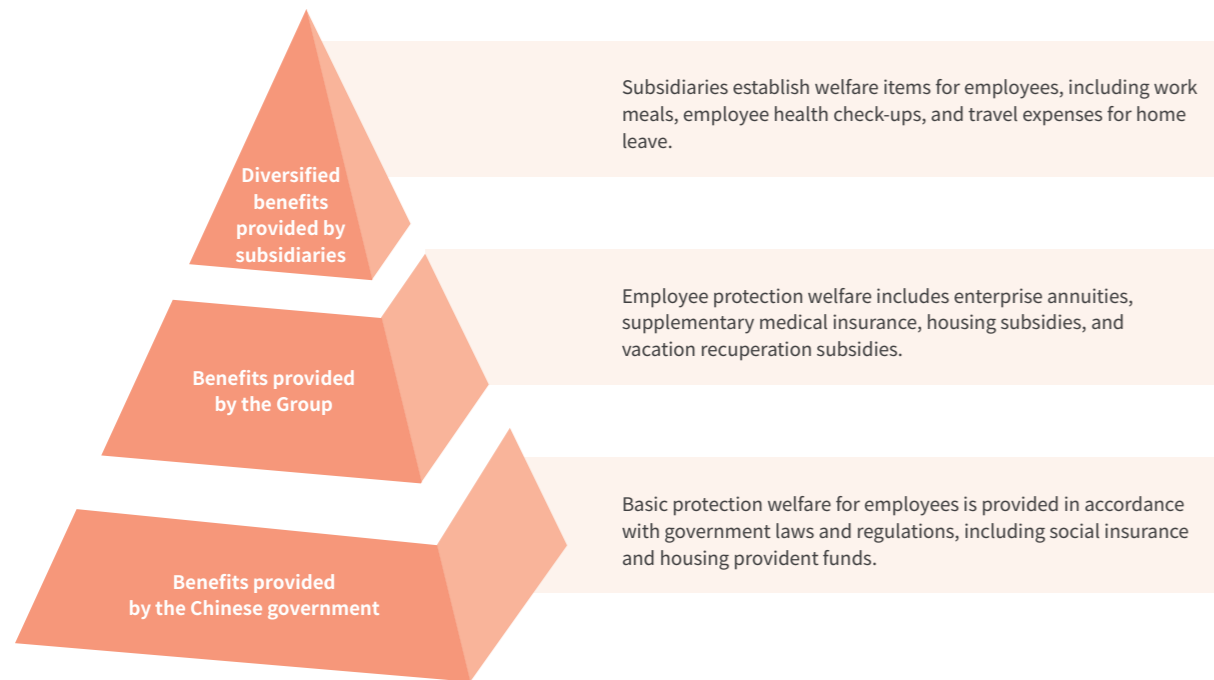
## Employee Rights Protection

The Group recognises that employees are vital for the development, and ensuring their rights and creating a comfortable working environment are foundational for sustainable growth. The Group rigorously adheres to laws and regulations such as *Labour Law*, *Labour Contract Law*, and *Women's Rights and Interests Protection Law*, establishing and enforcing a series of management practices in areas including labour contracts, remuneration incentives, welfare systems, such as *Labour Contract Management Measures*, *Salary Management Measures*, *Welfare Management Measures*, *Salary Management Measures*, leaving policies to form a comprehensive, systematic management system that fully safeguards employees' basic compliance rights and welfare construction.

The Group lawfully signs labour contracts with all employees, specifying working hours in the contracts and paying overtime wages for hours worked beyond the statutory limit in accordance with regulations. In overseas operations, we strictly follow all relevant local laws and regulations, cooperating with local requirements to ensure employee visas and labour contracts comply with local standards.

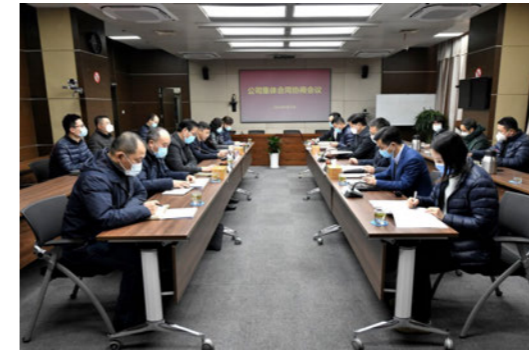
Regarding remuneration incentives, the Group establishes a market-aligned remuneration system, formulates medium- and long-term incentive plans for core backbone employees and implemented work efficiency-linked assessments.

In terms of welfare construction, the Group follows the principles of "lawful compliance, fairness, and inclusiveness", establishing a complete employee welfare system. According to national laws and regulations, social insurance and housing provident funds are paid in full and on time every month. On this basis, the Group provides employees with an additional welfare security system, such as enterprise annuities and supplementary medical insurance. We also offer specific subsidies based on cost-effectiveness and job characteristics, such as physical examinations and travel expenses for home leave. Overseas employees are also protected by the local laws and regulations of overseas institutions, with social security contributions made monthly and medical insurance purchased for employees and their families. In 2023, Saudi Arabia Co., Ltd. adjusted the social security payment standards in accordance with the latest policy requirements of the General Organization for Social Insurance (GOSI) in Saudi Arabia.



Regarding the leave system, the Group always adheres to the principle of "people-oriented", fully guaranteeing employees' leave rights. We respect employees' rights to statutory holidays, bereavement leave, maternity leave, breastfeeding leave, and paid leave, ensuring employees get ample rest. In overseas operations, we highly respect local cultures and religious beliefs, such as reasonably arranging for Muslim employees to take turns off during the Eid al-Fitr. For female employees, the Group actively creates an enjoyable working environment and reasonable protection mechanisms, implementing targeted care measures. In terms of basic compliance with leave entitlements, we follow national regulations, implementing systems for maternity and breastfeeding leave.

Case



### Actively Creating an Enjoyable Working Environment and Reasonable Protection Mechanisms for Female Employees

In 2023, the subsidiary Ningbo Engineering Co., Ltd. signed *Ningbo Engineering Co., Ltd. Special Collective Contract for the Protection of Women Employees' Rights and Interests* to further safeguard the rights of female employees.

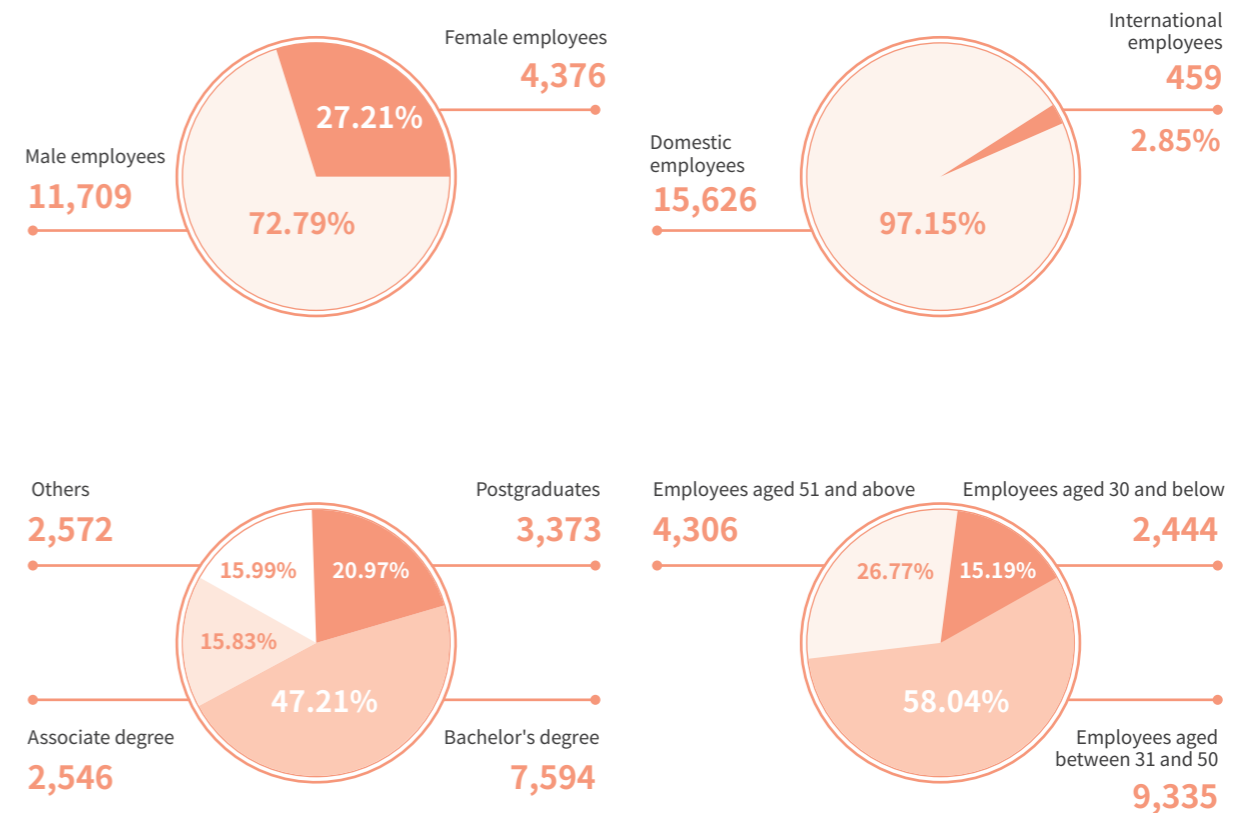
*Ningbo Engineering Co., Ltd. Signing the Special Collective Contract for the Protection of Women Employees*

## Diversity and Equal Opportunities

The Group is committed to fostering a diverse talent pool to bring a wider range of perspectives to the development.

As of the end of 2023, the Group employs a total of 16,085 people, with women making up 27.21% of the workforce, representing a comparatively high percentage for companies in the field of engineering construction. The Group boasts a highly educated workforce, with 7,594 employees holding a bachelor's degree and 3,373 with a master's degree or higher, indicating an increase in the proportion of highly educated talent compared to the previous year.

### Employee Diversity



In terms of equal opportunity in employment, the Group steadfastly upholds the principle of equal employment, ensuring all employees enjoy equal treatment during recruitment, promotion, and evaluation processes, irrespective of gender, age, ethnicity, skin colour, nationality, language, race, religion, or physical disability. The Group is adamantly opposed to the use of child labour and forced labour, strictly preventing any instances of child labour, forced labour, and other illegal employment practices.

To better adapt to globalisation trends, the Group has also adopted active strategies in international talent recruitment. The subsidiary Heavy Lifting and Transportation Co., Ltd., continues to advance the strategy of "internationalising management talents and globalising skilled talents," constantly exploring the international talent market. In 2023, new talent resources from countries including Vietnam, Tajikistan, and Kazakhstan were added to the reserve, and in-depth labour cooperation was conducted with local labour companies in Nepal.

Recognising that special groups often face more challenges in employment, the Group actively recruits from these demographics, providing job opportunities for impoverished students, individuals with disabilities, and veterans.

## Talent Development

The Group adheres to the strategy of "strengthening the enterprise through talent", implements multi-level training methods, fully enhances international exchanges, cultivates a high-quality talent team, comprehensively supports employee growth, and provides solid talent assurance for enterprise development.

By the end of 2023, the Group is proud to have among ranks 1 academician of the Chinese Academy of Sciences, 2 academicians of the Chinese Academy of Engineering, 7 national masters of engineering survey and design, 35 recipients of the government special allowance, and 5,781 individuals with senior professional technical qualifications.

The Group actively responds to employees' training and development needs. We formulated *Employee Training Management Methods*, establishing a multi-level and comprehensive training system that enriches training content and innovates training methods. This approach helps employees continually improve themselves, reserves knowledge and experience for their growth and development, and enhances their comprehensive qualities, enabling mutual progress for employees and the enterprise. Throughout the Reporting Period, the Group's employee training covered 43,258 person-times, with an average training duration of 52.6 hours per person.

### Talent Development Management System

**Effectiveness in Talent Allocation:** Implementing *SEG Management Regulations for the Expert Database* and *SEG Talent Cultivation Management Regulations*, the Group leverages various experts to provide support. We focus on the core construction of young cadres to cultivate a talent pool of excellent quality and optimised structure.

**Professionalism in Talent Recruitment:** Issuing *SEG Professional Technical Sequence Classification* and *SEG Skills Operation Sequence Work Type Classification*, we clarify the division of professions and work types, laying a foundation for classified talent cultivation. We formulated *Talent Channel Position Qualification Evaluation Standards*, standardising the knowledge, skills, and abilities required for different position levels and providing clear standards for talent recruitment and cultivation.

In 2023, we issued measures such as *SEG Position Management Measures* to optimise the conditions for talent selection and recruitment, standardise quantitative methods for title management, and enhance the objectivity, fairness, and accuracy of talent evaluation.

**International Talent Management:** We established a *Global Talent Evaluation Standard System*, and ability evaluation indicators include three dimensions: fundamental quality, professional quality, and management quality.

### Comprehensive Talent Development Strategy

**Planning:** We issued *2023 Annual Employee Training Plan*, covering 45 types of training for senior, middle, and junior level employees across management, professional and technical, and skill operation sequences. Training modules and classes are tailored to the different requirements of each level, focusing on strengthening talent cultivation and reserves in key areas such as professional technology, QHSE, and skill operations, as well as their corresponding critical positions.

**Capability Enhancement:** We strengthen core capability building and combine practical experience to enhance the capabilities of the internal training centre.

**Resource Diversification:** Diversifying "online + offline" methods to enhance the flexibility, effectiveness, and timeliness of training. We actively engage in or participates in various competitions such as vocational skills and technological innovation, integrating competition with training to cultivate high-quality talent comprehensively.

**Layered Development:** For managerial talent, we conduct "Project Manager Capability Enhancement Classes" and "Young Business Backbone Training Classes" to improve project manager team capability building. For young cadres, the "Pedestal Seedling Plan" is continuously implemented to promote multi-position exchange and training within and between units. For skilled talent, training courses like "Electrical Technician Training Classes for Skill Operation Personnel" and "Online Continuing Education Classes for Safety Management Personnel" are conducted to enhance professional skills.

**Mutual Learning:** Implementing an employee rotation system to cultivate high-quality composite talents. Establishing "Skill Talent Innovation Workshops" led by internal craftsman and skill masters, to promote exchange and mutual learning.

**International Development:** Selecting outstanding employees to participate in overseas construction projects. Employees from overseas branches are also sent to China to participate in "Belt and Road" order classes, aiding in the training of foreign talents.



Number of trainings for senior managers in 2023 (Person-times)	6,489	Year-on-year growth	20%
Number of trainings for junior managers in 2023 (Person-times)	10,814	Year-on-year growth	47%
Number of trainings for employees in 2023 (Person-times)	25,955	Year-on-year growth	72%

### Case

#### Implementing the "211" Talent Project Plan to Promote International Talent Cultivation

The Saudi Arabia project department of Fifth Construction Co., Ltd., aiming to cultivate international talents, formulated the "211" Talent Project Plan, setting goals to cultivate 20 management elites, 100 management and technical backbones, and 100 outstanding foreign employees. For foreign employee training, the subsidiary detailed targets to each department, established training ledgers, and systematically carried out training activities. Regular progress meetings were held, and "Chinese master and foreign apprentice" pairing activities were organised to ensure orderly training progress.

In October 2023, the subsidiary Fifth Construction Co., Ltd. recommended an Indian deputy manager of safety to participate in the "Sinopec Excellent International Employee Training Class" in Beijing, promoting exchange and cooperation between Chinese and foreign employees.

# Employee Care

## Employee Communication and Participation

We believe that establishing and reinforcing trust requires continuous communication and cooperation. The Group places great emphasis on the construction of mechanisms for employee communication and participation, establishing and improving systems such as trade unions, employee representative conferences, and employee grievance mechanisms, ensuring that employee concerns are effectively communicated and promptly addressed.

### Trade Union and Employee Representative Conference Mechanism

The Group has established and effectively operates a mechanism for the employee representative conference, actively listening to employees. In 2023, we organised and completed the election of a new trade union committee; organised employee representative meetings to solicit opinions and reviewed related reports and proposals, including *Annual Work Report*, *Production and Operation Report*, *Trade Union Work Report*, and *Report on Employee Representatives' Proposals*. Employee representatives were also organised to evaluate the construction of union-based family support programs, achieving a 100% satisfaction rate among the employees and masses.

### Opinion Collection Mechanism

Annually, we conduct employee satisfaction surveys and set up suggestion boxes, providing channels for expressing work disagreements and for employees to reflect on their work situations and propose rational suggestions. The Group adheres to the Company's confidentiality system, keeping all feedback providers' personal information confidential and protecting employee rights. The issues identified through surveys are categorised and summarised. We summarise and analyse these issues, submitting them to relevant departments for research and improvement as a crucial basis for next year's work.



### Labour Dispute Handling

The Group has established a complete process for handling labour disputes, formulating *SEG Labour Dispute Management Methods* to properly address labour disputes that arise during the duration of the employment contract and after the termination or dissolution. Employees can submit dispute handling requests to the HR department via phone, email, face-to-face meetings, or in writing; the HR department decides within 5 working days whether to accept the request and notifies the employee. Then the HR department analyses and judges the dispute matters within 15 working days, proposing dispute resolution suggestions based on legal and regulatory requirements. During the Reporting Period, the Group did not experience any labour disputes.

### Open Factory Affairs Mechanism

The Group has formulated and issued *Detailed Rules for the Implementation of Open Factory Affairs*, fully standardising the content, procedures, requirements, and responsible departments of open factory affairs, providing a systematic guarantee for units to carry out democratic supervision. Units disclose major decisions and execution, significant issues in production and operation management, financial conditions, matters related to employees' vital interests, and clean governance through special work meetings, open factory affairs columns, Official Automation (OA) Information Platform, etc., continuously improving the democratic management system.

### Case

#### Implementing the "Doing Practical Things for the Masses" Long-term Mechanism, Precisely Enhancing Service to Employees

The subsidiary Ningbo Engineering Co., Ltd. actively implements and continuously improves the "Doing Practical Things for the Masses" long-term mechanism, establishing both company-level and grassroots-level *Monthly Rolling Progress Lists for Key 'Practical Actions for the People' Projects*, with a democratic appraisal satisfaction rate reaching 97.02%.



Ningbo Engineering Co., Ltd. "Doing Practical Things for the Masses" Special Meeting

## Comprehensive Employee Care

The Group is dedicated to providing holistic care and support for our employees, continually optimising related systems and mechanisms. In 2023, we revised *SEG Assistance and Aid Fund Management Methods* and *Trade Union Funds Management Methods* to ensure more accurate and timely aid and care activities.

### Case

#### Continuously Conducting Employee Assistance and Care Work to Address Practical Issues

The subsidiary Tenth Construction Co., Ltd. actively engages in aid and problem-solving work for those in difficulty, resolving disputes and conflicts. During the Reporting Period, a total of 381 person-times were aided.



Tenth Construction Co., Ltd. Organising a Meeting for Overseas Employees' Families



Tenth Construction Co., Ltd. Spring Festival Greetings for Overseas Employees' Families

The Group recognises the challenges and pressures they face in both career paths and personal lives, so we place great emphasis on female employee care and support, organising female employee representative meetings. Around International Women's Day on March 8th, the Company planned activities such as "Technological Innovation, Women's Achievements" story sessions and "Beauty in You, Cheers for Health" yoga activities to help our female employees relieve stress and improve their physical and mental health.

We understand employees' expectations for job satisfaction and happiness, actively providing a variety of entertainment activities to enrich their leisure time and enhance team cohesion. By organising family day activities, we offer employees' families the opportunity to gain a deeper understanding of the employees' professions, further strengthening the emotional bond between employees and their families.

### Case

#### Successfully Hosting the 5th "Peony Cup" Employee Badminton Tournament

In May 2023, the 5th "Peony Cup" Employee Badminton Tournament was successfully held in Luoyang by the Group, with participation from 11 teams and over 150 athletes, embodying the concept of "Happy Work, Healthy Life".



"Peony Cup" Employee Badminton Tournament

We also care for our retired employees, taking practical measures to provide a range of care and benefits for retirees, and ensuring they continue to feel the warmth and support even in their later years. In 2023, the subsidiary Engineering Construction Co., Ltd. organised a series of activities and distributed commemorative plaques to retirees, making them truly feel corporate warmth and care.

# 06

## Social Responsibility

Supporting the United Nations Sustainable Development Goals:



- The total number of employee participations in volunteer activities amounted to 225 person-times
- The total duration of volunteer activity services reached 556 hours
- The total amount of external donations reached 1,033,500 RMB

# Responsible Value Chain

## Leading New Industrialisation

The Group is dedicated to promoting the transition of the engineering construction industry from traditional models to a "standardised lean design + industrialised smart manufacturing + modular installation" model, striving to forge a new path towards industrialisation.

During the Reporting Period, the Group has conducted discussions on new industrialisation topics, identifying 11 directions for research and experimental subjects, covering key areas such as high-end, green, and intelligent aspects. We aim to fully leverage the leading role of intelligent industrial transformation, enriching new corporate advantages in the smart transformation, fostering organic synergy between our industry and emerging sectors like information technology, digital engineering, intelligent manufacturing, and green low-carbon development. This strategy aims to pave a new industrialisation path characterised by green low-carbon as the new foundation, innovation as the new driving force, safety and resilience as new requirements, data resources as new elements, and chain-group collaboration as the new model, striving to play a leading role in the new industrial system of the engineering construction industry.

### Engineering Project Management

In 2023, we developed *High-Quality Development Project Management Capability Enhancement Special Action Plan*, elaborating on the innovation of engineering construction models from aspects such as promoting standardised design, standardised construction sites, industrialised prefabrication, and modular construction, with the aim of enhancing the Company's engineering construction industry's new industrialisation.

<p><b>Standardised Design</b></p>	<p>The Group places great emphasis on standardised design, implementing the concept from the preliminary stages of consultation, feasibility studies, and overall design, and organising engineering companies to undertake standardised design in aspects such as standards, workflows, design documents, software usage, and modular design. Each engineering company has established a standard pool, developed standardised design management methods and application regulations for standardised design outcomes, set up a topic management platform, and implemented standardised, regular management of topics, continuously optimising and upgrading the existing standards library.</p>
<p><b>Standardised Construction Site</b></p>	<p>In line with relevant requirements, activities related to on-site standardised management, signage standardised management, and materials standardised management are conducted. The Group formulates detailed rules for standardised construction site implementation, compile standardised HSE site plans and safe work operation standards, laying a foundation for standardising site operations and behaviours. Significant achievements have been made in creating standardised construction sites across multiple projects in recent years.</p>
<p><b>Industrialised Prefabrication and Modular Construction</b></p>	<p>By promoting the "factory replacing the site" approach, we aim to transform construction sites into factory, shift from high-altitude to ground-level operations, and from traditional construction to digital and information technology-driven processes. This approach significantly minimises operational risks, ensures product quality, and enhances work efficiency. In terms of factory prefabrication, we establish pipeline factory prefabrication bases in multiple projects, gradually creating an automated, assembly line, and information technology-driven pipeline factory prefabrication business. We carry out research and development in smart factory technologies, laying the foundation for the next step in constructing smart prefabrication factories. Regarding modular construction, the Group leverages the synergistic effects of the design, procurement, and construction supply chain, undertaking modular construction and application in traditional areas such as industrial furnaces, large frames, pipe racks, tower equipment, skid-mounted equipment, and flare facilities across multiple projects.</p>
<p><b>Advanced Engineering Machine</b></p>	<p>The Group advances the industrial application of automatic welding and welding robots. The application rate of automatic welding has increased by 3 percentage points year-on-year, with the successful research, development, and industrial application of technologies such as trackless crawling welding robots, nine-axis and six-axis pipeline root welding robots, significantly improving work efficiency and quality. Research and development on intelligent factory workshop technologies are conducted to explore the creation of industrialised manufacturing bases. The 2,000-tonne multi-water area mobile heavy-duty wharves and 5,000-tonne gantry cranes have been researched and developed successfully.</p>

### Digitalisation and Informatisation

In 2023, the Group proactively coordinated the construction of a digital foundation for intelligent manufacturing, advancing the construction of our engineering business. We completed the 2.0 information application architecture, the comprehensive APP, and the design of the data resource directory. Two data governance achievements were selected as Top 100 excellent data application cases by Sinopec; we compiled *Special Action Plan for High-Quality Development of Engineering Information and Digitalisation*, focusing on the construction and application of "digital engineering". We aimed to address the uneven development of information and digital construction applications in the refining and chemical engineering business domain, the issue of information construction being initiated independently, and the problem of unclear property rights due to repetitive construction. Our goal is to create an industry-leading information and digital management system, empowering the digital transformation, enhancing intelligence, and promoting high-quality development.

- In the realm of informational empowerment, the subsidiary Guangzhou Engineering Co., Ltd., in collaboration with Information Centre, has undertaken the Ministry of Industry and Information Technology's project for the adaptation verification centre of design simulation industrial software. Leveraging 26 typical application scenarios from the critical design phase of the Zhenhai Residue Hydrogenation Construction Project, 6 design software systems or platforms usage models have been established. A laboratory validation environment for the petrochemical industry's domestic design production line has been set up to carry out adaptation verification work, with the scenario applications being selected for the industrial software supply capacity catalogue.
- Regarding digital application, Information Centre, utilising the Sinopec Smart Cloud, has deployed a specialised area for our data services. Based on FIRMS data application scenarios, it has achieved a comprehensive display of 35 indicators such as cash flow, costs and expenses, and profit within the BW financial management dashboard, covering both domestic and international scopes.
- In terms of visual management, the subsidiary Tenth Construction Co., Ltd. has developed a "Digital Platform for Engineering Construction", incorporating 6 digital engines—model processing, detailed design, procurement management, construction management, visual display, digital delivery—and 18 systems or subsystems, with over 3,000 functional modules. This enhances intelligent management and digital innovation capabilities during the construction process.
- For specialised services, R&D Centre has developed the SEG Corrosion Management Platform, supporting corrosion management efforts for 52 sets of equipment across 5 refining and chemical enterprises.
- In integrated platform construction, Information Centre has built an operational management business middle platform for the refining and chemical engineering business domain, based on the Sinopec Smart Cloud. Focused on key business areas of project management and market development, it integrates six application systems—ERP, CRM, ERS, BW, MDM, CMIS—achieving six major functionalities: unified login, unified to-do list, unified display, unified alerts, unified workflow, and unified mobile application. This has resulted in a more than 30% improvement in the efficiency of business approvals, operations, circulation, and permission handling.

During the Reporting Period, the subsidiaries, Shanghai Engineering Co., Ltd., Guangzhou Engineering Co., Ltd., and Engineering Construction Co., Ltd., all obtained the AAA-level certification for the integration management system of informatisation and industrialisation.



AAA-level Certification for the Integration Management System of Informatisation And Industrialisation of Subsidiaries

**Industrial Chain Integration and Collaborative Capability**

The Group is accelerating the advancement of integrated collaborative design, integrated supply chain management, integrated constructability research, and integrated project interface management. By strengthening the standardisation of the entire business chain processes, interconnectivity of data chains, and AI applications in tool chains, we optimise the integrated collaborative working mechanism in engineering construction. This provides clients with better integrated collaborative value-added services throughout the entire lifecycle.

**Further Enhancing Digital Intelligence Empowerment**

The Group focuses on specialised technical R&D and promotional applications in areas such as modular smart manufacturing, factory prefabrication production lines, digital simulation of lifting and transportation, and intelligent equipment including motorised welding, welding robots. We are accelerating the R&D of intelligent equipment and the construction of intelligent production workshops, creating SEG pilot and model workshops.

**Smart Construction Sites and Green Engineering**

The Group accelerates the promotion of intelligent construction methods, smart site management, greening of construction processes, and visualised business supervision, significantly enhancing the construction of the safety production governance system. Leveraging technologies such as the Internet, Internet of Things (IoT), and BeiDou, we intelligently identify and match green, low-carbon, and environmentally friendly indicators and requirements throughout the project's entire lifecycle. This minimises negative impacts on the ecological environment, achieves resource-saving and recycling, and constructs green, low-carbon demonstration projects.

**Intelligent Operation and Maintenance of Facilities**

The Group expands the scope and depth of digital factory delivery, gradually achieving high-quality digital delivery of full and comprehensive engineering information. Based on intelligent factory operation application scenarios, a digital twin technology intelligent operation and maintenance platform is constructed. We further conduct remote diagnostics and innovative research, providing clients with higher quality intelligent production and maintenance services. We are accelerating the formation of the "Process Remote Technical Support Centre" and the construction of the "Process Remote Intelligent Support Service Platform", planning to create pilots in "ethylene, gasification, thermal power, and anti-corrosion" among other varieties, to form typical applications.

During the Reporting Period, the subsidiary Guangzhou Engineering Co., Ltd. was recognised as the "Energy Chemical Digital Engineering Technology Research Centre of Guangdong Province" and the "Petrochemical Industry Digital Carbon Neutrality Engineering Centre".

**Sincere Services to Clients**

**Quality Management**

As an engineering construction enterprise, quality management is not only a service that provides quality assurance to our clients but also a crucial aspect of ensuring employee safety. The Group places great emphasis on quality management, establishing a comprehensive quality management responsibility system that covers all subsidiaries and levels of engineering projects. We actively engage in the certification and auditing of management systems to ensure our quality management system meets the standards. By the end of 2023, 11 entities of the Group had passed the third-party supervisory audit for ISO9001 Quality Management System certification.

**Construction of Quality Management Systems**

- We formulated and implemented various procedural documents, such as *Quality Management Methods, Quality Management System Implementation Methods, Quality Objective Management Methods, Construction Project Construction Procedure Management Methods, Construction Standards and Specifications Management Methods, International Project Management Manual, Overseas Engineering Project Welding Process Evaluation Report Management Regulations (Trial), Quality Management Regulations, and Quality Incident Management Regulations*, continuously improving engineering quality management.

**Improving the Efficiency of the Quality Management System**

- We continuously improve the audit quality of the quality management system.
- We integrate subcontractor management throughout the quality management system process.

**Quality Management Talent Development**

- We perfect and open up ascending channels for quality professional skills.
- We conduct diversified training for operational staff and professional skill competitions.
- We establish and publish the Company's quality management expert database, covering all major specialties in refining and chemical engineering construction, and provide comprehensive guidance on the entire process of quality work from the expert database.

**On-site Engineering Quality Management**

- For key nodes of engineering project management, we compile *Sinopec Practical Series of Quality Inspections for Engineering Projects, Project Quality Control Point Checklist, Quality Inspection Management Measures, and Sub-project Inspection Checklist*, further standardising construction levels, processes, and procedures.

**Conducting Thorough Quality Inspections**

- We establish a quality control reporting mechanism, employing various modes such as daily inspections, self-inspections, and cross-project inspections to detect quality issues early in all processes, materials, components, and finished products, aiming for early discovery, handling, and resolution of quality issues.
- To enhance the verification of quality during the execution of engineering projects, we ensure equipment and performance meet quality requirements through on-site and fly-in inspections.
- The results of the supervision and inspection form a typical quality issue case database, and subsidiaries are organised to conduct training and learning.

**Perfecting the Engineering Quality Issue Handling Mechanism**

- We formulate *SEG Quality Incident Management Methods*, *SEG Welding Quality Fly-In Inspection Management Regulations (Trial)*, *SEG Construction Engineering Quality Supervision and Inspection Management Regulations (Trial)*, *Non-conforming Product Control Procedures*, and *Corrective and Preventive Measures Management Procedures*.
- We set engineering quality complaint management objectives, establishing a graded handling mechanism to supervise and resolve complaint issues, and taking special rectification measures and preventive actions for repeatedly problematic project aspects, promoting widespread learning among construction and technical personnel to prevent recurrence.

**Continuous Quality Improvement**

- We draft *Continuous Improvement Work Procedures*, developing improvement measures from aspects such as work objectives, cost of measures, systemic and incidental, improvement performance, client satisfaction, and reputation.

**Publicity and Awareness Building**

- We actively carry out publicity activities such as "Sinopec Quality Day".
- We organise welding quality inspector competitions and other activities to create a quality culture atmosphere.

**Sincere Service**

The Group has always taken it upon itself to create "model projects" and "boutique projects", injecting high-quality genes into modern chemical plants right from the source, continuously improving project management levels, serving every client with the best technology and the most advanced equipment, and comprehensively ensuring the delivery quality of each project. We have constructed a large number of key engineering projects, establishing a good brand image and market reputation, and receiving praise and appreciation from many clients. In 2023, the Sinochem Quanzhou Ethylene, the Rizhao-Puyang-Luoyang Crude Oil Pipeline, and the Tianjin LNG project, which were designed and constructed by several of our subsidiaries, won the National Quality Project Award. During the Reporting Period, the Group was honoured with 2 National Excellent Design Awards and 10 National Quality Project Awards.

**Case**

**The Group's multiple engineering projects have been awarded the "National Quality Project Gold Award" and the "National Quality Project Award"**

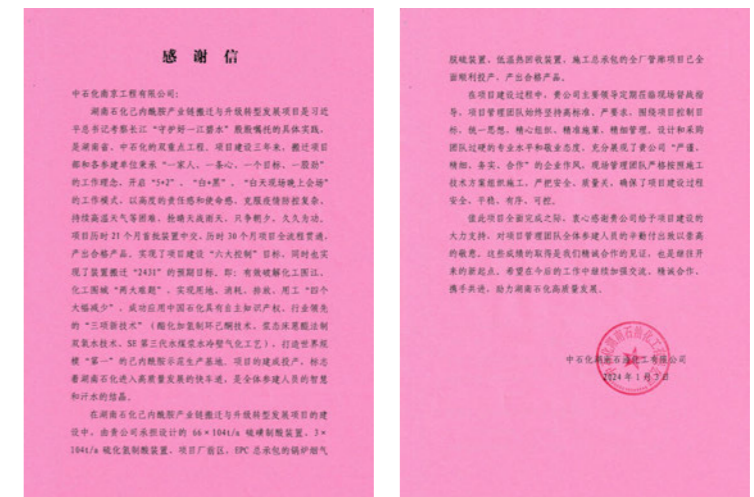
- The Sinochem Quanzhou 1 million tonnes per year Ethylene and Refinery Expansion Project, which was contracted by subsidiaries Engineering Construction Co., Ltd., Shanghai Engineering Co., Ltd., Ningbo Engineering Co., Ltd. as the general contractors, and participated by subsidiaries Tenth Construction Co., Ltd., Fifth Construction Co., Ltd., Nanjing Engineering Co., Ltd., and Heavy Lifting and Transportation Co., Ltd., received the "National Quality Project Gold Award". This project is a key construction project aimed at accelerating the construction of the Meizhou Bay Petrochemical Base.
- The Rizhao-Puyang-Luoyang Crude Oil Pipeline Project, participated by our subsidiaries Tenth Construction Co., Ltd., Nanjing Engineering Co., Ltd., and Fifth Construction Co., Ltd., received the "National Quality Project Award". The project is designed to transport 10 million tonnes per year in the short term and 18 million tonnes per year in the long term. It is a key national petroleum and natural gas infrastructure construction project, beneficial for improving the crude oil pipeline layout in China's central and eastern regions.
- The Tianjin Liquefied Natural Gas (LNG) Project Terminal and Receiving Station, contracted by subsidiary Engineering Construction Co., Ltd. as the general contractor and subsidiary Fourth Construction Co., Ltd. as the construction general contractor, received the "National Quality Project Award". The project employs the complete LNG receiving station technology developed by proprietary intellectual property rights of the subsidiary Engineering Construction Co., Ltd.

**Efficient Project Construction Earns Praise from Clients**

The ExxonMobil Huizhou Ethylene Project has been efficiently advanced, receiving high praise from the client and was honoured with the "Global Project Safety President's Award." This project is the first major petrochemical project solely invested by an American company in China and is also the largest foreign-funded project undertaken by SEG within China. The successful implementation of this project will provide an excellent example for the aggregation of high-end capacities in China and will also help the Chinese special model in the refining and chemical engineering field to reach a broader stage.



Engineering Construction Co., Ltd. was Honored with the "Global Project Safety President's Award" Issued by the Client



Nanjing Engineering Co., Ltd., Undertook A Key Project in Hunan Province - the Relocation And Upgrade Transformation Development Project of the Hunan Petrochemical Caprolactam Industrial Chain, Receiving A Letter of Appreciation from Sinopec Hunan Refining & Chemical Co., Ltd.

## Supplier Management

The Group highly prioritises supplier management and is committed to enhancing the sustainability and transparency of the supply chain. To ensure the quality and credibility of our suppliers, we strictly control the entry mechanism, setting different entry conditions for various types of suppliers, specifying that key ESG elements such as QHSE management, quality system establishment, green product certification, social responsibility fulfilment, and penalties for violations of energy conservation and environmental protection laws are included in the supplier qualification review scope. This clarifies suppliers' responsibilities and obligations in environmental protection, resource conservation, and social responsibility, effectively mitigating ESG risks at the supply chain level. By the end of 2023, our Group had approved 183 suppliers through qualification review, and audited the product catalogues of suppliers for 160 batches.

We rigorously implement *Sinopec Material Procurement Tendering and Bidding Management Measures*. To prevent corruption, we have formulated *Interim Measures for Credit Risk Management* based on *Sinopec Six Prohibitions on Governance of Commercial Bribery in the Material Supply System* and have specified the supply behaviour codes and anti-corruption requirements in *Material Supply Management Regulations*, *Material Procurement Management Methods*, and *Material Procurement and Supply Resource Management Methods*. For suppliers with whom we have business relations, we require the signing of *Integrity Compliance Commitment* to regulate transaction behaviour and maintain a healthy material procurement ecosystem. In 2023, the signing rate of *Integrity Compliance Commitment* by suppliers reached 100%. To improve procurement efficiency and transparency, we continuously perfect the construction of procurement management and operational platforms consisting of ERP, EPEC, EC, CMIS, etc., fully realising online procurement for various materials and services within the Group, and providing real-time auditing and review functions for supervisory departments, further enhancing the openness and transparency of the procurement process.

We adhere to the concept of green procurement, strictly conducting our work in accordance with *Sinopec Green Procurement Management Measures*, *Sinopec Green Materials Procurement Catalogue*, and *Green Industry Guidance Catalogue*. We require suppliers to use environmentally friendly raw materials and production processes, minimising environmental impact. For environmental issues caused by suppliers, we promptly conduct internal reporting and management work and take corresponding measures; for economic losses and social impacts caused to users by suppliers' environmental violations, we process according to the breach of contract and intensify the punishment for deliberate concealment behaviours.

Furthermore, we actively carry out supplier communication, listening to their demands, advocating for, and promoting long-term cooperation with excellent suppliers. We organise supplier conferences and commend outstanding suppliers based on comprehensive strength evaluations including basic qualifications, production and operation status, credit rating, equipment capabilities, quality assurance system, performance, and cooperative attitude, building a mutually beneficial new business format. In 2023, 343 new suppliers established service relationships with the Group, totalling 3,987 suppliers.

## Subcontractor Management

The Group steadfastly adheres to the principles of cooperation, harmony, mutual benefit, and win-win situations. In alignment with these values, we have established and implemented a *Subcontractor Management Rules* to standardise the creation of subcontractor resource libraries, subcontracting processes, evaluation standards for subcontractors, and on-site management requirements.

We have integrated subcontractor management into the Group's quality management system to ensure that the standards for training, inspection, assessment, and management are uniformly aligned with our internal standards. Furthermore, to enhance management efficiency, we have established a strategic subcontractor management mechanism for high-quality subcontractors with whom we have long-term partnerships. This mechanism outlines a company-level unified approach for cultivating strategic subcontractors, covering aspects such as task planning, process management, assessment and evaluation, and promotion and demotion management.

### Systematic Improvement

- In accordance with various regulations and guidelines such as *Sinopec Regulations on the Management of Engineering Construction Subcontracting*, *SEG Subcontractor Management Methods*, *SEG Subcontractor Contracting Management Regulations*, *SEG Subcontractor Assessment and Evaluation Management Regulations*, *SEG Subcontractor On-site Management Regulations*, *SEG Subcontractor Resource Library Management Regulations*, and *SEG Strategic Subcontractor Management Methods*, we ensure unified management standards, work procedures, resource library establishment, and implementation of assessments and evaluations. At the team management level, *SEG Guide to the Construction of 'Three Basics' Work Safety Standardisation Teams* has been developed, promoting the construction of standardised teams across the Board and gradually standardising team organisation and safety activities.

### Entry Threshold Control

- We maintain strict entry standards, especially for key engineering projects where we prioritise and guide the selection of strategic partners as subcontractors to ensure high-quality project progression. Additionally, we actively explore labour subcontracting models in certain key projects to ensure legal and compliant labour practices.
- Before subcontractors' key personnel enter project sites, we conduct interviews and screenings to ensure their competency, thereby safeguarding project success.

### Enhancement of Training Capabilities

- Subcontractor key personnel are included in integrated training programs organised regularly by our subsidiaries, offering and expanding various business training opportunities to improve subcontractor management levels.

### Regular Assessments and Audits

- A comprehensive system audit of strategic subcontractors is conducted every three years to continuously optimise our subcontractor teams. In 2023, 14 strategic subcontractors were demoted due to poor assessment scores.
- Monthly and annual assessments are conducted for subcontractors from various dimensions such as safety, quality, schedule, and green construction. Annual audits of subcontractors' qualifications, credit, and QHSE systems are carried out regularly. Subcontractors are dynamically managed based on assessment results and promotion or demotion management methods. In 2023, QHSE system audits were conducted for 870 subcontractors, including 100% coverage of 91 strategic subcontractors.
- Important ESG-related indicators such as integrity construction and migrant worker wage payment are incorporated into the subcontractor assessment and management system.

### Sharing Practical Experiences

- Special meetings on subcontract management work are organised to share and exchange experiences in subcontract cost control, labour subcontracting implementation, and overseas subcontractor management. These activities assist subcontractors in identifying weaknesses and strengthening their self-monitoring capabilities.

We also place high importance on the integrity management of subcontractors, actively signing integrity agreements, disseminating integrity policies, and establishing a strong sense of boundary awareness. In 2023, the subsidiary Shanghai Engineering Co., Ltd. actively conducted integrity risk investigation work, comprehensively scrutinising 21 positions, identifying 83 issues, and developing corresponding control measures for each issue.

Moreover, we actively respond to and implement national policies related to *Regulation on Ensuring Wage Payment to Migrant Workers*, enhancing supervision and management of subcontractors in the payment of migrant workers' wages to genuinely protect the legal rights and interests of a broad group of migrant workers. In 2023, the Group set up specialised accounts for migrant workers' wages in 30 projects, totalling 100 accounts for migrant workers' wages, implementing the proxy payment of migrant workers' wages to prevent arrears.



# Community Relations

The Group is dedicated to giving back to society, leveraging our strengths to actively participate in community development and fostering harmonious communities.

We utilise our employer advantages prioritising the employment of local workers in our operations both domestically and abroad, creating more job opportunities for local residents. During the Reporting Period, the Group employed 533 persons, indirectly advancing the economic development of the communities where our businesses are located. Annually, the Group conducts skill training for over 20,000 person-times among social personnel through business outsourcing, temporary hiring etc., promoting the skill development of industry chain personnel and indirectly enhancing community economies.

We operate our overseas projects under the principle of "people-oriented, respect-promoting development". We respect local cultures, establish effective communication mechanisms to ensure the harmonious operation of projects, and contribute to local economic development and community building through diversified means such as recruitment, donations, and educational charity activities.

<b>Community Relations</b>	We have established the position of Geographical Relations Officer (GRO) in foreign operations, held by full-time personnel familiar with local cultures. They are responsible for collecting feedback and opinions from local community residents and providing internal cultural training. This helps our employees better understand local operational mechanisms, reducing obstacles caused by cultural differences and communication difficulties in overseas project operations.
<b>Cultural Respect</b>	During our international operations, we deeply respect the cultural and customary needs of our global staff. For Muslim employees, we build ventilated prayer rooms and purchase prayer mats. We also organise holiday activities based on the nationality, religion, and cultural backgrounds of the project team members, and provide cross-cultural exchange meetings and experiences of Chinese traditional festivals to promote cultural exchange.
<b>Local Employment</b>	We actively pursue localised employment, driving local employment and economic development while achieving diversity in employee composition. During the Reporting Period, the subsidiary Fourth Construction Co., Ltd. indirectly provided about 40,000 job positions in the project construction locations.
<b>Community Contributions</b>	We integrate into foreign community environments, undertake social responsibilities, and participate in various charitable activities. In 2023, Nanjing Engineering Co., Ltd. of our Group conducted a charity education activity themed "Love for Education, Enlightening Hearts" at the 24th School in Dammam, Saudi Arabia, and received an "Education Charity" certificate from the Saudi Ministry of Education.

**Case**

**Promoting Local Employment**

In 2023, Saudi Arabia Co., Ltd. of our group. actively participated in Community Development Programs (CDP), creating more job opportunities locally. During this period, more than 2,000 job opportunities were resolved locally in Saudi Arabia, with over 1,000 individuals successfully registered in the Saudi Ministry of Labour (Tagat) system and 300 Saudi nationals recruited through the Saudi Human Resources Development Fund (HRDF).

**Case**

**"Green Hope + Red Volunteer" Action, Building Green Communities Together**

On February 28, 2023, the subsidiary Shanghai Engineering Co., Ltd. launched the "Green Hope + Red Volunteer" activity. Volunteers entered the community to collect used batteries from residents and used knowledge lectures and fun games to explain China's green development stories and promote environmental protection knowledge and green living.



"Green Hope + Red Volunteer" Action of Shanghai Engineering Co., Ltd.

**"Exploring Smart Energy" Public Open Day, Bridging School-Enterprise Communication**

The subsidiary Guangzhou Engineering Co., Ltd. hosted a "Exploring Smart Energy" public open day, inviting teachers and first-year high school students from Guangzhou Middle School to visit the company. The event included a "career experience" activity, allowing participants to understand the corporate culture system and development history, and to deeply experience petrochemical interactive installations through VR technology.



"Exploring Smart Energy" Public Open Day of Guangzhou Engineering Co., Ltd.

**Celebrating the Festivals of China and Saudi Arabia Together, Promoting the People-to-People Bond between the Two Countries**

On September 23, 2023, in anticipation of the upcoming National Day of Saudi Arabia and the National Day of China, the subsidiary Nanjing Engineering Co., Ltd. organised a grand celebration event among the Chinese and Saudi Arabian staff at the camp. During the event, staff from both countries enjoyed tasting exotic foods, participating in cultural activities, and exchanging national flags and medals.



Celebrating the Festivals of China and Saudi Arabia of Nanjing Engineering Co., Ltd.

# Charity and Public Welfare

With gratitude in our hearts, we actively engage in social welfare and charity activities, such as supporting rural revitalisation and consumption assistance, educational aid, and participating in flood rescue and disaster relief efforts. We are committed to fulfilling our social responsibilities, promoting the spirit of "dedication, love, mutual assistance, and progress", and actively organising volunteer activities for our employees. During the Reporting Period, our employees participated in volunteer activities 225 person-times, contributing a total of 556 hours of volunteer service.

Our Group systematically conducts donations under the regulations of *Charity Law of the People's Republic of China*, *Notice on Strengthening the Management of Foreign Donations by Central Enterprises*, *Supplementary Notices on the Management of Donations by Central Enterprises* issued by the State-owned Assets Supervision and Administration Commission of the State Council. Complying with *SEG Regulations on External Donations Management*, and following the principles of legality, budget management, graded approval, living within our means, and showcasing our image, we carry out our donation work in an organised manner. During the Reporting Period, the Group made total donations amounting to 1,033,500 RMB.

## 2023 Public Welfare Projects

### Rural Revitalisation

#### Consumption Assistance

- The subsidiary Engineering Construction Co., Ltd. continuously expands channels for consumption assistance, purchasing 912,200 RMB worth of Dongxiang quinoa products.
- The subsidiary Guangzhou Engineering Co., Ltd. purchases more than 400,000 RMB worth of agricultural products.
- The subsidiary Shanghai Engineering Co., Ltd. participates in pairing assistance between urban and rural party organisations, purchasing more than 30,000 kilograms of rice produced by farmers.
- The subsidiary Ningbo Engineering Co., Ltd. purchases products such as Dongxiang quinoa from Gansu, edible mushrooms and oil from Yuexi, Anhui, as gifts for the company's employees during festivals.
- The subsidiary the Fourth Construction Co., Ltd. continues to participate in collaboration projects between the eastern and western regions, donating 100,000 RMB annually to Gannan, Gansu, and purchasing products from impoverished areas.
- The subsidiary Tenth Construction Co., Ltd. purchases 496,100 RMB worth of poverty alleviation goods.



Engineering Construction Co., Ltd. Purchasing Dongxiang Quinoa Products

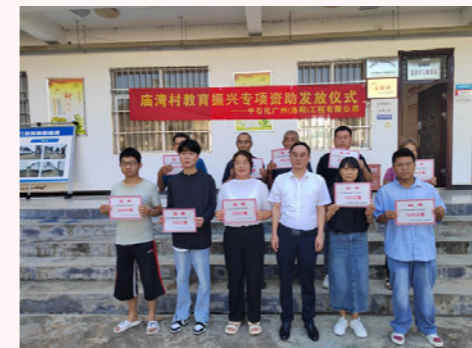


Shanghai Engineering Co., Ltd. Participates in Pairing Assistance

### Rural Revitalisation

#### Educational Assistance

- The trade union of Engineering Construction Co., Ltd. donated 48,500 RMB to the Gansu Provincial Poverty Relief Foundation to purchase 100 sets of sports equipment love packs, which were donated to Dongxiang County Petrochemical Middle School.
- The subsidiary Guangzhou Engineering Co., Ltd. established a special fund for educational revitalisation for students from Miaowan Village, Santun Town, with financial difficulties, conducted various charitable educational activities, assisted in repairing school facilities, and by the end of 2023, had donated more than 90,000 RMB in total, supporting 21 young students. Additionally, it carried out educational pairing assistance for Yexi Petrochemical Junior High School in Yuexi County, Anhui.
- The subsidiary Ningbo Engineering Co., Ltd. based on in-depth research findings, proposed a comprehensive approach to educational assistance through "Nine Deliveries and Three Assists", developed a sister school pairing assistance mechanism between Ningbo New Blue Youth School and Longquan School, and organised over 50 teachers and students from Longquan School to Lanzhou for a "Pursuing Sinopec Memories" summer cultural and educational tour.



Guangzhou Engineering Co., Ltd. Established a Special Fund for Educational Revitalisation for Students



Ningbo Engineering Co., Ltd. Developed A Summer Cultural And Educational Tour

### Volunteer Services

- Youth volunteers of Engineering Construction Co., Ltd. of our group actively participated in the "Clean Geothermal, Green Earth" World Geothermal Congress, providing guidance and consultation services to domestic and foreign guests. The total volunteer service time exceeded 60 hours.
- The subsidiary Ningbo Engineering Co., Ltd. organised a Party member volunteer service team that annually visits retired employees over 80 years old, those living alone, or those hospitalised, to assist with property heating subsidy registration.
- The Youth League Committee of Heavy Lifting and Transportation Co., Ltd. of our group launched the "Love Passes On, Warm Old Clothes" Lei Feng Day charitable donation activity.



Youth Volunteers of Engineering Construction Co., Ltd. Serve at the "Clean Geothermal, Green Earth" World Geothermal Congress

Flood Rescue and Disaster Relief

- The subsidiary Fifth Construction Co., Ltd. supported the flood and disaster relief work in the Beijing-Tianjin-Hebei region. The company dispatched 6 trucks and 2 cranes, organising nearly 80 employees to cooperate with the local government in clearing silt, repairing roads, and fixing houses. They visited and consoled 200 households affected by the disaster, distributing water, food, and other urgently needed supplies, with a total investment of more than 150,000 RMB in rescue and disaster relief funds.



Device of Flood and Disaster Relief Work from Fifth Construction Co., Ltd.

# Environmental Performance

## A1 Emissions

### General Disclosure

The Group rigorously adheres to *Environmental Protection Law of the People's Republic of China, Air Pollution Prevention and Control Law, Water Pollution Prevention and Control Law, Solid Waste Pollution Environmental Prevention Law, and Environmental Noise Pollution Prevention Law*, among other national and local laws and regulations, as well as relevant laws and regulations in the countries where projects are located.

The Group has established various systems, including *SEG Environmental Protection Management Regulations, SEG Environmental Information and Environmental Protection Statistics Management Regulations, SEG Solid Waste Environmental Protection Management Guidelines for Engineering Projects (Trial)*, and *SEG Environmental Protection Management Guidelines for Prefabrication Yards of Engineering Projects (Trial)*, to regulate the management of various emissions such as air pollutants, waste, wastewater, and greenhouse gases. We are committed to reducing pollutant emissions during operations and comprehensively managing our environmental footprint.

### A1.1 The types of emissions and respective emissions data.

The primary air pollutants produced by the Group's production and operations include dust and VOCs. Dust mainly originates from shot blasting, sandblasting, rust removal, welding, grinding, and cutting processes. For dust pollution, the Group employs source control measures, planning enclosed workshops for sandblasting and shot blasting operations and strictly prohibiting open-air operations. Ventilation dust removal and adsorption equipment are installed in prefabrication yard workshops to absorb dust produced by operations. Dust purifiers are installed for welding, grinding, and cutting fumes, cartridge dust collectors for shot blasting processes, and environmentally friendly recycling sandblasters with dust recovery systems for sandblasting processes. Additionally, the emission rate and concentration at the discharge ports of ventilation and dust removal equipment are regularly monitored and recorded. VOCs primarily originate from the volatilization of paint during anti-corrosion and painting operations. For VOCs pollution, the Group adopts strict operational control measures, conducting paint mixing, spraying, and drying processes in closed environments as much as possible, and equipping VOCs collection and treatment facilities to collect and incinerate all VOCs produced during operations before discharge.

During the Reporting Period, the Group carried out VOCs hazard management, held VOCs hazard management discussion meetings, and, after analysing feasibility reports from several subsidiaries, selected two projects from Ningbo Engineering Co., Ltd., and Tenth Construction Co., Ltd., as pilots for VOCs hazard management, achieving good results. The Group's VOCs emissions for the Reporting Period amounted to 2,457.60 tonnes.

The Group's SOx and NOx emissions mainly come from automobile exhaust and other operational machinery exhaust. This Report includes automobile exhaust and gas fuel combustion in the SOx and NOx statistics scope. In the future, we plan to gradually refine the statistics scope to include atmospheric pollutants produced by external subcontractors, leased vehicles, and equipment. This year, we optimised the statistical and calculation methods for SOx and NOx emissions, detailing the specific driving mileage of each vehicle causing emissions, replacing the previous estimation method. During the Reporting Period, the Group's SOx emissions were 3.52 tonnes, and NOx emissions were 71.56 tonnes.

### A1.2 Greenhouse gas emissions (in tonnes) and, where appropriate, intensity (e.g., per unit of production volume, per facility).

Indicators	Unit	2023	2022	2021
Total GHG emissions	Tonne CO <sub>2</sub> e	111,136.88	105,229.85	111,873.76
Scope 1 emissions	Tonne CO <sub>2</sub> e	45,612.41	48,357.30	46,848.89
Scope 2 emissions	Tonne CO <sub>2</sub> e	65,524.47	56,872.55	65,024.87
GHG emissions per unit revenue	Tonne CO <sub>2</sub> e/100 million RMB	197.64	198.44	193.69

The Group's direct greenhouse gas emissions primarily stem from the consumption of diesel, gasoline, natural gas, liquefied petroleum gas, acetylene, propane, and other natural resources and energy sources in operations, reported under "Scope 1 Greenhouse Gas Emissions Total". Indirect emissions, mainly from purchased electricity and heat, are reported under "Scope 2 Greenhouse Gas Emissions Total". Due to the extensive range of the Group's industrial chain projects, statistics on Scope 3 emissions have not yet commenced but will be progressively refined in the future.

**A1.3 Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g., per unit of production volume, per facility).**

During the Reporting Period, the Group refined hazardous waste statistics, reporting a total generation of 556.83 tonnes<sup>Note 1</sup>, of which 429.74 tonnes were recycled<sup>Note 2</sup>, and 127.09 tonnes were disposed of by third parties<sup>Note 3</sup>.

Indicators	Unit	2023	2022	2021
Amount of hazardous waste produced	Tonne	556.83	784.92	982.64
Intensity of hazardous waste	Tonne/100 million RMB	0.99	1.48	1.70
Disposal rate of hazardous waste	%	100	100	100

Note 1: All hazardous wastes generated by the production and operation of the Group are entrusted to qualified third-parties for disposal. The two sub-items of this indicator are based on whether the hazardous waste materials are recycled.

Note 2: Handled and recycled by third-parties.

Note 3: Handled by third-parties, but no enough information on whether the waste materials are recycled or not.

The Group defines hazardous wastes as materials that exhibit dangerous or potentially harmful properties, as listed in the National Directory of Hazardous Wastes or identified through national identification standards and methods. Major wastes generated during business operations include paint contaminants like paint containers and paint waste, toner cartridges, fluorescent tubes, etc. To ensure proper handling and disposal, the Group works with qualified third-party service providers to either recycle or safely treat these hazardous materials.

The Group adheres to national regulations for hazardous waste identification and ensures proper classification, recycling, reuse, and harmless disposal of such waste. By integrating these practices into environmental protection and inspection routines, the Group aims to prevent improper storage or mixing of hazardous and non-hazardous waste, thereby enforcing corrective measures and establishing long-term control mechanisms to safeguard the environment.

**A1.4 Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g., per unit of production volume, per facility).**

During the Reporting Period, the Group refined the statistics on non-hazardous waste, resulting in a total generated amount<sup>Note 1</sup> of 86,129.54 tonnes. Of this, 17,110.93 tonnes were recycled<sup>Note 2</sup>, and 69,018.61 tonnes were disposed of by third parties<sup>Note 3</sup>.

Indicators	Unit	2023	2022	2021
Amount of non-hazardous waste produced	Tonne	86,129.54	87,834.91	51,314.78
Intensity of non-hazardous waste	Tonne/100 million RMB	153.20	165.64	88.84
Disposal rate of non-hazardous waste	%	100	100	100

Note 1: All non-hazardous waste was disposed of by third parties.

Note 2: The portion recycled by third parties.

Note 3: The portion disposed of by third parties, where the method of disposal is uncertain.

The non-hazardous waste generated by the Group primarily includes waste wood products, waste paper, waste plastic products, waste composite packaging materials, waste steel, waste non-ferrous metals, waste mechanical products, waste transportation equipment, waste batteries, waste electrical and electronic products, construction waste, and domestic waste. These mainly originate from construction and contracting units during the construction, expansion, and demolition of various buildings, structures, pipelines, etc., as well as from daily office work. For the parts of non-hazardous waste that can be recycled, including waste wood products, waste steel, and construction waste like discarded soil and materials, the Group undertakes recycling efforts. For parts that cannot be recycled in-house, they are handled by qualified third parties, with some parts being recycled and the rest being disposed of.

The Group strictly abides by waste discharge management policies, and handles and stores non-hazardous waste in an appropriate manner, making it a priority in daily environmental protection supervision. We select appropriate disposal methods for stored construction waste, works to standardise record-keeping, implements standardised waste separation signage, and establishes long-term management and control systems.

**A1.5 Description of emissions target(s) set and steps taken to achieve them.**

Targets	Detailed Description	Countermeasures
Target for greenhouse gas reduction	<ul style="list-style-type: none"> <li>During the "14<sup>th</sup> Five-Year Plan" (2021-2025) period, reduce greenhouse gas emission intensity by 5.7%.</li> <li>The greenhouse gas reduction data baseline is 193.69 tonnes of CO<sub>2</sub> per 100 million RMB (2021), including emissions from the Group's offices and related engineering construction projects. This reduction target is voluntarily set by the Group and not mandated by regulation.</li> </ul>	Optimise energy consumption structure in engineering construction and office processes, actively conduct research on carbon reduction and carbon trading.

To achieve the established emission reduction targets, the Group strictly adheres to the relevant systems set by Sinopec, including *Sinopec Water Resources Conservation Management Measures*, *Sinopec Contract Energy Management Project Management Measures*, and *Sinopec Carbon Emission Management Measures*. We implement these measures and provide clients with energy-saving, consumption reduction, and clean production services. The greenhouse gas reduction targets are primarily set for resource consumption during the construction project process.

**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.**

Target	Detailed Description	Countermeasures
Target for emission reduction of wastes	<ul style="list-style-type: none"> <li>During the 14<sup>th</sup> Five-Year Plan (2021-2025) period, the Group strives to reduce non-hazardous waste emission by 11% per 100 million RMB of revenue.</li> <li>The baseline data for non-hazardous waste emission reduction is 88.84 tonnes/100 million RMB (2021). Emission reduction entities include the Group offices as well as related construction projects. The target is set voluntarily by the Group and is not a mandatory regulatory requirement.</li> </ul>	Waste reduction devices are designed and used to minimise waste emissions at source.
Target for disposal volume of hazardous wastes	<ul style="list-style-type: none"> <li>During the 14<sup>th</sup> Five-Year Plan (2021-2025) period, the Group strives to reduce disposal volume of hazardous wastes by 8% per 100 million RMB of revenue.</li> <li>The baseline data for solid waste entrusted for process and disposal is 1.7 tonnes/100 million RMB (2021). The entities covered by the reduction of solid waste entrusted for process and disposal include the Group office as well as related construction projects. The target is set voluntarily by the Group and is not a mandatory regulatory requirement.</li> </ul>	Actively promote project construction management level, strive to reduce the generation of hazardous wastes.

The waste generated by the Group primarily consists of general solid waste, household garbage, and hazardous waste. General solid waste mainly originates from construction units and contractors during the construction, expansion, renovation, and demolition of various buildings, structures, pipelines, and from daily office operations. Household garbage arises from the daily lives of employees, while hazardous waste primarily comes from construction activities and daily office work. For both general solid waste and hazardous waste, the Group undertakes recycling and reuse internally. For the portion that cannot be recycled internally, we entrust third-party companies for recycling and disposal. As for household garbage, it is uniformly managed and disposed of by municipal departments.

## A2 Use of Resources

### General Disclosure

The Group strictly adheres to *Energy Conservation Law of the People's Republic of China, Cleaner Production Promotion Law of the People's Republic of China, Regulations on Energy Conservation in Civil Buildings*, and other related laws and regulations. The Group has established internal management regulations and systems such as *SEG Environmental Protection Management Regulations, SEG Environmental Information and Environmental Protection Statistics Management Regulations*, and *Contract Energy Management Project Management Methods of Sinopec Energy Management Co., Ltd.*, while also following *Sinopec Contract Energy Management Project Management Methods, Sinopec Water Resources Conservation Management Method*, and *Sinopec Carbon Emission Management Method* to ensure resource conservation throughout the Group's operations.

The Group leverages the complete industrial chain advantage in engineering construction to actively promote the research and application of new energies, new technologies, and new equipment, aiming to build green engineering projects and green factories. Measures have also been taken to optimise the energy structure, including phasing out the use of coal-fired boilers and promoting the use of clean and efficient gas boilers.

### A2.1 Direct and/or indirect energy consumption by type (e.g., electricity, gas or oil) in total (kWh in 1,000s) and intensity (e.g., per unit of production volume, per facility).

Indicators	Unit	2023	2022	2021
<b>Direct Energy Consumption</b>				
Consumption of diesel	Tonne	9,947.85	9,967.21	9,425.57
Consumption of gasoline	Tonne	2,416.36	3,062.78	3,337.56
Consumption of natural gas	Cubic Metre	666,081.15	584,582.15	455,314.89
Consumption of liquefied petroleum gas	Tonne	839.30	336.65	337.42
Consumption of acetylene	Tonne	1,417.00	1,650.32	2,473.22
Consumption of propane	Tonne	175.33	137.66	304.00
<b>Indirect Energy Consumption</b>				
Consumption of purchased electricity	MWh	110,723.34	93,476.26	95,247.97
Consumption of purchased heat	Million KJ	21,261.82	22,756.31 <sup>Note 1</sup>	63,833.22
Consumption of integrated energy converting to standard coal	Tonne of standard coal	46,478.66	46,475.05	51,006.33
Integrated energy consumption intensity per revenue	Tonne of standard coal/100 million RMB	82.67	87.64	88.31

Note 1: Since 2022, the Group has refined and adjusted the calculation method for purchased heat according to China's *Design Standard for Energy Efficiency of Residential Buildings in Severe Cold and Cold Zones*, resulting in significant data changes.

### A2.2 Water consumption in total and intensity (e.g., per unit of production volume, per facility).

Indicators	Unit	2023	2022
Groundwater withdrawal <sup>Note 1</sup>	Tonne	59,458.00	392,898.7
Surface water withdrawal <sup>Note 2</sup>	Tonne	269,080.00 <sup>Note 5</sup>	11,570.5
Seawater withdrawal <sup>Note 3</sup>	Tonne	0	500,042
Third-party water supply (municipal water) withdrawal <sup>Note 4</sup>	Tonne	2,913,941.06	2,726,046.23
Total Office water resource consumption	Tonne	1,189,181.19	1,174,291.76
Total construction activity water consumption	Tonne	2,006,266.62	2,004,596.79
Other water resource consumption	Tonne	47,031.25 <sup>Note 6</sup>	451,668.88

Indicators	Unit	2023	2022	2021
Total water resource consumption	Tonne	3,242,479.06	3,630,557.43	6,226,047.49
Water resource consumption intensity	Tonne/100 million RMB	5,767.42	6,846.49	10,779.17

Note 1: The source of third-party water withdrawal is the groundwater component.

Note 2: The source of third-party water withdrawal is the surface water component from national rivers, lakes, canals, channels, and reservoirs with utility functions.

Note 3: The source of third-party water supply includes the seawater component.

Note 4: Municipal water supply.

Note 5: During the Reporting Period, Ningbo Engineering Co., Ltd. adjusted its water usage structure, resulting in an increase in the amount of surface water used compared to the previous year, leading to significant differences in the data over the past two years.

Note 6: During the Reporting Period, the Group adjusted the statistical scope of water resource consumption, and the total data of other water resource consumption changed significantly.

### A2.3 Description of energy use efficiency target(s) set and steps taken to achieve them.

The Group has not yet set specific energy efficiency targets but plans to improve the formulation of such goals in the future. During the Reporting Period, the Group actively pursued research and application of low-carbon process technologies such as low-temperature waste heat utilisation, aiming to reduce our own energy consumption and assist clients in achieving efficient energy use. Details on specific energy management measures and their effectiveness can be found in the "Energy Management" section.

### 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.

During the Reporting Period, there were no issues encountered in sourcing suitable water. The Group has not yet established quantified water-saving targets but plans to do so in the future. We encourage our staff to actively improve water use efficiency in office operations and project construction. Our water-saving measures include promoting the engineering application of zero-discharge wastewater technologies to significantly reduce the consumption of fresh water, using water-saving devices to prevent wastage, and employing sewage treatment systems to treat wastewater, which is then recycled for purposes such as irrigation.

### A2.5 Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.

The Group's operation does not involve the consumption of packaging materials for finished products.

### A3 Environment and Natural Resources

**General Disclosure**

The Group steadfastly adheres to *Environmental Protection Law of the People's Republic of China* and other relevant environmental regulations applicable within the regions of our operations. We are committed to our responsibilities towards environmental and natural resource conservation both within China and on a global scale, strictly observing ecological constraints and environmental protection standards. In the course of executing construction projects, we meticulously evaluate the potential impacts on biodiversity and natural resources, endeavouring to mitigate adverse environmental effects. To eliminate negative effect of ecological effect, the Group has instituted several regulations, including *SEG Environmental Protection Management Regulations*, *SEG Regulations on Management of Environmental Information and Environmental Protection Statistics*, *SEG Regulations on HSE Risk Control, Investigation and Management of Potential Hazards (Trial)*, *SEG Guidelines for Environmental Protection Management at Engineering Project Prefabrication Sites (Trial)*, *Procedures for Identification, Risk Assessment, and Control Management of Environmental Factors*, and *Environmental Performance Management Procedures*. Furthermore, we follow a range of protocols established by Sinopec, including *Sinopec Radiation Management Measures (Trial)*, *Sinopec Greening Management Regulations*, *Sinopec Ecological and Environmental Incident Management Measures*, *Sinopec Ecological and Environmental Incident Accountability Management Measures*, *Sinopec Environmental Factors Identification, Evaluation, and Control Management Measures*, *Sinopec Emergency Environmental Incident Risk and Emergency Management Measures*, to govern relevant activities.

**A3.1 Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.**

The Group has implemented a comprehensive environmental management system, organising it into a three-tier structure comprising the "ESG Committee of the Board - HSE Committee of the Management - Execution". When business operations or related management activities significantly affect major environmental and natural resources, the Quality and Safety Department compiles the specific risks encountered by the Group and submits them to the HSE Committee for evaluation. The ESG Committee of the Board then undertakes the corresponding oversight responsibilities.

We advocate for the certification of environmental management systems as a means to standardise the development of the Group's environmental management framework. By the end of 2023, 11 entities of the Group had passed the third-party supervisory audit for the ISO14001 Environmental Management System certification, accounting for 100% of the Group's operating revenue.

Types of potential environmental and natural resource impacts	Countermeasures
<b>Destruction of ecological environment</b>	Carry out no construction on World Heritage sites or any areas where development is prohibited by ecological red lines. Respect all internationally regulated legal protected areas, including those classified as Ia, Ib, II, III, IV, V and VI protected areas regulated by the International Union for Conservation of Nature (IUCN). For construction in environmentally sensitive areas and areas with high surface destruction, strictly follow internal environmental protection measures and soil erosion prevention measures.
<b>Soil degradation or cultivated land pollution</b>	The construction of long-distance pipelines may cause soil degradation. The Group exercises strict control over the construction area, implements hydraulic protection measures, and restores the landform promptly. These actions effectively prevent pollution of cultivated land and forest land.
<b>Pollution of rivers and waters neighbouring the projects</b>	Ensures that all wastewater generated during construction, including drainage from foundation pits, tunnel construction wastewater, site flushing water, and wastewater generated from pressure tests, is properly managed. The wastewater is either reused for road watering or discharged to designated locations, following the requirements outlined in the contract or by the client. Properly sedimented the wastewater before reuse or discharge to minimise pollution to rivers and surrounding waters.

### A4 Climate Change

**General Disclosure**

As a significant engineering service provider and technology patent holder in the petrochemical sector, the Group places a high emphasis on the impacts of climate change. We actively respond vigorously to *Sinopec's Declaration on Carbon Peaking and Carbon Neutrality in the Petroleum and Chemical Industry*. In compliance with *Sinopec 2030 Carbon Peaking Action Plan*, we proactively deploy relevant work within the Group, contributing to the push towards clean and low-carbon energy development. We willingly undertake Sinopec Group's strategies, targets, roadmaps, and supporting measures for carbon peaking and carbon neutrality, thereby actively contributing to climate change mitigation efforts.

**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.**

The Group's Board of Directors oversees climate-related topics and tasks, with the ESG Committee responsible for identifying climate-related issues and recommending actions to the Board of Directors, as well as supervising the implementation of the Group's climate change response plans.

The Group refers to *International Financial Reporting Standards Sustainability Disclosure Standard S2: Climate-related Disclosures (IFRS S2)* for guidance on identifying and reporting the principal risks associated with climate change. Moving forward, the Group will further develop action plans related to ESG, including those addressing environmental and climate risks.

Risk Type	Climate-related Risks and Impacts	Countermeasures
Physical Risks	<b>Acute Risk</b> Increased frequency of extreme weather events such as heavy rain, floods, and typhoons may cause interruptions to project construction, damage to project materials, disruptions to transportation routes leading to delays in material delivery, thereby extending the project delivery cycle and corporate financial turnover period. This could expose projects to performance risks.	Conduct emergency drills regularly, and develop contingency plans in advance for potentially affected projects, including material reserves, personnel deployment, and safety protection.  Continuously optimise supply chain management to enhance the resilience of the supply chain against extreme climate events.
	<b>Chronic Risk</b> Includes long-term climate change risks, such as global temperature rise leading to sea-level rise, indirectly causing water scarcity, potentially impacting the safety and maintenance costs of our completed/ under-construction projects.	Actively engage in planning and design to improve the intrinsic safety level of designs against climate change, and reduce potential financial costs.

Risk Type	Climate-related Risks and Impacts	Countermeasures
Transition Risks	<p><b>Policy and Legal Risk</b></p> <p>China's implementation of a quota system for carbon emissions may increase the carbon emission compliance costs for the Group if it is included among the key emitters in the national carbon emissions trading market.</p>	<p>Actively conduct carbon trading research, perfect internal carbon inventory mechanisms, and prepare in advance for coverage by the emissions trading market.</p> <p>Explore carbon emission factor accounting for petrochemical enterprises' public utilities, improve transparency and credibility of carbon emission data disclosure, and aid in establishing industry carbon accounting standards.</p>
	<p><b>Reputation Risk</b></p> <p>Stakeholders are increasingly concerned about the Group's response to climate change and natural resource consumption. Failure to meet expected energy conservation and environmental protection targets in deliverables could negatively impact the Group's image.</p>	<p>Continuously strengthen research on energy conservation and environmental protection technologies, setting internal management targets on various environmental issues to reduce the likelihood of related adverse events.</p> <p>Proactively understand the negative environmental incidents published on regulatory websites and take them as warnings. Should any related incidents occur within the Group, the Investor Relations Department and the Publicity Department are responsible for providing explanations to investors and the public to minimise the impact on public opinion.</p>
	<p><b>Market Risk</b></p> <p>Under the pressure of the Paris Agreement and Carbon Dioxide Peaking and Carbon Neutrality targets, the consumption level of fossil energy is gradually decreasing, posing market risks to traditional businesses.</p>	<p>Actively expand into new energy businesses, enhance analysis of emerging markets and research and development of new technologies, and strengthen the coupling of traditional refining technologies with new energy. Increase communication efforts to build market confidence.</p>
	<p><b>Technology Risk</b></p> <p>As the global energy transition accelerates, the limitations of traditional technologies and equipment in low-carbon development are increasingly evident. The lack of maturity in low-carbon technologies may lead to risks of energy inefficiency, high equipment update costs, and unreliability of technology.</p>	<p>Actively research and promote low-carbon technologies, improve the maturity and reliability of technology. Through technological innovation, reduce equipment.</p> <p>Establish partnerships with universities, scientific research institutions, and others to jointly promote the research and development and application of low-carbon technologies. Through cooperation, resources and technological achievements are shared to accelerate the maturation process of low-carbon technologies.</p>

## Social Performance

### B1 Employment

#### General Disclosure

The Group rigorously follows *Labour Law of the People's Republic of China*, *Labour Contract Law of the People's Republic of China*, and other legal regulations, actively implementing the national human rights action plan and international human rights conventions. Internationally, the Group strictly adheres to labour laws and regulations of the operational locations, such as *Labour Law of the Kingdom of Saudi Arabia*.

The Group has established various systems including *Labour Contract Management Measures*, *Employee Training Management Measures*, *Welfare Management Measures*, *Salary Management Measures*, and *Attendance Management Measures*, to protect employee rights and build harmonious labour relations. The Group secures employees' rights in basic salary and benefits, recruitment and dismissal, promotion, working hours, vacation, equal opportunities, diversity, and anti-discrimination through formal labour contracts and collective bargaining agreements. Moreover, we actively protect and guarantee employees' rights to information, participation, expression, and supervision through mechanisms such as employee representative congresses, trade unions, factory affairs openness, and employee complaint mechanisms.

The Group effectively handles labour disputes and has established *SEG Labour Dispute Management Measures*. No labour disputes occurred during the Reporting Period.

#### B1.1 Total workforce by gender, employment type (such as full- and part- time), age group and geographical region.

Indicators	Unit	2023	2022	2021
<b>Total employees</b>	<b>Person</b>	<b>16,085</b>	<b>16,641</b>	<b>16,973</b>
of which: Domestic employees	Person	15,626	16,247	16,428
Overseas employees	Person	459	394	545
of which: Male employees	Person	11,709	12,138	12,436
Female employees	Person	4,376	4,503	4,537
of which: Employees aged below 30	Person	2,444	2,252	1,995
Employees aged between 31 and 50	Person	9,335	9,506	10,191
Employees aged above 51	Person	4,306	4,883	4,787
of which: Employees with a postgraduate degree	Person	3,373	3,179	2,987
Employees with bachelor's degree	Person	7,594	7,773	7,807
Employees with associate degree	Person	2,546	2,692	2,849
Employees with other qualifications	Person	2,572	2,997	3,330

Note: The disclosed number of employees includes only the official employees of the Group. Due to significant fluctuations in the number of subcontractor employees, the statistics of subcontractor employees are not established and are not included.

**B1.2 Employee turnover rate by gender, age group, and region.**

Indicators	Unit	2023	2022
<b>Total employee turnover rate</b>	%	<b>1.28</b>	<b>1.33</b>
of which: Male employee turnover rate	%	1.04	1.15
Female employee turnover rate	%	0.24	0.34
of which: Employees aged below 30 turnover rate	%	0.72	0.69
Employees aged between 31 and 50 turnover rate	%	0.55	0.62
Employees aged above 51 turnover rate	%	0.01	0.02
of which: Domestic employee turnover rate	%	1.28	1.33
Overseas employee turnover rate	%	0	0

**B2 Health and Safety**

**General Disclosure**

The Group strictly complies with occupational health and safety regulations in the countries and regions where projects are located. Domestically, we adhere to laws such as *Safety Production Law of the People's Republic of China, Management Regulations on Work Safety in Construction Projects, Implementation Measures for the Safety Responsibility System of Fire Protection, Special Equipment Safety Law of the People's Republic of China, Regulations on the Management of Hazardous Chemicals, Emergency Regulations on Production Safety Accidents*, and laws related to occupational health such as *Law on the Prevention and Control of Occupational Diseases of the People's Republic of China, Occupational Health Check Management Measures, Workforce Occupational Health Supervision and Management Regulations and Occupational Disease Hazard Prevention and Control Standards for the Construction Industry*. Internationally, we follow relevant laws and regulations, such as *Kuwait's Labour Law, Safety Measures Against Occupational Injuries and Diseases, and Medical Assessment in Cases of Occupational Injuries and Diseases*.

The Group has established a series of safety management and occupational health regulations to ensure comprehensive operational safety, including:

<b>Safety Management</b>	<i>SEG Regulations on Emergency Management</i>
	<i>SEG Management Regulations on HSE Risk Control and Hidden Danger Investigation (Trial)</i>
	<i>SEG Safety Management Regulations on High-risk Operations</i>
	<i>Regulations on Emergency Management</i>
	<i>Management Regulations for Production Safety Accidents (Incidents)</i>
<b>Occupational Health</b>	<i>Safety Management Regulations for Production Change</i>
	<i>SEG Management Measures for Employee's Health</i>
	<i>SEG Management Regulations on Labour Protection Fees</i>
	<i>SEG Management Regulations on Personal Labour Protection Articles</i>
	<i>Management Regulations on Construction Sites Labour Protection Articles</i>

Additionally, to improve overseas employees' occupational health management, we have developed *SEG Overseas Employee Health Management Regulations, Overseas Employee Health Risk Assessment Guidelines, and Overseas Employee Cardiovascular Disease Risk Prevention Guidelines*, establishing a comprehensive employee health management system.

**B2.1 Number and Ratio of work-related fatalities occurred in each of the past three years, including the reporting year.**

Indicators	Unit	2023	2022	2021
Number of reported incidents	/	1	3	0
Number of work-related deaths	Person	0	1	0
Work-related deaths	%	0	0.06	0
Work-related lost working-hours <sup>Note 1</sup>	Workday	0	6,000	0
Fatal accident rate per 200,000 working-hours		0	0.0024	0

Note 1: According to GBT15499, 1 fatality is estimated as a loss of 6,000 workdays, reporting lost workdays spans over a year.

**B2.2 Number of Lost days due to work injury.**

Indicators	Unit	2023	2022	2021
Number of incidents of work-related injuries	Person	19	23 <sup>Note 1</sup>	0
Lost working-hours due to work-related injuries	Workday	306	1,000	0
Incident (accident) rate per 200,000 working-hours		0.02	0.04	0

Note 1: From 2022, the statistical scope was expanded to the Group, leading to an increase in reported data compared to 2021.

**B2.3 Description of occupational health and safety measures adopted, and how they are implemented and monitored.**

The Group has established a comprehensive occupational health and safety management system, forming a three-level safety work management structure: "ESG Committee of the Board - HSE Committee of the Management - Execution". In the event of any significant occupational health and safety accident, the responsible person from the Quality and Safety Department addresses the incident and reports it to the HSE Committee, with the Board's ESG Committee performing oversight duties. For specific execution and monitoring methods, please refer to the section on "Occupational Health and Safety Management Mechanism".

The Group, taking 2021 as the baseline year, has set the "14<sup>th</sup> Five-Year Plan" targets covering subcontractor employees. These include reducing the rate of general and above responsibility accidents and HSE accidents or incidents among employees by 40%, reducing the lost time injury rate by 30%, and reducing the total recordable incident rate by 30% during the "14<sup>th</sup> Five-Year Plan" (2021-2025) period.

The Group actively carries out safety risk identification and inspection, safety capacity building, major safety production contracting, and project safety supervision, among other tasks, while focusing on raising employees' awareness of occupational health and promoting services. The Group provides employees with on-site first aid training, office health tips, and other health knowledge dissemination and capacity building, establishing an employee occupational health platform to offer health consultation services to the staff. Additionally, the Group places high importance on employees' mental health, setting up psychological counselling rooms and hiring external professional mental health consultants to provide Employee Assistance Program (EAP) psychological counselling and other mental health consultation services, thereby safeguarding employees' physical and mental health.

The Group continues to strengthen the construction of a safety production culture, continuously improving employees' safety skills through safety culture promotion and safety education and training. In 2023, the Group's safety production training involved 32,000 participants, with 323 safety production training sessions held, totalling 66,000 hours of safety production training time.

The Group actively undertakes the certification and review of occupational health and safety management systems. By the end of 2023, 11 entities of the Group had passed the third-party supervisory audit for the ISO45001 Occupational Health and Safety Management System certification, accounting for 100% of the Group's operating revenue. For significant indicators such as employee accidents per 200,000 work hours accident rate per 200,000 work hours fatality rate, the Group regularly submits data to Sinopec Group for supervisory management. Other related indicators are subject to monthly internal supervision and management, with key data on work-related fatalities disclosed to investors annually through the ESG report.



## B3 Development and Training

### General Disclosure

To facilitate employees' professional advancement and enhance their competencies, the Group actively provides comprehensive and diverse vocational training. We have established regulations such as *SEG Expert Database Management Regulations* and *SEG Talent Training Management Regulations* to standardise vocational training efforts. Our goal is to cultivate a talent pool of excellent quality and optimised structure, thereby fostering employee growth and development.

During the Reporting Period, we released *SEG Position Management Methods*, refining our employee career development channels and title management system. Additionally, the Group organised various online and offline training activities to continually elevate our training standards. Details on our position management platform and training content can be found in the "Talent Development" section.

Moreover, the Group pays attention to the professional development, business training, and health and safety of foreign employees. In international projects, we actively participate in local or third-country job fairs to recruit foreign employees, establish *International Talent Evaluation Standards System* to standardise the management of international talents, and promote the localisation of employment and the specialisation and qualification of the international talent team.

### B3.1 The percentage of employees trained by gender and employee category (e.g., senior management, middle management).

Indicators	Unit	2023	2022	2021
<b>Total number of employees participating in training</b>	<b>Person-times</b>	<b>43,258</b>	<b>28,378</b>	<b>35,898</b>
of which: Percentage of training participation of senior managers	%	15	19	21
Percentage of training participation of mid-level managers	%	25	26	35
Percentage of training participation of grass-roots employees	%	60	55	44
of which: Percentage of training participation of male employees	%	62	66	57
Percentage of training participation of female employees	%	38	34	43
of which: Participation of on-the-job training	Person-times	36,794	23,506	29,735
Participation of continuing education	Person-times	1,130	809	1,024
Participation of other training	Person-times	5,334	4,063	5,139

### B3.2 The average training hours completed per employee by gender and employee category.

Indicators	Unit	2023	2022	2021
<b>Average training hours of employees</b>	<b>Hour</b>	<b>53</b>	<b>50</b>	<b>49</b>
of which: Average training hours of male employees	Hour	53	53	51
Average training hours of female employees	Hour	52	47	46
of which: Average training hours of senior management staff	Hour	53	54	52
Average training hours of mid-level management staff	Hour	55	47	46
Average training hours of grassroots employees	Hour	50	50	49
Total amount of vocational training	10,000 Hours	84	67	83
Investment in vocational training	10,000 RMB	5,483	3,261	4,336
Total attendances of vocational training	Person-times	43,258	28,378	35,898
Number of employees hired during the Reporting Period	Person	533	625	507

## B4 Labour Standards

### General Disclosure

The Group rigorously adheres to *Labour Law of the People's Republic of China*, *Law on the Protection of Minors of the People's Republic of China*, *Prohibition of Child Labour Regulations*, and actively implements the national human rights action plan and international human rights conventions. Internationally, the Group strictly follows the labour laws and regulations of the operating sites, such as *Labour Law of the Kingdom of Saudi Arabia*. The Group has established and implemented *SEG Occupational Employee Management Measures* to ensure compliant employment practices, strictly prohibiting the employment of child labour and forced labour.

### B4.1 Describe measures to review recruitment management to avoid child labour and forced labour.

The Group firmly opposes any form of illegal employment such as child labour and forced labour. We strictly prevent incidents of child labour, forced labour, and other illegal employment practices from the source. In recruitment, the Group rigorously checks the age of employees through strict verification of identity documents to prevent child labour.

### B4.2 Describe the steps taken to eliminate violations when detected.

In management, if any violations such as child labour and forced labour are discovered, the Group will strictly supervise compliance with employment practices in accordance with relevant legal standards and guidelines. Effective measures are taken to strictly penalise personnel responsible for any oversight. Details on the measures for reviewing employment recruitment are available in the "Rights Protection" section.

During the Reporting Period, there were no incidents of child labour or forced labour, nor any litigation related to employment issues.

## B5 Supply Chain Management

The Group has established stringent management mechanisms for supplier selection and assessment. We have developed various management systems, including *SEG Supplier Management Regulations*, *SEG Supply Resource Management Regulations*, *SEG Supplier On-site Inspection Management Regulations*, *SEG Supplier Evaluation Management Regulations*, *SEG Subcontractor Management Method*, *SEG Subcontractor Contracting Management Regulations*, *SEG Subcontractor Evaluation and Management Regulations*, *SEG Subcontractor On-site Management Regulations*, *SEG Subcontractor Resource Database Management Regulations* and *SEG Strategic Subcontractor Management Measures*. These systems explicitly incorporate ESG-related performance indicators such as HSE management, quality system establishment, green product certification, performance of social responsibilities, and penalties for violations of laws and regulations on energy conservation and environmental protection into the supplier qualification review process, aiming to mitigate ESG risks at the supply chain level. During the Reporting Period, the Group completed the revision of subcontract management system documents, standardising the subcontract management work for both domestic and international projects and achieving integration of subcontract documents and management procedures.

Moreover, for overseas projects, the Group has built a supply resource management platform and developed regulations *SEG Supply Resource Management Regulations*, *SEG Supplier On-site Inspection Management Regulations* and *SEG Supplier Evaluation Management Regulations*, to provide institutional support for the construction of overseas supply resource libraries and management platforms.

### B5.1 Number of suppliers by region.

Indicators	Unit	2023	2022	2021
<b>Total number of suppliers in supply chain</b>	<b>Entity</b>	<b>3,987</b>	<b>3,644</b>	<b>3,041</b>
of which: Number of domestic suppliers	Entity	3,799	3,491	/
Number of overseas suppliers	Entity	188	153	/
Proportion of total procurement expenditure from top 5 suppliers	%	10.17	10.47	/
Tender procurement rate	%	89.90	96.21	/
Open tender rate	%	98.80	99.47	/

### B5.2 Describe the practices regarding the employment of suppliers, including the number of suppliers to whom the practices are implemented, and implementation and monitoring approaches.

The Group has formulated *Procurement Discipline* and *Procurement Integrity Self-discipline Regulations* to ensure a fair, open, and transparent procurement process and a standardised bidding system to prevent corruption.

The Group compiles *Interim Measures for Credit Risk Management* and specifies the Supplier Code of Conduct, including anti-corruption requirements, in the terms of *Material Supply Management Regulations*, *Material Procurement Management Method*, and *Material Procurement Supply Resource Management Method*. The Operation Management Department of the Company is responsible for comprehensive monitoring of suppliers, tracking dynamic assessments of suppliers during the entry, management, and post-evaluation process, integrating inspection requirements into the Supplier Code of Conduct clauses.

The Group actively conducts supplier communication and training, listens to supplier demands, and conducts diversified supplier training to enhance supplier capabilities. During the Reporting Period, we organised supplier conferences periodically to recognise and award outstanding suppliers based on their overall strength evaluation, including basic qualifications, operational status, credit rating, equipment capability, quality assurance system, performance, and cooperative attitude.

In 2023, 343 new suppliers established service relationships with the Group, reaching a total of 3,987 suppliers.

### B5.3 Describe practices related to the identification of environmental and social risks in each component of the supply chain, and related implementation and monitoring methods.

The Group actively carries out full-process management of suppliers, comprehensively supervising supplier qualification reviews and other supplier admission processes. At the admission assessment stage, we have established *SEG Supplier Management Regulations*, clarifying the supplier admission mechanism and strictly controlling various requirements. Obtaining ISO14000 and OHSAS18001 certifications is considered one of the standard conditions for admission, thoroughly examining suppliers' management practices to ensure their quality and reputation. In selecting suppliers, it is clearly stated that HSE management, quality system establishment, green product certification, social responsibility fulfilment, and penalties for violations of energy conservation and environmental protection laws are included in the supplier qualification review. This clarifies suppliers' responsibilities and obligations regarding environmental protection, resource conservation, and social responsibility in trading activities, preventing ESG risks at the supply chain level. For specific execution and monitoring methods, see the "Responsible Value Chain" section.

The Group conducts regular assessments of suppliers at least once a year, evaluating suppliers' performance, quality assessment, market performance, green products, and other aspects. Through the analysis of supplier evaluation results, non-qualifying suppliers are screened out. If a supplier's related environmental and social risks are discovered or anticipated to have a potential significant negative impact, penalties according to relevant regulations, such as warnings, interviews, suspension, etc., are imposed, and the supplier's disposal results are publicly disclosed by Material and Equipment Department of Sinopec Group.

### B5.4 Describe the practices of promoting the use of more environmentally friendly products and services in the selection of suppliers, and the related implementation and monitoring methods.

The Group and our subsidiaries adhere to the green procurement philosophy, strictly implementing regulations such as *Sinopec Green Procurement Management Methods* and *Material Green Procurement Implementation Details*. In the selection of suppliers, the Group considers suppliers' relevant qualifications, green and low-carbon practices as qualifications for review. Suppliers with green energy-saving labels are given priority consideration. The Group guides suppliers to sign green procurement service agreements or commitments, clearly defining suppliers' responsibilities and obligations in terms of environmental protection, resource conservation, and social responsibilities during transaction activities.

## B6 Product Responsibility

### General Disclosure

The Group strictly adheres to laws, regulations, and technical standards related to project quality, such as *Construction Law of the People's Republic of China*, *Regulation on Quality Management of Construction Projects*, and *the Kingdom of Saudi Arabia's Road Construction Law*, among others. We have developed and implemented several procedural documents, including *Overseas Engineering Project Welding Process Evaluation Report Management Regulations (Trial)*, *Quality Management Regulations*, and *Accident Management Regulations*. These efforts aim to comprehensively advance the construction of the quality management system, enhance project quality management, and ensure product quality and safety. The Group's current quality management system comprises 11 regulations, covering quality management, quality accident management, welding quality spot checks, welding material management, welder management, welding operation management, heat treatment, and non-destructive testing.

### B6.1 Percentage of the total number of products sold or shipped that are subject to recall for safety and health reasons.

This metric is not applicable to the Group's operations.

### B6.2 Number of received complaints about products and services and how to respond to them.

During the Reporting Period, the Group reported no quality accidents and received no significant complaints about quality issues.

### B6.3 Describe the practices related to the maintenance and protection of intellectual property rights.

The Group strictly follows *Patent Law of the People's Republic of China* and *Copyright Law of the People's Republic of China*, along with other relevant intellectual property protection laws and regulations in operating sites. We have developed and implemented management regulations such as *SEG Intellectual Property Protection Management Regulations*, *SEG Patent Management Regulations*, and *SEG Proprietary Technology Management Regulations*. During the Reporting Period, the Group updated *SEG Intellectual Property Protection Management Regulations*, continuously improving the management of overseas intellectual property rights.

The Group's Technology Department includes an Intellectual Property Management Team, which oversees all aspects of intellectual property protection and patent applications for the Group. It is responsible for formulating and implementing the Group's intellectual property strategy, ensuring that innovative achievements are fully protected. In addition, the Group regularly conducts intellectual property training, covering trademark law, copyright law, and other related legal regulations, as well as knowledge on intellectual property application, protection, and rights defence, to comprehensively enhance employees' awareness of intellectual property and protection. The progress of the Group's intellectual property protection efforts and training will be disclosed in the annual ESG report.

**B6.4 Describe the quality inspection process and product recall procedures.**

The Group conducts rigorous quality inspection and verification activities. The Group organises quality management system audits based on *SEG Engineering Professional Quality Management System Effectiveness Evaluation Form (QSH 0828-2021)* and conducts quality supervision and inspection according to standards such as *Petrochemical Engineering Quality Inspection Guidelines (2017 Edition)*. Through the audit of various quality management systems, quality supervision, and spot checks on welding quality, the Group analyses the root causes of discovered quality issues. For typical quality problems, notifications and discussions are initiated to facilitate timely rectification and management improvement. By the end of 2023, 11 entities of the Group had passed the third-party supervisory audit for ISO9001 Quality Management System certification.

Furthermore, the Group continuously refines the engineering quality issue resolution mechanism, establishing a tiered management system to oversee and address complaints. For aspects of projects where issues recur, specific corrective and preventive measures are devised, and construction and technical personnel are provided with guidance and learning opportunities to prevent such issues from reoccurring.

**B6.5 Describe the consumer data protection and privacy policy, as well as the related implementation and monitoring methods.**

In the domain of client rights and privacy, the Group abides by internally established guidelines, including *SEG Information Security Management Measures*, *SEG Cybersecurity Level Protection Management Measures*, *SEG Information and Digital Management Measures*, and *SEG Computer Equipment Management Measures*, to enhance the privacy management mechanism. The Group mandates that all document clients employ high-level encryption measures to prevent data leakage. Should any privacy breach or related violations be discovered, the Group promptly intervenes to minimise the harm of the incident and issues internal criticisms. For severe cases, stricter disciplinary actions are taken against those responsible. Throughout the Reporting Period, the Group experienced no incidents of privacy or data leakage.

**B7 Anti-Corruption**

**General Disclosure**

The Group rigorously complies with *Criminal Law of the People's Republic of China*, *Supervision Law of the People's Republic of China*, *Anti-Unfair Competition Law of the People's Republic of China*, *Company Law of the People's Republic of China*, and *Interim Provisions on Prohibiting Commercial Bribery*, as well as applicable laws and regulations on preventing bribery, extortion, fraud, and anti-money laundering in the operating sites. The Group opposes all forms of corruption and unfair competition.

To combat corruption, the Group has developed and implemented several management systems, including *SEG Anti-Fraud Management Rules*, *SEG Integrity Risk Prevention and Control Implementation Measures*, *SEG Compliance Management Guidelines for Business Partners*, *SEG Compliance Management Guidelines for Foreign Business Economic Sanctions*, *SEG Anti-Overseas Corruption and Anti-Commercial Bribery Compliance Management Guidelines*, and *SEG Registration Management Measures for Receiving Gifts and Cash in Domestic Interactions*. For overseas project management, the Group executes *SEG Anti-Overseas Corruption and Anti-Commercial Bribery Compliance Management Guidelines* and *SEG the Anti-Overseas Corruption and Anti-Commercial Bribery Compliance Risk Checklist*.

During the Reporting Period, the Group revised *SEG Work Rules of the Supervisory Committee*, continuously improving the anti-corruption management system to create a transparent and honest business environment.

**B7.1 Number and the outcome of corruption litigation cases filed and concluded against the issuer or its employees during the Reporting Period.**

There were no corruption lawsuits filed or concluded against the Group during the Reporting Period.

**B7.2 Describe preventive measures and reporting procedures, as well as related implementation and monitoring methods.**

The Group continuously establishes and improves systems and management systems against corruption. In addition to revising anti-corruption management systems applicable to all business operations, the Group has also developed *Supply Management Regulations*, *Material Procurement Management Methods*, and *Material Procurement Supply Resource Management Methods*, which include a supplier code of conduct (containing anti-corruption content).

The Company's Discipline Inspection Commission is the responsible body for anti-corruption and integrity work, with the Supervision and Audit Department acting as the main responsible department. The head of the Discipline Inspection Commission, serving as the key responsible person, reports to the relevant discipline inspection work groups. The Group has a series of clear and explicit anti-corruption regulations, including *SEG Anti-Fraud Management Rules*, *SEG Business Partner Compliance Management Guidelines*, *SEG Foreign Business Economic Sanctions Compliance Management Guidelines*, and *SEG Anti-Foreign Corruption and Anti-Commercial Bribery Compliance Management Guidelines*. These regulations strictly prohibit any form of corruption, including embezzlement, bribery, and offering bribes, and regularly conduct anti-corruption training to raise employees' awareness of integrity and anti-corruption. Upon discovery of any form of corrupt behaviour, the Group will strictly punish according to *Sinopec Employee Discipline Regulations* and other provisions, including warnings, dismissal, termination, etc., and, depending on the specifics, refer to the relevant regulatory departments for handling.

For directors and senior management, *Board of Supervisors Meeting Rules* of the Company further specify the Board of Supervisors' duty to oversee the directors and senior management's actions in violation of laws, administrative regulations, or *Articles of Association* when executing their corporate duties, and to propose the dismissal of directors and senior management who violate laws, administrative regulations, Articles of Association, or resolutions of the shareholders' meeting.

<b>Awareness Building</b>	Organised the anti-corruption and integrity education month, conducting integrity talks from the top-down, promptly reporting typical cases to build a strong ideological defence against corruption among senior management; focused on key points to deliver integrity reminders, issued pre-holiday integrity alerts to eliminate festive corruption.
<b>Compliance Checks</b>	Carried out specialised compliance inspections on directly managed units and joint inspections on key engineering projects, continuously driving lawful and compliant operations; Released a five-year inspection work plan, conducting high-quality patrols and reinforcing the strength of inspection personnel.
<b>Improvement of Reporting Mechanisms</b>	Established a comprehensive reporting channel, including hotlines, mailboxes, and email, for reporting violations and disciplinary actions. The whistle-blower mailbox is placed in a blind spot of cameras to protect the whistle-blower's privacy; strict confidentiality is maintained for named reports, ensuring that the whistle-blower's identity is not disclosed.

**B7.3 Description of anti-corruption training provided to directors and staff.**

The Group proactively organises anti-corruption training that encompasses directors, senior management, and other employees, adopting a hybrid approach of both online and offline methods to carry out diversified anti-corruption and integrity training. This approach ensures 100% coverage of all personnel.

Indicators	Unit	2023	2022
<b>Number of anti-corruption and Integrity Training</b>	<b>Times</b>	<b>1,240</b>	<b>1,194</b>
of which: Number of online Training	Times	382	403
Number of offline Training	Times	858	791
Hours of anti-corruption and integrity training	Hour	4,412	4,373
<b>Participants in anti-corruption and integrity training</b>	<b>Person-times</b>	<b>28,785</b>	<b>28,733</b>
of which: Participation of Board members	Person-times	25	23
Participation of other management levels and employees	Person-times	28,760	28,710
of which: Percentage of Board members participating	%	0.09	0.08
Percentage of other management levels and employees participating	%	99.91	99.92

## B8 Community Investment

### General Disclosure

The Group adheres to *Charity Law of the People's Republic of China, Notice on Strengthening the Management of Foreign Donations by Central Enterprises, Supplementary Notices on the Management of Donations by Central Enterprises* issued by the State-owned Assets Supervision and Administration Commission of the State Council, and other relevant policies. We have formulated relevant management systems such as *SEG External Donation Management Regulations*, strictly following the approval processes involved.

### B8.1 Focus areas of contribution (e.g., education, environmental concerns, labour needs, health, culture, sport).

The Group actively contributes our strength and intensifies community investment efforts. During the Reporting Period, contributions were made in areas including rural revitalisation consumer assistance, educational support, volunteer services, and disaster relief charitable activities, as detailed in the "Charity and Public Welfare" section. Additionally, leveraging employer advantages, the Group has created more employment opportunities both domestically and internationally, with a total of 533 job absorption during the Reporting Period.

### B8.2 Resources contributed (e.g., money or time) to the focus area.

Dedicated to leveraging strengths, the Group actively engages in community building and fosters good corporate-local relations. In our overseas operations, the Group has established the position of Geographical Relations Officer (GRO) to facilitate external communications and internal cultural training, assisting in meeting the cultural and customary needs of local employees and actively participating in local charitable and educational support activities, thus contributing to the cultural and economic development of the local communities. During the Reporting Period, the Group made total donations of 1,033,500 RMB, participated in volunteer activities with a total of 225 person-times, and accumulated 556 hours of volunteer service time. Detailed expenditures and effects in various focus areas can be found in the "Community Relations" section.

## Paraphrasing

Sinopec Group: China Petrochemical Corporation

Sinopec: Sinopec Group and its subsidiaries and branches

The Company: SINOPEC Engineering (Group) Co., Ltd.

The Group, SEG, we/us: the Company and its subsidiaries and branches

Engineering Construction Co., Ltd.: SINOPEC Engineering Construction Co., Ltd.

Guangzhou Engineering Co., Ltd.: SINOPEC Guangzhou Engineering Co., Ltd.

Shanghai Engineering Co., Ltd.: SINOPEC Shanghai Engineering Co., Ltd.

Ningbo Engineering Co., Ltd.: SINOPEC Ningbo Engineering Co., Ltd.

Nanjing Engineering Co., Ltd.: SINOPEC Nanjing Engineering Co., Ltd.

Fourth Construction Co., Ltd.: SINOPEC Fourth Construction Co., Ltd.

Fifth Construction Co., Ltd.: SINOPEC Fifth Construction Co., Ltd.

Tenth Construction Co., Ltd.: SINOPEC Tenth Construction Co., Ltd.

Heavy Lifting and Transportation Co., Ltd.: SINOPEC Heavy Lifting and Transportation Co., Ltd.

Energy Management Co., Ltd.: SINOPEC Energy Management Co., Ltd.

R&D Centre: Luoyang R&D Centre of Technology SINOPEC Engineering (Group) Co., Ltd.

Information Centre: Information Technology Branch of SINOPEC Engineering (Group) Co., Ltd.

QHSE: Quality, Health, Safety & Environment

HSE: Health, Safety & Environment

# Independent Assurance Report



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## Independent Limited Assurance Report

GTCNZZ (2024) NO.110C002021

### To The Board of Directors of SINOPEC Engineering (Group) Co., Ltd.:

We were engaged by the Board of Directors of SINOPEC Engineering (Group) Co., Ltd. (the "Company") to provide limited assurance on selected 2023 key data in the Company's 2023 Environmental, Social and Governance Report (the "ESG Report") for the year ended 31 December 2023.

#### I. Key data

In this report, limited assurance procedures were performed on the following selected key data of the Company's 2023 ESG Report:

- GHG emissions (tonnes CO<sub>2</sub>-equivalent)
- Direct GHG emissions (tonnes CO<sub>2</sub>-equivalent)
- Indirect GHG emissions (tonnes CO<sub>2</sub>-equivalent)
- Consumption of diesel oil (tonnes)
- Consumption of gasoline (tonnes)
- Consumption of natural gas (cubic metres)
- Consumption of liquefied petroleum gas (cubic metres)
- Consumption of acetylene (tonnes)
- Consumption of propane (tonnes)
- Consumption of purchased electricity (trillion Wh)
- Consumption of purchased heat (million kJ)
- Consumption of water resources (tonnes)
- Weight of disposed hazardous waste (tonnes)
- Total number of employees
- Employee turnovers rate (%)

# Independent Assurance Report



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

Within the scope of our work, we only performed procedures on selected 2023 key data at Sinopec Guangzhou Engineering Co., Ltd. and Sinopec Fifth Construction Co., Ltd. We have not conducted work at other entities. We have not performed any procedures with respect to 2022 and earlier periods or any other information included in the 2023 ESG 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 2023 ESG Report in accordance with basis of preparation of the key data ("basis of preparation").

The Board of Directors is also responsible for designing, implementing and maintaining the internal controls that enable the preparation and presentation of 2023 ESG 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 (IESBA), 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.

#### IV. Summary of procedures performed

A limited assurance engagement on the 2023 ESG Report consists of making inquiries, primarily of persons responsible for the preparation of information presented in the ESG

# Independent Assurance Report



Report, and applying analytical and other procedures, as appropriate. Our procedures include:

- Assessing the risk of material misstatement of selected 2023 key data relating to the ESG Report, whether due to fraud or error;
- Conducting interviews with relevant staff at the Company who are responsible for providing the information in the ESG Report;
- Performing analytical review procedures on the selected 2023 key data relating to the ESG Report;
- Checking relevant documents of selected key data relating to the ESG Report on a sample basis;
- Recalculating 2023 selected key data relating to the ESG Report;
- Reading the information presented in the ESG 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 Limited Assurance procedures performed and the evidences obtained, nothing has come to our attention that causes us to believe that the selected 2023 key data contained in the Company's ESG Report for the year ended 31 December 2023 is not prepared, in all material respects, in accordance with the basis of preparation.



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## Feedback

Thank you for reading the 2023 Environmental, Social and Governance Report of SEG. In order to enhance the communication with you and other stakeholders, and to continuously improve our ESG performance and reporting, we sincerely welcome your valuable opinions and suggestions, and look forward to your feedback in the following ways:

### Your Information

Name: \_\_\_\_\_ Telephone: \_\_\_\_\_ Email: \_\_\_\_\_

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### Open questions:

1. What information do you wish to know but has not yet been covered in this Report?

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2. Please share with us your comments and suggestions on SEG's ESG practice and ESG report preparation.

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