



2023

Corporate Social
Responsibility Report

ABOUT THE REPORT

This is China National Petroleum Corporation's 18th annual Corporate Social Responsibility Report since the establishment of the reporting system in 2006. This report reflects our accomplishments in fulfilling our economic, environmental and social responsibilities. Hereby, we make the following statement on relevant information:

Reporting company: China National Petroleum Corporation (CNPC)

Alternative reference: China National Petroleum Corporation is also referred to in this report as "CNPC", "the Company", "we" and "us".

Time frame: From January 1 to December 31, 2023. Given the continuity and comparability of the disclosed information, part of the information may be taken forward or backward as necessary.

Reporting period: This is an annual report. The previous year Corporate Social Responsibility Report was issued on September 21, 2023.

Reporting principles: objective, standardized, honest, transparent and substantive.

Report content: our accomplishments in fulfilling our economic, environmental and social responsibilities.

Information sources: the Company's official documents, statistical reports and consolidated statistics related to the Company subsidiaries' performance. All the information has been reviewed by the Company's management and its subsidiaries.

Improvements: In order to showcase our social responsibility performance in a more objective, comprehensive and prioritized manner, we highlighted the disclosure of important topics such as "energy transition", "climate change" and "rural revitalization", and featured the "CNPC in the Belt and Road Initiative" in this report. Meanwhile, we inspected the CSR practices of all subsidiaries, verified the authenticity of cases, extensively solicited opinions and suggestions, and actively responded to the concerns of all stakeholders.

References: The report was compiled in accordance with the *Guidance on State-owned Enterprises to Better Fulfill their Social Responsibilities* by the State-owned Assets Supervision and Administration Commission of the State Council, and in reference of the following documents: *Sustainability Reporting Standards* (G2021 Edition) of the Global Reporting Initiative (GRI), *Sustainability Reporting Guidelines for the Oil and Gas Industry (2020 Edition)* jointly issued by the International Petroleum Industry Environmental Conservation Association (IPIECA) and the American Petroleum Institute (API), the ISO26000 Guidance on Social Responsibility issued by the International Organization for Standardization, the United Nations *2030 Agenda for Sustainable Development*, the GB/T36001-2015 *Guidelines for Preparing Social Responsibility Reports* issued by the Standardization Administration of China, and the *Guidelines 4.0 on Corporate Social Responsibility for Chinese Enterprises - Petrochemical Industry (CASS-CSR4.0)* issued by the Chinese Academy of Social Sciences.

Language: The report is released in Chinese and English, and the Chinese version shall prevail in case of any discrepancy.

Access to the report: For paper report, you may email to csr@cnpc.com.cn or call 8610-59984395. We recommend you to visit our website and get the PDF version at <http://csr.cnpc.com.cn/>.

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CHAIRMAN'S MESSAGE

I'm very pleased to present this year's CSR report. In 2023, in spite of profound adjustments took place in the world economy and the volatile energy market, we made some progress while ensuring stable production, management, reform and development. With new records set in business performance, we are one more step closer to the goal of becoming a world-class energy company.

Securing energy supply

We accelerated the construction of a diversified oil and gas supply system, achieved a number of new breakthroughs in oil and gas exploration, and the oil and gas SEC reserve replacement rate stabilized and rebounded. Domestic and foreign oil and gas production reached a record high, with increased share of natural gas, exceeding the target of the seven-year action plan. We also stepped up efforts in building the "three 100-million tons" pattern at home and abroad. Major breakthroughs were made in the refining-chemical transformation and upgrading. Guangdong Petrochemical's world-class integrated refining and chemical base was successfully put into commercial operation. Two ethylene projects in Jilin and Guangxi continued to advance, and the phase II of the Tarim ethane-to-ethylene project was approved and started construction. Major production and operation indicators such as crude runs, refined products production and sales, ethylene production, paraxylene production, chemical product sales, and natural gas production and sales all reached the best level in history. The marketing ability has been significantly improved. With over 60% in market share, we provided quality natural gas in key periods and key regions, enhancing our ability to ensure secure and stable supply.

Green and low-carbon transition

We accelerated the efforts in the general deployment of the three-step strategy of "clean energy substitution, strategic succession and green transition", and built a number of projects, including the construction of million-kilowatt PV stations in Kashgar, Xinjiang, the medium and deep-level geothermal heating project in Beijing, and the water electrolysis hydrogen production facility in Yumen, as well as the equity acquisition of Potevio New Energy Co., Ltd. Solid progress was made

in the whole industry chain CCUS demonstration project, and a historic breakthrough was made in new energy development and utilization. With the new energies capacity reaching 11.5 million tons of standard coal/year, the power generation is 3.4 times that of 2022, and the pattern of "oil, gas, geothermal, electricity and hydrogen" has taken shape. Significant progress was made in speeding up new materials projects, target products were produced from polyolefin elastomer pilot plants; new materials production rose by 60% year-on-year, making solid strides towards the mid-to-high end of the industrial chain.

Reform, development and innovation

In the past year, we strengthened self-reliance in high-level science and technology, made steady progress in major science and technology projects and key projects, and made a number of landmark achievements. Practical progress was made in building the two original technology incubation hubs, ten-thousand deep and ultra-deep exploration, and mass production of China's first double-end functional dissolved polystyrene-butadiene rubber. Other progress was made in our efforts in building a digital CNPC, as well as enhancing national strategic scientific and technological strength and innovation hubs of energy and chemicals. We continued to modernize the corporate governance system and governance capacity, launched a new round of actions to deepen and upgrade the reform of state-owned enterprises, and comprehensively, completing smooth reform in the oil/gas & new energies and refining/chemical & new materials businesses. The reform and adjustment of the natural gas sales system was in place, the transfer of vehicle refueling terminals was basically completed, and the reform of the overseas business system was deeply promoted. The new Kunlun Manufacturing Company is established in Xiong'an, Hebei. We also doubled efforts in promoting the market-based reform in operation, and the reform in R&D innovation for major SOEs, injecting sustained and powerful vitality to high-quality development.

International energy cooperation

We took an active part in global energy governance, and made Chinese energy voice heard. 2023 was the 10th anniversary of the Belt and Road Initiative and the 30th anniversary of CNPC's go global strategy, and we pushed forward global energy cooperation by hosting a series of foreign events including the Third Belt and Road Energy Cooperation Roundtable, the fifth China-Russia Energy Business Forum, and the sixth CNPC International Cooperation Forum. I also visited some companies, and shared with some friends of old and new on petroleum in international conferences. We have achieved some new results as our foreign cooperation advanced widely and deeply.

Employee growth

In the past year, we put people first and safeguard the interests and rights of all our employees. We conducted activities around employee demand on a regular basis, and built a nine-level skills enhancement system for employee growth; we expanded and diversified vocational development channels, completed support system for employees in need, and strengthened care, mental counseling and health management for employees. We innovated a digital party building platform to handle matters concerned by employees via the party information box. With our effective reach out to employees, 99.86% of problems reported were solved.

Inclusive and shared development

We ensured high-quality peak shaving in summer and gas supply for heating in winter. We invested RMB 659 million in rural revitalization and social welfare undertakings, benefiting people with our resources and helping them in consumption, industry, and education, making our contribution to poverty alleviation through rural revitalization. We promoted localized employment overseas. 95% of our employees in the Rumaila project in Iraq were locals. Besides, we conducted trainings and built hospitals and schools for local communities, benefiting millions of people. The overall taxes and charges totaled RMB 93.15 billion overseas in the past year. With our contributions to the local economy and society, we received the "Subroto Award" by the Indonesian Ministry of Energy and Mineral Resources and the "Outstanding Environmental Compliance Award" by the Ministry of Environment of Ecuador.

Looking ahead, there are still uncertainties in this changing world, presenting enormous challenges and opportunities. We will continue to make steady progress, implementing the new development philosophy and national energy security strategies, so as to achieve high-quality development, secure national energy security, and contribute to the Chinese modernization.

Thank you for your long-term support for CNPC! As a global corporate citizen, we will leverage our strengths to meet social needs, address common challenges, explore potentials for development, and create shared values with stakeholders. In our pursuit of harmonious and sustainable development between energy, environment and society, we are dedicated to building a community with a shared future for mankind.

Dai Houliang
Chairman

戴厚良

ABOUT US

As one of China’s key state-owned enterprises (SOEs) and a major global oil and gas producer and supplier, CNPC is an integrated international energy corporation with businesses covering oil and gas exploration and operations, new energies, refining and sales, new materials, technical support and services, and financial services. We possess oil and gas assets and interests in 32 countries/regions around the world. In 2023, CNPC ranked the third among the world’s top 100 oil companies, the fifth in the Fortune Global 500 ranking, and the 1st in the China Top 100 Multinational Corporations and Their Transnationality Indexes.

Our Vision

To become a world-class integrated international energy company built to last.

Our Values

Pursuing green development and providing reliable energy supply to fuel our customers’ growth and power people’s happy life.

Our guiding principle to prosperity

High-quality development, deeper reform and opening up, law and rule-based operation and management, as well as full and strict governance over the Party

Our corporate governance principle

Specialized development, market-oriented operation, lean management, and integrated planning

Our Strategies

Innovation. Resources. Market.
Internationalization. Green & Low Carbon.

Assets & profits

Total assets	Total revenue
RMB 4,475.60 billion	RMB 3,160.83 billion
Total profit	Total taxes and charges
RMB 287.96 billion	RMB 531.08 billion

Resource reserve (domestic)

Newly proved oil reserves	Newly proved oil reserves (Exceeding 600 million tons for 18 straight years)
770 million tons	exceeding 600 million tons
Newly proved natural gas reserves	Newly proved natural gas reserves (Exceeding 400 billion cubic meters for 17 straight years)
754.2 billion cubic meters	exceeding 400 billion cubic meters

Oil/gas output

Domestic and global oil and gas equivalent production	Domestic and global oil and gas equivalent production (+2.5% YoY)
331 million tons	+2.5%
Domestic crude output	Domestic natural gas production
105.80 million tons	152.9 billion cubic meters
Domestic crude output (50.6% of the national total)	Domestic natural gas production (66.6% of the national total)
50.6%	66.6%

FIGURES IN 2023

Oil/gas supply (domestic)

Refined products sales
123.619 million tons

Natural gas sales
229.91 billion cubic meters

Refined products sales
(market share: 33.5%)
33.5%

Natural gas sales
(market share: 61%)
61%

Global presence

Oil and gas investment in 32
countries and regions
32

Overseas oil and gas equity
production
103.82 million tons

Oil engineering and construction services in 80 countries and
regions
80

Ecological environment protection

Saved land
1,400 hectares

Total GHG emissions
188 million tons of carbon
dioxide equivalent

Methane emissions intensity:
-10% YoY
exceeding **-10%**

NO_x emissions: -2.93% YoY
-2.93%

VOC emissions from
refineries: -6.25% YoY
-6.25%

COD emissions: -0.33%
-0.33%

New energies & new materials

Geothermal heating area added
10.45 million square meters

Total geothermal heating area
over **35** million square meters

Total installed wind/solar
capacity
over **5** million kW

Production of new materials:
+60% YoY
+60%

Technological progress

R&D expenses
RMB **28.94** billion

key core technology breakthrough rate
42.6%

Employee development

Total employees
1,061,600

Share of local employees in
overseas projects
83.29%

Annual training expenses
RMB **2.84** billion

Training coverage for front-line
employees
100%

Public welfare

Total investments in rural revitalization and social welfare programs:
RMB 659 million (RMB 600 million for domestic rural revitalization),
benefiting 5 million people
RMB **659** million

Number of assistance programs:
1,310, among which 1,071 for rural
revitalization
1,310

Personnel sent to work in villages:
718 for rural revitalization
718

CORPORATE GOVERNANCE

As a wholly state-owned enterprise, CNPC has integrated strengthened central leadership with corporate governance, and continuously perfected a coordinated and effectively balanced corporate governance structure comprising Party Leadership Group, board of directors and top management which have statutorily defined and transparent powers in line with the decisions of the CPC Central Committee and the State Council and the requirements of SASAC. The Company is making steady progress toward the modernization of its governance system and governance capabilities to ensure the sound decision-making processes and controls are in place for compliance and surveillance, improve corporate competitiveness, innovation, corporate control, corporate influence, risk resistance and governance efficiency and increase corporate accountability in the financial, political and social areas to achieve high-quality development.

Governance Structure

The Party Leadership Group

The Party Leadership Group plays a leading role in guiding, supervising, and ensuring the implementation of major decisions. By integrating the strengthened leadership of CPC with the improvement of corporate governance, the Party Leadership Group is responsible for deliberating and making decisions on the Company's "Three Important and One Major" issues in accordance with regulations; performing the decision-making responsibilities on major issues such as Party building; performing the supervisory responsibilities on major operation and management issues; promoting the transformation of the Party's propositions and major decisions into the Company's strategic goals, work measures, conscious actions of employees and actual results of enterprise reform and development; implementing the decisions and deployments of the CPC Central Committee and the State Council and General Secretary Xi Jinping's important instructions in the Company; calibrating the direction of corporate reform; and ensuring that the Company fully performs its economic, political and social responsibilities.

In 2023, adhering to the guidance of the Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, we fully studied and implemented the major principles of the Party's 20th National Congress, resolutely implemented the decisions and deployments of the CPC Central Committee and the State Council, upheld the underlying principle of pursuing progress, followed the new development philosophy, served and integrated into the new development paradigm. The Company as a major central state-owned enterprise made solid headway in accelerating green and low-carbon transformation, deepening rural revitalization and agricultural assistance, supporting emergency and disaster relief in key areas, underpinning oil and gas supply and making meaningful contribution to ensuring national energy security, stabilizing the macroeconomic market and maintaining social stability.



Board of Directors

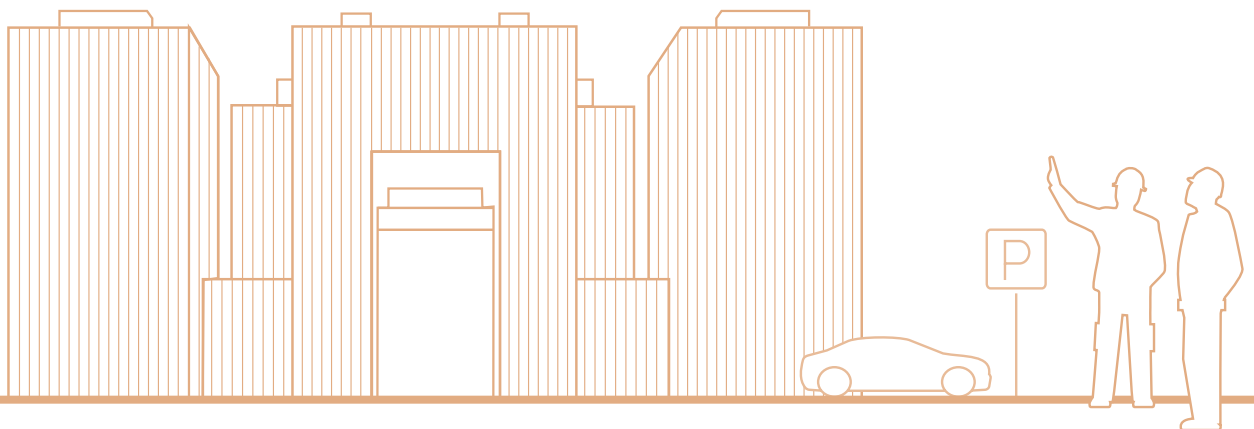
The Board of Directors plays the role in strategy defining, key decision making and risk prevention. In accordance with the *Company Law of the People's Republic of China* and the *Articles of Association of CNPC*, the board of directors makes important decisions on the Company's major management issues. The Board of Directors has four affiliated committees, i.e., Strategy & Development Committee, Nomination Committee, Remuneration & Evaluation Committee and Audit & Risk Management Committee (Supervisory Committee), which are designed to provide advice and recommendations for Board decisions.

In 2023, focusing on its functions and roles, the board of directors served the overall strategic situation of the Party and the nation and the national energy security, based on a strategy-guided approach to promote the steady implementation of the Company's strategic planning for core operations; its prudential decision-making process maintained a focus on legal and regulatory compliance, consistency with investor requirements, compatibility with the Company's business strategy and balance of risks and returns to sustain the Company's high-quality development; risk management capabilities were improved as measures were enhanced for risk monitoring, risk assessment and risk mitigation. Procedures and mechanisms were improved to enable the efficient operation of the board of directors and bring the competencies of the Board to the next level.

Managers

The managers play the role of "planning for operation, ensuring implementation and strengthening management". Centering on the implementation of the Company's development strategy and planning, the managers analyze and judge the development situation, and plan for improving the production and operation strategies and schemes. The managers are responsible for organizing the implementation of board resolutions, and rationally allocating resources, to ensure that the Company's business plans and objectives are effectively achieved. They are responsible for strengthening the internal management of the Company, optimizing the business process, preventing and resolving risks, and ensuring the standardized and efficient operation of the Company's management system. The managers report to the Board of Directors regularly on the implementation of authorized decisions and resolutions, to ensure the implementation of the Company's strategies.

In 2023, the managers followed the underlying principle of pursuing progress in stabilizing operations, strengthening management, mitigating risks, and improving efficiency with a focus on enhancing core competencies and bolstering core functions. The Company's operations in the oil and gas industry chains and other businesses were running smoothly and efficiently, and the new energies and new materials business grew rapidly. Significant progress was made in improving quality and efficiency, technological innovation, and the deepening of reform advanced steadily. The management of regulatory compliance moved up to the next high level and the HSE performance remained stable. The Company's targets and tasks for the year were successfully achieved as the operating results reached all-time highs.



Corporate governance system

CNPC governance system	Goals
 Compliance management	➤ More optimized organizational structure and responsibilities for compliance management ➤ Improved compliance management system ➤ Smooth operation of compliance risk prevention and control mechanism ➤ Stronger compliance guarantee ➤ Stronger compliance cultural atmosphere
 Internal control	➤ Integrated system ➤ Comprehensive control ➤ Effective implementation
 QHSE	➤ Standardized operation ➤ Controllable risks ➤ Continuous improvement
 Anti-corruption	➤ Systemic and integrated ➤ Synergized and efficient ➤ Interconnected and converged

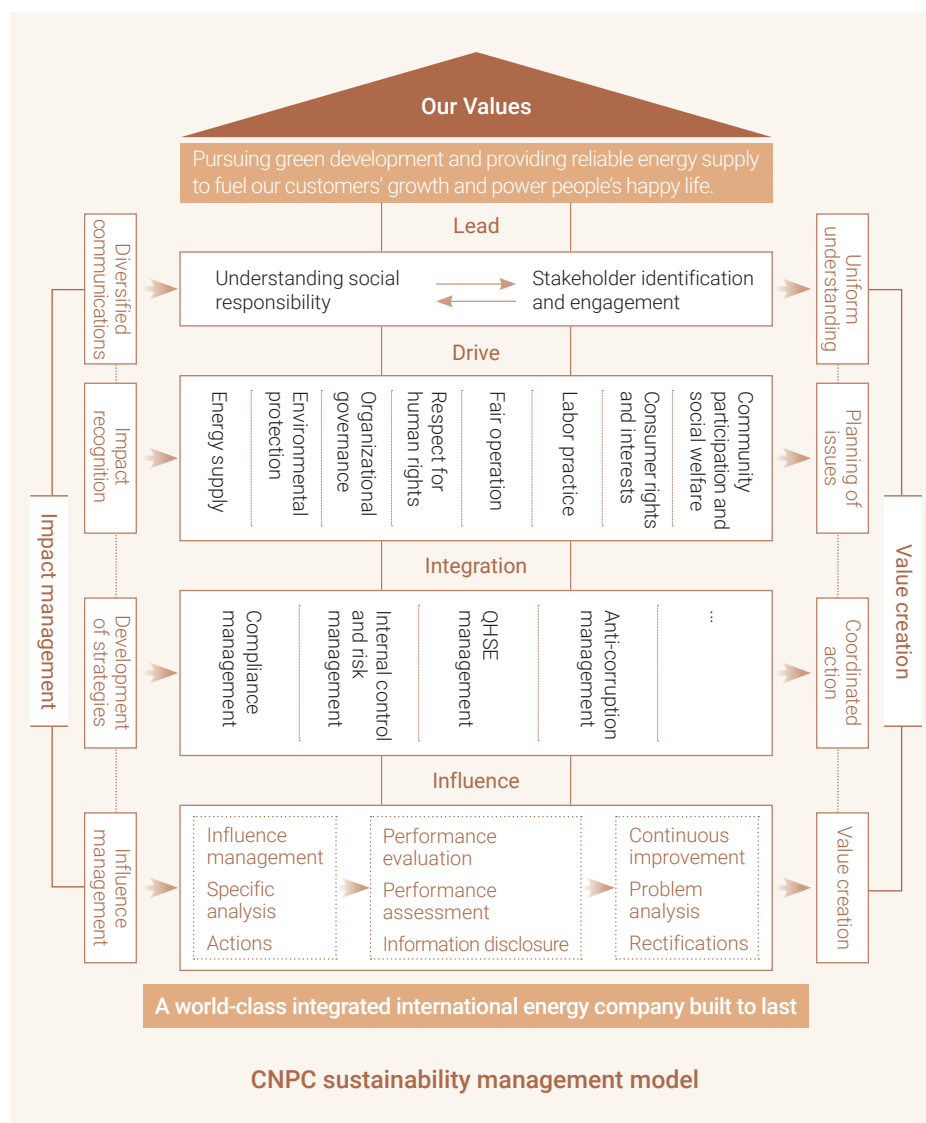
	Measures
	▶ Improved the compliance management system. The <i>Regulations on Compliance Management</i> and <i>Measures for the Management of Compliance Review</i> were issued to optimize and improve the structure, operation and guarantee mechanism of compliance. ▶ Evaluated the effectiveness of the compliance management system. Formulated evaluation indicators for comprehensive evaluation, and improved the construction and operation of the compliance management system. ▶ Improved compliance guidelines in key areas. The <i>Guidelines on Antitrust Compliance</i>, the <i>Guidelines on Compliance with Tendering Services</i> and other documents were issued to provide guidelines for compliance performance. ▶ Strengthened compliance training. Organized compliance training and rule of law knowledge examination to enhance compliance awareness and ability; Conducted training courses on compliance and business operation of overseas projects to improve the compliance risk prevention and control ability of overseas business personnel.  Scan the QR Code to Download the <i>Integrity and Compliance Manual</i>
	▶ Continued to deepen the construction of internal control system, constantly optimized business process management, and promoted the construction of internal control system in 6 overseas companies. ▶ Regularly tracked risk changes, carried out risk analysis and judgment, and improved risk prevention and control capabilities. ▶ Continued to carry out internal control supervision and evaluation, strengthened the rigid constraints of the internal control system, and promoted the high-quality development of enterprises.
	▶ Completed HSE audit of 110 domestic enterprises and 19 overseas projects. ▶ Issued the <i>2023 QHSE Management System Audit Plan</i>, adopted a differentiated audit method, and highlighted the duty performance of staff and the normative verification of operational behaviors. ▶ Issued the "Measures for the Management of Production Safety Accidents", "Measures for the Management of Hidden dangers of safety and Environmental Protection Accidents" and "Measures for the Management of Contractor Safety Supervision", and the safety supervision system was further improved. ▶ Revised the HSE responsibility statements for professional companies and enterprises, and strengthened the assessment of production safety processes. ▶ Continued to carry out the "Hundreds of Thousands Demonstration Projects" for HSE standardization at grass-root level, and selected 20 demonstration station teams.
	▶ Promoted the unity of not daring to corrupt, not being corrupt, and not wanting to corrupt. Always maintained a high-pressure situation in the fight against corruption, and more effectively curbed the increase and eliminate the stock. ▶ Accelerated the development of digital supervision to improve our ability and coverage. ▶ Deepened three-supervision (business, function, and accountability) and promoted efficient synergy from other means of supervision.

SUSTAINABLE DEVELOPMENT MANAGEMENT

Concept of Sustainable Development

For a company, fulfilling its corporate social responsibilities is not only a necessary path to achieve economic, environmental and social sustainability, but also an inevitable choice for its own sustainable development; it is not only an external requirement to adapt to economic and social development trends, but also an internal requirement to enhance its sustainability; it is not only an important way to change its development mode and achieve sustainable development, but also a strategic requirement for expanding its international operations.

Adhering to legal operation, we are honest and trustworthy, conserve resources and protect the environment, insist on the people-oriented principle and build a harmonious enterprise, in order to make returns to society and realize value sharing. We aim to achieve the organic unity of economic, environmental and social responsibilities, and strive to become an outstanding global corporate citizen with higher profitability, stronger brand influence, and a sound reputation in society.



Management Mechanisms

Sustainable development management is an important part of CNPC's drive for deepening the modernization of its governance system and capabilities. At CNPC, we regard the establishment and improvement of the social responsibility management mechanism as a fundamental task in advancing sustainable development management. Focusing on system establishment, organizational structure and capability building, we have established a set of comparatively comprehensive sustainable development management mechanisms.

System Building

We have developed a "1+N" system, with the "Guideline of CNPC on Fulfilling Social Responsibility" as the guiding document for sustainable development management. Focusing on corporate governance, energy transformation, green and low-carbon, safety production, product quality, employee health, and social welfare, laying a solid foundation for sustainable development management (see corresponding chapters of this report for details).

Organizational Structure

The Social Responsibility Management Committee is responsible for making social responsibility strategies and plans. The Committee is composed of heads of headquarters functional departments, with a company leader as the director. Meanwhile, we have established an External Experts Committee and regularly hold meetings to solicit professional advice on social responsibility management and best practices, and to provide support for our decision-making. At the headquarters, we have set up the Social Responsibility Office for CSR implementation, which is responsible for organizing and coordinating the planning and implementation of our social responsibility work. A working mechanism has been established, in which the Committee takes the lead, departments in charge organize the work, business sectors take respective responsibilities and affiliates are fully engaged. This has effectively ensured the progress of our social responsibility standards and planning.

Capacity Building

We actively carried out research in the field of social responsibility, promoted CSR education and training, and boosted communication with relevant organizations at home and abroad, in order to continue enhancing CSR awareness and our capability to fulfill responsibilities among all employees.



CNPC and UN SDGs

The UN SDGs represent the greatest consensus of mankind on sustainable development. CNPC gives full play to its own advantages, and seeks opportunities through meeting social development and addressing common challenges, striving to contribute to the achievement of the United Nations Sustainable Development Goals.



We implemented Rural Revitalization Project to help eliminate poverty in all forms.

- ▶ We earmarked RMB 659 million in rural revitalization and social welfare



We took action to restore farmland, boost agricultural production and supply water to rural areas to promote local agricultural development.

- ▶ We provided assistance in spring plowing, summer planting, summer harvesting, summer field management and autumn harvesting
- ▶ We invested RMB 10 million in a project to build high-standard farmland and feed processing plants in Qinghe County, Xinjiang, and upgraded a pressurized drip irrigation system for 2,000 acres of farmland to boost agricultural production



We publicized a healthy lifestyle, and provided free medical services to the public. We paid great attention to employee health, and implemented the Employee Assistance Program (EAP).

- ▶ Our employee occupational health examination rate reached 99.41%.
- ▶ Our psychological hotline provided services for about 1,618 hours



While promoting traditional education projects, we explored new models to help solve the problem of educational equity.

- ▶ We earmarked RMB 65.31 million in supporting education
- ▶ We granted CNPC Scholarships to 685 students
- ▶ The "Xuhang Program" helped 3,313 students in poverty



We upheld gender equality, respected and protected female employees' legal rights and interests, and paid attention to the demands of female in poverty-stricken areas, to help them enjoy a better life.

- ▶ We advocated an employment policy based on equality, and the proportion of female employees is 28.7%.



We improved water use efficiency, and strengthened water resources management and water pollution control. We supported and participated in projects to improve drinking water quality in poor areas.

- ▶ We implemented water resources management throughout the industry chain
- ▶ We implemented programs on drinking water safety



We developed new energies, improved energy efficiency, and enhanced our ability to supply natural gas.

- ▶ We added 10.45 million square meters of geothermal heating area
- ▶ Accumulative installed wind and solar capacity exceeded 5 million kW.
- ▶ A total of 21 hydrogen refueling stations were built.
- ▶ Domestic natural gas sales volume reached 229.91 billion cubic meters.



We created job opportunities for local people according to applicable labor standards and prioritized local contractors in economically underdeveloped areas.

- ▶ We had a total of 1.0616 million employees
- ▶ Over 40% of fresh university graduates we recruited are from western China



We attached great importance to technological innovation capability building, and supported infrastructure construction in economically underdeveloped areas.

- ▶ We invested RMB 28.94 billion in R&D.



We had no child employment or forced labor, and no form of discrimination in terms of gender, region, religion, nationality, etc.

- ▶ We launched public welfare projects such as "employment empowerment training for women" to promote women's employment



We helped build inclusive, safe, and risk-resilient cities and communities.

- ▶ We assisted in the construction of terraced homestays for rural tourism in Hengfeng County, Jiangxi Province
- ▶ We assisted in the building of an agricultural, forestry, and flower base in Fan County, Henan Province



We intensified our efforts in clean energy supply, sustainable management of natural resources, hazardous chemicals management and pollutant discharge reduction.

- ▶ Emissions of major pollutants continued to decline



We embrace and support the goal of the *Paris Agreement* and actively responded to climate change

- ▶ We formulated and released the *Action Plan for Green and Low Carbon Development*, put forward low-carbon circular economic development, and defined the path for carbon peaking and carbon neutrality
- ▶ CNPC's methane emission intensity decreased by more than 10% year-on-year



We launched the environmental feature acquisition program, and carried out environmental control and monitoring projects, to protect local marine ecological environment and biodiversity.

- ▶ We protected the marine ecological environment in Brazil



We complied with local environmental protection policies, and animal and plant trading laws and regulations, and protected local rare species.

- ▶ We built 3 Other Effective area-based Conservation Measures (OECMs)



We promoted economic prosperity, and pursued peace and growth.

- ▶ We strengthened overseas security management. There were no security-related fatalities in our overseas projects



We cooperated with host governments and partners to address challenges in energy sustainable development.

- ▶ We have energy cooperation with BRI-related countries, and the annual oil and gas equity output in these countries accounted for 83% of the overseas total equity production.
- ▶ Our total international oil and gas trade volume was 500 million tons in 2023.

COMMUNICATING AND INTERACTING WITH STAKEHOLDERS

Stakeholders are the groups or individuals who are able to influence corporate decisions and activities or are subject to influence from corporate decisions and activities, including government, employees, customers and consumers, partners, relevant agencies and communities, etc. Stakeholders' participation in CSR work can help deepen mutual communication, understanding, trust and cooperation, and is beneficial to the Company's development.

We adhere to the principles of honesty, interaction and equality, and actively establish and improve the mechanism of stakeholder participation. We introduce a variety of ways to collect and analyze the expectations and concerns of our stakeholders, enhance our communication with stakeholders, and invite them to participate in decision-making and activities related to our sustainable development. In addition, we learn from standards and advanced experiences at home and abroad to continuously improve stakeholder participation.

Increasing Routine Disclosure

Through newspapers, the Company's website and its micro-blog, WeChat, mobile reading and other new media, we enrich information disclosure channels on social responsibility in a timely manner and enhance the effectiveness of our communications.



Changqing Oilfield: oil exploration in changes - a close look at rock core



Sichuan Petrochemical: the whole-process green production

Engaging Stakeholders

We encouraged stakeholders to participate in the Company's major decision-making and activities, and provided the media and the general public with a better understanding of CNPC. We introduced a variety of ways to enhance communications with our stakeholders including the staff congress, announcements, seminars and dialogues. We also launched a series of activities including the CNPC Open Day, and other activities allowing visits to CNPC.

Case Building platforms for communication with the public

We actively built platforms for communication with the public. In 2023, we held the sixth CNPC Open Day event, during which we invited government departments, media reporters, corporate clients, representatives of residents and other stakeholders to visit and learn about the whole petroleum industry chain. Channels for communication with the public, both online and offline, were built through various forms such as field visits and drills, science popularization events, games, special lectures, and live streams. We are open to the public, and we promote petroleum culture.

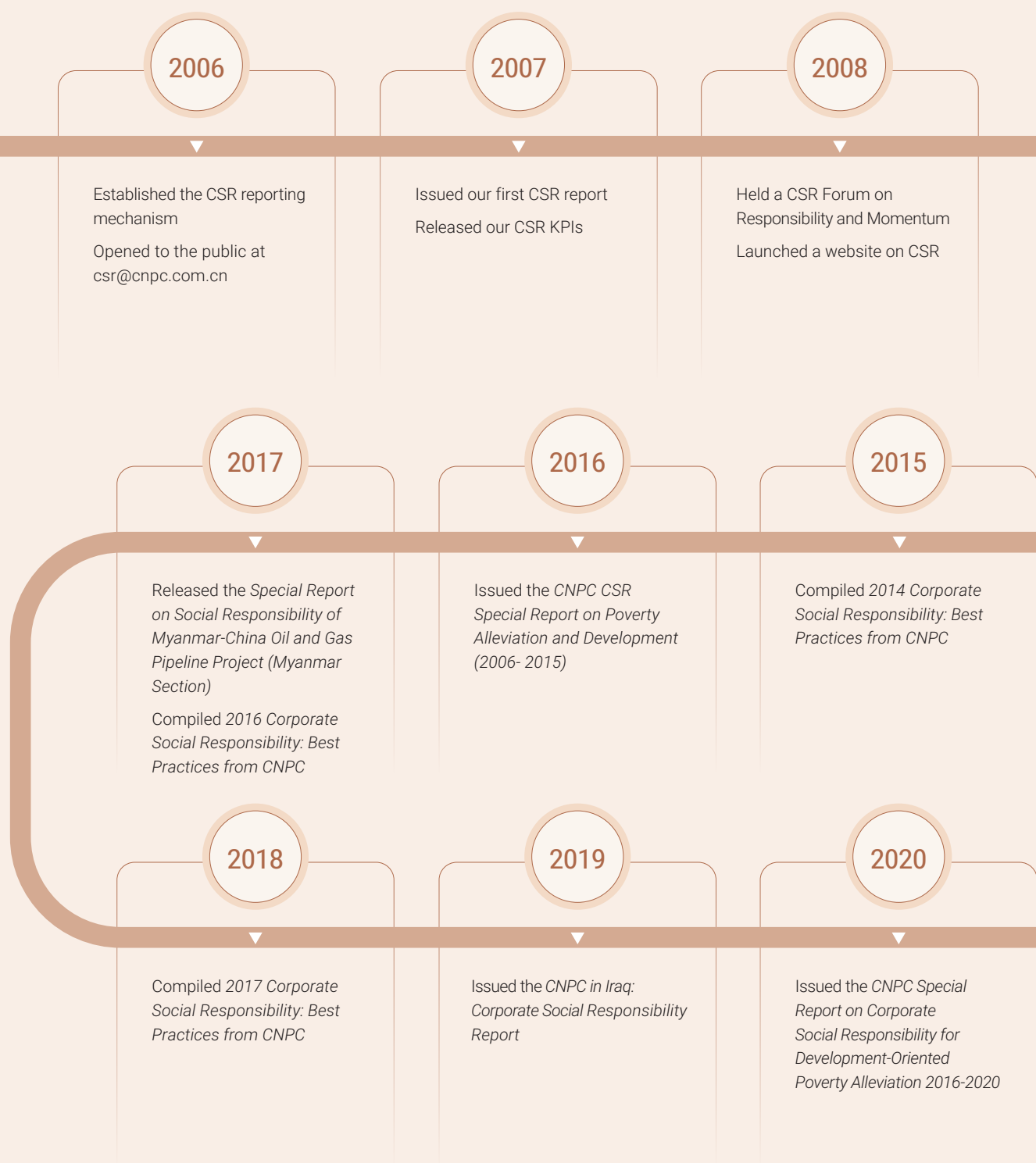
Since 2018, CNPC Open Day, which has been held for six years in a row, has become an important platform for showcasing CNPC to the outside world and strengthening its two-way communication with the public. The total number of online and offline visitors exceeded 70 million person-times.

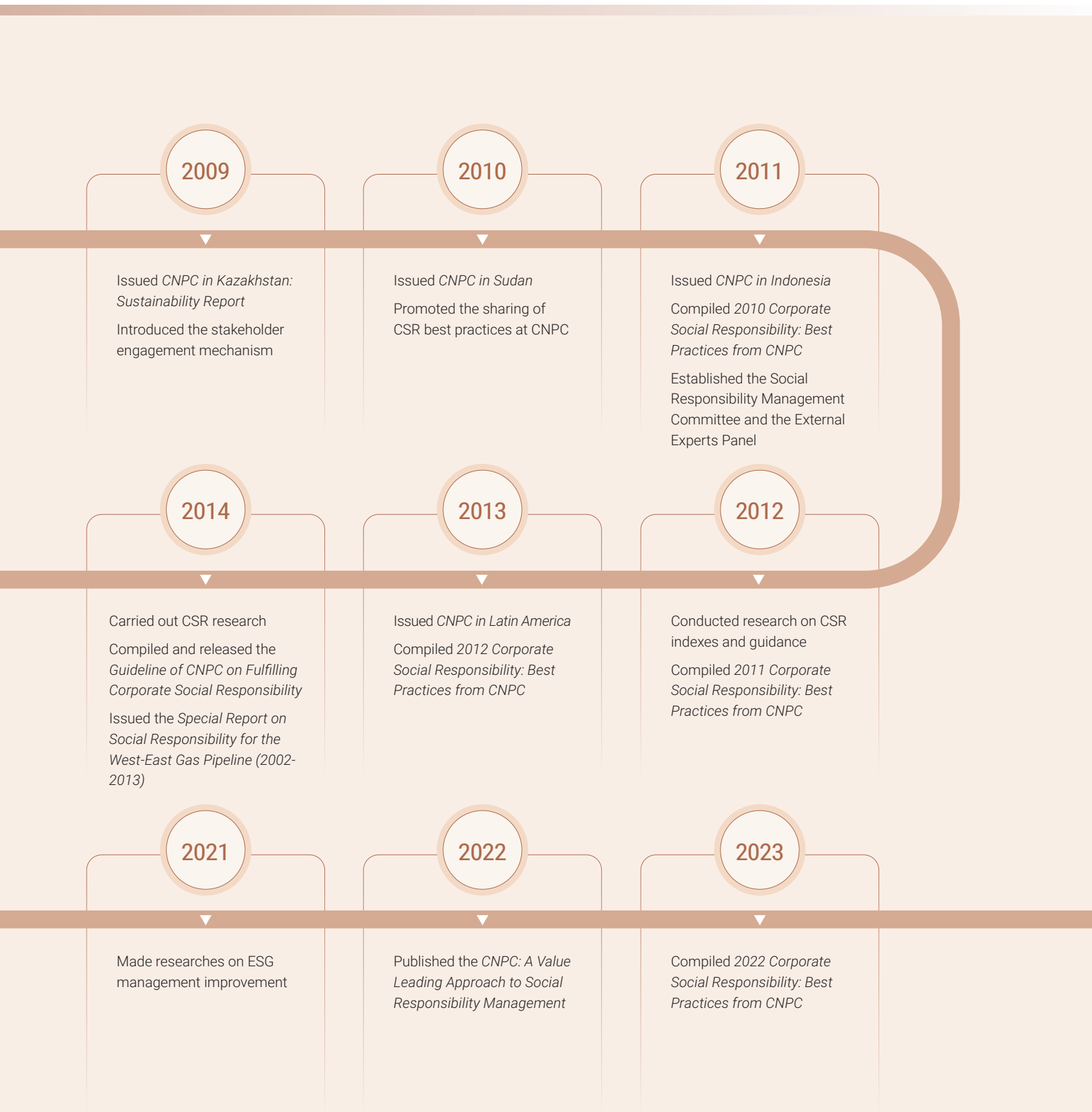


Yumen Oilfield: students' letter to iron men



Open Day! Let's visit PetroChina Kunlun Gas in Suqian, Jiangsu





CNPC and Stakeholders

	Government	Employees
 Goals and concerns	➤ Guarantee energy security ➤ Stabilize market supply ➤ Fulfill social responsibility ➤ Address climate change ➤ Operate in compliance with all legal requirements ➤ Build ecological civilization ➤ Deepen corporate reform ➤ Protect the rights and interests of investors	➤ Guarantee employees' rights and interests ➤ Employee career development ➤ Employee value realization ➤ Employee health and safety
 Mode of Communication and Engagement	➤ Legal operation, integrity and trustworthiness ➤ Respond to the government's call, and accept supervision ➤ Contribute to the formulation of energy policies, laws and regulations and industry standards ➤ Enhance the quality of products, engineering and services ➤ Improve environmental performance	➤ Support trade unions at different levels ➤ Hold staff congresses ➤ Reinforce staff training ➤ Improve salary distribution system ➤ Hold contests and evaluations
 Our Actions	➤ Change the mode of development, leverage resource potential, promote technological innovation, maintain sound operations and increase the value of state-owned assets ➤ Safeguard energy supply and optimize energy mix, in coordination with national energy strategy ➤ Promote the building of national key laboratories and major sci-tech innovation projects	➤ Implement human resource development programs ➤ Improve the staff development mechanism ➤ Enhance employee training by hosting professional skills competitions ➤ Protect the legitimate rights and interests of employees ➤ Continue to organize occupational health examination and employee assistance activities

	Customers and consumers	Business partners	NGOs and relevant organizations	Communities and the public
	▶ Provide safe, environmental- friendly, and high-quality products ▶ Provide quality services ▶ Improve customer satisfaction ▶ Establish communication mechanisms ▶ Advocate sustainable consumption patterns ▶ Protect consumer privacy ▶ Improve consumer complaints mechanism	▶ Comply with national laws, regulations and business ethics ▶ Standardized HSE management ▶ Promote fair competition and mutual benefits ▶ Promote social responsibility throughout the value chain	▶ Participate in discussion on public policy and industry standards ▶ Keep track of industry trends and policy moves ▶ Advance the sustainable development of enterprises and industries ▶ Carry out cooperation in social development and environmental protection	▶ Promote community development ▶ Protect community environment ▶ Increase local employment ▶ Support education, public health and other public welfare activities ▶ Perform social investment ▶ Enhance sustainable development capacity
	▶ Safeguard consumers' interests ▶ Supervise product quality ▶ Solicit the opinions of customers and consumers	▶ Promote e-procurement through e-commerce platform ▶ Share management experience and technical standards ▶ Strengthen communication with suppliers and contractors	▶ Share corporate experience ▶ Attend related meetings and forums ▶ Facilitate international exchanges and cooperation	▶ Provide education, training and employment opportunities ▶ Promote cultural exchange ▶ Pay community visits
	▶ Further promote the CNPC Quality Month Campaign ▶ Provide natural gas and other clean energy and products ▶ Establish a unified service station management system and launch overall inspections on service stations ▶ Implement customer satisfaction investigation and conduct mystery customer visits	▶ Advocate fair competition and standardized operations, and promote the use of e-procurement and management platform ▶ Strengthen control over key processes including design, procurement, construction and supervision, and strengthen HSE management for suppliers and contractors	▶ Exchanges with the public on their concerns ▶ Participate in high-level strategic cooperation forums to discuss how to build an efficient, safe and competitive supply chain	▶ Carry out disaster relief, poverty alleviation and donations to education, and support the reconstruction of disaster-stricken areas ▶ Implement Rural Revitalization Project ▶ Support and drive the development of local economies through major project construction ▶ Support the development of SMEs and promote local procurement

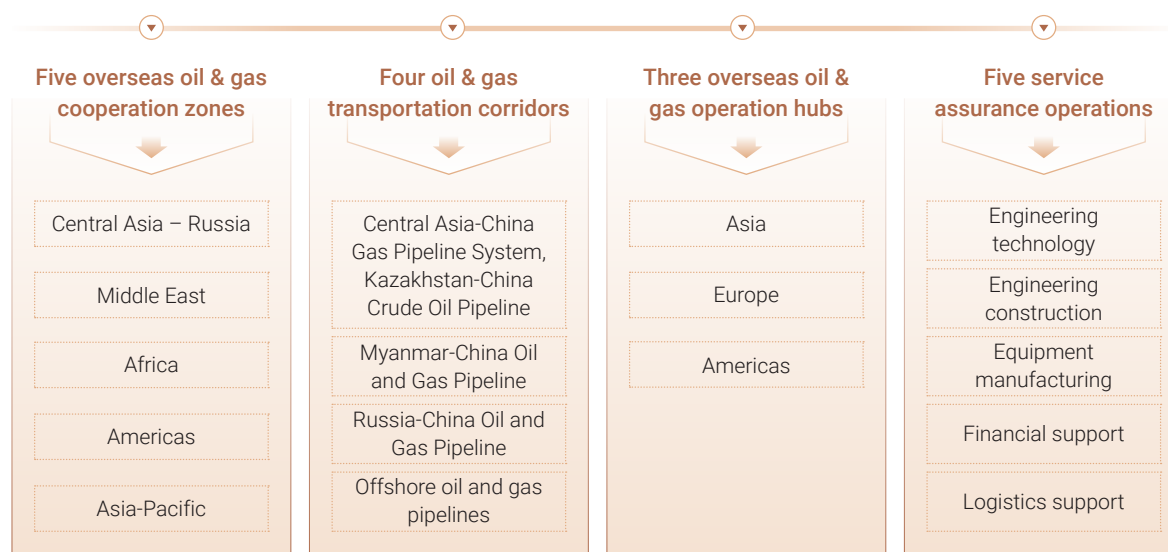
TOPIC

DEEPENED INTERNATIONAL ENERGY COOPERATION FOR JOINT CONSTRUCTION OF THE BELT AND ROAD INITIATIVE

The year 2023 marked the 10th anniversary of the Belt and Road Initiative (BRI) and the 30th anniversary of CNPC's "going global" strategy. As the pioneer and main force of building the Belt and Road, CNPC has always been committed to high standards, sustainability and a better life for the people. In the year, we made efforts in expanding physical connectivity, institutional connection and people-to-people bonds, carried out innovative practices in international energy cooperation, and promoted win-win partnerships in wider range and at higher and deeper levels, making positive contributions to the country's opening-up drive and ensuring national energy security.

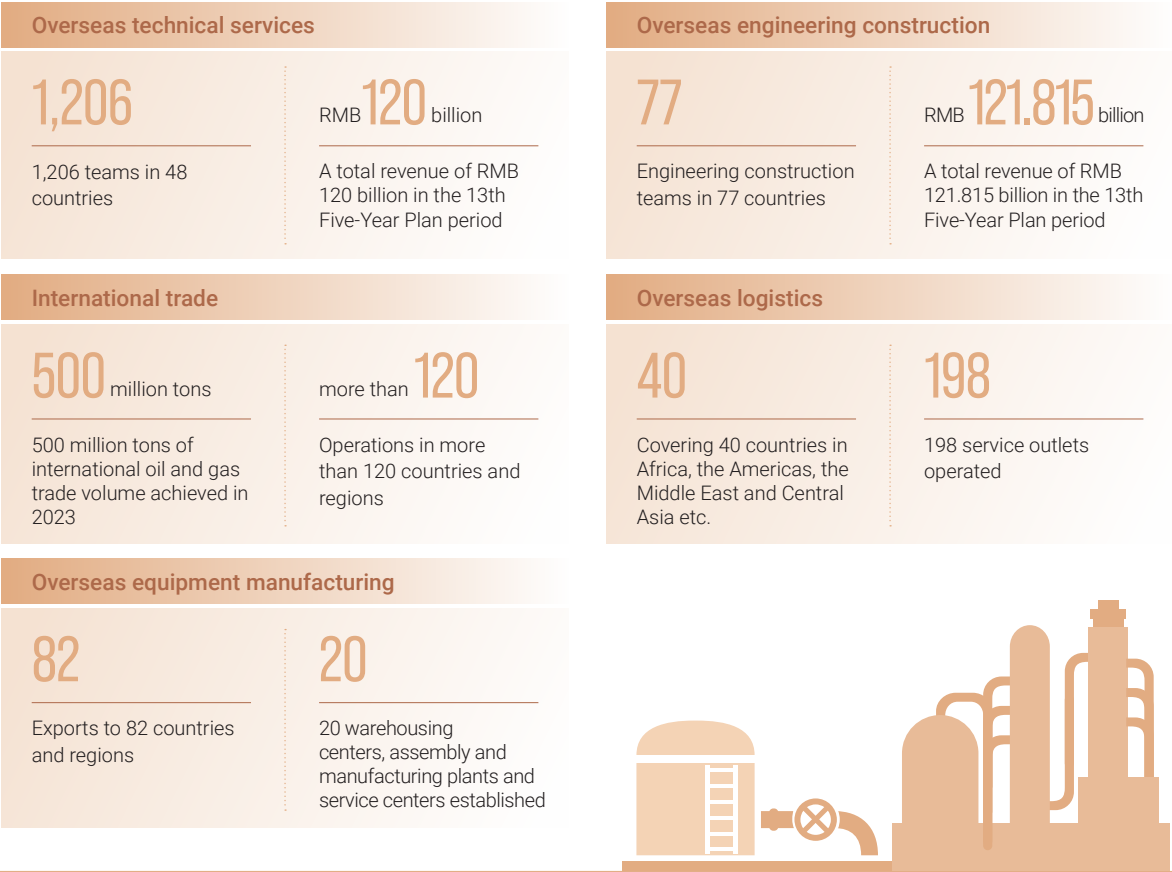
Stabilizer in Energy Supply

Through profound energy cooperation with BRI countries, CNPC shaped its five overseas oil & gas cooperation zones, four oil & gas transportation corridors, three overseas oil & gas operation hubs, and five service assurance operations. For the fifth consecutive year, the Company saw its overseas oil and gas equity production equivalent exceeding 100 million tons in 2023, consolidating its basis for serving as a "pillar" of energy supply and also contributing to the building of energy industries and economic & social development in BRI countries. With these results, the Company made positive contributions to deepening and expanding international energy cooperation and building a community with a shared future for mankind.



A Main Force in Belt and Road Initiative

Over the past ten years since the BRI implementation, CNPC has built new energy partnerships by adhering to the principles of extensive consultation, joint contribution and shared benefits, and registered the largest number and scale of projects among Chinese companies joining the BRI. By the end of 2023, CNPC had formed a complete industry chain along the BRI routes integrating exploration & development, pipeline operation, refining & chemical, engineering services, and finance & trade, recording an oil and gas equity production equivalent of about 83% of the Company's overseas total for the fifth consecutive year. In addition, a market for its engineering services with a contract value of more than USD 100 million in more than 20 countries including the UAE, Iraq and Saudi Arabia, providing a solid foundation for ensuring China's national energy security.



TOPIC

Innovation Leading to “New Heights”

We insist on innovation in management, technology and human resources. We participate in global competition, enhance our core competitiveness and build a globalized operation and management model. We prioritize benefits while upholding low-cost development, and we adopt the international operation model while leveraging our advantages in integration. In 2023, our international core competitiveness in exploration, development, project management, technical support and other core business areas was enhanced markedly, leading to a landmark shift from “going global” to “becoming stronger”.

Overseas oil and gas discoveries since 2013

Six 100-million-ton oil and gas pay zones

One world-class giant oil field

Two billion-ton oil and gas fields

Technological Innovation

For our overseas businesses, we built a “1+15+N” technical support system; relying on RIPED, we have 15 professional technical centers and a number of domestic oil and gas fields. We also developed ten characteristic technologies represented by high-speed development of overseas sandstone oilfields and oil stabilization and water control technology, efficient development technology for large carbonate reservoirs, and foamy oil cold recovery technology in integral horizontal wells of extra-heavy oil reservoirs.



- First prize of 2003 National Scientific and Technological Progress Award for “technology and practices of efficient exploration in blocks 1/2/4 of Muglad Basin, Sudan”.
- Second prize of 2005 National Scientific and Technological Progress Award for “supporting technologies and practices for rapid discovery of large oil fields in the Melut Basin”.
- First prize of 2019 National Scientific and Technological Progress Award for “100-million-ton capacity building engineering and efficient development of thick and complex carbonate rock reservoirs in the Middle East”.

Management Innovation

We built an internationalized operation and management system with our own characteristics. We established a set of models for overseas operation and management based on local realities and Chinese characteristics following international norms.

Innovation in Team Building

We built an international, professional workforce to promote high-quality development of our overseas operations.



Practicing Green Development

We implemented the green and low-carbon development strategy, and prepared *Action Plan for Carbon Peak in Overseas Operations*. With a view to realizing the diversified, complementary and coordinated development of oil & gas and new energies, we deployed geothermal, CCUS, solar and wind energy operations in BRI countries, promoting international energy cooperation to “go green”. By 2023, we had won more than 30 environmental protection awards in BRI countries, embarking on a path for clean, low-carbon, circular and sustainable cooperation. For our project in Iraq, for example, we initiated measures to reduce flare emissions, cut energy consumption and carbon emissions of oilfield development, and stepped up efforts in environmental restoration and protection, e.g. treatment of oilfield produced water, in accordance with the country’s local environmental policies and regulations as well as the environmental standards prevailing in the global oil industry. In addition, we were deeply involved in dialogues and exchanges under the international energy governance mechanism, joined the Oil and Gas Climate Initiative (OGCI), and carried out researches on low-carbon transition.

Being a Pacesetter as a Responsible Global Corporate Citizen

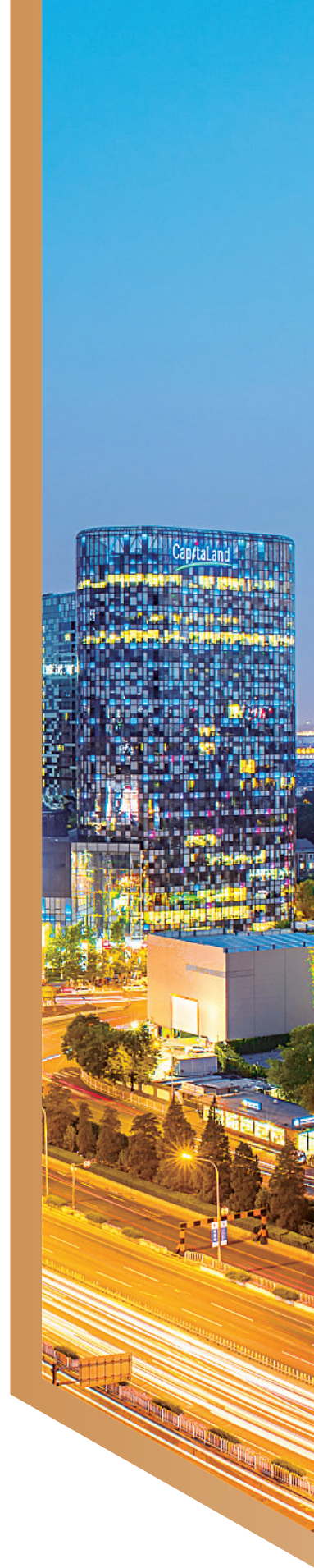
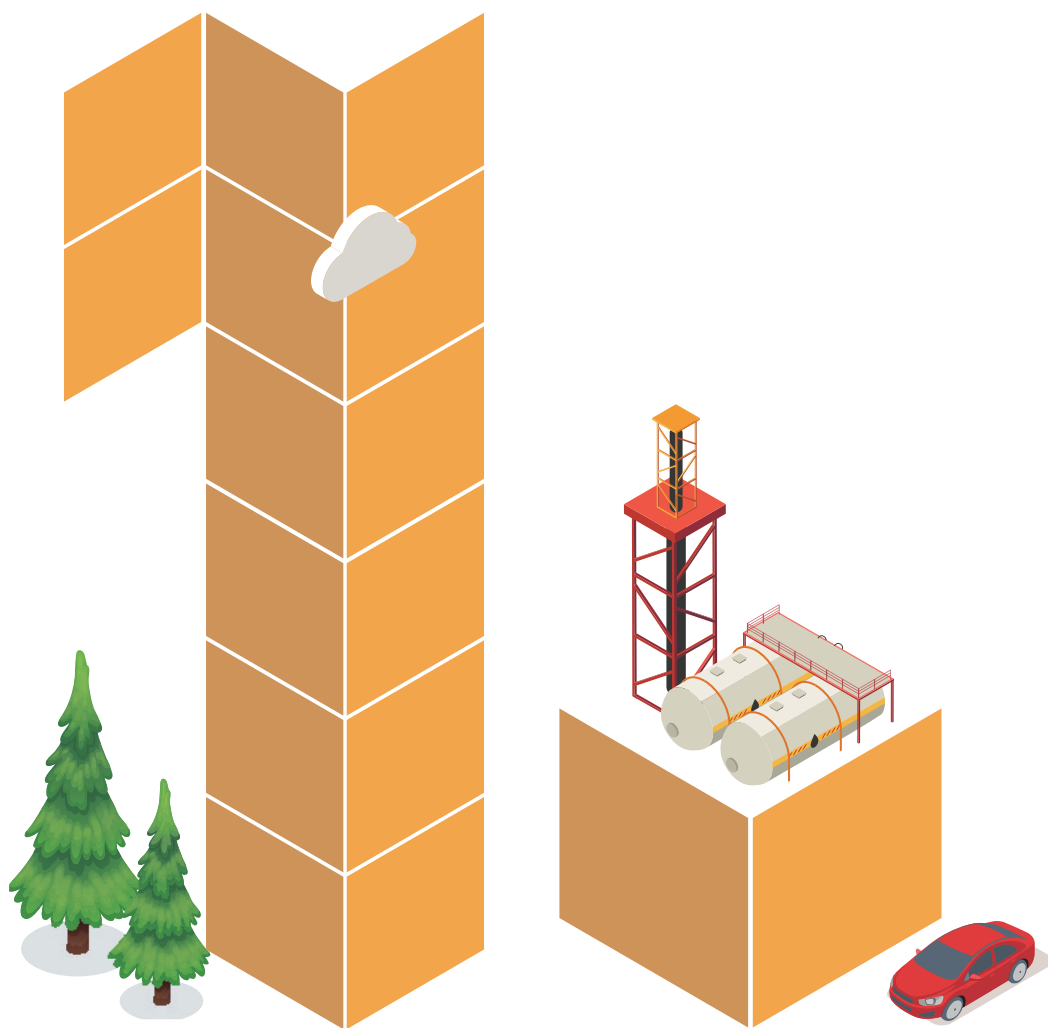
We are committed to being a responsible corporate citizen. We promoted the economic and social development of host countries, and joined hands with BRI countries to establish a sound and complete petroleum industry system. Our oil and gas cooperation projects in Kazakhstan, Niger and Chad were highly praised by the heads of state of these countries as models of bilateral cooperation. We implemented employment localization for our overseas operations. In Iraq, we achieved a localization rate of 95% of employees for the Rumaila project, which significantly improved the livelihoods of local communities. Upholding the concept of building a community with a shared future for mankind, we valued the aspirations of host countries and stakeholders. We paid more than USD 40 billion in taxes and fees to host countries, created over 100,000 jobs, donated more than USD 150 million to build bridges and roads, improved medical care and education, and cultivated local talents, benefiting millions of people.

We are setting out on a new journey in the new era. We will, focusing on the BRI, advance international energy cooperation in an integrated manner, make every effort to promote the high-quality development of international operations, and act as the main force for the high-quality BRI construction in the new era, so as to contribute to safeguarding China’s national energy security, deepening and expanding international energy cooperation, and building a community with a shared future for mankind.



SUSTAINABLE ENERGY SUPPLY

It is CNPC's responsibility and mission to meet energy challenges and satisfy the ever increasing demand for low-carbon clean energy. To this end, we enhance technological innovation to continuously increase our efficiency in hydrocarbon development and utilization. We boost the natural gas industry, expand new energies and new materials business, and raise the proportion of clean energy in our energy supply. With these efforts, we strive to make contributions to the construction of a diversified, clean energy supply system and the prosperity of human society.





Energy and Future

Opportunities and Challenges

The growth of economy and population drives the growth of energy demand. By 2060, the world population is expected to be 10.07 billion, an increase of 26.2% over 2022. Technological progress and population growth are major drivers for the size of the world economy. By 2060, the world economy is expected to reach USD 236 trillion, 2.35 times more than that of 2022. In the long run, economic development and population growth will drive sustained growth in global energy demand and consumption.

Lack of equal access to energy is still a prominent issue. At present, over 1.2 billion people worldwide still lack access to affordable modern energy, and developing countries are still using large amounts of high pollution and high-carbon energy. Helping this group obtain equal access to clean, low-carbon and affordable energy is not only a requirement for achieving the Sustainable Development Goals (SDGs) of the United Nations, but also the key to achieving global temperature control goals.

Accelerated transformation to clean and low-carbon energy is driven by addressing climate change. Climate change has become a major issue affecting the global and human destiny. A number of important consensuses were reached including “achieving a just and equitable transition from fossil fuels (oil and gas) to renewables” in the 28th United Nations Climate Change Conference. The clean and low-carbon transition is an irreversible trend, and non-fossil fuels will gradually dominate in the supply system, with an estimated proportion of 63% in the primary energy by 2060.

China is accelerating the construction of its clean and low-carbon energy system. Efforts are stepped up in building a new energy system driven by the national “Carbon Peak and Carbon Neutrality” goals, so as to peak demand for oil and gas in 2030 and 2040 respectively. Oil and gas will see a shift in their position in the new energy system, but will remain an important component. Demand for oil will highlight its attribute as a feedstock “to support economic and social development”, compared with “the pillar of energy supply for the transportation sector” in the past; while natural gas will gradually become an important source of energy to support the all-round green transformation of the economy and society.

✓ Changqing Oilfield in low-carbon transition



Strategic Response

The world is undergoing a profound and rapid energy transition towards a cleaner, low-carbon, more efficient and diversified energy structure. Especially at a time of sluggish global economic growth and an intensified backlash against globalization, energy companies should work together to overcome difficulties, explore new opportunities and seek sustainable development. As a major player in the oil and gas industry and China's largest oil and gas producer and supplier, CNPC has been actively cooperating with the government and companies in the industry chain, and strives to provide clean, low-carbon, safe and efficient energy while meeting future energy demand, in an effort to jointly build a sustainable energy future.

Committing ourselves to the value pursuit of "pursuing green development and providing reliable energy supply to fuel our customers' growth and power people's happy life", we have been accelerating the green and low-carbon transition. First, we leverage our rich gas resources and increase gas production, while stabilizing oil production. Second, we make good use of our abundant wind, solar and geothermal resources, promote the integrated development of wind, solar, gas and electricity and the industrialized utilization of hydrogen energy, and step up the large-scale development and comprehensive utilization of thermal resources, helping CNPC transition to become an integrated energy company specializing in "oil, gas, geothermal, electricity and hydrogen". Third, we promote the green action plan, and implement energy conservation, emission reduction and clean energy replacement in production, to reduce fossil energy consumption and CO₂ emissions from the source, and achieve carbon reduction; we accelerate the industrial layout of CCS/CCUS, strengthen the development of forestry carbon sinks, chemical utilization of carbon dioxide, etc., strive to achieve carbon removal, and actively contribute to the achievement of the "Carbon Peak and Carbon Neutrality" goals.

Green and Low-carbon Transition Path of CNPC

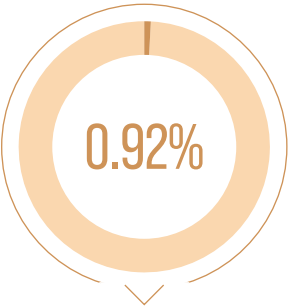
	Clean alternatives 2021-2025	Strategic replacement 2026-2035	Green transformation 2036-2050
Targets	▶ Striving to enable the new energies business to contribute to 7% of China's energy supply capacity by 2025	▶ Ensuring new energies to take up one-third of our business capacity, with oil and gas by 2035.	▶ Ensuring that new energies business makes up half of our business capacity
Measures	▶ To enhance the development and utilization of geothermal energy, solar energy, wind, hydrogen and other new energy sources, promote clean replacement of energy in production, and promote the coordinated development of new energies and oil and gas industry chain ▶ To actively promote the integrated development of natural gas power generation and new energy power generation to provide clean energy products for society ▶ To actively deploy technological breakthroughs and pilot demonstrations in resource replacement fields such as hydrogen energy industry chain and clean conversion and utilization of fossil energy, and strive to complement CCUS measures to actively explore the clean development and utilization of fossil energy at lower cost ▶ To vigorously promote synergy in energy conservation, carbon reduction and pollution reduction, steadily promote clean alternatives to self-consuming energy, and step up cleaner production and pollution control	▶ To promote the coordinated development of new energies and new businesses with the oil and gas business. To allow new businesses such as clean electricity, hydrogen energy industry chain and clean transformation of fossil energy to initially form a strategic replacement pattern for oil and gas resources ▶ To promote the implementation of CCUS and carbon sequestration projects on a large scale to continuously reduce carbon emissions	▶ To continue to increase the development and utilization of new energies and strategic replacement of oil and gas resources, and improve the five major energy platforms of "oil, gas, geothermal, electricity and hydrogen" energy ▶ To intensively implement electrification transition, develop CCS/CCUS strategic replacement industries, and promote the development of carbon circular economy

Technology and Innovation

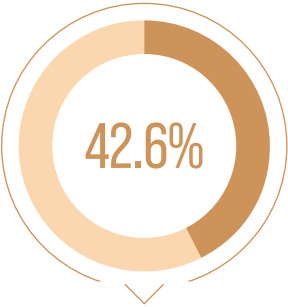
We put more emphasis on the innovation strategy. We endeavor to deploy innovation chains based on industrial chains, and enhance the value chains driven by innovation chains. We drive high-quality supply through innovation, and address global challenges such as equal access to energy, reduction of carbon emissions, and improved energy efficiency.

CNPC's Goal for Technological Development

2021-2035 (stage 1)	➤ Basically tackling problems in core technological research in the oil and gas industrial chain. ➤ Basically building a national strategic scientific and technological force and a highland for energy and chemical innovation.
2035 - mid-century (stage 2)	➤ Comprehensively building national strategic science and technology capabilities and took energy and chemical innovation to new heights. ➤ Becoming a major scientific and technological innovation center and innovation hub in the industry

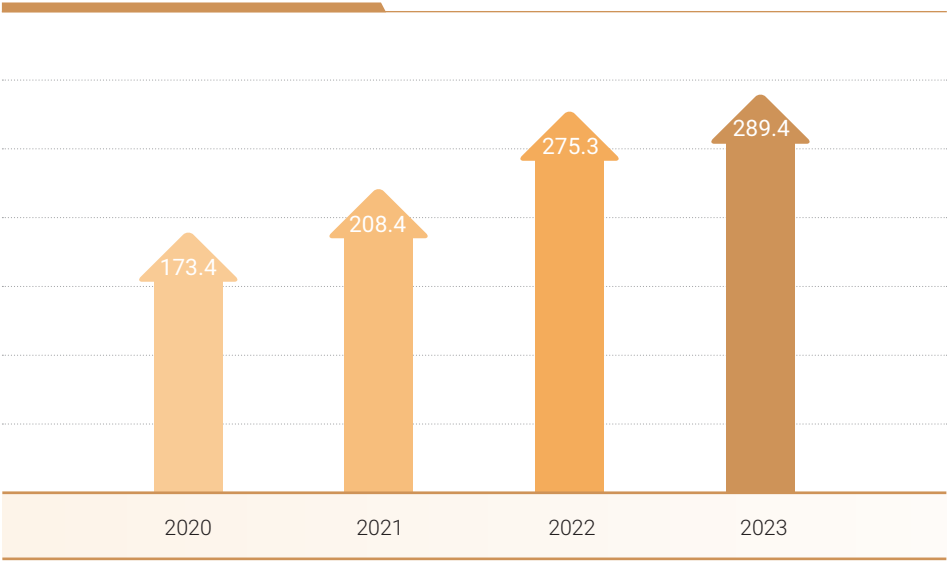


R&D investment ratio in revenues



Breakthrough in key core technologies

R&D investment (RMB 100 million)



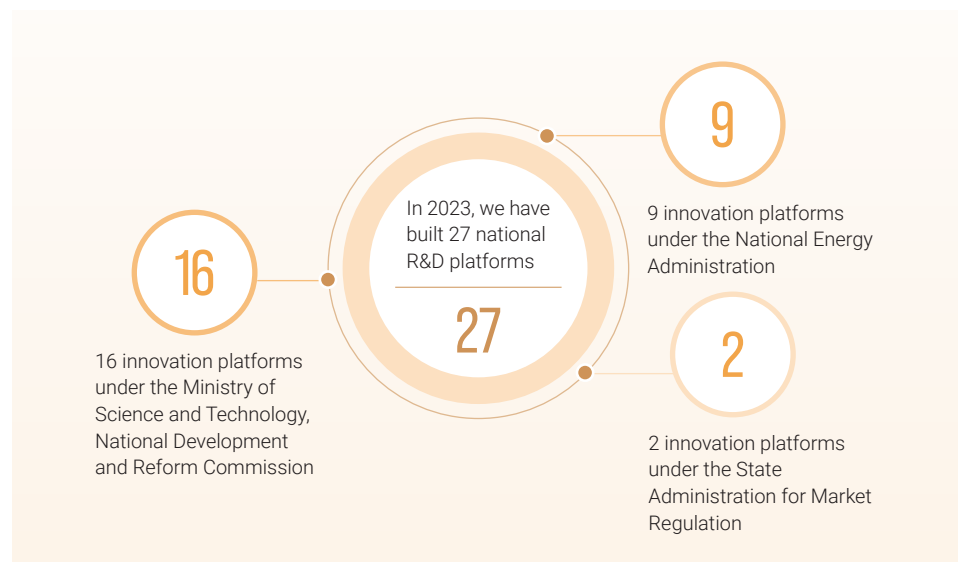
Innovation Platforms

CNPC has 92 research institutions and departments, with 12 directly affiliated to the Company and 80 enterprise-level scientific research institutions. CNPC also has 27 national R&D platforms and 56 CNPC key laboratories and experimental bases, covering the upstream, midstream and downstream sectors, and supporting and leading the Company's sustainable development.

CNPC maintains a two-level (national-level and provincial/industry-level) talent cultivation platform, and has formed an excellent team of 257 scientific and technological experts, 494 young scientific and technological candidates, and 146,000 researchers.



Daqing Oilfield pools national technological talents together to build a research and experiment platform



Scientific and Technological Achievements

Guided by construction of original technology bases, CNPC intensified efforts in its major scientific and technological projects for technological innovation and formed a batch of innovative theories and new technologies/new products with proprietary intellectual property rights. CNPC also accelerated efforts in breakthroughs in a number of key and core technologies, in order to provide strong technological support for the high-quality development of the Company.

In 2023, CNPC

- Applied for **10,071** invention patents at home and abroad, with **2,933** granted.
- Led the compilation and launch of **3** international standards, **2** international advanced standards; led the revision and launch of **6** international standards.
- Released the first international standard on shale gas in China, and led the compilation of the Global Enhanced Oil Recovery Standard.
- Made to the list of 2023 Most Innovative Companies of Top 50 by Boston Consulting Group (BCG).

CNPC 2023 top ten scientific and technological advances

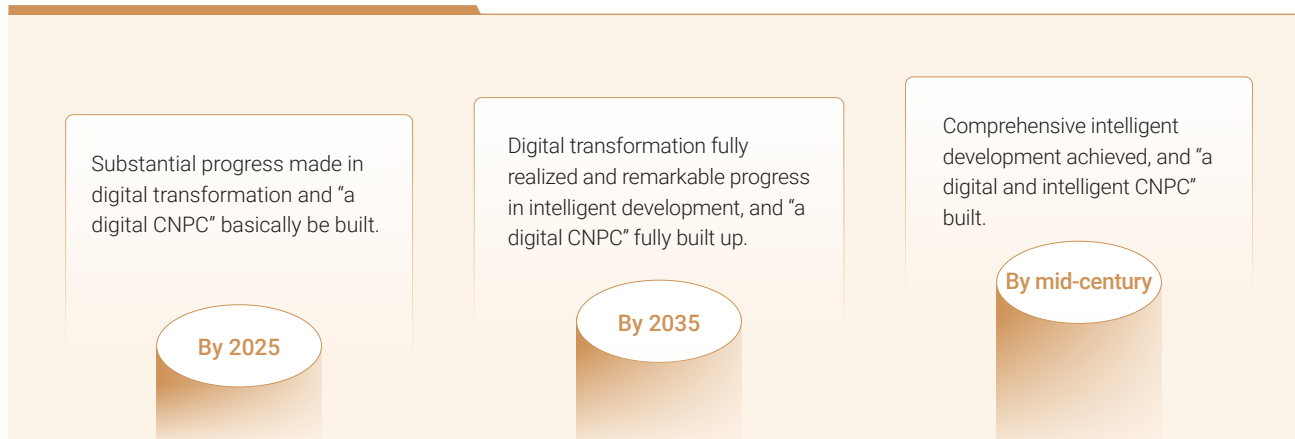
- 1 Breakthroughs in high clay-content shale oil enrichment theory and key technologies supported the construction of Gulong Shale Oil Demonstration Area
- 2 Innovation in deep coal rock gas enrichment theory and key development technologies promoted industrial development
- 3 Deep reactivation technology for amine solution supported efficient production of sour natural gas
- 4 Development and application of package technology of solution-based high-performance ethylene-octene polyolefin elastomer (POE)
- 5 Development and application of China's first package technology of PETG co-polyester
- 6 Development and application of high-performance solution-styrene butadiene rubber (a key material for tires) technology
- 7 Intelligent seismic operation system contributed to quality and efficiency improvement of seismic acquisition
- 8 Localization of fast imaging through-drilling-tool logging system and processing software for horizontal wells achieved
- 9 Major breakthroughs made in passive magnetic guidance drilling technology
- 10 Over 1,000-cubic-meter, wide-load and low-energy-consumption alkaline water electrolysis hydrogen production technology and equipment put into operation for the first time

Information Technology

Guided by the "value-oriented, strategy-led, innovation-driven and platform-supported" principle, we center on the three main lines of "business development, management reform and technology empowerment", endeavored to maximize the overall benefits of the industrial chain, promote the development of digital transformation and intelligence, and accelerate the high-quality development of the oil and gas business powered the new generation information technology, striving to create an open and shared smart industrial ecosystem of energy and chemicals.

In 2023, we advanced the construction of "a digital CNPC" steadily. We unveiled the CNPC (Beijing) Digital Intelligence Research Institute, implemented IT enhancement projects, and accelerated large-scale ERP construction. We saw remarkable results in optimized oil and gas value chain, released a guide to digital transformation, and made breakthroughs in the construction of national key projects. We further enhanced our cybersecurity and new infrastructure capabilities, basically built a global shared service system and achieved notable results in fully utilizing digital technology to continuously promote reform in corporate management and enhance the effectiveness of corporate governance, and accelerated digital and IT construction, providing new engines for us to become a world-class integrated international energy company built to last.

Development roadmap for "a digital CNPC"



Achievements in digital transformation and intelligent development

Task	Goal	Achievement
Business development	Coordinated and optimized oil and gas businesses. To achieve overall benefits and maximum value for shareholders, we made synergized efforts in resources allocation optimization, business performance coordination, and emergency response.	► We vigorously promoted the construction of production and operation platforms, accelerated the implementation of digital transformation of production sites, continued to promote production and operation "visible, controllable, and manageable", and gradually realized the real-time perception, dynamic analysis, intelligent regulation and adaptive optimization of all elements of production in the whole process. ► The optimization of the oil and gas value chain has achieved obvious results, effectively supporting the pre-calculation of production and operation and the integration and optimization of the industrial chain, realizing the overall management of market prediction, plan optimization, benefit calculation, and comprehensive analysis, promoting the deep integration of production and operation and finance, and supporting the production and operation and decision-making of the Company.
	Transformation and upgrading of main businesses. Industrial transformation and upgrading was driven by integrating Internet of Things, big data, AI etc. into the Company's businesses.	► The <i>Digital Transformation Construction Guide (1.0)</i> was released, covering six construction standards: business scenario design, data, cloud computing resource requirements, production private networks, network security, and the Internet of Things, and clearly proposing the path and construction sequence of digital transformation. ► Oil and gas & new energies: To build a model of "intelligent oil and gas field", we established a unified mode for digital transformation focusing on exploration, development, and engineering among other 8 business areas. Tarim Oilfield completed the pilot construction and achieved lean production, multi-party operation control, integrated and sharing of research. Southwest Oil and Gas Field built three integrated working environment, and formed new business management models for drilling engineering, gas production etc. ► Refining and chemicals & new materials: to build a model of "intelligent refiners", we formulated the <i>Technical Guidelines for the Digital Transformation and Intelligent Development of Refining and Chemical Business</i>, where intelligent refining and chemicals requires for controllable safety risks, lean operation and management, optimized process dynamics. A 3D integrated plant was built in the Yulin ethane to ethylene project comprising digital design, handover, digital twin. Dushanzi Petrochemical and Guangdong Petrochemical were awarded "2023 Intelligent Manufacturing Demonstration Factory" by the Ministry of Industry and Information Technology. ► Marketing business: to build a model of "smart marketing", we completed the construction of all-scenario for marketing, continued to optimize the intelligent scheduling, membership services, intelligent marketing, and cross-business collaboration within a province or region. ► Natural gas sales: to build a model of "smart natural gas sales", we enhanced our capabilities in sales forecast, household safety inspections, and station control.
Management reform	By digital transformation in decision-making, operation and management, collaboration OA, R&D, and service sharing, we promoted the modernization of corporate governance systems and governance capabilities.	► We pushed forward the construction of a unified office platform, and upgraded the general office platform in line with the principle of "platform+application+service", to build up six functions of multi-terminal service integration, visual application, systematic service management, intelligent data utilization, ecological collaborative sharing, integrated operation and maintenance/operation, hence realizing one-click login and unified to-do for all the 14 office management systems. ► The global sharing service system including finance and human resources was established. Financial sharing incorporated 3 types of business of domestic enterprises in accounting, statement preparation, capital settlement; Human resource sharing has completed full coverage of 6 businesses in 3 categories, promoted and implemented report customization, and regularly analyzed 2 data services; Social security services cover all corporate headquarters. We have integrated and optimized 455 robots, handling more than two-thirds of the business volume, continuously improving the level of automation, and expanding intelligent applications. ► We launched large-scale ERP projects. By optimizing resource planning, integrating business and finance, coordinating operation and production, we accelerated the synergy between materials, fund, information and value, so as to standardize business performance, efficient resource coordination, and value creation ability.
Technology empowerment	To build first-class industrial Internet system of energy and chemicals, and empower digital transformation technologies.	► Based on CNPC's four big data centers, we accelerated the application of cloud platforms, and continued to enhance abilities in cloud computing and storage. ► We conducted special activities for data governance. We put life-cycle data management into place for joint construction and management, and shared benefits. We dived deep for data value, and promoted data governance and data lake construction.

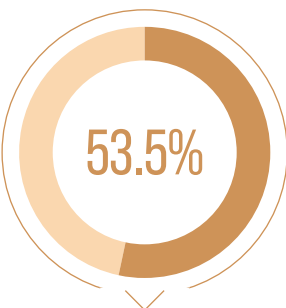
Clean Energy

In order to secure the sustainable supply of clean energy in the future, we have been vigorously developing natural gas. Particularly, we accelerate the development and utilization of unconventional natural gas, and deploy the new energies and new materials businesses in a faster manner to meet market demand for clean and high-quality energy and products.

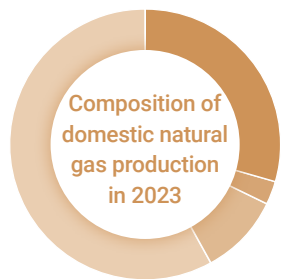
Natural Gas

As natural gas is a bridge from fossil energy to clean energy, its development and utilization is fundamental to green and low-carbon transition. Taking natural gas as a strategic, growing and value-added project, CNPC keeps strengthening natural gas exploration and development, developing unconventional natural gas such as tight gas, shale gas and coalbed methane, and importing overseas natural gas to build a diversified energy supply system.

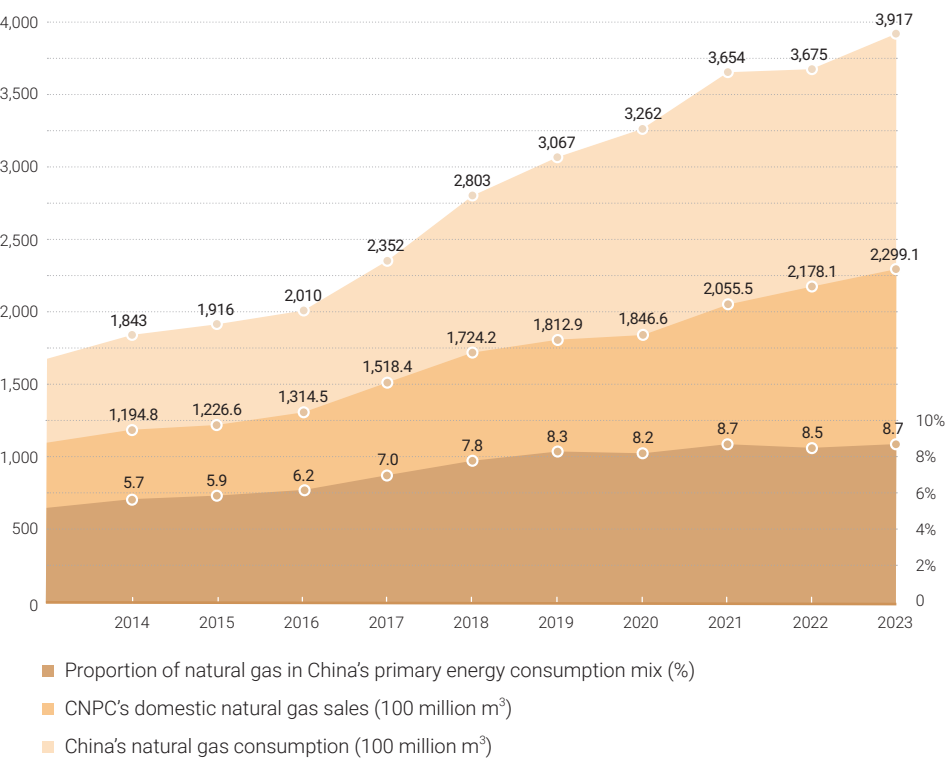
Green Power Optimized Energy Structure



Share of natural gas in domestic oil and gas production



■ Tight gas	29.5%
■ Coalbed methane	2.8%
■ Shale gas	9.7%
■ Conventional natural gas	58%



Source: CNPC Economics & Technology Research Institute

In 2023, CNPC's natural gas production increased 5.1% from last year to 184.6 billion cubic meters (152.9 billion cubic meters domestically), 66.6% of the national total. Meanwhile, the Company strengthened efforts in enhancing natural gas supply capabilities by ramping up domestic production and increasing pipeline gas imports, and provided a total of 229.91 billion cubic meters to the country, an increase of 5.6% year-on-year.

Case Ensuring gas supply for residential heating in winter

1. We deployed in advance domestic key production capacities and the construction of gas storage and peak-shaving capacities during the heating season. By tapping our production potential of domestic gas, imported gas and gas storage, we saw a year-on-year increase of more than 4.5% in the total gas supply in the 2023-2024 heating season.
2. We fully completed the signing of gas supply contracts, and confirmed 34% of contract signed for winter domestic gas in the Company's market area, ensuring full coverage of gas demand for residential use.
3. We held a group-wide mobilization and deployment meeting before winter to ensure gas supply. We prepared in advance a plan to cut down gas supply among interruptible gas users and carried out practical drills to ensure gas supply for residential heating and improve our coordination and emergency response capabilities.
4. At the end of October, we completed injection in gas storage and collecting resources for more than 80% of the tanks in our own LNG terminals.
5. In response to wide fluctuations of temperature since the beginning of winter, we strengthened industry-wide coordination, and effectively safeguarded our gas supply during the ultra-low-temperature cold wave across the country. Sales reached a peak of 932 million cubic meters on December 21, 2023, an increase of 91 million cubic meters, or 10.8%, from the historical peak of the heating season.

Unconventional natural gas

 Shale gas	 Coalbed methane	 Tight gas
► Five shale gas fields built: Changning, Weiyuan, Luzhou, West Chongqing, and Zhaotong; ► Total output: 14.81 billion cubic meters (+890 million cubic meters from 2022)	► Two CBM industrial bases built: Qinnan and Edong ► Total output: 4.31 billion cubic meters (+1.29 billion cubic meters)	► Gas fields built: the Sulige Gas Field (Changqing Oilfield Company), and Edong Gas Field (PetroChina Coalbed Methane Company) ► Total output: 45.1 billion cubic meters (+3.97 billion cubic meters)

Utilization of Natural Gas as an Alternative Energy Source

We accelerated the construction of the production, supply, storage, and marketing system, as well as the comprehensive utilization of clean energy projects. We continued to promote the comprehensive utilization of natural gas as urban gas, industrial fuel, chemical raw materials, and vehicle and vessel fuels, and in power generation. We accelerated the implementation of renovation projects using natural gas as an alternative to coal, and continuously promoted projects such as gasification in Longjiang, Gansu, Yunnan, and Xiong'an (Hebei), enabling clean energy to benefit thousands of households. In 2023, the total domestic terminal sales of natural gas increased by 9.3% year-on-year.

In 2023, we launched 13 natural gas terminal programs in Shandong, Jiangsu, Henan, Liaoning, Tianjin, Xinjiang, Inner Mongolia and Gansu etc.

New Energies

We incorporated new energy into our main operations and formulated a special plan for the development of new energies and new businesses. We vigorously promoted the integrated development of geothermal energy, wind, solar PV, gas, and electricity, advanced the full-industry-chain development of hydrogen production, transportation, storage and utilization, and pushed forward the transformation of CNPC into an integrated energy service provider of "oil, gas, geothermal, electricity and hydrogen", striving to become the backbone of supplying clean energy and building a beautiful China. In 2023, we built a number of projects such as a million-kilowatt PV power plant in Kashgar, Xinjiang, the medium and deep-level geothermal heating project in Beijing, and the water electrolysis hydrogen production project in Yumen, and completed the equity acquisition of Potevio New Energy Co., Ltd., with a new energy development and utilization capacity amounting to 11.5 million tons of standard coal per year.



- Yumen Oilfield's 300,000 kW PV power project connected to the grid



Progress in new energies and new businesses in 2023



Geothermal

- Newly added geothermal heating area of 10.45 million square meters, amounting to more than 35 million square meters in total
- Newly added 11 geothermal projects, all of which were listed for winter gas supply, spreading over 10 provinces, autonomous regions and municipalities such as Beijing, Hebei, Henan, Shandong, and Shaanxi
- The first medium and deep-level geothermal heating project in Beijing put into operation
- Expanded the geothermal heating market in Beijing-Tianjin-Hebei and central regions, with a contracted area of more than 40 million square meters



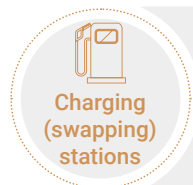
Wind and solar

- The aggregate installed capacity of more than 5 million kW
- Completed a 1.1 million kW photovoltaic power generation project in Kashgar, Xinjiang; the 300,000 kW photovoltaic power generation project in Yumen Oilfield connected to the grid for power generation
- Qinghai Oilfield restarted the Golmud gas-fired power station and commenced construction of supporting new energy projects



Hydrogen

- Our total production capacity of high-purity hydrogen reached 6,600 tons/year, an increase of 120% over the previous year.
- The hydrogen purification project of CNPC Sichuan Petrochemical put into production and provided clean hydrogen energy to the Chengdu Universiade.
- Our first large-scale water electrolysis hydrogen production demonstration project, the Yumen Oilfield Water Electrolysis Hydrogen Production Demonstration Project, was completed.
- Our first "oil, gas, hydrogen, electricity, solar and non-fossil fuel" integrated energy station, the Suzhou Huaqiao Station of CNPC Jiangsu Marketing Company, was put into operation.



Charging (swapping) stations

- Completed the equity acquisition of Potevio New Energy Co., Ltd.
- 923 charging (swapping) stations were completed and put into operation, an increase of 122% over the previous year.

6,600 tons per year
High-purity hydrogen capacity

344 tons
High-purity hydrogen produced

Green Products

We optimized the energy consumption structure by upgrading energy products. In 2023, we further increased our hydrogen production capacity. The hydrogen purification project of PetroChina North China Petrochemical was restarted, the water electrolysis hydrogen production demonstration project of Yumen Oilfield was completed, and the hydrogen purification project of Changqing Petrochemical was put into operation. With high-purity hydrogen generated, Sichuan Petrochemical completed the task of supplying hydrogen to the Chengdu Universiade.

Climate Change

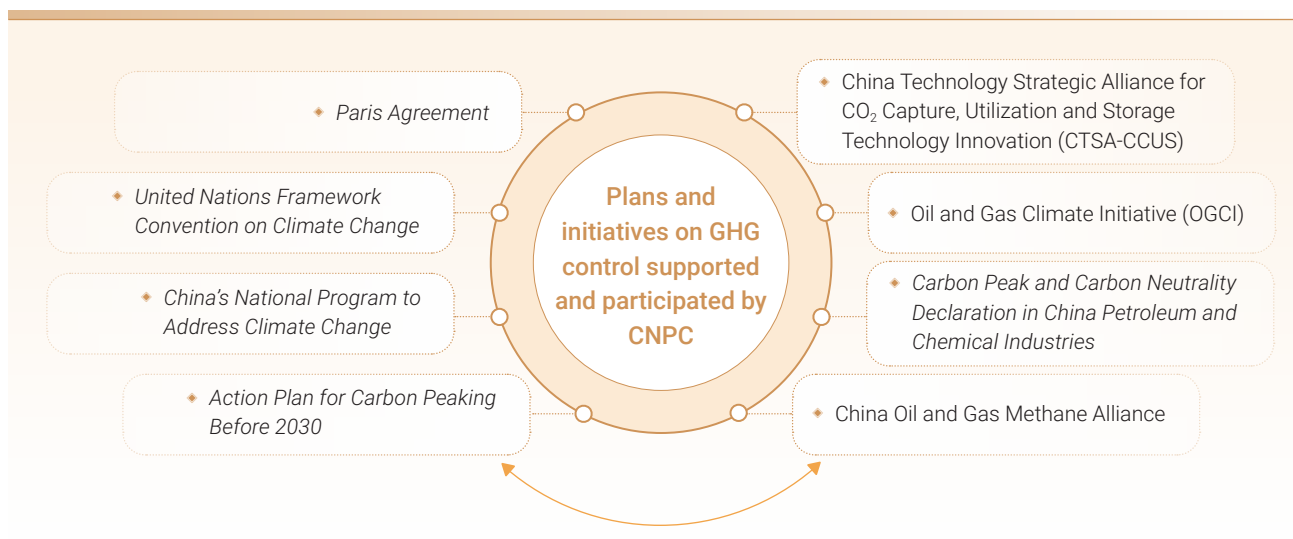
We respond to the *Paris Agreement*, and actively contribute to China's efforts to peak CO₂ emissions. We take the initiative in international climate governance, and actively respond to climate change.

Carbon Emission Management

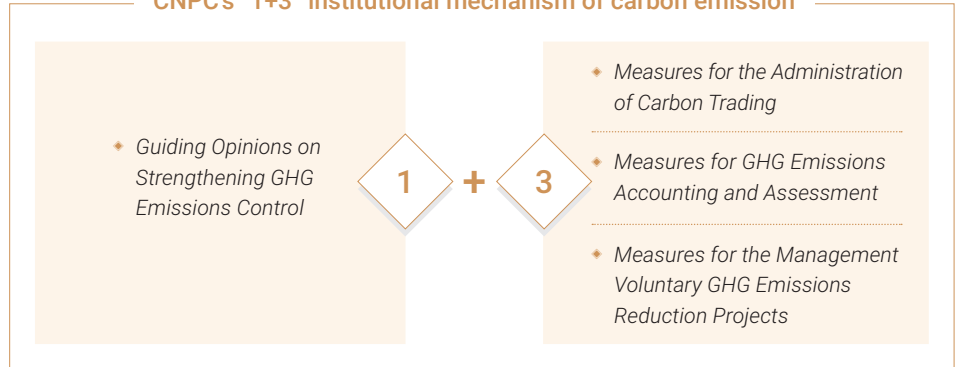
We pay close attention to greenhouse gas (GHG) emissions. We continually improve our carbon emission control system, strengthened methane emission reduction management and control, take an active part in the construction of the carbon market, and deeply participate in cooperation with the global oil and gas industry to cope with climate change. In 2023, the total GHG emissions from our operations were 188 million tons of carbon dioxide equivalent, and the methane emission intensity decreased by more than 10%. In 2023, we were honored with the title of "Carbon Peak Pioneer" and "Low-carbon Model" for 12 years in a row by China Federation of Industrial Economics.

In 2023, CNPC

- ▶ Conducted a study on methane emission control in the oil and gas industry, supporting the country in formulating the *China Methane Emission Control Action Plan*.
- ▶ Promoted pilot monitoring of methane in oil and gas fields, and carried out satellite remote sensing monitoring.
- ▶ Built the "Methane Leakage Detection and Repair Platform" to promote methane leakage detection and repair, and increased methane emission control measures such as exhaust gas recovery, flare extinguishing, and regionalization of stations to continuously reduce methane emissions.
- ▶ Continued to advance energy conservation, efficiency improvement and clean substitution to reduce fuel consumption; and promoted self-generated green power substitution to reduce carbon emissions from the production process.
- ▶ Actively participated in international exchanges on climate change. As the chairman of China Oil and Gas Methane Alliance, CNPC led 10 member companies to keep promoting in-depth technical exchanges, and hosted a side event on methane emission control for China Pavilion at COP28.



CNPC's "1+3" institutional mechanism of carbon emission



In 2023, the Company strengthened carbon emissions assessment and compliance with CEA

- ♦ Continued to strengthen assessment constraints. We decomposed the total amount and intensity targets of carbon emissions to professional companies and subordinate companies to intensify the anti-driving mechanism for carbon control and carbon reduction.
- ♦ Optimized the operation of coal-fired units, reduced the use of coal, increased clean substitution, and continued to promote synergies in energy conservation and carbon reduction. We increased our carbon emissions allowance reserves and compliance management, and our coal-fired captive power plants included in China's national carbon emissions trading market fully completed the clearance of carbon emissions allowance for the second compliance period.
- ♦ Carried out an upgrade of carbon asset control platform and on-site data verification, and strengthened data quality management to continuously promoted lean management of carbon emissions.
- ♦ Tracked the carbon trading market launch policy for China's national carbon market expansion and voluntary emission reduction (CCER) projects, advanced the development of CCER projects, and participated in trading in international carbon markets.

New progress in full-industry-chain CCUS development

- ♦ We took the lead in conducting research on carbon capture, utilization, and storage (CCUS) technology in China
- ♦ We established the "1+8" CCUS full-process technology system. Our State Key Laboratory of Enhanced Oil Recovery was selected as one of China's 20 benchmark state key laboratories.
- ♦ We deployed "Four Engineering Demonstrations" and "Six Pilot Tests" of the entire CCUS industry chain, and laid out CCUS hubs and demonstration projects in Songliao, Junggar, Ordos and other regions.
- ♦ We injected 1.59 million tons of CO₂ annually in 2023.



Carbon neutral ecological park, Daqing Oilfield

Global Climate Governance

As the only member of OGCI in China, CNPC has been deeply involved in international cooperation to address climate change, contributing to the fight against climate change and the realization of green and low-carbon transformation of the oil and gas industry with other member companies. In 2023, we acted as the president of the China Oil and Gas Methane Alliance, and promoted exchanges in methane abatement technologies. We participated in COP28, at which we hosted a side event on methane emissions control at the China Pavilion, showcasing our program and our commitment in this endeavor.

Clean Substitution

While providing clean oil products to the society, we focus on optimizing our own energy consumption structure. We care about carbon emissions and carbon footprints in our production and operations, and strive to reduce our consumption of fossil fuels and lower energy consumption intensity. We make energy conservation our number one source of energy, improve oil and gas commodity rates and energy efficiency, and accelerate green and clean substitution. In 2023, after a combination of measures such as energy conservation and emissions reduction, clean substitution, and carbon offsetting were implemented, the first station of the West-East Gas Transmission Pipeline in the Tarim Oilfield was certified by a third party as China's first "carbon neutral station".

Participating in Carbon Emission Trading

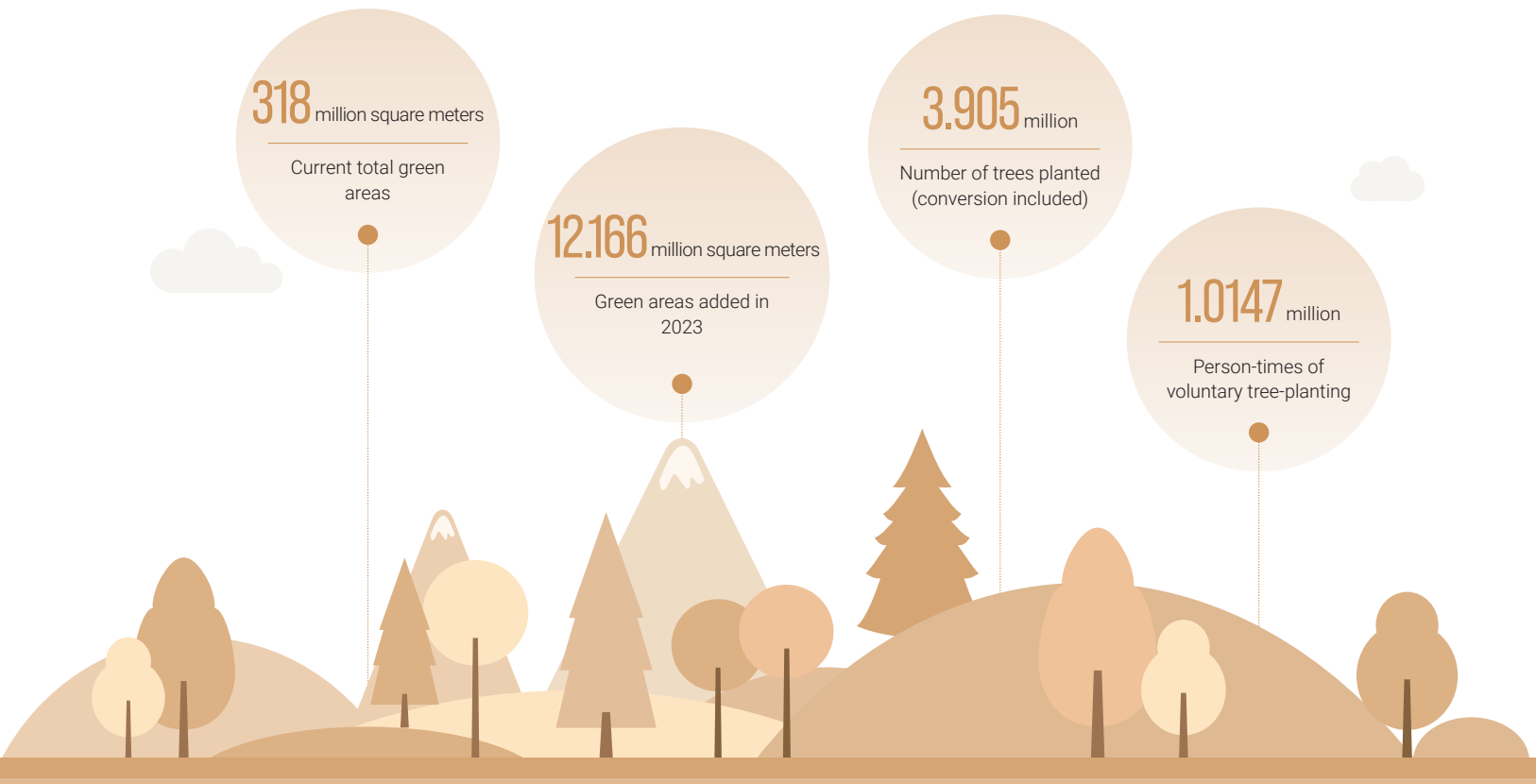
We actively participate in the construction of the national carbon emissions trading market. We increased our carbon assets reserves and enhanced our performance by purchasing carbon emission allowance (CEA) and China Certified Emission Reduction. In 2023, we put the CEA plans in place and improved our performance management, and paid the second performance period of CEA for the self-supply power plants included into the national carbon emissions trading market.

Developing Forest Carbon Sequestration

We actively rolled out the construction of carbon sinks and carbon neutral forests, and promoted the realization of carbon neutrality through carbon offsetting. In 2023, CNPC's first carbon neutral forest in Ma'anshan (Daqing Oilfield Company) was built into an eco-park covering an area of 10,000 mu; the second carbon neutral forest was also unveiled in Junggar of Xinjiang Oilfield Company.

In 2023, CNPC

- Completed its second carbon-neutral forest in Xinjiang Oilfield (Xinjiang Oilfield Junggar Carbon Neutral Forest), making a total of 17,900 mu of carbon sequestration forests and carbon neutral forests in Daqing Oilfield, Changqing Oilfield and Xinjiang Oilfield.
- Launched the "Afforestation Action in 10,000 Well Sites" in response to the country's initiative, with a total of 901,000 trees planted in 2,026 well sites and stations.
- Continued to carry out the public welfare activity of "Planting a Tree for Carbon Neutrality", with a total of 1.096 million person-times participating in donations of more than RMB 33.63 million, and 3,550 mu of four forests including the Daqing Battle Forest were built.
- Launched "Planting a Tree for Carbon Neutrality - Red Nanliang Forest Theme Activity" in partnership with the Office of the National Greening Committee, the National Forestry and Grassland Administration and the China Green Foundation, advocating the participation of the whole society in afforestation, and was awarded the honorary title of "Outstanding Contributor to Land Greening" by the China Green Foundation.



Energy Cooperation

Adhering to the philosophy of “mutually beneficial, win-win cooperation and development”, we give full play to our advantages in integration as well as in finance, technology and management, and work with host governments and partners to address local energy challenges, meet local energy demand and maintain regional energy security.

International Energy Cooperation

In the face of the complex and volatile situation in the world, we work with host governments and partners to ensure the smooth operation of cooperation projects. We carried out all-round cooperation with the BRI countries in the fields of upstream, downstream, trade & marketing, technical support, etc., and signed cooperation agreements on the purchase and sale of natural gas, pipeline transportation, etc. In 2023, the Company registered overseas operating production of oil and gas 181.954 million tons of oil equivalent, with equity production of 103.82 million tons, up 1.5% year-on-year, making due contributions to energy supply for host countries and supporting local economic development.

CNPC key international energy cooperation projects in 2023



In September 2023

The Halfaya Gas Processing Plant in Iraq, invested and constructed by CNPC, was basically completed. The completion of the project will considerably boost Iraq's economic & social development, people's livelihood, and ecological & environmental protection.

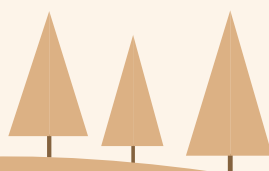
In October 2023

CNPC signed cooperation agreements with the Ministry of Energy of Kazakhstan and KazMunayGas, agreeing to deepen oil and gas cooperation with Kazakhstan. This injected new momentum into China-Kazakhstan energy cooperation and high-quality BRI construction, promoting industrial prosperity and the sharing of development results.



In June 2023

CNPC and QatarEnergy signed a cooperation document on the North Field LNG expansion project. According to the agreement, QatarEnergy will continuously supply 4 million tons of LNG per year to CNPC over the next 27 years.



E&P Cooperation in China

We continued to make steady progress in cooperation with international partners in developing oil and gas resources in China. While deepening cooperation in conventional areas, we reinforced cooperation with IOCs in unconventional resources. The E&P projects including the Changbei Project, the South Sulige Project and the Northeast Sichuan Project achieved steady progress. Our domestic oil and gas production in cooperation with international partners amounted to 12.69 million tons in 2023.

International Trade

We coordinated and optimized global resource allocation, and made every effort to promote high-quality development of international trade. Based on our overseas oil & gas operation centers and trading network, we traded with over 120 countries and regions in the forms of joint venture or cooperation etc., hence enhancing our abilities in optimizing and allocating global resources. In 2023, the total global oil and gas trade volume reached 500 million tons, with the revenue of USD 278.8 billion.

- ✓ The Yamal LNG Project is the first mega energy cooperation project in Russia under the "Belt and Road" Initiative.



RESPONSIBLE OPERATIONS

We are always committed to the principle of “people-centered, quality foremost, safety first, environment prioritized” to achieve “zero accidents, zero pollution and zero injuries”. We regard minimizing the environmental impact, reducing emissions and providing high-quality products and services as the strategic foundation of the Company’s sustainable development. We continue to improve the quality management of products and services, and promote safe, environmentally-friendly and resource-saving operations, in order to promote the construction of ecological civilization, and a resource-saving and environmentally-friendly enterprise.





Safe Operation

We coordinated development and safe operation, promoted the building of a long-acting work safety system, and comprehensively enhanced our work safety management. In 2023, the Company recorded no major safety or environmental incidents, and maintained a stable improvement in QHSE performance.

QHSE System Audit

In 2023, the Company prepared and issued the *QHSE Management System Audit Program*, enhanced the tracking and coordination of the audit process, and completed full-coverage QHSE audit in 110 companies and 19 overseas projects to promote HSE performance.

Case	Promoting HSE standardization at grassroots
	▶ Carried out the construction of “Hundreds of Thousands Demonstration Projects” for HSE standardization at grassroots stations and teams, and selected 20 company-level stations and teams for demonstration and guidance. ▶ Popularized effective grassroots HSE practices, issued the <i>Typical HSE Experiences at Grassroots Stations and Teams</i>, and improved the level of grassroots standardization management. ▶ Issued the <i>Guiding Opinions on Standardizing and Strengthening the Preparation and Application of the “Two Lists” for Grassroots Positions</i>, improving the HSE execution and precise prevention & control capabilities of grassroots positions continuously.

Management System and Performance Assessment

We continued to improve the safety management system covering the whole process of production and operation. In 2023, the Company issued the *Measures for the Administration of Work Safety Accidents*, the *Administrative Measures for the Application and Use of Work Safety Fund*, the *Measures for the Management of Safety and Environmental Hazards*, the *Measures for Contractor Safety Supervision and Administration*, etc. The Company revised the responsibilities for work safety and environmental protection, tightened the criteria for safety and environmental assessment, organized the signing of responsibilities for work safety and environmental protection among professional companies and subordinate companies, and intensified the safety process assessment.

	Work safety debriefings and inquiry	To conduct safety debriefing for newly appointed head of CNPC companies, and inquire the leadership team on serious safety hazards
	Safety and environmental protection performance assessment	Safety and environmental protection performance assessment To review employees' performance in HSE, with the assessment results included in performance appraisals
		Safety and environmental performance capability assessment To review employees' capabilities in HSE, with the assessment results serving as a reference for the employee's qualification for job transfer

Hazard Control

We attached equal importance to both prevention and control of hazards, and built a long-acting mechanism for hazard control. We carried out special investigation and rectification of hazards that could lead to major accidents. We advanced the annual action of enhancing safety management, the special rectification of hazardous chemicals and city gas safety, and the centralized rectification of work safety in key areas such as well control and oil & gas pipelines. We kept increasing inputs in controlling safety hazards, and implemented hierarchical supervision of capitalized hazards, in order to ensure timely and effective response and treatment and to enhance the overall safety performance of the Company.

Safety Risk Management

We implemented a dual-prevention mechanism covering hierarchical control of safety risks and hazard identification & treatment, with focus on preventing and resolving major safety risks. We increased efforts in safety risk assessment and prediction, promptly issued risk warnings or reminders in response to domestic typical accidents, seasonal climate changes and sensitive periods during holidays, etc., and supervised the implementation of risk prevention measures.

In 2023, we held CNPC companies at all levels accountable for work safety

- Conducted work safety debriefing reviews for 51 newly appointed principals of subordinated companies
- Enhanced the management of work safety scoring for all employees, with a total of 131,800 points scored and 32,000 people held accountable and punished
- Continued to carry out work safety supervision and inspections of key companies in key areas. Throughout the year, we inspected 82 companies (times), and found/reported more than 2,000 problems, all of which were rectified in a closed loop.

Work Safety Emergency Management

Following the principle of “prioritizing emergency preparedness, combining emergency preparedness and emergency rescue”, we constantly improve our emergency management mechanism and enhance our emergency rescue capabilities. In 2023, we carried out the “Cangzhou-Zibo gas pipeline leakage and fire emergency drill” and the “Eastern blowout control emergency response drill”, further enhanced our emergency response capabilities.

In 2023, CNPC

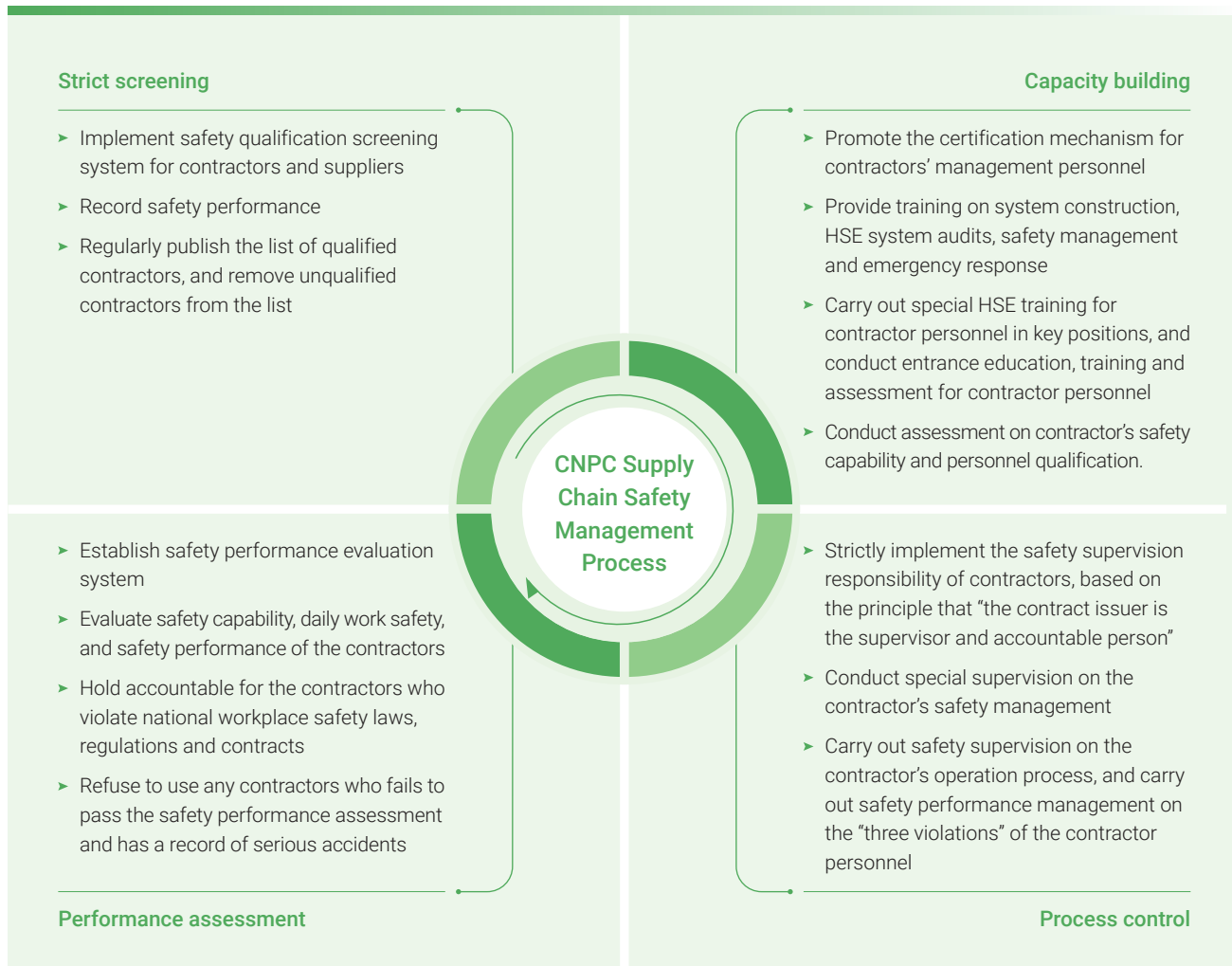
- Liaohe Oilfield, Huabei Oilfield and CPPE fire-fighting team were highly appraised by SASAC and local governments for their efforts in the flood fighting and rescue after the hit of Typhoon Doksuri, and Lanzhou Petrochemical and Chuanqing for their assistance to Gansu in the fight against drought.
- Daqing Oilfield won the first prize for its 8 projects in the 3rd National Hazardous Chemicals Work Safety Emergency Rescue Technology Competition, and was the group champion of the competition for three consecutive years.

Offshore Oil Safety

We carried out special rectifications of offshore oil safety risks, with efforts focusing on building a long-acting mechanism of “1222” offshore oil safety supervision. We kept strengthening the compliance management of new offshore construction, renovation and expansion projects, strictly controlled the safety risks of offshore oil operations, and constantly enhanced the supervision and capacity building of offshore safety intermediaries. We carried out special supervision and inspections of offshore safety in an all-round way, maintaining a stable work safety in offshore oil operations.

Contractor Safety

We include contractors in our safety management, and conduct full process management in access, selection, training, use, evaluation and assessment, in order to prevent and reduce accidents caused by contractors. In 2023, we strengthened the selection of high-quality strategic contractors, strictly implemented measures for “zero tolerance for unqualified contractors”, and carried out training for key positions of contractors and refused to hire those who failed the examination.



Environmental Protection

We have implemented the overall plan to deepen the battle against pollution, committed to precise, scientific and law-based pollution control, and advanced all tasks and measures to protect our blue sky, clear water and clean land to high standards. We take the initiative to evaluate the environmental impact of our management and activities, and make efforts to reduce adverse effects on the environment and climate. We endeavor to enhance resource utilization efficiency, deepen our efforts in the battle against pollution, promote energy conservation and emission reduction, strive to achieve environmentally-friendly and resource-saving operations, and vigorously advocate ecological civilization, in order to achieve harmonious development with the environment.

Steady progress in ecological and environmental protection in 2023

- ▶ We issued the *Circular on Supplementary Measures to Strengthen Ecological and Environmental Protection in the Yellow River Basin* and the *Circular on Further Strengthening the Ecological and Environmental Protection in the Yangtze River Economic Belt*, launched special rectification actions for ecological and environmental protection in key river basins, and perfected the program of enhancing ecological and environmental protection in the Yellow River Basin and the Yangtze River Economic Belt.
- ▶ We advanced major projects for controlling soil pollution sources, and explored experiences and models of soil pollution prevention and control in enterprises in production. CNPC Changqing Petrochemical was praised by the Ministry of Ecology and Environment for its efforts made in soil pollution prevention and control.
- ▶ We obtained 9,596 pollutant discharge permits, achieving full coverage of key company emitters.

Strengthening Risk Prevention and Control

We implemented an environmental risk management system dominated by hazard control, with efforts focusing on the prevention and control of ecological and environmental risks and hazard control. In 2023, in accordance with the *Criteria for Classification and Assessment of Environmentally Risky Enterprises (trial)*, we carried out the annual classification and assessment of environmentally risky enterprises, and implemented classified control of different environmental risk levels. We issued the *Circular on Carrying out Effective Work in the Investigation and Treatment of Ecological and Environmental Hazards in 2023*, comprehensively carried out the investigation of ecological and environmental hazards, established a list of major ecological and environmental risks and hazards, formulated rectification programs for major and general ecological and environmental hazards, and incorporated the major ecological and environmental hazards newly discovered into HSE information system for scheduling supervision, further improving our capabilities for prevention and control of environmental risks. In 2023, CNPC reported no major environmental incidents.

Continuous online monitoring of key pollution sources

We revised and issued the *Measures for the Operation and Management of Online Monitoring System for Pollution Sources* to improve the management system for online monitoring of pollution sources.

We strengthened the operation and management of online monitoring system for online monitoring of pollution sources. Based on the monitoring system, we carried out daily monitoring and implemented timely supervision for abnormal situations. By the end of 2023, CNPC had 860 networked monitoring outlets, achieving full coverage of national key monitoring points.

We carried out on-site inspections on facilities in companies for automatic monitoring of pollution sources and increased relevant efforts, and strengthened supervision by third-party operation and management agencies, so as to ensure companies' automatic monitoring was in compliance with laws and regulations.

Pollution Prevention and Control

Atmospheric Environment Management

We continued to improve the comprehensive treatment of air pollution and strived to reduce the discharge of air pollutants. In 2023, the Company formulated and implemented the *Action Plan for Ozone Pollution Prevention and Control (2022-2025)*. We doubled efforts in compliance and upgrading as well as on-site management around Nitrogen oxides (NO_x) and volatile organic compounds (VOCs), and promoted the building of “odorless plants”. As a result, we achieved enhanced performance in pollution control, and the total emissions of NO_x and VOCs went down by 2.93% and 6.25% respectively.

Measures for pollutants discharge control



We strengthened early warning of the discharge of pollutants up to standards, and conducted real-time data monitoring of waste water and waste gas discharge using an online monitoring system



We strengthened the flare gas recycling and utilization of venting gas, reduced gas flaring, and promoted the synergistic effect in reducing pollution and carbon emissions



We strictly controlled the discharge of pollutants up to standards, implemented measures to control pollution at the source of production, and strengthened the operation and management of existing pollution control facilities



We implemented the upgrading and renovation of pollutant treatment facilities to ensure that all pollutants in wastewater and waste gas are discharged steadily up to standards



We incorporated the emission indicators of major pollutants into the annual performance contract of the main managers of enterprises, and strictly accessed the fulfillment of the contract.



Control of Waste Water Discharge

We have strengthened the control of total wastewater targets, carried out analysis of the emission reduction potential of large enterprise emitters, and accelerated the implementation of wastewater emission reduction projects. We implemented the *Implementation Opinions on Strengthening the Supervision and Management of Outfalls into Rivers and the Sea* released by the General Office of the State Council, enhanced standardized treatment of outfalls, and upgraded the control and management of outfalls involving wastewater from key watersheds. In 2023, CNPC's total chemical oxygen demand (COD) and ammonia nitrogen (AN) emissions dropped by 0.33% and 9.16% year-on-year, respectively.

Three-tiered Water Pollution Risks Prevention and Control System

We set up a safe, timely and effective pollution prevention and control system, conducted environmental risk assessment, and adopted necessary prevention measures to control water pollution risks and prevent oil spill accidents.

Tier 1 prevention and control system

Prevent possible minor pollution risks by setting up cofferdams, tank area fire dikes and supporting facilities.



Tier 2 prevention and control system

Prevent possible major pollution risks by setting up a rainwater cutting system, waste barrage, anti-overflow and diversion facilities, as well as necessary intermediate accident buffers and supporting facilities.



Tier 3 prevention and control system

Prevent possible serious pollution risks by setting up terminal accident buffers and supporting facilities.



Soil and Groundwater Risk Management

We have steadily strengthened the prevention and control of soil and groundwater pollution, strictly fulfilled the legal obligations of key soil pollution under supervision; We advanced 16 major projects to control soil pollution sources, actively carried out five pilot projects of "control in production" enterprises, and accelerated the implementation of soil pollution control on closed and relocated plots.

Solid Waste Control

We continued to promote full-process compliance management for solid waste generation, collection, storage, transportation, transfer, utilization and disposal. We increased efforts in digital and IT-based management and control of solid waste, and regularly carried out inspections to help standardized management of solid waste sites. In 2023, we saw further improvement in our solid waste management.

Sustainable Utilization of Resources

We attach great importance to the protection and rational utilization of resources. We strengthen the protection of water, conservation of freshwater and rational use of land, and strive to improve energy and material utilization efficiency to minimize resource consumption.

Water Resources Management

We put saving first, and adhere to principle of “energy saving is production increase, saving is efficiency”, and implementing energy saving throughout all aspects of production and operation. By strengthening water utilization process management, adopting technologies for water-saving and wastewater treatment and recycling, and integrating water-saving indicators into performance evaluation and other measures, we reduced fresh water consumption and saved up 8.54 million cubic meters of water in 2023.

Full-chain Water Resources Management

Exploration & development

- In oil and gas development activities, we attach equal importance to water pollution prevention and control and water recycling. After oil and water separation and filtration treatment oil recovery and water re-injection are achieved to avoid the pollution of groundwater and surface water. By the end of 2023, the treatment rate and reinjection rate of wastewater from oil production in oil and gas fields had reached 100% and 99% respectively.
- We carried out maintenance and renovation of water systems, improved the rate of water up to standards, and optimized operation plans. We upgraded wastewater discharge and treatment processes, reduced the discharge of produced water, promoted new water treatment technologies and processes, and saved water to the maximum. In 2023, the Company met 100% of the national standards for wastewater discharge.

Refining & chemicals

- We promoted cleaner production technology, saved water from the source, optimized water utilization system, and improved water use efficiency. We increased the concentration ratio of circulating water, reduced the amount of supplementary water, and enhanced the recovery of steam condensate water to realize water saving. Paying attention to sewage treatment and reuse, we reduced sewage discharge, improved the reuse rate of industrial water, strengthened groundwater pipeline network leakage detection and plugging, and reduced groundwater leakage rate. In 2023, the sewage recycling rate of the Company's refining and chemical enterprises increased by 2.88 percentage points year-on-year.

Refined products sales

- The leakage-proof transformation of the underground storage tank of gas stations is carried out for all-weather online monitoring of leakage and a safe soil and groundwater environment.

Natural gas sales

- We implemented water quota management, issued annual water consumption targets for urban gas and auxiliary production systems, LNG plants and LNG receiving terminals, and made the total water consumption under control.
- We renovated water supply pipelines for LNG plants to reduce leakage losses; carried out purification and reuse transformation of production and domestic sewage to reduce sewage discharge; saved and recycled cooling water and replacement water to reduce water consumption.

Engineering construction

- Focusing on controlling the impact of engineering construction on water resources and the risk of leakage accidents in operation, we carried out environmental impact assessment, including water environment, and integrated the concept of water conservation and protection into the whole process of construction and operation.

Land Resources Management

We implemented systems for land conservation and intensive utilization in all aspects of our production and operations. We formulated the *Guidance on Strengthening Land Management to Promote Quality Land Utilization*. Through structure optimization, efficient land utilization and making good use of reserves, we achieved whole-process, all-element standardized land management, and intensified efforts in land conservation and intensive utilization. In 2023, we saved 1,400 hectares of land.

In 2023, CNPC

1,400 hectares

Saved 1,400 hectares of land

8,200 hectares

Reclaimed 8,200 hectares of land

324 hectares

Withdrew from 324 hectares of land

In the 2022 Selection of "Pacesetters" in Energy Efficiency and Water Efficiency in China's Petroleum and Chemical Industries in September 2023

- ▶ Yunnan Petrochemical was honored "pacesetter" in energy efficiency in the crude oil processing sector
- ▶ Dushanzi Petrochemical was honored "pacesetter" in energy efficiency and water efficiency in the ethylene sector
- ▶ Lanzhou Petrochemical Yulin Chemical Co., Ltd. was honored "pacesetter" in energy efficiency and water efficiency in the ethane-to-ethylene sector
- ▶ Tarim Petrochemical Branch of Dushanzi Petrochemical was honored "pacesetter" in water efficiency in the ethane-to-ethylene and synthetic ammonia sectors



Energy Management

We keep to energy conservation and consumption reduction throughout the whole process of production and business activities, and strive to achieve a reasonable control of total energy consumption and continuous improvement of energy efficiency, and help achieve the goal of "Carbon Peak and Carbon Neutrality" and high-quality development. We continued to improve energy utilization by improving the efficiency of oil and gas production systems, implementing energy system optimization, promoting the construction of energy control, and strengthening the transformation of energy-saving technologies. In 2023, the Company saved energy of 860,000 tons of standard coal.

Improving energy efficiency

- ▶ Energy/Water-saving technological upgrading. RMB 701 million was put in energy-saving and water-saving technological upgrading projects, and has saved energy of 114,000 tons of standard coal in projects completed.
- ▶ Energy efficiency enhancement. Refining energy efficiency standard improvement was conducted in Lanzhou Petrochemical, Urumchi Petrochemical, Daqing Refining & Chemical, Sichuan Petrochemical, as well as the E3 project of Daqing Petrochemical and the ethylene project of Sichuan Petrochemical.
- ▶ Energy efficiency alignment. 3,870 grass-roots stations in oil and gas fields participated in the energy efficiency alignment activities, and 24 stations were recognized by good performance in energy saving.
- ▶ Energy-consumption equipment testing and assessment. More than 26,000 sets of pumpjack, heating furnace and oil pump were tested and evaluated for performance in energy and water consumption.
- ▶ Energy saving from the source. We optimized the energy conservation evaluation process of fixed asset investment projects, strengthened the optimization of energy conservation design, to ensure advanced energy efficiency of construction projects from the source.

Conservation of Biodiversity and Natural Habitats

We incorporated biodiversity conservation into the management system of the Company. Persisting in the solution of integrated protection and systematic management of mountains, rivers, forests, fields, lakes, grass and sand, we adopted natural restoration measures or green restoration technology, carried out ecological and environmental protection in the Yangtze River, Yellow River and other key river basins, biodiversity conservation areas and green mines, and implemented a variety of biodiversity conservation practices. Through Nature-based Solutions (NbS), we explored and tapped the development potential of public welfare tree planting and carbon sequestration, ecosystem restoration and biodiversity conservation, and ecological corridor construction. We encouraged employees to actively participate in biodiversity conservation actions, and mobilize their communities, the public, partners and other stakeholders to jointly build a multi-party cooperation system for biodiversity conservation. In 2023, the Company registered no biodiversity damage incidents.

Measures and Actions on Biodiversity Conservation

Measure	Action
Incorporating biodiversity into our company's management system	Formulated and issued the <i>Opinions on the Construction of CNPC OECMs</i> and other regulations.
Carrying out a variety of biodiversity conservation practices	Built the first three national OECMs in Daqing Oilfield and Huabei Oilfield, receiving great attention from the National Forestry and Grassland Administration and China Representative Office of the International Union for Conservation of Nature (IUCN). "It's projected to play a leading role in China, and contribute Chinese wisdom and program for the development of OECMs worldwide." (IUCN)

Accelerated the construction of green companies

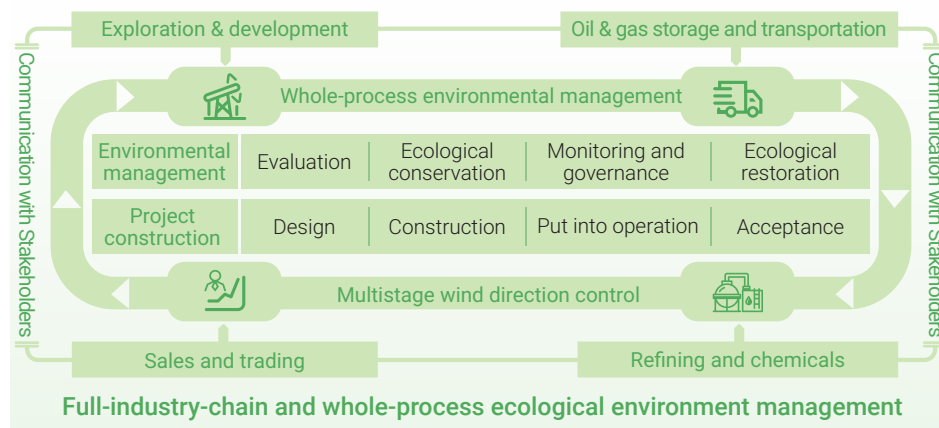
We accelerated our efforts in building green companies, achieving full coverage of our production operations.

30

30 green companies
certified in 2023

54

54 green companies
created in total



Product and Services

Following the quality target of “zero accident, zero defect, domestically leading and world-class”, we strengthened the quality management system and improve process control to create excellent brand products. In addition, we consistently promoted the quality of products, projects and services, so as to achieve high-quality development of the Company.

Quality Control

We pushed forward efforts in quality-driven enterprise construction by issuing Quality-driven Enterprise Plan and Quality Management Guide. We launched three special activities on quality management: the upgrading and optimization of chemical products, increased the quality acceptance rate for materials purchased, and quality control in the transportation links. Based on the QHSE audit system, we conducted special reviews and check in quality of crude oil products, wellborn quality and oilfield chemicals control. As a result, targeted actions and measures were taken to improve and solve the 9,235 quality problems found, in a bid to achieve an ongoing improvement of the quality management system. No major quality accident was reported in 2023.

Enhanced quality supervision of oil products	➤	We supervised and inspected 115 batches of gasoline, diesel and aviation fuel products from 26 refining and chemical companies to prevent substandard products from entering the market.
Intensified quality supervision of purchased materials	➤	We carried out random quality inspections on purchased products at the headquarters, professional companies and regional companies. Over 40,000 batches were inspected, with a pass rate of 98%, and unqualified suppliers were seriously dealt with.
Mass quality activities	➤	We registered 10,599 QC teams, with about 103,400 participants and 6,846 results. We won six gold awards and one silver award at the 48th International Convention on Quality Control Circle.
“Quality Month” Campaign	➤	520,000 employees attended the total quality management knowledge contest for central SOEs.

In 2023, CNPC



The scientific research building of Tarim Oilfield was awarded the Luban Prize of China Construction Engineering.

The Bab Integrated Facility Project (BIFP), the EPCC Project for Ground Construction of Halfaya Oilfield in Iraq, and the Sinochem Quanzhou 1 million tons per year Ethylene and Refining Expansion Project won gold prizes of the National Quality Engineering Award.

Quality Products and Services

- ▶ Dushanzi Petrochemical's achieved stable production of double-ended functional dissolved polystyrene butadiene rubber, and wide application of polypropylene resin for lithium battery diaphragms.
- ▶ Daqing Refinery's special polypropylene resin became recommended domestic raw material for China's MPP power cables and pipes.
- ▶ Liaoyang Petrochemical's PETG copolyester passed three routine medical equipment and biological evaluations.
- ▶ Jilin Petrochemical's Ultra high impact ABS resin met the demand for domestic production of middle and high-end helmets.

Providing Quality Products. By strengthening technological innovation and optimizing the product mix, we provided safe, reliable, high-quality and environmentally friendly products for our customers. In 2023, we further increased the proportion of high-end, high-performance products, continuously promoted the new material production acceleration project, and took the initiative in scientific research, planning and layout, production capacity construction, joint venture cooperation, etc. We produced 1.37 million tons of new materials, an increase of 60% (an increase of over 50% for two consecutive years). The output of our 1.22 million tons new chemical products increase 45% year-on-year.

Promoting Service Level. We constantly improve consumer experience and provide consumers with convenient and efficient services, and built an ecosystem of "people-vehicles-life". By the end of 2023, our 22,755 service stations had a nationwide coverage in 31 provinces (municipalities and autonomous regions) and the Hong Kong SAR.

Service network	Service category	Customer satisfaction
▶ A coverage of 31 provinces (municipalities and autonomous regions) and the Hong Kong SAR ▶ Our annual sales capacity exceeded 124 million tons ▶ We provided more than 8 million person-times services every day	▶ 22,755 domestic service stations ▶ 19,583 uSmile convenience stores ▶ 225 million Kunlun refueling cards issued (real-name registered)	▶ Joint inspection and anonymous customer visits: 9,001 times of visits ▶ Customer satisfaction rate: 98.3%

Case Providing services in busy farming seasons

Spring farming season. CNPC opened 7,331 priority refueling channels for agricultural machinery across the country, arranged 13,000 trips of oil delivery to the countryside, and supplied a total of 930,000 tons of oil for agricultural machinery.

Summer farming season. CNPC's marketing companies in nine major wheat-producing provinces of Hebei, Shanxi, Jiangsu, Anhui, Shandong, Henan, Hubei, Sichuan and Shaanxi opened 2,916 priority refueling channels for agricultural machinery, arranged vehicle 2,159 trips of oil delivery to the countryside, and supplied a total of 121,000 tons of oil for agricultural machinery.

Autumn farming season. CNPC opened 7,610 priority refueling channels for agricultural machinery across the country, arranged 27,000 vehicle trips of oil delivery to the countryside, and supplied a total of 722,000 tons of oil for agricultural machinery.

In 2023, CNPC established a total of 6,851 service stations to benefit and assist farmers, opened 7,891 priority refueling channels for agricultural machinery, issue 480,000 cards for agricultural machinery, and supplied 2.0002 million tons of oil for agricultural machinery. The Company set up rest areas for agricultural machinery operators, delivered oil to the fields, and organized 65,000 vehicle trips of oil delivery to the countryside. Throughout the year, the Company sold a total of 1.4 million tons of fertilizers and other means of agricultural production, with concessions of non-oil products exceeding RMB 40 million.

Supply Chain Management

98.44%

98.44% of Tier 1 manufacturers passed ISO9001 certification

94.98%

94.98% of Tier 1 manufacturers passed ISO14001 certification

94.13%

94.13% of Tier 1 manufacturers passed ISO45001 certification

Upholding the supplier management philosophy of "global sourcing, open cooperation, resource sharing, mutual benefit and win-win results", CNPC exercises a life cycle closed-loop management of suppliers from admission to withdrawal, continuously optimizes the supplier resource structure, and gives priority to energy saving and environmental protection products and products with independent intellectual property rights. The Company includes QHSE and occupational health system certification into the supplier admission standards. We actively guide suppliers to strengthen legal operation, abide by business ethics and fulfill social responsibilities.

CNPC is committed to interconnection and interaction with its suppliers, using various means to understand their concerns and claims via a well-established communication mechanism. The Company strengthens multi-field and deep-level cooperation with suppliers, carries out active exchanges in, environmental protection, sustainable development and other aspects, tap the potential for mutual cooperation. Paying attention to QHSE and compliance operations of suppliers, we communicate with suppliers in a timely manner for quality and enhanced coordination in the supply chain.

Full-process supplier management

Strict Access Control	- Suppliers must have a good commercial reputation and compliance performance, and have no record of violations of laws and regulations affecting procurement transactions in their business activities in the past three years. They are also required to accept all legal due diligence work done by CNPC to verify their eligibility for admission. - All new suppliers and contractors are required to receive training on business ethics, anti-corruption, safety and environmental protection, etc., and sign a letter of commitment for admission. - All manufacturers are required to pass an on-site inspection, in which HSE and CSR are important audits, and complete information is required for the outsourcing of raw materials and ancillary products.
Performance Tracking	In the daily management process, we track and evaluate the performance of suppliers, focusing on health, safety, environmental protection and compliance operations. Daily performance is an important part of our evaluation of suppliers.
Green Procurement	Priority is given to the procurement of energy-saving, environmentally friendly and low-carbon materials. The use of environmentally friendly packaging products and green procurement is encouraged. In terms of scoring rules, we have a preference for green procurement.
Enhanced Exit Management	- We have formulated and revised the Measures for the Management of the Blacklist of Suppliers, Contractors and Service Providers and the Measures for the Management of Untrustworthy Behaviors of Bidders. According to these measures, suppliers who have committed fraud or dishonesty in the process of bidding, product supply, product quality, project services, contract settlement, etc., will be included in the blacklist, and will be blacklisted and punished for different periods of time, such as 3 years, 5 years, and permanently, depending on the circumstances of the violation. - Suppliers with problems in quality, compliance, integrity and honesty will be dealt with in a hierarchical fashion. From mild to severe, they will be given exit treatments such as suspension of product trading privileges, suspension of supplier trading privileges, cancellation of product and supplier access qualifications.

In 2023, we optimized the supply resource dynamic adjustment mechanism

- We admitted new suppliers. We organized and carried out a total of suppliers for 78 first-class materials for open bidding.
- We conducted dynamic adjustment of suppliers. Through evaluation, 1,407 manufacturers with transactions in the previous year were categorized, and we suspended the qualifications of 625 suppliers for 2,488 products without transactions for three years.

EMPLOYEE DEVELOPMENT

Employees are the most valuable resource and wealth, and the development and success of the Company are attributed to concerted efforts of all employees. We always put people first in our operation and management, safeguarding employees' legitimate rights and interests. We built sound platform for employee development; we promote local recruitment and employee diversity; we care about the mental and physical health as well as life quality of our employees; in so doing, we are sharing our development and innovation results with all employees, and achieving growth together.





Employee Rights and Interests

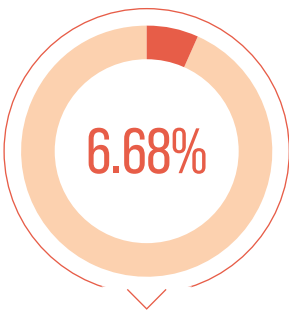
We observe international conventions on labour and human rights, respect and protect employees' legal rights and interests, and create a fair and harmonious working environment with democratic mechanisms, equal and non-discrimination policies, and sound benefits for all our employees.

Employment Policies

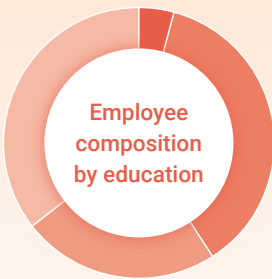
We put people first, respect and safeguard the legal rights and interests of our employees. We abide by the *Labor Law of the People's Republic of China*, *Labor Contract Law of the People's Republic of China* and *Trade Union Law of the People's Republic of China*, as well as the relevant international conventions ratified by the Chinese government and the relevant laws, regulations and systems of the host countries. We adopt equal and non-discrimination employment policies, treating every employee from different nationalities, races, genders, religions and cultures in a fair manner. We never hire child labor or forced labor. We pay attention to the employment in the ethnic minority areas and poverty-stricken areas, and actively create job opportunities within our business capacity. We take concrete actions to protect the rights and interests of female employees, providing them with maternity and breastfeeding leaves, while maintaining equal compensation and benefits and career development opportunities as their male counterparts. By the end of 2023, the Company had 68 female senior managers and 1,434 female middle level managers.

In 2023, CNPC

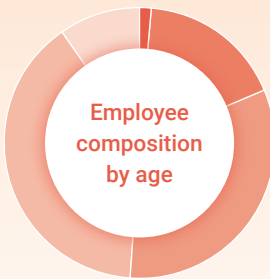
- ▶ Over 40% of fresh graduates we recruited are from western China.
- ▶ Held the first job fair for Tibetan graduates, with high recognition by the Government of Xizang Autonomous Region.



Share of ethnic minorities



■ Master and above	4.71%
■ Undergraduate	38.32%
■ Junior college	23.37%
■ Technical school and below	33.60%



■ 25 and below	1.66%
■ 26-35	15.12%
■ 36-45	33.53%
■ 46-55	40.28%
■ 56 and above	9.41%



■ male	71.3%
■ female	28.7%



Coverage of employment
contracts signed



Coverage of social insurance

Career Development Platform

Compensation and Incentives

We closely link the company's compensation and incentive scheme with its reform and innovation, quality and efficiency improvement, and Talent Thriving Enterprise activities, in order to stimulate vitality, improve efficiency, promote market-oriented salary reform, and continuously improve the differentiated distribution mechanism. We improve the total salary determination mechanism which is composed of efficiency based salary design, performance linked benchmarking method and salary adjustment system. We continue to optimize the incentive and guarantee system for science and technological innovation activities, and adopt supportive policies for the introduction of high-level talents. Meanwhile, we optimize the salary structure, with priorities given to front-line workers, key and harsh environment working staff and technical professionals. With all these efforts, the compensation and incentive scheme is more precisely biased towards high-end management talents, key R&D talents, and high-skilled talents.

Democratic Participation

We fully respect the democratic and legitimate rights and interests of employees, values the role of our employees in democratic management, democratic participation and democratic supervision. A democratic management system and an open bulletin system based on the labor union and workers' congress are in place to ensure employees' right to know, to participate, to express and to supervise. By clarifying the various powers, organizational systems, and work systems of the workers' congress, we will further standardize the content, procedures, and forms of the disclosure.

We have established multiple channels to communicate with the employees, and continued to implement democratic procedures. We carried out multi-level communication and exchange through employee representative groups and online interactions, encouraging employees to participate in the production, operation and management of the Company.

We pay attention to needs of employees at different development stages, employee education and training and career planning, constantly innovate the environment and mechanism for the growth of talents, and make efforts in providing resources and ensuring conditions for the growth of talents, so as to establish a broad platform for them to realize self-worth.

Education and Training

Centering on the goal of becoming a world-class integrated international energy company, we adhere to modern corporate training vision, conduct Talent Thriving Enterprise activities, follow the principle of "setting standards, building systems and creating values" to improve talents' self-cultivation quality and capability, constantly innovate training methods, aggressively promote the "Internet+training" model, adopt a diversified and differentiated approach to vocational training, unleash the full potential of human resources, so as to achieve the co-development of both the employee and the company, and provide intellectual support for the ultimate goal of the Company. In 2023, we earmarked RMB 2.84 billion for training, and completed more than 53,000 training projects, fully satisfying the employees' demands for development.

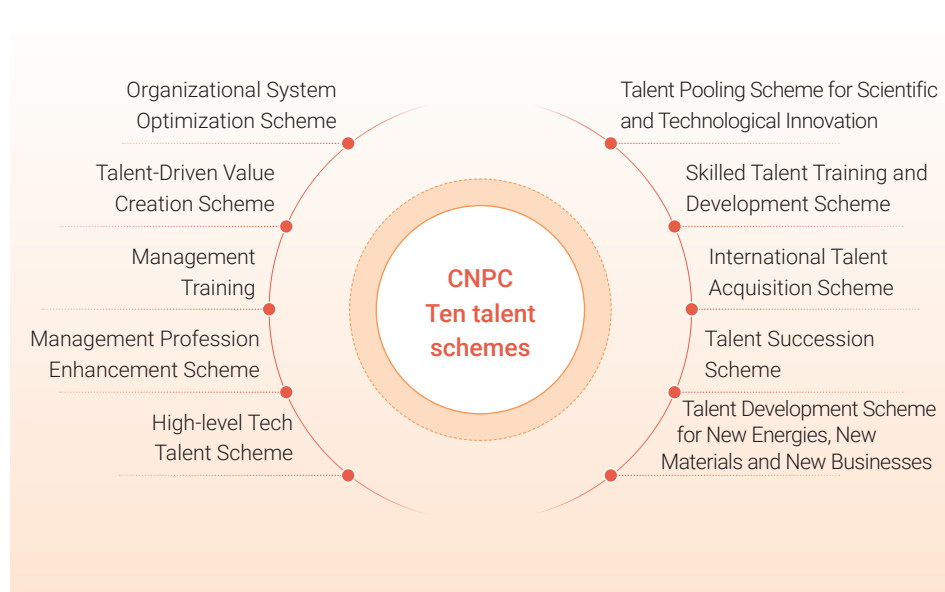


Diversified training programs for different employees' development needs in 2023



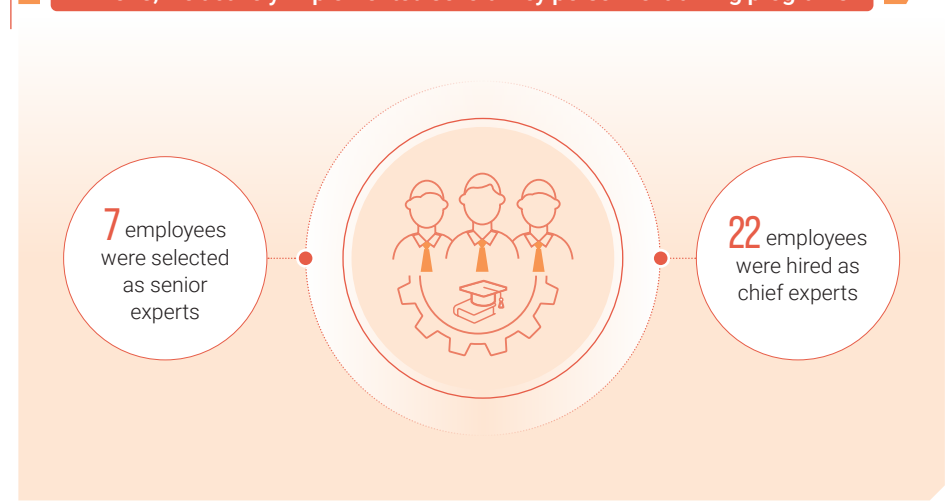
Career Development

We attach great importance to the career planning of employees and support their career development to realize their value. In 2023, we comprehensively carried out the "Year of Talent Thriving Enterprise" activity, continuously promoting the construction of key talent teams such as leading science and technology talents, scientific and technological innovation team, young science and technology talents and outstanding engineers. Meanwhile, the mechanisms for job rotation, evaluation, selection/appointment, and the remuneration incentives were further optimized to provide employees with barrier-free and well-paced career paths.



By the end of 2023, we had 257 senior experts, 353 skilled masters and technical experts. We have set up 128 Skilled Expert Workshops, including 34 National Skilled Expert Workshops.

In 2023, we actively implemented several key personnel training programs



CNPC National Graduate College for Engineers unveiled

In March 2023, the unveiling ceremony of CNPC National Graduate College for Engineers was held in Beijing. CNPC chairman Dai Houliang attended the event, and said that the Company will give full play to the talents in close collaboration with universities in operating, managing and developing the college, so as to make due contribution to the construction of a great modern socialist China in all respects.



Remuneration and Incentives

We conduct wide selection of model workers, advanced workers, technical experts, and academic leaders, and encourage employees to participate in competing domestic and global awards etc., so as to reward and motivate employees spiritually and materially. We attach great importance to the growth of scientific and technological personnel, and select young talents to undertake national and CNPC's major scientific and technological projects, relying on key projects at home and abroad, major programs, and important scientific research bases.



We improve employees' vocational skills and professional competencies through the combination of training and competition such as vocational skills competitions. Through these measures, we promote the development of front-line employees. In 2023, we hosted 4 national category II competitions and 13 CNPC competitions; we also organized the Second National Vocational Skills Competition - Drilling Technology Competition, and won the gold and silver medals.

Case From ordinary to extraordinary — the first Annual Oil Worker Award ceremony

In 2023, we began the selection of Annual Oil Worker Award for the first time, and held the ceremony on the anniversary of CNPC's restructuring (September 25).

From ordinary to great, heroes come from the people.

Li Desheng, icon of petroleum geology, Liu Li, oil craftsman, Lu Shulai, pioneer in new materials, Yang Weiwei, shale oil expert, Guan Shunwei, natural gas manager in Xizang, Luo Yuan, emergency response director, Eskar Eshan, the heroic man, Yu



Li Desheng, renowned petroleum geologist

Chenguang, a model for poverty alleviation, Zhao Bo and Zheng Xiaoli, the dedicated couple, Yan Shixiu, the oil station manager in altitudes, the service team for Beijing Winter Olympics, the six-sister managers in Yimeng, and the workers of Guangdong Petrochemical ... They are worthy of CNPC's annual people! They stay true to their duties and devoted to their ordinary routine work; they worked hard in spite of challenges and created extraordinary values; they align personal growth with CNPC's and the national development, and bring warmth and strength to all of us. They are the inexhaustible momentum that pushes CNPC to move forward.

Heroes come from ordinary world. All the annual inspirational oil workers are ordinary people from ordinary positions. Thousands of oil employees work behind the scenes, in the desert, the plateau, beaches ... anywhere they are needed; they are making their contributions unknown to the public across every link of the industry chain of oil, gas, geothermal, electricity and hydrogen. They shoulder the responsibility of carrying forward the Petroleum Spirit – the Iron Man and the Daqing Spirit, and are committed to the goal of building China into a strong country of energies. They are extraordinary heroes.

Success comes from perseverance. All the annual oil workers have achieved great success and won great honors through their hard work and contributions. We should pay great tribute to each and every one of them. They are dream catcher in this new era. We should also translate the Petroleum Spirit – the Iron Man and the Daqing Spirit into concrete actions in work, and build a new iron man team in the new era with belief, disciplines and responsibilities, so as to make our due contributions to the building of a world-class energy enterprise as well as the Chinese modernization cause.

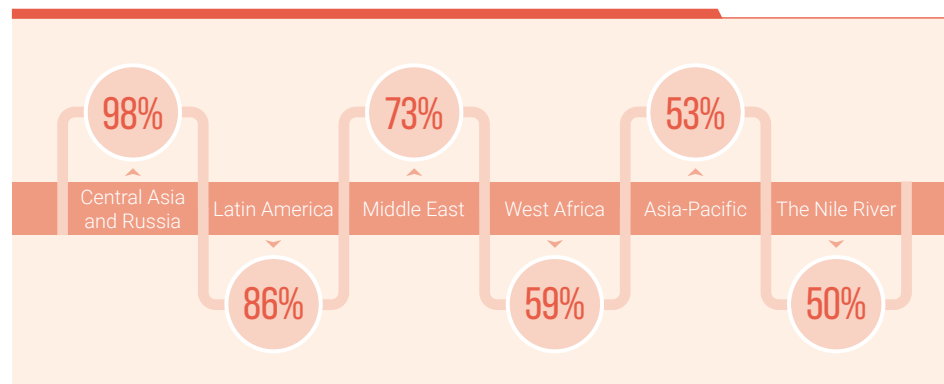
Localization and Diversity

We advocate a culture of respect, openness and inclusiveness, adhere to the hiring principle of “localization, specialization and marketization of overseas talents”, follow the laws and regulations of the host country, and formulate the *Measures for the Management of Overseas Local Employees*. In so doing, we promoted the innovation and practice of overseas employment management, established a sound system for the recruitment, use, performance assessment, rewards and punishments of employees. We also made great efforts to attract and cultivate excellent local talents and create a platform for their career growth.

Local Employment

We create job opportunities, employ and train local people, and promote local employees to management positions. Our overseas operations are hiring professional talents in E&P, refining and chemicals, pipeline operation, international trade, finance, accounting and human resources management etc. In 2023, international employees and local employees accounted for 83.29% of our overseas workforce.

Localization ratio in major overseas business cooperation areas



Case Local employee cultivation

CNPC-AktobeMunaiGas has been paying great attention to talents cultivation and education, and set up special education fund to sponsor university academic conferences and select Kazakhstan students to study in China. Every year, excellent workers and high school graduates, with good school record and from difficult workers' families, were selected and sent to study in China and Kazakhstan universities. There were 234 excellent students sent to study abroad in the past 26 years, many of them are now professionals and management in production and operation of CNPC-AktobeMunaiGas, spreading China-Kazakhstan cultures and bonding profound friendship between the two countries.

Cultural Diversity

We respect our employees' personality, ability and background, and value their diversified talent. We object occupational and employment discrimination, strive to create a relaxing and inclusive working environment, and promote mutual respect and understanding among employees from different ethnic groups, nationalities and cultural backgrounds.

Case Promoting multi-cultural integration

We respect the customs and habits of all ethnic groups and religious belief, and follow the customs of the host country with regard to food, festivals and so forth. The Nowruz is a very popular traditional festival in Turkmenistan, also known as the "Spring Festival" of Turkmenistan. On the occasion of Nowruz in 2023, CNPC Amu Darya Gas Company organized a series of cultural and sports activities to promote the exchange and integration of Chinese and Turkmen employees.



Physical and Psychological Health

Attaching great importance to our employees' health, we continuously rolled out a series of policies and measures to provide a favorable working environment and ensure that employees can work in good physical conditions and sound mind state.

Occupational Health

We give priority to improving occupational health of our employees. We held the publicity week of the *Law of the People's Republic of China on the Prevention and Control of Occupational Diseases* among other efforts to build a health-caring enterprise. More than 99.41% of employees received occupational physical examinations, the screening rate of occupational hazard factors reached 100%, and occupational health case reports were filed for 100% of our employees.

Key Actions for Occupational Health in 2023

Popularization of occupational health knowledge	- Launched the Publicity Week of the <i>Law of the People's Republic of China on the Prevention and Control of Occupational Diseases</i>, with more than 990,000 participants. - Organized the second collection of works on occupational health communication, with 80 winning works.
"Health-caring enterprises" building	- Carried out inspection and acceptance of health-caring enterprises, with 32 enterprises passed (Southwest Oil and Gasfield, Jilin Petrochemical etc.) 156 employees won in the selection of "Occupational Health Masters" event
Overseas employee health management	- Construction of overseas medical care system of monitoring, early warning, prevention, and treatment. - Strengthened efforts in overseas sudden disease response, conducted 11 person-times remote medical treatments, and cured 2 overseas employees. 23,859 person-times of physical examination and assessment for working abroad, 35% more than in 2022.

Mental Health

We take measures to continuously improve the employee vacation system. We implemented the Employee Assistance Program (EAP), set up a hotline and a website for psychological counseling, and carried out various forms of training on mental health improvement, in order to build a positive and healthy mind state among employees.

Results of the EAP for overseas employees in 2023

Mental health assessment for 4,682 person-times	Mental health counselling hotline in service: 1,618 hours	Mental health hotline for counselling: 992 person-times
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Caring for Employees

We advocate work-life balance, help employees in difficulty, enrich the cultural life of employees, and strive to create a healthy and comfortable environment for employees to work and live happily.

Employee Assistance

We continuously carried out employee assistance activities, focusing on the solving of various difficulties facing employees, including retirees, employees' family members and family dependents of the deceased employees.

Cultural and Sport Activities

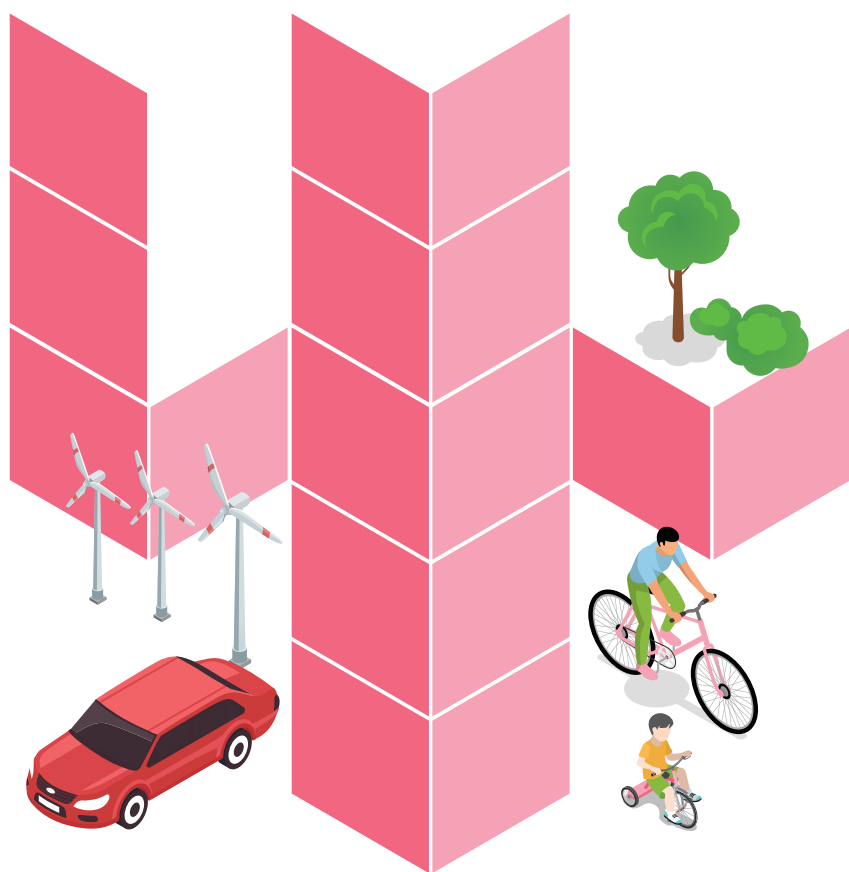
We carried out wonderful and diversified cultural and sports activities through the establishment of cultural and sports associations, organization of cultural activities, sports and intellectual competitions, etc. to enrich the spare time life of our employees and improve their comprehensive ability and team cohesion.



Overseas employees in the Great Wall, a glimpse of Chinese culture

PUBLIC WELFARE

We have been always integrating corporate development with the sustainable development of the regions where we operate, sharing development opportunities and resource values with the local communities, actively participating in community building, paying attention to people's livelihood and social progress, promoting the harmonious development of regional economies and societies, making our contribution as an excellent corporate citizen.





Rural Revitalization

We have responded positively to the initiatives of the United Nation's *2030 Agenda for Sustainable Development* and the national requirements on comprehensively promoting rural revitalization. Making full use of our business advantages and based on the characteristics of resources in the recipient areas, we take a variety of measures to enhance the capacity of the local economy for self-development and effectively align efforts to consolidate and expand the achievements in poverty alleviation with efforts to promote rural revitalization, including deepening support for characteristic industries, and helping local areas create more jobs. We strive to explore solutions to rural revitalization and make positive contributions as an oil company. In 2023, we earmarked RMB 659 million in 1,310 assistance projects for rural revitalization and public welfare, covering 418 villages in 30 provinces.

Our public welfare actions in 2023

Distinctive industry enhancement

- **"Guisu" village tourism assistance demonstration program**
We put in RMB 30 million to build 42 village hotels, as well as cultural squares among other supporting facilities.
- **"Wotu" food safety program**
We put in RMB 10 million to assist in building high-standard farm land and fed mills, and upgrading 2,000 mu of pressure drip irrigation system.
- **"Yuanju" industrial park program**
We put in RMB 25 million to assist the building of black bee industrial park, creating jobs for over 2,000 households.

Happy village building

- **"Hemei New Village" livable program**
We put RMB 20 million in dwelling wastes and sewage treatment, and upgraded 2,384 toilets in 137 villages.
- **"Zero-carbon village" program**
We put RMB 15 million in building "zero-carbon village", and launched pilot application of waste water technologies in alpine areas.
- **"Zhiyuan" village school building program**
We put RMB 10 million in building Binhu school, benefiting 1,100 people.

"Xingnong" lecture

- **"Sannong fair" online course**
We built a village school that provides more than 200 kinds of online courses in agricultural policies and regulations.
- **"Village craftsman" Intangible cultural heritage skills training**
We trained 1,510 village craftsmen in intangible embroidery in Kezhai among other cultures with local distinction.
- **"I walk mommy to work" women skill enhancement**
We helped 510 women gain access to suitable job opportunities, via the mode of "enrollment+training/on-line study+employment"
- **"Zhinong course" expert lecture**
We trained 1,559 people in field teaching with the help of experts in rural revitalization.
- **"Youmiao" peered training program**
We selected 100 senior high students in Xinjiang for professional training in the oil industry, and secured preferential job opportunities in CNPC companies.
- **"Yishi" teacher training program**
We paid attention to enhance the abilities of the school faculty in the recipient areas, and had 22,325 people registered, a solution to the uneven access to compulsory education in the areas out of poverty.

Supporting Education

Education is an important cornerstone for national revitalization and social progress. We take supporting education as an important part of our social responsibility to help young people gain fair educational opportunities and realize their ideals and self-worth. We set up scholarships, grants among other means. In 2023, we put RMB 65.31 million in education.

We are actively exploring new modes to draw the attention of society as a whole to the issue of educational equity. Through the development of public assistance programs, we help more students in poor areas to realize their dreams of studying.

In 2023

- ▶ We granted CNPC Scholarships worth RMB **4.47** million to 685 excellent students
- ▶ We earmarked RMB **11** million in 24 high schools in 8 provinces, covering **3,313** poverty-hit students, through the "Xuhang Program".

Consumer assistance

- ▶ **"uSmile shopping festival" trade fair**
In support of SASAC's "consumer assistance actions", we organized "the 3rd uSmile shopping festival" trade fair, and achieved potential signings worth of RMB 502 million.
- ▶ **"Livestream events for farmer assistance"**
In support of SASAC's "consumer assistance actions", we launched 19 livestream sales in 11,736 oil stations, with a total amount of RMB 147 million.
- ▶ **"Oilmen's" red journey**
We set up "red field education stations", and sent 9,000 employees from 63 companies to assist and work in county-level locations, generating consumption of RMB 20 million.
- ▶ **"Distinctive agricultural products exhibition"**
We organized events to exhibit rural and agricultural products with local distinctions in oilfields, refineries and mines, achieving a total amount of RMB 122 million.

Health guard

- ▶ **"Come on, Baby" youth health insurance program**
We attracted RMB 9.58 million in donations from 2.88 million people and public welfare organizations, and provided serious illness public welfare insurance for 169,000 children from low-income families in 19 poverty-stricken areas.
- ▶ **"Kangyuan" rural hospital building**
We invested RMB 27 million to build township health centers and China-Mongolia border hospitals, and purchased medical equipment and supplies, benefiting 65,000 people.
- ▶ **"Yunyi" remote medical care on line**
With the support of Beijing's medical resources, 2,990 consultations were conducted in 10 counties, and 11,960 person-times medical workers were trained.

Grass-roots party building

- ▶ **"Youyuan" village credit markets**
We explored to build "credit markets" in 5 villages, covering 2,249 people.
- ▶ **"Village lead" grassroots training program**
We conducted 29,000 person-times of trainings for village management.
- ▶ **"Pioneer" cooperative training program**
We trained 5,112 talents based on local resources and development conditions.
- ▶ **"Tongmeng" village party branch building**
We co-built 27 party branches, 28 villages out of poverty; we assisted in 45 leading enterprises and cultivated 36 new agricultural business entities.

Promoting Local Development

CNPC's development is inseparable from the support of the local governments, communities and the general public. We embrace openness, cooperation mutual benefit and win-win results, expanding collaboration with local governments and enterprises in upstream, midstream and downstream operations, cultivating local suppliers and contractors in construction and operation, creating jobs in related industries, and realizing integrated development of industries and cities.

Case Ten-year commitment in Southern Xinjiang

In August 2013, the Southern Xinjiang Natural Gas Project was completed. The 4,704 km-pipeline surrounds the Tarim Basin, and brings happiness to more than 8 million families. They no longer use coal in daily life and have access to clean, low-carbon fuels for a modern and convenient way of life.

With this pipeline in operation, Tarim Oilfield continued to construct the pipeline network, promoting greater connectivity with the west-to-east gas pipelines. Cities in southern Xinjiang such as Hotan, Aksu and Kashgar now have diversified natural gas consumption structures, with the city utilization rate exceeding 80%. Taking advantage of the pipelines, counties and cities built industrial parks to attract key petroleum and petrochemical projects such as Zhongtai Chemical, ethane to ethylene, and comprehensive natural gas utilization etc. Moreover, many leading enterprises such as Nanda New Agriculture, Amina Food, Odu Sugar, Xinjiang Minghui New Materials, also settled in southern Xinjiang to use natural gas for agricultural products processing, exploitation of energy and mineral resources, and ethnic products processing, contributing to the local economic development.

In this wide space in southern Xinjiang, we have abundant oil and gas resources everywhere. Statistics show that the pipeline would generate opportunities for over 600 local enterprises, benefiting more than 60,000 people. 14 cities (incl. Korla, Luntai, Kuqa, Kashgar etc.) gathered great momentum for rapid development and modernized urbanization fuelled by clean natural gas. By the end of 2023, the pipeline's annual gas transmission increased to 2.1 billion cubic meters from 497 million cubic meters, playing a crucial role in improving people's livelihood and driving economic development.

- CNPC reached out to local professional biotechnology companies to help villagers develop the marigold industry based on the soil conditions in the Yecheng County in Xinjiang.



Volunteer Activities

We carry forward the spirit of volunteerism, focusing on ecological civilization, rural revitalization, community service and other aspects of the "Gem Flower" youth volunteering activities. In 2023, we had a total of 108,000 young volunteers from 3,103 organizations to carry out 8,828 times of youth volunteering activities.

The youth volunteer team of PetroChina Beijing Marketing Company conducted "caring for the old" program in local nursing homes and communities, fulfilling the fine tradition of piety and love for seniors.

Shandong Branch of PetroChina Natural Gas Marketing Company launched the "Qilulan" volunteer program to popularize safe natural gas use, visit families in need, plant trees, and conduct emergency rescues among more than 3,100 times locally, benefiting nearly 4 million person-times.



Contributions to the Development of Overseas Communities

We respect the local culture and customs where we operate, and are committed to establishing long-term and stable cooperative relationships with the host countries, integrating our corporate development into local economic and social development, actively creating social and economic value, building a community of shared destiny, and jointly promoting the prosperity and development of local communities.



↗ CNPC repairs camel water troughs in Saudi Arabia in line with international standards



↗ CNPC provides green Batik training for local females in Indonesia.

Managing our Community Impact

	Potential positivity	Potential negativity
 Natives	Employment	Land use, removal, environmental impact
 Local enterprises and industries	▶ Business opportunities ▶ Capacity enhancement ▶ Technology transfer	Neglection of local products and services, without sharing advanced technologies
 Community consultation and engagement	Equal access to voice concerns and know the potential impact	Neglection of community concerns
 Social investment	Initial consultation and negotiation with communities to meet actual needs and bring long-term benefits.	Investment in plan and execution may not built on the real conditions, thus may not generate long-term benefits.

Managing our Community Impact

We strive to make a positive impact on community development through responsible operations. This impact is not only represented in creating jobs, paying tax revenues and generating business opportunities for local suppliers, but also in protecting the natural environment, safeguarding human rights of local residents, and carrying out public service programs.

	Coping strategies
	▶ We conducted impact assessment on local residents, human rights, cultural heritages, and other involuntary resettlement etc. beforehand, protecting their legal rights and interests. ▶ We responded to the requests and needs of local people, and protected their rights and interests. We made reasonable land compensation plans by considering the views of local governments, partners, and villagers. Compensation first and land use later. We released timely land use and compensation information, ensuring transparency in every step. ▶ We preferred in local hiring and made technical training for specific projects, increasing their income. ▶ We strictly follow HSE rules, and set up relevant HSE requirements for stakeholder engagement; we implement whole-process supervision, and make timely restoration, minimizing our impact on local ecology.
	▶ We supported local enterprises by purchasing locally and collaborating in technical services, boosting development of local SMEs. ▶ We supported in talent training programs in the resource countries.
	▶ We established community committee to provide public welfare assistance, and supervise the progress and implementation. ▶ We built corporate-government management committee, corporate-community association, and corporate-employee committee, for strengthened and smooth communications in between.
	▶ Make reasonable plans for community investment based on the actual conditions and real needs of local residents and local economic development.

Enhancing Communication with Local Communities

The Company attaches importance to communication with all social parties, especially stakeholders, in the countries where it operates, and has set up environmental protection and community relations coordinating agencies in many overseas regions. Also, we have established various forms of communication mechanisms with local governments, non-governmental organizations, community representatives, etc., to strengthen communication and coordination, enhance mutual understanding, and achieve win-win cooperation by means of meetings, reports and visits.

Case Strengthened communication with local communities

PetroChina Halfaya Company conducted phased environmental and social impact assessment, and maintained close communications with the local communities. In 2023, the company held many meetings with local residents, social groups and relevant organizations on the impact of environmental monitoring, biodiversity conservation, and buffer zones, to discuss and record all the concerns, needs and suggestions of the local people. Moreover, the company made regular visits to communities near the oilfields to know their requests, and took targeted solutions, hence enhanced mutual understanding and friendship.

In 2023, the company held open day event among other activities, inviting over 100 representatives from local media, colleges, and the Ministry of Oil to visit the oilfield production base, helping them to have a better understanding of oilfield operation, production, as well as the management of public welfare programs.

Case Knowing what they need to protect their interests

Following the guidelines and policies of SKK Migas in the country, CNPC Indonesia Company actively fulfilled its social responsibilities and supported the local development.

The company included community development into annual work plans and budget plans, and submitted to local government for approval. It also set up special departments on the oil field to communicate with communities and local governments; it makes active communication to find problems and know people's requests, so as to make timely responses. With focus group dialogue, discussion groups, personal interviews and press conferences, communications of various modes were established to secure accurate, efficient and timely response.

Before implementing major infrastructure projects that may have an impact on local people's life and environment, the company would hire professional third-party agencies to conduct surveys in people's livelihood, environment, and economy, and make adjustment based on the feedback and results, maximizing the benefits of local communities.

Community Welfare

We help local residents to improve their production and living conditions, and provide support to neighboring communities in the areas of environment, health and education every year according to their actual needs, contributing to the sustainable development of the community.

Our overseas community initiatives in 2023



Shymkent Oil Refinery donates buses to the local orphanage.



The Chad Refinery donates medicines to the village hospital in Alkoudou.

Kazakhstan	A total of 27 donations worth of USD 975,691 was made to charity, education, art and sports organizations in Kyzylorda and Almaty, Kazakhstan.
Iraq	Delivered 3 community projects to local governments: transformer station, lighting system, and power grid upgrading; we are constructing painted road, two bridges and roads, with an annual input of USD 2.8 million, benefiting 150,000 people in the area.
Chad	- We drilled 129 wells for local communities, providing safe and clean drinkable water for nearly 40,000 people in 47 villages (tribes) around the oilfield site. - We provided school supplies and donated medicines to schools and communities nearby.
Peru	- We supported sustainable development projects of the local communities, including renovating local schools and donating books, participating in tree-planting and land restoration activities, as well as organizing football match and concerts among other cultural activities. - We took an active part in post-disaster relief efforts, repairing roads, providing safe drinking water, disinfectants and epidemic prevention equipment.
Myanmar	We conducted 327 community-based public welfare programs with our partners in Rakhine, Magway, Mandalay, and Shan etc., providing medical assistance, building schools and donating books etc.



CNPC sets up the "MOZ-Dream" Scholarship in Eduardo Mondlane University in Mozambique.



CNPC's "Chinese Bookshelf" event in Oman.



CNPC received "Oilfield Area Greening Engineering Excellence Award" by the Indonesian Ministry of Environment and Forestry.



CNPC's bakery charity sale activity in London, UK.

Local Environmental Protection

We strictly abide by the environmental protection laws and regulations and relevant international standards in countries where we operate. We adhere to the principle of sustainable development of "protection in development and development in protection", and minimize the impact of our production activities on the local ecology.

Case Ecological conservation in Canada

Systemic environmental protection measures were adopted in the MacKay River oil sands project and the Duvernay Shale Gas project in Canada, integrating the requirements of the *Environmental Protection and Enhancement Act* (EPEA), especially in construction and operation of environmental protection facilities, implementation of environmental protection measures, environmental monitoring and reporting, hence achieving stable waste gas and solids treatment and standard discharge, with a recycling rate of over 99.5%. In so doing, the impact from project activities on the local ecology was minimized.



CNPC sponsored the "CNPC Cup Chinese Bridge" Chinese proficiency competition in Panama division.



CNPC employees participated in the charity cycling race in Texas, USA.



CNPC donated articles of daily use and money to build dormitories for students in Marandi Elementary School in the Agadem Oilfield in Niger.



CNPC's environment-themed public welfare event in Hong Kong, China.

Promotion of Localization

We actively implement our localization strategy, giving priority to the procurement and use of local products and services, providing opportunities for local contractors and service providers to participate in projects, supporting the development of local small and medium-sized enterprises (SMEs) and community entrepreneurs, and creating local employment opportunities.

Transparent Tax Payment

We comply with the laws and regulations of the countries in which we operate, and pay taxes to local governments in a transparent manner, contributing to the development of the local economy. In countries where the Extractive Industries Transparency Initiative (EITI) is implemented, such as Iraq and Mongolia, we actively collaborate with stakeholder groups and disclose our projects and tax payments to the government and the community, conforming to the disclosure requirements of the EITI. We support and respond to anti-base erosion and profit shifting (BEPS), and commit to paying taxes in accordance with the law in the places where our economic activities take place and where value is created, so as to realize the sustainable development of the Company while making due contributions to the socio-economic development. In 2023, the Company's overseas cumulative tax payments and fees amounted to RMB 93.15 billion.

Local Employment

While continuously improving our international operation and management, we promote the localization of employees. We respect the culture of local employees, promote cultural integration, and carry out training programs for local employees, to facilitate the growth of local employees, and inject impetus into the local socio-economic development while realizing our own development. The employee localization rate of the Canada subordinate is as high as 88.7%, among which all the employees at the McKay River Oil Sands Project and the Duvernay Shale Gas Project, where the Company is the operator, all come from local communities. We have more than 1,900 local employees at the Halfaya project in Iraq, with a localization rate of 80%; the localization rate of employees at the Rumaila project has reached 95%.

Case Training local talents

The Rumaila Project Company attached great importance to local talent training, and include it into the annual performance evaluation. The company set up special fund for education and training facilities and scholarships for excellent students, and implemented long-term, multi-channel, multi-level professional training programs for local employees. A total of over 2.6 million hours of professional training have been conducted, producing numerous talents in oilfield management and senior technologies. Besides, the company set up a special education fund to support students from difficult families, and USD 15 million have been expended. Thanks to these continuous efforts, the company led in employee localization among other oilfield companies.

In addition to trainings, the company partners with local schools to cultivate students. For example, the training program for young students with Mayssan oil training college. The company also provided international education opportunities and scholarships for local young students, reaching out to more young people for higher education. By now 6 students have received their doctorate degrees, 27 obtained master degree and 24 received bachelor degree. The company also provided professional trainings in language, engineering and HSE for the staff of the Iraqi Oil Ministry by building a comprehensive training center.



Local Procurement

We give priority to local products and services in project procurement, and regard localization as our contractual obligation. On the basis of fair competition, we give priority to procurement of local materials, equipment and consumables, to provide opportunities for local suppliers, contractors and service providers to participate in projects, and support the development of local SMEs and community entrepreneurs. We have made great efforts to cultivate local suppliers at Mangistaumunaigas (MMG) in Kazakhstan. The localization rate of services and engineering at MMG has reached 83.1%, and 49.3% for local materials purchasing. We have purchased important materials such as drilling rig casing, oil recovery machines, wellhead oil recovery trees and fiberglass pipes from local producers.

Respecting the Rights of Local Residents

Prior to the commencement of projects, we assessed the social, economic and environmental impacts, including the needs of the local people, human rights, cultural heritage and involuntary immigrants, and formulated a compensation plan with reference to the views of the local government, our partners and the local people, in order to maximize the protection of the legitimate rights and interests of the community residents.

Case Protecting the rights and interests of local people

CNPC Halfaya Company has always upheld the HSE policy of ensuring the health and safety of employees and protecting the natural ecological environment amid development. It complies with HSE policies and legal requirements, and continues to mitigate risks, creating active HSE culture via open communication with local government and communities.

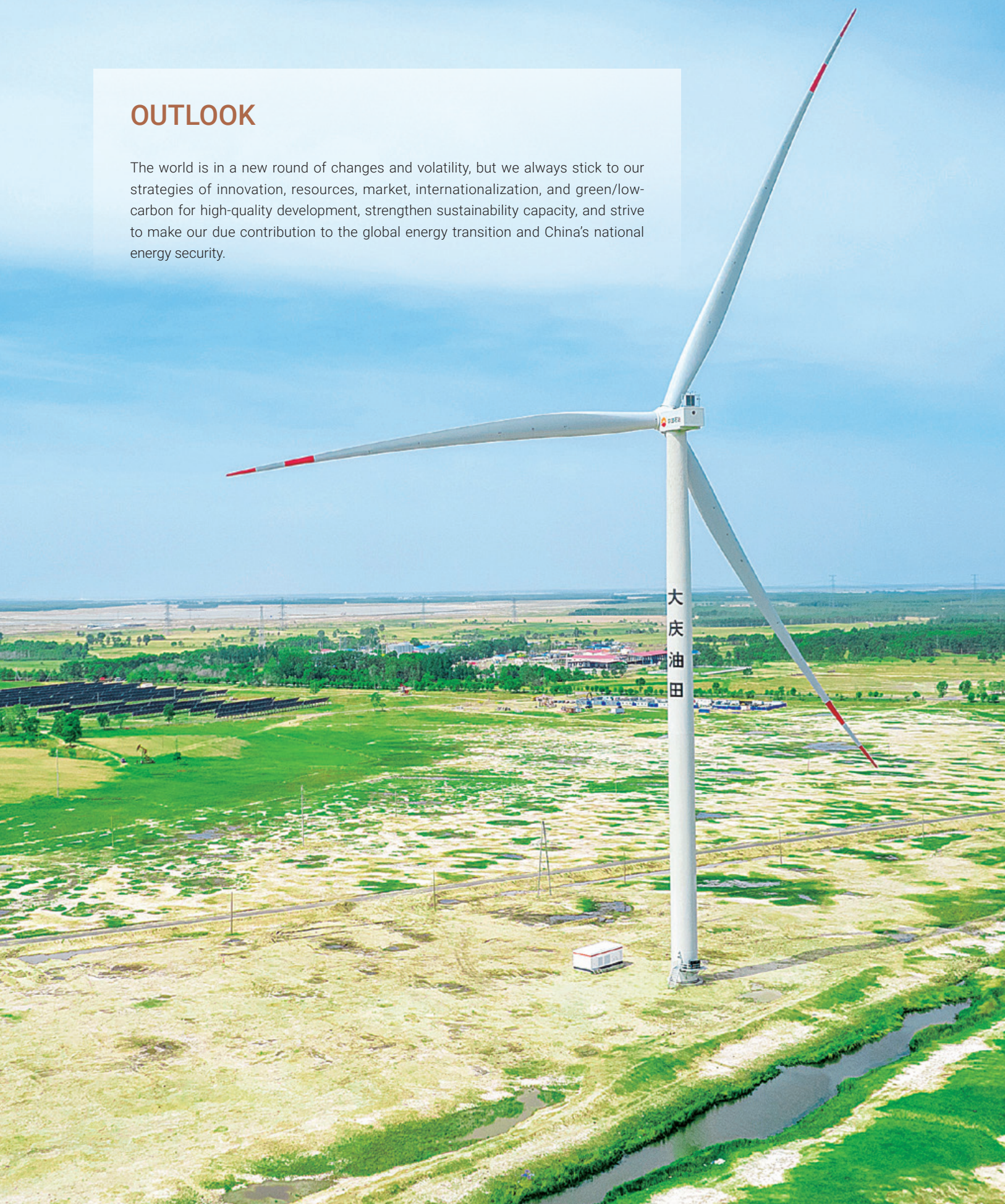
In 2023, the company made active plans for ecological conservation and community communication, and achieved great results in ecological control of historical burning pits, third-party environmental monitoring and biodiversity surveys in oil areas, community HSE publicity, and oil area sanitation enhancement etc.

The company paid close attention to resources, environment, workers, safety and social security among other areas, so as to make timely responses to local people's concerns. By surveying the public opinion and sentiment of nearby communities and villagers about the oilfield operations, the company made response measures in advance, and guided them to resolve problems, concerns, and misunderstandings through reasonable and legal channels, hence minimizing the risks of serious security incidents.

In accordance with the relevant laws and regulations of Iraq, the company implemented the land expropriation compensation policy to protect the interests of farmers in the oil areas. The company also did its best to provide income generation opportunities for residents in the oil area, such as coordinating contractors to temporarily hire residents in the oil area, temporarily renting equipment for community residents, etc. In so doing, the company provided a source of income for local people and improved their living standards.

OUTLOOK

The world is in a new round of changes and volatility, but we always stick to our strategies of innovation, resources, market, internationalization, and green/low-carbon for high-quality development, strengthen sustainability capacity, and strive to make our due contribution to the global energy transition and China's national energy security.



PERFORMANCE DATA

Performance indicators	2019	2020	2021	2022	2023
Finances and Operations					
Total assets (RMB 100 million)	42357	40887	41924	43951	44756
Owner's equity attributable to parent company (RMB 100 million)	19696	19786	19902	21188	21974
Sales revenues (RMB 100 million)	27714	20871	28073	34000	31608
Taxes and fees payable (RMB 100 million)	4045	3158	3980	5305	5311
Newly-added proved oil reserves (10,000 tons)	7720	6670	7979	10149	10190
Newly-added proved gas reserves (100 million cubic meters)	1258	1409	1383	1803	1843
Crude oil production (including overseas equity output) (10,000 tons)	18102.7	17864.2	17943.5	18203.7	18435.2
Natural gas production (including overseas equity output) (100 million cubic meters)	1503	1603.5	1692.4	1772.0	1846
Crude oil processed (including overseas crude oils processed) (10,000 tons)	20796.7	19182.7	20080.9	20346.0	22701.5
Output of refined products (including overseas output) (10,000 tons)	14943.7	13067.4	13444.7	13441.6	15015.5
Ethylene output (10,000 tons)	586.3	634.5	671.3	741.9	800.1
Lubricant output (10,000 tons)	163	157.5	196.4	167.9	223.8
Sales of refined products (domestic sales) (10,000 tons)	11959.4	10650.7	11125.6	10423.0	12361.9
Number of service stations (domestic)	22365	22612	22684	22655	22755
Safety					
Total number of accidents	249	176	176	73	70
Fatality rate (person/million working hours)	0.0024	0.0018	0.0014	0.0009	0.0021
– Fatality rate (person/million working hours)-employee	0.0012	0.0023	0.0014	0.0007	0.0022
– Fatality rate (person/million working hours)-contractor	0.0048	0.0008	0.0015	0.0014	0.0018
Fatality rate per thousand vehicles in traffic accidents (‰)	0.0783	0.0569	0.0431	0.0393	0
Environment					
Total GHG emissions (Scope 1 and Scope 2) (million tons of carbon dioxide equivalent)	–	–	1.79	1.80	1.88
COD emissions (10,000 tons)	–	–	0.57	0.53	0.52
Volatile Organic Compounds (Refining) (10,000 tons)	–	–	7.06	6.82	6.39
NOx emissions (10,000 tons)	–	–	10.8	10.0	9.72
Energy saved (10,000 tons of TCE)	82	79	74	74	86

Performance indicators	2019	2020	2021	2022	2023
Water conserved (10,000 cubic meters)	1084	1033	1049	923	854
Land saved (hectares)	1247	1190	1120	1280	1400
Staff					
Percentage of female staff (%)	32.4	31.3	30.43	29.5	28.7
Percentage of ethnic minority employees (%)	6.3	6.4	6.51	6.57	6.68
Percentage of local employees (%)	84.92	88	86.67	78.8	83.29
Occupational health examination ratio (%)	99.62	99.23	100	99.31	99.41
Hours of mental health counseling hotline service (hours)	1200	2017	1228	1624	1618
Training funds spent (RMB 100 million)	19.8	14.5	15.2	16.7	28.4
Total training time (10,000 hours)	—	2100	2662	3838	5715
Public					
Number of material suppliers	23623	23699	20257	21890	22845
Purchase expenditure (RMB 100 million)	2180	1683	1806	2015	2103
Total contribution (RMB 10,000)	85432	71795	80779	66666	65881
— Poverty alleviation (RMB 10,000)	24388	23224	40291	40500	40712
— Poverty alleviation (RMB 10,000)	4421	1271	4784	6600	4908
— Education (RMB 10,000)	8269	10544	7396	6400	6531
— Charity donation (RMB 10,000)	43933	30264	24189	11700	12061
— Environmental charity (RMB 10,000)	4421	6492	4119	1466	1669

GLOSSARY

Proven reserves	According to China National Standards, proven reserves are estimated quantities of hydrocarbon deposits possibly to be recovered from reservoirs proved by appraisal drilling during the period of reservoir evaluation, with a reasonable certainty or a relative difference of no more than $\pm 20\%$.
Proved reserves	According to the guidelines of the US Securities and Exchange Commission, proved reserves refer to, against current economic and operating circumstances, the quantity of oil, natural gas or liquid natural gas which can be reasonably identified and recovered from a known oil & gas layer in the future according to geological and engineering documents. Their price and cost are based on the reality in evaluation. Price changes will only consider the changes of the current price specified by the contract agreement rather than escalations. Proved reserves include developed and undeveloped proved reserves.
Reserve replacement ratio	The reserve replacement ratio refers to the value of the amount of oil and gas reserves added in a year divided by the amount of oil and gas produced during that same year.
Recovery ratio	The percentage of oil/gas in place that is recoverable from underground.
Horizontal well	A class of nonvertical wells where the wellbore axis is near horizontal (within approximately 10 degrees of the horizontal), or fluctuating above and below 90 degrees deviation. A horizontal well may produce at rates several times greater than a vertical well, enhance recovery efficiency and prolong the production cycle, due to the increased wellbore surface area within the producing interval. Meanwhile, the environmental costs or land use problems that may pertain in some situations, such as the aggregate surface "footprint" of an oil or gas recovery operation, can be reduced by the use of horizontal wells.
Liquefied natural gas (LNG)	Liquefied natural gas is produced by dewatering, deacidifying, dehydrating and fractionating the natural gas produced from a gas field and then turning it into liquid under low temperatures and high pressure.
New energies	New energies refers to unconventional energy and renewable energies, mainly including CBM, shale gas, oil sands, oil shale, fuel ethanol, biodiesel, geothermal energy, wind energy, solar energy, hydrogen energy, water-soluble gas and NGH.
Low-carbon economy	A low-carbon economy is an economic development model characterized by low energy consumption, low pollution and low emissions. Its essence is efficient energy consumption, development of clean energy and pursuit of green GDP. The core of this model is the optimization of the industrial structure, low-carbon technology and institutional innovation. A low-carbon economy is developed by means of energy conservation, emissions reduction and the development of clean energy.
Greenhouse gas (GHG)	Greenhouse gases are gases in an atmosphere that absorb solar radiation from the surface and then emit radiation, such as water vapor, CO ₂ and most refrigerants. Their effect is to make the Earth's surface warmer, as the "greenhouse effect" sequesters solar radiation and increases the temperature of the air. Greenhouse gases in the Earth's atmosphere mainly include CO ₂ , CH ₄ , N ₂ O, HFC _s , PFC _s and SF ₆ .

Carbon sequestration	Also referred as carbon sink. It is the process, activity and mechanism to remove carbon dioxide from the air. Generally, it indicates the capability of forests to absorb and store carbon dioxide. Carbon dioxide in the atmosphere is artificially sequestered in biological forms in plants and the soil through forestation, forest management, and other forest carbon sequestration measures.
HSE management system	HSE is the acronym of the health, safety and environment management system. The HSE management system is an integration of various elements such as organizational structures, mandates, practices, procedures, processes and resources used for health, safety and environment management. The advanced, scientific and systematic integration and operation of these elements create the mutually reinforcing, supportive and interactive and dynamic management system.
Oils (mineral oil)	Compounds of hydrocarbons in wastewater. These include all substances collected by certain solvents, as well as all substances extracted by solvents from acidified samples, which remained fixed during the extracting process.
Chemical oxygen demand (COD)	Chemical oxygen demand is the quantity of strong oxidant consumed to process water samples. It serves as a comprehensive index of pollutants in wastewater and their impact on the environment. A higher COD represents the heavier pollution of reductive substances in the water body.
Major accident	Major accidents refer to accidents that cause deaths above 10 but below 30, or grievous harm to people numbering above 50 but below 100, or economic losses worth above RMB 50 million but below RMB 100 million.
Emergency accidents	Emergency accidents refer to sudden accidents which result in or may result in serious casualties, and/or damage to property, the environment, society and public safety. Emergency accidents faced by CNPC include four types, namely natural disasters, accidents, public health and social security.
Occupational disease	Diseases caused by exposure to dust, radioactive substances and other toxic and hazardous substances to employees working for enterprises, institutions and private organizations.
Stakeholders	Stakeholders are groups and individuals that can affect the achievement of corporate goals, or groups and individuals that are impacted by corporate goals, including the natural environment, future generations, and non-human species that are directly or indirectly affected by corporate business activities.
Production base	Generally, this refers to mining zones recovered, being recovered or to be recovered. It includes several regions covering mines and open mines equipped with utilities such as production processes, ground transportation, power supply, telecommunication scheduling, production management and living services.
Community	A community is an administrative jurisdiction within which a group of people live in a fixed geographical area, fulfilling their social functions and creating social norms. It is at the same administrative level as an administrative village.

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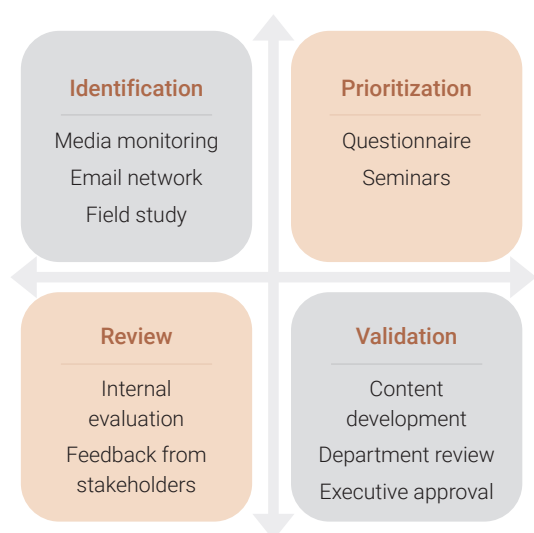
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APPROACH TO REPORTING

Definition Process of the Contents

The contents in this report were selected and disclosed based on their substantiality, integrity and balance principle, and taking into account the concerns of stakeholders and the Company's great influence on society. They exert a substantial impact on the Company's sustainable development.



1. The Company pays close attention to the views of its stakeholders, and collects their comments through community visits, periodical reports, field study and online communication. It makes suggestions on the topics of the report by taking into account stakeholders' major concerns.

2. We assess the Company's sustainable development strategy and cover major social, economic and environmental events related to our strategies, risks and opportunities.

3. We refer to UN SDGs and the social responsibility initiatives and standards proposed by NGOs for topic selection. These include ISO26000 (Guidance on Social Responsibility).

4. Topics are selected based on the comprehensive assessment of stakeholders' concerns and their impact on the Company's strategies. The time span and the scope of impact for each specific topic are clearly defined to ensure the accuracy of the information disclosed.

**Pursuing green development and
providing reliable energy**
supply to fuel our customers' growth and
power people's happy life



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