2024 Annual Report

China National Petroleum Corporation

Contents

About Us

China National Petroleum Corporation (CNPC) is an integrated international energy & chemical company covering oil, gas & new energies, refining, chemicals, marketing & new materials, support & services, as well as capital & finance etc.

◎ **Our Vision**

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

◎ **Our Strategies**

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

◎ **Our Values**

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

Board of Directors

Dai Houliang
Chairman

Hou Qijun
Director

Duan Liangwei
Director

Li Jianhong
External Director

Deng Jianling
External Director

Shi Yan
External Director

Wang Guangkun
External Director

Li Yanjiang
External Director

Zhu Qingzhong
Employee Director

Top Management

Dai Houliang
Chairman

Hou Qijun
Director & President

Duan Liangwei
Director

Zhou Song
Chief Financial Officer

Huang Yongzhang
Vice President & Chief HSE Supervisor

Ren Lixin
Vice President

Xie Jun
Vice President

Zhang Daowei
Vice President

Chen Dongsheng
Chief of the Discipline Inspection and Supervision Office

Message from the Chairman

In 2024, we earnestly implemented the important instructions of President Xi Jinping and the decisions and deployments of the CPC Central Committee and the State Council. In the face of complex and challenging circumstances, including volatile oil prices and sluggish market demand, we persevered with determination and hard work, achieving a series of remarkable accomplishments. Our high-quality development has reached new heights, making significant contributions to safeguarding national energy security and supporting China's economic recovery and growth.

We have remained steadfast in fulfilling our mission, continuously enhancing our energy supply capabilities. Major discoveries and breakthroughs were achieved in domestic oil and gas exploration, further improving the balance between reserves and production. Domestic and overseas oil and gas output reached a record high. The restructuring and upgrading of refining and chemical business accelerated. Construction commenced on the Blue Ocean high-end polyolefin project, while major projects in Jilin Petrochemical, Guangxi Petrochemical, and the ethane-to-ethylene project in Tarim progressed in an orderly manner. A preliminary layout for an integrated value chain consisting of refining, chemicals, bio-manufacturing, fine chemicals and new materials has started to take shape. Our market share in refined petroleum products steadily increased, while sales of natural gas and chemical products reached historic highs.

We accelerated strategic deployments, driving vigorous development in emerging industries. Our new energy business expanded rapidly, with multiple new projects launched. Wind and solar power generation increased by 120% year-on-year, while geothermal development, CCUS/CCS initiatives, and hydrogen energy demonstration projects advanced steadily. Our New Materials Acceleration Program was implemented thoroughly, with output of new materials exceeding two million tons. Notable progress was made in the development of new products such as polycarbonate and polyoxymethylene, and metallocene product output maintained a leading domestic market share. We also made a strategic investment in a controlled nuclear fusion company, marking a substantial step forward in future-oriented industries.

We intensified R&D efforts and achieved major breakthroughs in scientific and technological innovation. Our key scientific and technological projects yielded significant results: the Shenditake 1 Well

recorded the world's first oil and gas discovery at a depth of 10,000 meters on land; our seismic exploration technology and equipment won the First Prize of the National Technology Invention Award; and we pioneered the industrial-scale production of polyolefin elastomers (POE) using gas-phase processes, reaching output level of 10,000 tons. We pushed forward with three key initiatives — IT infrastructure enhancement, digital empowerment and intelligent development. Our Kunlun Large Model became the first nationally certified generative AI model in the energy and chemical industry. These accomplishments mark significant milestones in building Digital & Intelligent CNPC.

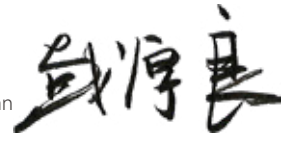
We pursued systematic planning, achieving significant progress in deepened reforms and enhanced management. We developed a comprehensive blueprint for further all-round reform, advancing structural and institutional reforms in key areas such as the business unit system and specialized business restructuring. We exceeded the phased targets of the Reform Deepening and Enhancement Initiative, making solid strides in modernizing our corporate governance system and capabilities. Through the "Compliance Management Improvement Year" campaign, we implemented a high-standard "value-added version" of quality and efficiency enhancement, driving continuous improvements in management effectiveness and profitability.

We championed openness and inclusiveness, delivering remarkable achievements in global energy cooperation. Anchored by major oil and gas projects and focused on Belt and Road partner countries, we deepened integration with worldwide energy development, creating powerful synergies. We successfully convened the 6th China-Russia Energy Business Forum and 7th CNPC International Cooperation Forum, and hosted over 100 foreign envoys at our headoffice, strengthening consensus on open collaboration. With all the efforts, we layed the foundation for the second golden decade of Belt and Road energy partnerships.

We shared development dividends, further strengthening our reputation as a model corporate citizen. Domestically, we responded proactively to national priorities of stabilizing growth and employment and to implementation of national major policies, by increasing investments in strategic projects, implementing large scale equipment modernization, and hiring unprecedented numbers of university graduates. Upholding the values of "Harmony in Diversity, Shared Progress," we worked hand-in-hand with the people in pursuing a better life. We supported over 1,100 community projects across 28 provinces, leaving lasting contributions to rural revitalization. Globally, we prioritized host country development needs and concerns of stakeholders, and generated substantial employment and tax revenues, delivering sustainable socioeconomic value.

2025 is the concluding year of the 14th Five-Year Plan and the 75th anniversary of CNPC's founding. Guided by Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, we will continue to adhere to the general work tone of steady progress while ensuring stability, comprehensively implement the new development philosophy, and integrate into the new development pattern. We will focus on enhancing energy supply capacity and resilience of industrial and supply chains, and accelerate the development of self-reliance in science and technology and new quality productive forces. We will deepen reforms and strengthen management to ensure compliance and risk mitigation. We will continue to enhance our core functions and strengthen core competitiveness. With firm confidence and unwavering determination, we will overcome difficulties, deliver concrete results through dedicated action, and fully accomplish the goals and tasks of the 14th Five-Year Plan. We are committed to making meaningful contributions to national energy security and the broader mission of building a great country and advancing national rejuvenation through Chinese modernization.

Chairman



Dai Houliang

President's Report

In 2024, against the challenging backdrop of a declining demand for refined petroleum products and a cyclical downturn of the chemical industry, CNPC acted on the overall plan of the Board of Directors and stepped up efforts in optimizing production and operation, strengthening reforms and management, and further improving quality and efficiency. Our oil and gas industry chains and business operations have been running in a stable and well-ordered way, with main production indicators growing steadily and operating results reaching all-time highs. In 2024, the Company registered RMB 3,136.2 billion in operating income, RMB 301 billion in earnings before taxes and RMB 205.9 billion in net profit, making important contributions to national energy security and the overall recovery and growth of the Chinese economy.

This year, CNPC intensified efforts to boost reserve and production, as our oil, gas and new energies business was more capable of ensuring supply and generating profits. New breakthroughs were achieved in domestic E&P operations with nine 100-million-ton oil plays and eight 100-billion-cubic-meter gas plays confirmed. Newly proven oil in place totaled 868.64 million tons and newly proven gas in place stood at 996.9 billion cubic meters. In 2024, the Company produced 106.15 million tons of crude oil and 158.6 billion cubic meters of natural gas, with crude oil output growing steadily and natural gas output maintaining rapid growth. Overseas oil and gas businesses stayed stable and profitable. Domestic natural gas sales reached a new milestone of 240 billion cubic meters. The development of new energies sped up, with a cumulative installed capacity of wind and solar power exceeding 10 million kilowatts.

This year, CNPC stayed committed to green and intelligent development as our refining, chemicals, marketing and new materials business accelerated transformation and upgrading. The key ethylene projects at Jilin Petrochemical and Guangxi Petrochemical continued to advance. The preliminary work progressed steadily for projects such as the integrated refining and petrochemical project at Xizhong Island, Dalian. Based on a market-oriented approach, the Company optimized the product structure and achieved remarkable results in reducing the output of refined products and increasing the output of chemicals and specialty products. In 2024, the Company processed 188.22 million tons of crude oil domestically and produced 120.61 million tons of refined products. The gasoline and diesel yield decreased by

2.4 percentage points, while jet fuel output and specialty products increased by 20.3% and 6.6% respectively. Ethylene production reached 8.65 million tons, up 8.1% year-on-year. The output of new materials exceeded 2 million tons. The Company sold 119.22 million tons of refined products domestically with a steady increase in its market share, leveraging the enhanced production-sales coordination and precision marketing strategy. The Company's international trade business played an effective role in guaranteeing supply, reducing costs and boosting profitability through optimized resource channels.

This year, CNPC focused on improving the quality of services, further enhancing the strategic support and market competitiveness of our support and service business. Oilfield technical services operations facilitated balanced production and improved rig efficiency. The drilling depth of Shenditake 1 Well surpassed 10,000 meters as supporting engineering and technological capabilities continued to build up. Engineering and construction business strengthened project management and ensured the successful completion of major projects while continuously optimizing its market structure and achieving rapid growth in high-end markets and emerging industries. Equipment manufacturing business bolstered its research and development efforts and developed a number of flagship products.

This year, CNPC made new progress in high-quality development of capital and finance business, highlighting a focus on industry-finance integration. CNPC Capital continued to deepen industry-finance integration in support of the Company's core operations and introduced new marketing models to achieve robust results on all fronts. Kunlun Capital concentrated on emerging and future industries, and invested in a number of key projects in fields such as new energies, new materials and controlled nuclear fusion, facilitating CNPC's strategic transformation.

This year, CNPC enhanced reform and innovation with significant achievements in deepening management and improving quality and efficiency. We continued to optimize and improve the organizational system, steadily advancing the specialized reorganization of businesses such as technical services, engineering construction, and equipment manufacturing. We redoubled efforts to improve quality and efficiency and generated gains over RMB 20 billion. Significant progress was achieved in building national strategic scientific and technological strength and major breakthroughs were made in promoting greater self-reliance and strength in science and technology. The "10,000-meter deep scientific research & oil and gas exploration" project was named among the first projects under the Sci-Tech Innovation Commercialization Program for Central SOEs. The Digital and Intelligent CNPC initiative yielded notable highlights with a number of digital transformation pilot projects.

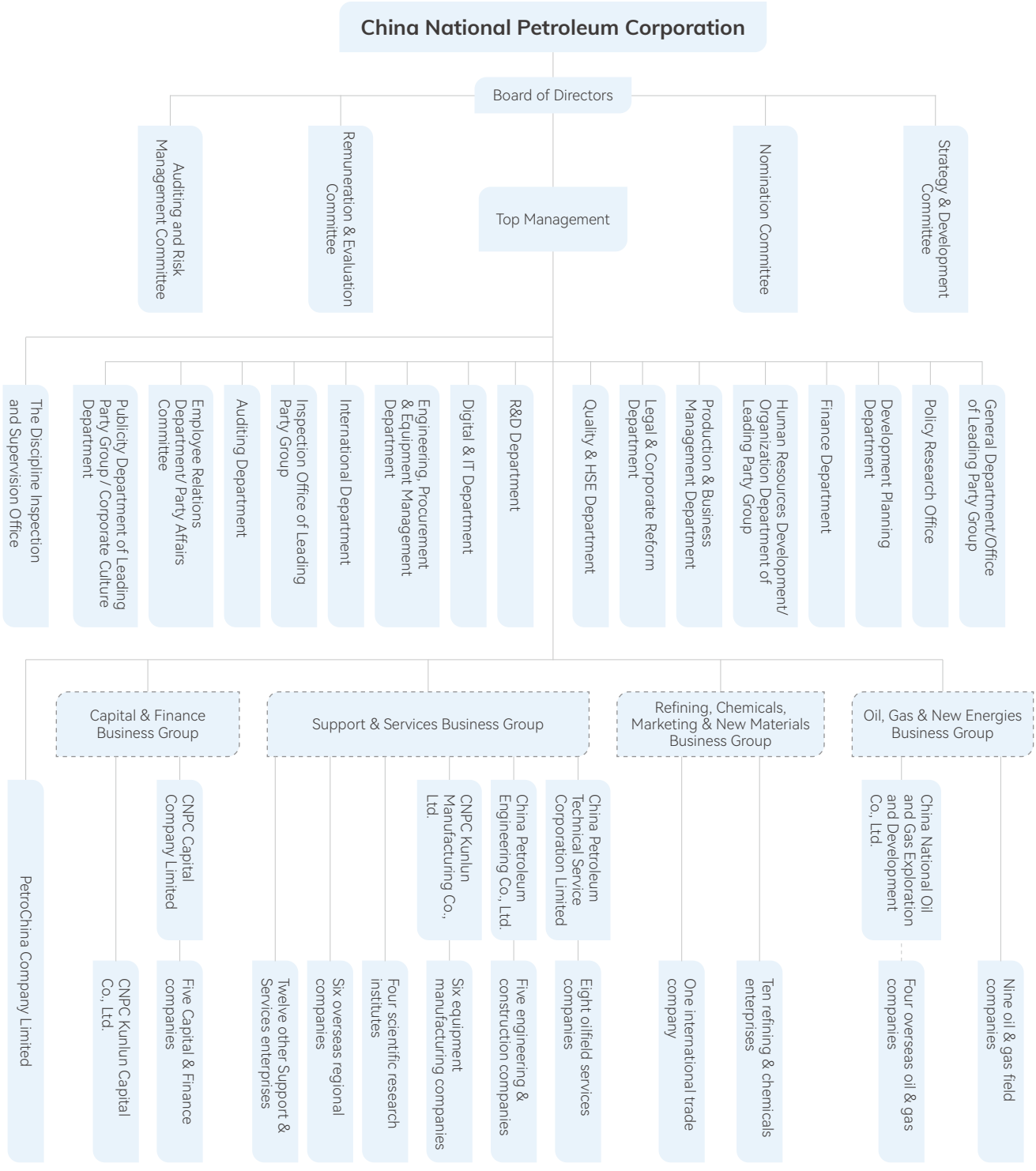
This year, CNPC strengthened the ability to prevent and mitigate risks as our QHSE performance remained sound and steady. We pressed on with the three-year action plan for fundamental improvement of production safety and worked with the central leading group in environmental protection inspections to ensure effective risk prevention and achieve stable safety and environmental protection performance. Our green enterprise enhancement, energy conservation and carbon reduction efforts reduced energy consumption by 780,000 tons of coal equivalent, and water consumption by 8.24 million cubic meters. We actively promoted the Healthy Enterprise initiative and the "Weight Management Year" campaign to improve the physical and mental health of our employees.

In 2025, the operating environment for the Company remains complex, with both challenges and opportunities. Facing new circumstances, changes and requirements, we will focus on our central tasks, forge ahead with dedication and commitment, and strive to achieve annual production and operation targets to a high standard. We will contribute to ensuring national energy security, building China into a great country and achieving national rejuvenation through Chinese modernization.

President

Hou Qijun

Organization Structure (as of December 31, 2024)



Operation Highlights

Financial Data	2022	2023	2024
Revenue (billion RMB yuan)	3,400.0	3,160.8	**3,136.2**
Earnings before taxes (billion RMB yuan)	266.9	288.1	**301.0**
Net income (billion RMB yuan)	180.4	195.2	**205.9**
Taxes and fees paid globally (billion RMB yuan)	530.5	531.1	**505.4**

Oil and Gas Production	2022	2023	2024
Oil production (mmt)	182.04	184.35	**187.22**
Domestic	105.00	105.80	**106.15**
Overseas (Equity)	77.04	78.55	**81.07**
Gas production (bcm)	177.20	184.62	**190.50**
Domestic	145.45	152.90	**158.64**
Overseas (Equity)	31.75	31.72	**31.86**

Refining and Chemicals	2022	2023	2024
Crude refining capacity (mmt)	247.89	247.89	**247.89**
Domestic	224.30	224.30	**224.30**
Overseas[1]	23.59	23.59	**23.59**
Crude runs (mmt)	203.46	227.02	**226.09**
Domestic	164.90	190.15	**188.22**
Overseas[2]	38.56	36.87	**37.87**
Domestic refined products output (mmt)	105.74	123.21	**120.61**
Domestic lube oil output (mmt)	1.68	2.24	**2.41**
Domestic ethylene output (mmt)	7.42	8.00	**8.65**

Marketing and Sales	2022	2023	2024
Refined products sales (mmt)	172.71	186.14	**178.88**
Domestic	104.23	123.62	**119.22**
Overseas	68.48	62.52	**59.66**
Domestic service stations	22,586	22,755	**22,441**
Domestic natural gas sales (bcm)	217.81	229.91	**244.89**

Note: [1-2] The overseas crude refining capacity is calculated based on CNPC's share of equity, and the data on overseas crude runs are based on the total output.

Corporate Governance

CNPC is a solely state-owned enterprise. The State-owned Assets Supervision and Administration Commission (SASAC) performs the responsibilities of investor on behalf of the State Council in accordance with relevant laws, administrative regulations, and authorizations. The Company has been implementing the principle of "Two Consistencies" in aligning Party's leadership over SOEs with corporate governance and aligning the leading role of the Leading Party Group with the Board of Directors' lawful fulfillment of its duties. A corporate governance mechanism has been established, with clearly defined rights and responsibilities, transparency and accountability, coordinated operations, and effective checks and balances. A modern enterprise system with Chinese characteristics has been evolving to support the modernization of governance systems and governance capabilities, with a focus on the development of mechanisms and institutions for building a world-class enterprise and the fulfillment of its economic, political, and social responsibilities.

The Leading Party Group

As the leading body established by the Party in CNPC, the Leading Party Group has a legal status in the corporate governance structure, and it plays a leading role in guiding, supervising, and ensuring the implementation of major decisions. In line with the principle of "Two Consistencies", the Leading Party Group implements the Party's leadership in all aspects of corporate governance such as decision-making, execution and supervision. It fulfills the duties of decision-making or guiding/directing of major matters of the Company, and decides on major matters such as Party building. It promotes the alignment between the Party's important guidelines and decisions and CNPC's strategic goals, policies, rules & procedures, and reform & development achievements, as well as employee behavior by conducting preliminary reviews of major matters concerning operation and management. It oversees the implementation of the Party's theories, guidelines, policies, and national development strategies and upholds socialism in the Company's reform and development.

In 2024, following President Xi Jinping's Thought on Socialism with Chinese Characteristics for a New Era and the guiding principles set forth at the 20th CPC National Congress, the Second and Third Plenary Sessions of the 20th CPC National Congress, the Leading Party Group resolutely implemented the decisions of the Party Central Committee and the State Council, upheld the underlying principle of "seeking progress while maintaining stability", followed the new development philosophy, exercised the duties in full and strict governance over the Party, coordinated the deepening of reform, strengthened scientific and technological capabilities of strategic importance and accelerated the development of new quality productive forces. As a major central state-owned enterprise, CNPC made solid headway in enhancing the supply capacity of high-quality energy and chemical products, strengthening production safety and environmental protection, making important contributions to ensuring national energy security and bolstering the overall recovery of the Chinese economy.

Board of Directors

The Board of Directors as the decision-making body provides guidance on business strategy, decision-making and risk mitigation. In accordance with the *Company Law of the People's Republic of China* and the *Articles of Association of CNPC*, the Board of Directors is entrusted with the power to review major matters of strategic importance; formulate and implement the Company's strategic plans; make major operation and management decisions and supervise the implementation of such decisions by executive management; promote the improvement of the Company's rules and procedures for risk management, internal controls, legal compliance, accountability and internal investigation; and identify, analyze, and oversee the prevention and mitigation of major risks.

In 2024, the Board of Directors focused on a systematic, rational and efficient approach to performing its functions and duties, including revising the Company's Articles of Association in accordance with the Company Law to provide a solid foundation for its institutional framework; serving the overarching strategic goals of the Party and the nation and the national energy security; guiding reform and development from a strategic perspective based on the accurate insight into industry trends; promoting the steady implementation of the Company's strategic planning for core businesses; taking a precise, disciplined and cost-effective approach to investment based on rational and informed decisions; preventing and mitigating major risks through an enhanced mechanism for identifying, analyzing and responding to risks; and leveraging the Company's strengths in sci-tech innovation, industry dominance and energy security to build China into a great modern socialist country and advancing the rejuvenation of the Chinese nation through the Chinese path to modernization.

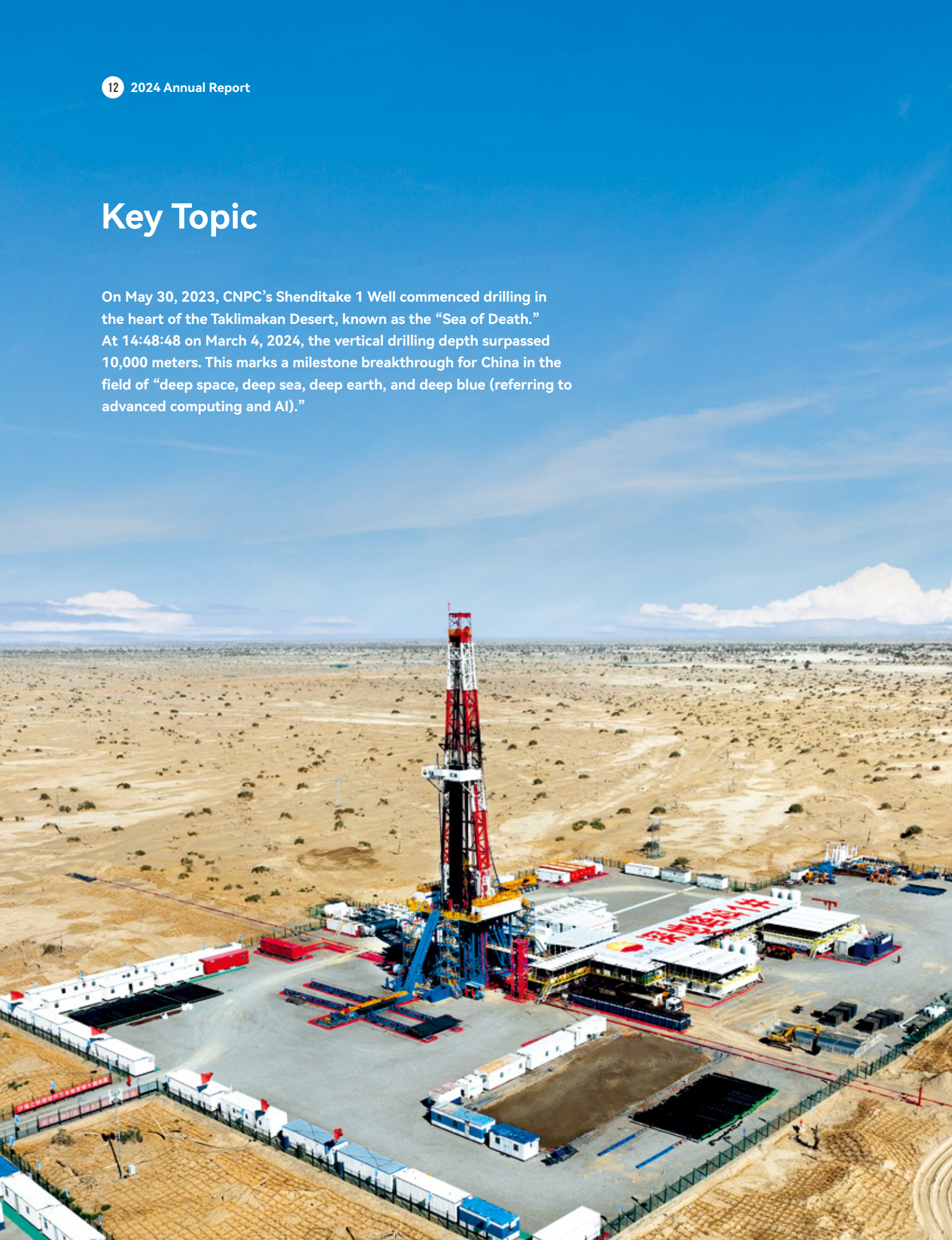
Top Management

As the execution body, the Top Management is responsible for business planning, implementation and management. It oversees the implementation of the Company's strategies; formulates schemes for improving production and operation; carries out board resolutions; and achieves the Company's business plans and business objectives. The Top Management strengthens internal control, streamlines business processes, and prevents and mitigates risks to ensure compliance and efficiency of the Company's operations management system. The Top Management reports regularly to the Board of Directors on the implementation of the decisions and resolutions made by the Board of Directors to deliver on the Company's strategies.

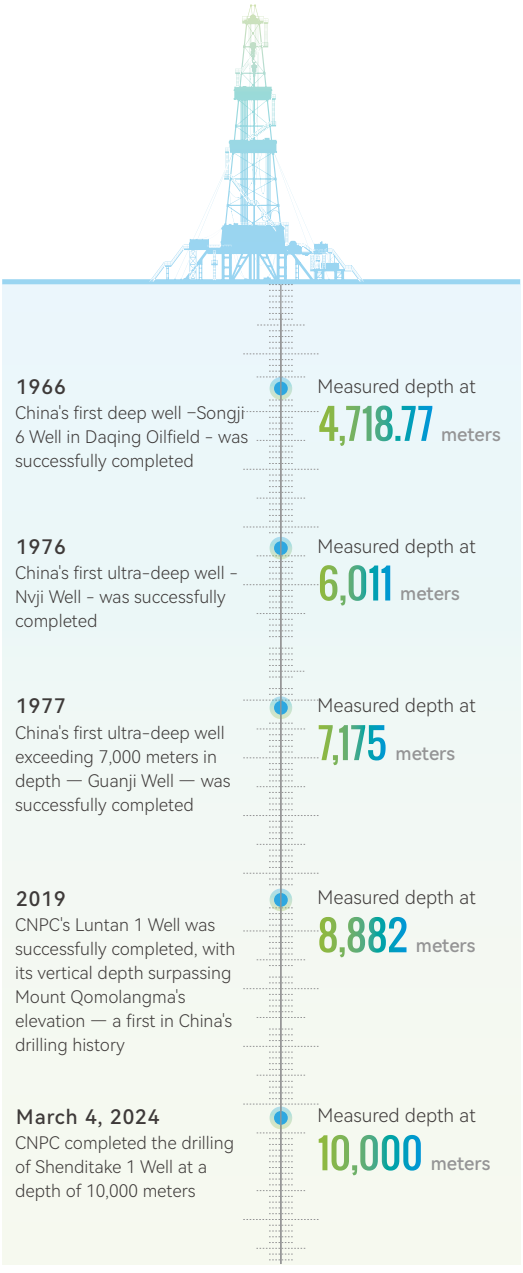
In 2024, The Top Management followed the underlying principle of "seeking progress while maintaining stability" and made headway towards high-quality development with a focus on enhancing core competitiveness and bolstering core functions. The Company's oil and gas operations and other businesses were running smoothly and efficiently and the new energies and new materials business grew rapidly. Significant progress was made in improving quality and performance, the technological innovation capabilities ramped up, and the deepening of reform advanced steadily. The legal compliance management continued to improve and the QHSE performance remained stable. The Company's targets and tasks for the year were successfully achieved as the operating results reached all-time highs.

Key Topic

On May 30, 2023, CNPC's Shenditake 1 Well commenced drilling in the heart of the Taklimakan Desert, known as the "Sea of Death." At 14:48:48 on March 4, 2024, the vertical drilling depth surpassed 10,000 meters. This marks a milestone breakthrough for China in the field of "deep space, deep sea, deep earth, and deep blue (referring to advanced computing and AI)."



China's first 10,000-meter scientific exploration well



Note: On January 5, 2025, Shenditake 1 Well was completed at a depth of 10,910 meters, becoming Asia's deepest vertical well and the world's second deepest.

As the exploration and development activities of mid-shallow oil and gas resources in China continue to advance, discovering new reserves becomes increasingly challenging. Currently, deep and ultra-deep oil and gas resources account for about one-third of China's total oil and gas resources. They have become the primary frontier for the country's major oil and gas discoveries. The Tarim Basin, where Shenditake 1 Well is located, is China's largest deep-earth oil and gas accumulation zone. Exploring strategic replacement areas for oil and gas resources in deeper and older strata has become an essential path to ensuring national energy security. Consequently, pursuing deep and ultra-deep resources is an inevitable choice for oil and gas exploration and development.

The 10,000-meter deep-earth scientific exploration project is not only crucial for developing proprietary ultra-deep oil and gas technologies and discovering oil and gas resources, but also of great significance for exploring the Earth's crust and continental evolution, gaining a more intuitive understanding of the earth's internal structure, and solving scientific problems related to the earth's depth. The project also leads to technological progress in related fields such as the development of new materials and the application of high-temperature and high-pressure technologies.

To support the 10,000-meter deep-earth scientific exploration endeavor, the Company developed essential materials, equipment, tools and instruments, including a 12,000-meter automated drilling rig, 220°C high-temperature-resistant water-based polymer drilling fluid, intelligent temperature and pressure responsive plugging materials, a 220°C ultra-high temperature water-based mud system, high-end PDC drill bits, 200°C high-temperature screw drilling tools, ultra-heavy load casing hangers, high-strength coring tools resistant to 240°C, ultra-high-temperature and high-pressure logging tools, and mobile well-site rock sample measurement and imaging systems. This has created a self-supporting, safe, and controllable industrial chain for 10,000-meter deep-earth "well engineering" project. Supported by geological theories and engineering technologies, Shenditake 1 Well not only achieved 100% compliance in key quality indicators such as well deviation, well diameter and logging, but also set multiple records in China during the second and third stages of casing running and cementing operations, including the deepest large-diameter casing installation, the largest tonnage casing installation, and the deepest large-diameter logging using domestic instruments.

The drilling of this 10,000-meter deep well is expected to open up new frontiers for oil and gas exploration and development at depths beyond 10,000 meters, leading to a more stable supply from this energy-rich area. It is of great strategic significance for ensuring national energy security, gaining a technological edge, and expanding oil and gas resources.

The drilling depth of Shenditake 1 Well surpassing 10,000 meters marks China's independent breakthrough in overcoming the technical bottleneck in 10,000-meter ultra-deep well drilling, signifying that its deep-earth oil and gas drilling capabilities and supporting technologies have reached an internationally advanced level.

As the coring operations of Shenditake 1 Well progress, Chinese scientists will obtain first-hand data on basic geological theories, geochemistry and geothermics, enabling them to investigate the mysteries of the Chinese mainland in the earth's evolutionary process.

2024 Industry Review

In 2024, the global economy demonstrated remarkable resilience amid steady growth in energy consumption and continued progress in energy transition toward cleaner sources. The oil market maintained basic supply-demand balance, though with slightly-weaker demand, while the natural gas market saw ample supply that drove international gas prices even lower. Global hydrocarbon production registered modest growth despite the first dip in exploration and development investments since 2021. While worldwide refining capacity continued its expansion, refinery margins experienced significant contraction. International oil companies witnessed notable declines in operational performance, albeit remaining at historically favorable levels. Against the backdrop of ongoing profound transformations in the global geopolitical landscape, collaborative efforts in carbon emission reduction emerged as a bright spot in international cooperation.

Guided by China's New Energy Security Strategy, the energy industry stepped up its efforts to secure energy supply and build a clean, low-carbon, safe, and efficient energy mix in line with the goals for carbon peaking and carbon neutrality. The energy industry exhibited signs of sufficient supply, accelerated transformation, and price stability, providing momentum for economic recovery. Oil consumption remained at high levels, with its role as a feedstock becoming increasingly prominent. Natural gas consumption grew beyond expectations, with robust growth in transportation gas. Remarkable results were achieved in boosting oil and gas reserves and production. Crude oil production increased for the sixth consecutive year with a year-on-year decrease in purchases of foreign oil; natural gas production increased for the eighth consecutive year, exceeding 10 bcm. Domestic oil refining capacity and petrochemical production capacity continued to grow, as the self-sufficiency ratio of new materials increased. China's top three oil companies continued to stabilize oil production and boost gas output, bringing oil and gas production to a new high.

2024 Global Oil and Gas Industry

The global energy landscape continued to change, as the transition to green and low-carbon energy advanced steadily.

Affected by geopolitical conflicts, the trend of "regionalization" and "bloc formation" in global energy flows became more pronounced, which coupled with frequent extreme weather events, led to a stronger emphasis on energy security worldwide. European countries toned down their previously aggressive energy transition goals and adopted a more pragmatic approach to security-centered energy transition. Global energy consumption saw steady growth as a cleaner energy mix continued to emerge. Fossil energy consumption rose slightly by 1.1%, with the share of fossil fuels in primary energy demand continued to inch down; Non-fossil energy consumption increased by 6% year-on-year as a result of the expansion of wind and solar power, accounting for 19.1% of the primary energy demand, an increase of 0.5 percentage points from the previous year. Green electricity generated from non-fossil energy is becoming a key driver of global energy decarbonization.

Demand remained weak as oil prices tumbled.

Economic slowdown and accelerated new energy substitution led to weak demand and a year-on-year decline in international oil prices. Brent crude oil futures averaged $79.86 per barrel for the year, a year-on-year decrease of 2.8%. Throughout the year, oil prices exhibited a range-bound, M-shaped trend, with a high peak followed by a low trough. The world oil market generally returned to balance as global oil consumption increased by 900,000 barrels per day year-on-year to 102.9 million barrels per day, and global oil supply increased by 600,000 barrels per day to 102.8 million barrels per day.

Natural gas prices declined amid a supply glut.

Global natural gas consumption recovered, with a year-on-year increase of 2.0% at 4.09 tcm. Global natural gas inventories were at a high level in nearly five years. The market supply and demand remained loose. The risks of geopolitical conflicts weakened, and international gas prices further declined. Globally, LNG capacity growth remained low. The estimated full-year capacity increase was 2.5 million tons, with total capacity at 470 million tons per year. The shift in global LNG trade structure continued, highlighting "a decline in Europe and an increase in Asia."

E&P spending fell as oil and gas production slightly increased.

Due to escalating geopolitical conflicts, energy transition, and market expectations, estimated global E&P spending decreased by 2.5% compared to the previous year, with the sharpest decline in North America and the biggest increase in Latin America. Estimated global crude oil production was 4.51 billion tons, a slight increase of 0.8% year-on-year. Crude oil production growth mainly came from Latin America and North America. Estimated global natural gas production was 4.39 tcm, an increase of 120 bcm or 2.8%.

Refining capacity was near the end of expansion as ethylene capacity continued to increase.

Global refining capacity continued to increase but showed signs of slowing. Estimated global refining capacity increased by a net 76.2 million tons per year to 5.255 billion tons per year. The capacity growth was faster compared to the previous year, with new capacity concentrated in China, Nigeria, and Mexico. Global crude runs increased by approximately 20 million tons to 4.14 billion tons per year. Demand growth significantly slowed down for refined products with a decline in refinery margins. Global ethylene capacity continued to increase by 6.5 million tons to 239 million tons per year as the average run rate rose from 83.8% to 84.5%. Ethylene production reached 191 million tons, a year-on-year increase of 1.1%.

2024 China's Oil and Gas Industry

The New Energy Security Strategy was thoroughly implemented, and the energy policy framework was further improved.

Guided by the New Energy Security Strategy, China's energy industry continuously optimized its supply and consumption structure, brought the green and low-carbon development to the next level, bolstered opening-up and international cooperation, and improved its energy security capabilities. Based on the strategy, China's energy policy framework is centered on securing energy supply in line with the "dual carbon" goals. A series of laws, regulations, and policy measures were introduced, covering focus areas such as energy security, the transition to green and low-carbon energy, the new power system, and the "dual control" mechanism for carbon emissions, to provide strong policy support for achieving the goals of the 14th Five-Year Plan and building a new, clean, low-carbon, safe, and efficient energy system.

A dynamic supply-demand balance was achieved, and new breakthroughs were made in the green and low-carbon transition.

Domestic energy security capabilities continued to improve as the energy self-sufficiency rate remained at a high level of over 80% in 2024. Electricity generation exceeded 10 trillion kilowatt-hours, an increase of 6.7% year-on-year, including 3.4 trillion kilowatt-hours from renewables, a rise of 19%. Renewables accounted for a substantial part of installed capacity which exceeded 1.8 billion kilowatts, an increase of 25% year-on-year. Energy consumption grew rapidly as national primary energy consumption totaled 5.96 billion tons of standard coal equivalent, an increase of 4.3% year-on-year. The shift towards low-carbon energy consumption continued as the proportion of coal and oil consumption decreased by 1.6 and 0.5 percentage points respectively from the previous year.

Oil demand remained at high levels as refined products consumption saw a downturn.

Total refined products consumption was 390 million tons, a decrease of 2.4% year-on-year. Refined products output was 424 million tons, a decrease of 4.6%. Apparent oil consumption was 753 million tons, flat from a year earlier. The oil consumption structure showed a drop in refined products and a rise in petrochemical feedstock. Crude oil imports were 553 million tons, a decrease of 1.9%. The ratio of purchased foreign oil was 71.7%, down by 0.7 percentage points.

Natural gas consumption exceeded expectations with accelerated import growth.

China's natural gas demand expanded at a historically significant pace, fueled by stable macroeconomic conditions, declining gas prices, and extreme weather events. Annual consumption reached 422.2 bcm, marking 7.8% year-on-year growth—1.2 percentage points higher than the previous year. Import volumes grew robustly to 184.1 bcm, representing an 11.2% increase. Notably, LNG imports accounted for 107.9 bcm, up 9.7% year-on-year.

China achieved significant progress in expanding hydrocarbon reserves and production, with deep-layer, deepwater, and unconventional resources ("two deeps and one unconventional") remaining crucial replacement frontiers.

Energy companies intensified exploration and development efforts, maintaining substantial upstream investment levels. Newly proven geological reserves demonstrated steady growth, reaching approximately 1.5 billion tons for oil and 1.6 tcm for natural gas. Domestic crude output was 213 million tons, marking six consecutive years of production growth. Natural gas production reached 246.4 bcm, an increase of above 10 bcm for eight consecutive years. Pioneering discoveries were made across strategic exploration frontiers: Multiple giant fields were identified, including 100-million-ton oil fields and 100-bcm gas fields in the Bohai Bay, Tarim, Sichuan, and Ordos basins; major hydrocarbon discoveries in the Bohai Bay (100-million-ton) and Pearl River Mouth basins (100-bcm); 336.6 bcm of newly proven geological reserves of coalbed methane in Ordos Basin, confirming China's first trillion-cubic-meter deep coalbed methane play; 10,000-meter drilling depth achieved at the Shenditake 1 Well in deep-earth scientific exploration.

China's refining capacity experienced modest growth while petrochemical production capacity continued its expansion.

Domestic refining capacity increased by 10 million tons per year (Mt/a) to reach 933 Mt/a. Ethylene capacity grew to 54.55 Mt/a, with the self-sufficiency rate improving to 72%. Propylene capacity additions reached 11.41 Mt/a, bringing total capacity to 74.75 Mt/a. Paraxylene run rates hit multi-year highs, reducing the ratio of foreign purchases to 19%. Synthetic resin capacity expanded rapidly by 9.07 Mt/a to 122 Mt/a. Synthetic rubber capacity increased by 1.13 Mt/a to 8.552 Mt/a. Synthetic fiber grew by 1.35 Mt/a, representing a notable slowdown in expansion. The petrochemical new materials sector demonstrated progress in both technological sophistication and market scale, with self-sufficiency rates continuing their upward trajectory.

Overseas equity production maintained steady growth as the “bringing in” and “going global” efforts continued to deepen.

Chinese companies continued to optimize asset portfolios and pursued pragmatic international oil and gas cooperation, driving sustained growth in overseas equity production. Chinese companies' overseas equity oil and gas output was approximately 190 million tonnes of oil equivalent (toe) in the year, marking a 1.9% year-on-year increase—including about 150 million tonnes of crude oil and about 50 bcm of natural gas. While ensuring stable operations of existing projects, Chinese enterprises actively expanded new developments, securing resources across the Middle East, Central Asia-Russia, and Latin America. They deepened conventional energy cooperation with Belt and Road partner countries, signing oil and gas agreements with nations such as the UAE and Kazakhstan. Simultaneously, Chinese enterprises demonstrated growing momentum in new energy collaboration, inking multiple integrated oil, gas, and renewable energy projects in Central Asia, the Middle East, and Africa. Meanwhile, international oil companies expanded their presence in the Chinese market, strengthening partnerships in energy and petrochemical sectors while exploring into carbon reduction, advanced materials, and technological innovation.

Source: *Global Oil and Gas Industry Development Report:2024*, CNPC ETRI

Environment and Society

At CNPC, we have been committed to the principles of "people-oriented, quality-utmost, safety-first, and environment-prioritized" to achieve the goal of "zero accident, zero injury, zero pollution and zero defect." We continue to improve our HSE Management System, actively address to people's livelihood and social progress and strive for harmonious relationship between energy industry and the environment, as well as between enterprise and the community.

Safe Operation

In line with the Company's overall reform and development plan, we implemented the three-year action plan for fundamental improvement of production safety and the special program targeting safety hazards in urban gas pipelines to identify and eliminate safety hazards and deepen the efforts in building a high-quality and healthy enterprise. Throughout the year, CNPC maintained a generally solid track record in production safety.

System construction

Rules and procedures for production safety management were improved. *Measures for Investigation, Remediation and Supervision of Safety and Environmental Hazards, Measures for Reporting Production Safety Accidents and Incidents, Measures for Ship Safety Management*, and *Measures for Offshore Petroleum Production Safety and Environmental Protection* were introduced to further improve the production safety management system.

Risk management

The procedures for regular production safety meetings were introduced, and routine HSE management activities were implemented, with a focus on the identification and elimination of risks and hazards. *Safety Risk Warning Letters* were issued, based on an "enterprise-specific" approach to risk assessment.

Emergency response capabilities

Emergency response drills were conducted, targeting road transport emergencies involving hazardous chemicals, and well control and rescue responses during production well leaks and fires at offshore gas storage facilities. In this way, employees and rescue teams are well-prepared for potential emergencies. The Company's capability to respond to emergencies continued to improve.

Supply chain safety management

Highlighting the "pre-phase, in-progress, and post-phase" whole-process supervision of contractors and the rectification of subcontractors, the production safety performance of contractors was assessed and the "zero tolerance" policy against incompetent contractors was strictly implemented to reduce supplier/contractor-related accidents.

Environmental Protection

At CNPC, we make great efforts to reduce adverse impact on the environment and climate and to achieve goals in the battle against pollution.

Fighting the battle against pollution

The *Enhanced Action Plan for Air Pollution Prevention* and *Air Quality Assurance Plan for Key Periods* were released to meet the standard of waste gas discharge and meet the requirements of air quality assurance. The Company pushed ahead with 14 wastewater discharge projects and enhanced remediation treatments and on-site inspections of key wastewater outlets to ensure a closed-loop solution for wastewater discharge issues. The *Action Plan for Prevention and Control of Soil and Groundwater Pollution* was released. On-site inspections were conducted to ensure compliance in solid waste control.

Improvement of the framework of standards

The *Measures for Industrial Solid Waste Management* was released, highlighting the importance of a lifecycle approach to hazardous waste compliance. The *Rules for Eligibility Verification and Management of Third-Party Organizations for Online Monitoring of Point Source Pollution* was released to standardize third-party operation and maintenance services in terms of eligibility, basic capabilities, management requirements, supervision, and verification. The Company participated in the formulation and revision of national standards such as the *Emission Standards of Pollutants from Petroleum Refineries* and the *Technical Specifications for Application and Issuance of Pollutant Discharge Permits for the Petrochemical Industry*.

Eco-environmental zoning management

Environmental governance in key areas was deepened; refined management was implemented in enterprises in the Yangtze River Economic Belt, the Yellow River Basin, the Songliao River Basin, and the Beijing-Tianjin-Hebei region; a list of discharge outlets was deployed; surveillance and early warning of excessive emissions was enhanced; environmental compliance was achieved at industrial wastewater discharge outlets in key river basins.

Ecological and environmental protection in key river basins

The *Action Plan for High-Level Corporate Ecological and Environmental Protection for the Yangtze River Basin and the Yellow River Basin* was released to coordinate efforts in pollution prevention & control and ecological & environmental protection. A comprehensive investigation of wastewater and waste gas outlets was conducted in the Yangtze and Yellow River Basins to develop a list of discharge outlets and implement a multi-tiered approach to discharge control.

Environmental hazard management and risk control

Environmental hazards were identified and addressed on an ongoing basis. A multi-tiered approach to risk control was deepened, and the progress of remediation was tracked and scheduled on a monthly basis.

Management of key pollutants

Chemical oxygen demand, ammonia nitrogen, nitrogen oxides, and volatile organic compounds from refining and petrochemical operations were reduced by 14.3%, 26%, 2.1% and 9% respectively year-on-year.

Sustainable use of resources

Great importance was attached to protection and rational utilization of resources to minimize resource consumption. We reduced energy consumption by 0.78 million tons of coal equivalent, and water consumption by 8.24 million cubic meters throughout the year.

Conservation of biodiversity

The Company actively engaged in biodiversity conservation and fully integrated such an endeavor into its business operations. Under the *CNPC Guidance on Other Effective Area-Based Conservation Measures (OECMs) for Biodiversity Conservation*, a total of 10 OECMs were established nationwide. These initiatives included building conservation station cabins, forming volunteer teams, and conducting comprehensive biodiversity conservation monitoring, creating a "four-in-one" CNPC model for biodiversity protection. The Guowu Lake OECM Reserve in Daqing Oilfield was included in the *Report on the Current Status of Other Effective Area-Based Conservation Measures in China* by the IUCN China Office. The Company was recognized by *Fortune* magazine's lists for the Most Admired Companies All-Stars and the Most Admired Companies Industry-Stars in China for its outstanding performance in biodiversity conservation.

Climate Change

Actions were taken in line with the *Paris Agreement* and the Chinese government's goals on carbon peaking and carbon neutrality. The *Green Enterprise Promotion Initiative* was launched, and the *Action Plan for Green Enterprise Promotion* was released, setting forth 6 green enterprise standards to cover all business operations such as oil and gas production, refining, marketing, and oilfield services. In 2024, the Company was recognized as a "Low-carbon case" (formerly known as "low-carbon model") by *China News Weekly* for the 13th consecutive year.

Carbon Emission Management

At CNPC, we continue to strengthen the management system for carbon emissions control, implement measures for carbon intensity-based emission reduction to further reduce the emission intensity of greenhouse gases, actively participate in the National Carbon Trading Market and deepen cooperation on climate change in the global oil and gas industry to promote green and low-carbon transition. In 2024, the Company's domestic and overseas GHG emissions totaled 187 million tons.

In 2024, the Company

- Released and implemented the *2024-2025 CNPC Energy Conservation and Carbon Reduction Action Plan* to form a "1+7" action plan framework for energy conservation and carbon reduction.
- Enhanced the "dual control" mechanism for carbon emissions reduction and released the *guidelines for improving carbon emission data quality and promote the dual control mechanism for carbon emissions reduction.*
- Developed a centralized carbon asset management platform and strengthened the depth of carbon emission accounting and verification.
- Co-founded the Energy and Chemical Industry Chain Carbon Footprint Alliance and played a leading role in the working group on carbon footprint standards for upstream oil and gas products.
- Formulated and implemented the *Methane Emission Control Action Enhancement Plan* and established a methane monitoring network to facilitate efforts in methane emission control.
- Led the formulation of the ISO standard *"Methane Leak Detection and Repair in Oil and Gas Fields"* and advocated voluntary methane reduction actions in the industry.
- Organized the COP29 side event "Methane Emission Control in China" and co-organized the side event "The Green Journey of Chinese State-Owned Enterprises" to build up the international presence of Chinese oil and gas enterprises in methane emission control and green transition.

The Company supported and participated in a number of programs and initiatives for GHG emissions reduction.

- *Paris Agreement*
- *United Nations Framework Convention on Climate Change*
- *China's National Climate Change Program*
- *Action Plan for Carbon Dioxide Peaking Before 2030*
- Carbon Technology Innovation Strategic Alliance for Carbon Capture, Utilization and Storage (CTSA-CCUS)
- Oil and Gas Climate Initiative (OGCI)
- China Oil and Gas Methane Alliance
- *China Petroleum and Chemical Industry Carbon Peak and Carbon Neutrality Pledge*
- *Aiming for Zero Methane Emissions Initiative*
- Energy and Chemical Industry Chain Carbon Footprint Alliance

Cooperation on Climate Response

As the only Chinese member of the Oil and Gas Climate Initiative (OGCI), we are actively involved in international cooperation in CCUS, methane emission reduction, nature-based climate solutions, energy efficiency improvement and decarbonization in the transportation sector etc. We also play an active role in implementing the national voluntary non-CO_2 GHG emissions reduction actions, and formulated the *Methane Emission Control Action Enhancement Plan* to control methane emissions. As the chair of China Oil and Gas Methane Alliance, we are leading the efforts of Chinese oil and gas enterprises in controlling methane emissions.

Accelerated Clean Substitution

At CNPC, we endeavor to minimize the use of fossil fuels, enhance energy consumption management, optimize the energy structure and accelerate the substitution with cleaner alternatives. The Hadexun Oilfield in the Tarim Basin became the first megaton oilfield with zero fossil consumption. Xinjiang Oilfield and Liaohe Oilfield promoted the use of thermal recovery techniques for heavy oil production, bringing the green and low-carbon transition to the next level.

Liaohe Oilfield' s accelerated green and low-carbon transition: oil, gas and new energies integration

Launch of CNPC Carbon Asset Management Platform

On July 10, 2024, the CNPC Carbon Asset Management Platform was officially launched after the test-run review. The platform integrates carbon emission analysis, carbon cost accounting, carbon trading, and green enterprise certification etc., providing an IT infrastructure for CNPC's carbon services operations and marking a significant step in the intelligent management of carbon emissions. Since its test run at the end of 2023, the platform has supported the monthly carbon emission accounting for more than 14,000 emission sources. At the same time, it supports the carbon compliance and carbon trading management, facilitates internal carbon cost accounting in the member companies and enhances carbon emissions reduction under the dual-control mechanism.

The platform has supported the monthly carbon emission accounting for more than

14,000 emission sources

Yumen Oilfield's PV power project

Participation in the National Carbon Emissions Trading Market

At CNPC, we actively participate in carbon trading activities through the National Carbon Emissions Trading Market, optimize the compliance strategy, and enhance the management of carbon allowance and carbon compliance. All Company-owned power plants under the national carbon emissions trading scheme have fully completed compliance and clearance of their annual carbon allowances.

Forestry Carbon Sink

At CNPC, we actively engage in building forestry carbon sinks and NbS (Nature-based Solutions) forests to promote carbon neutrality through carbon compensation. In 2024, the Company's participation in voluntary tree planting reached 1.01 million person-times, planting 3.41 million trees. As of the end of 2024, the existing green space had amounted to 360 million square meters. In the Afforestation Campaign for 10,000 Well Sites, 1,624,000 trees were planted at 8,724 well sites and stations, making CNPC the first Central SOE in response to the World Economic Forum's One Trillion Trees Initiative. A total of 1.554 million people participated in the "Plant a Tree for Carbon Neutrality" program, and forestry carbon sinks with a total area of 4,550 *mu* (≈303 hectares) were completed over the past three years.

The Company's participation in voluntary tree planting reached 1.01 million person-times, planting

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As of the end of 2024, the existing green space had amounted to

360 million square meters

Social Responsibility

At CNPC, we maintain a strong commitment to aligning our business growth with the sustainable development of the localities where we operate, with a focus on bolstering people's livelihood and social progress, supporting community agenda in various forms, and promoting harmonious socio-economic development of local communities.

Rural Revitalization

At CNPC, in response to the *United Nations' 2030 Agenda for Sustainable Development* and the Chinese government's guidance on promoting rural revitalization, we leverage our resources and increase investment to enhance local industries with characteristics, improve living environments, strengthen talent training, and improve public health. We introduce new assistance models and support demonstration projects to bolster our poverty alleviation efforts in alignment with the goals of rural revitalization. In 2024, the Company earmarked RMB 669 million for rural revitalization and public welfare and implemented over 1,100 assistance projects.

- We supported own-brand projects such as "Return to Rural Tourism", "Yuanju" Industrial Park, and "Fertile Soil" Food Security Assurance Program, to develop characristic industries, optimize industrial structures, and build industrial clusters.
- We supported the "Zero-Carbon Courtyards" project, promoted waste conversion and utilization, set the standards for low-carbon villages and facilitated the efforts under the Happy Villages initiative.
- We purchased and sold rural products worth RMB **2** billion by leveraging our online and offline resources to bolster consumption-driven assistance.
- We created own-brand healthcare programs such as "Go, Baby" healthcare campaign for children, "Cloud Doctor" remote medical consultation program and Kangyuan Initiative township hospital assistance program. These programs benefited over **80,000** people.
- We developed a talent ecosystem for rural revitalization and trained **143,500** people throughout the year to strengthen the talent pool for rural revitalization.

Education

At CNPC, we continue to support education through various student aid programs, including scholarships and grants. We explore new ways to raise awareness on education equality and help students from poverty-stricken areas get access to education and realize their dreams and values.

In 2024

CNPC Scholarships provided RMB **4.47** million to **685** outstanding students.

The Xuhang Scholarship Program provided RMB **12.886** million to **3,951** students.

Promoting Local Development

At CNPC, we adhere to the principle of open-up and cooperation for mutual benefit and keep expanding our joint-venture cooperation with local partners across the upstream, midstream and downstream sectors. During the process of developing and running our projects, we help foster local suppliers and contractors, thereby creating jobs and driving business growth in related sectors to achieve the city-based and industry-driven "city-industry integration".

Contributing to Local Communities in Overseas Operations

At CNPC, we respect local cultures and customs where we operate, and are committed to building long-term and stable cooperative relationships with the host countries. We integrate our development into local socioeconomic growth and actively create socioeconomic value to promote local development and prosperity.

Managing Community Impact

At CNPC, we seek to exert a positive influence on local community development through responsible operations. This is not only reflected in creating jobs, paying taxes, and providing business opportunities for local suppliers, but also in protecting the environment, safeguarding human rights of local residents and supporting public welfare.

Al-Ahdeb Company donates supplies to Iraq's Wasit University

On December 4, 2024, CNPC (Iraq) Al-Ahdeb Company donated 40 laptops and auxiliary equipment to Wasit University.

At the ceremony, Mazen, the President of Wasit University, introduced the university's history. Since its inception in 2003, Wasit University has consistently adhered to the principle of strengthening itself through scientific research, and dedicating itself to cultivating high-quality skilled talents for enterprises and society. Mazen noted that during challenging times when the university was confronted with shortages of teaching resources and equipment, CNPC promptly provided assistance, contributing charitable support that effectively addressed the urgent need for educational materials among faculty and students. This has significantly bolstered local education efforts and exemplifies the strong sense of corporate social responsibility held by international corporations.

Looking ahead, Al-Ahdeb Company plans to increase its investment in education and further collaborate with Wasit University on the establishment of petroleum engineering disciplines and the cultivation of local talents.

Enhancing Communication with Local Communities

At CNPC, we set up overseas liaison points for environmental protection and community relations to strengthen communication and coordination with local governments, NGOs and community representatives in a variety of forms.

CNPC's employees of the Halfaya project in Iraq carry out environmental protection work

Participating in Community Welfare Activities

At CNPC, we play an active role in helping local people improve their living conditions. Every year, we give support to education, healthcare and environmental protection to facilitate sustainable development of local communities.

In 2024, we carried out a variety of community public welfare activities overseas

Kazakhstan

We supported local schools, sports organizations, media organizations, and festival celebrations, as well as local welfare homes and charitable foundations.

We donated funds to more than 20 vulnerable families to improve the living conditions of large families, families with disabled members, and families impoverished due to illness.

Iraq

We donated gift packages for vulnerable families during Ramadan.

We visited children with cancer and the elderly at nursing homes during traditional Muslim festivals and brought them traditional clothes, daily necessities, and holiday cards.

We donated medical equipment for ophthalmology, dentistry, and other departments of community hospitals, and carried out public welfare activities such as renovating community courthouse office buildings.

Chad

We helped to drill 10 water wells and maintained 47 water wells in the local community.

We donated 100 sets of desks and chairs to local elementary schools and renovated their classrooms.

We provided medicines for the prevention and treatment of malaria, mosquito prevention supplies, and other medical supplies to the local community.

Singapore

We held a Lunar New Year luncheon for the elderly in partnership with the Singapore Women's Association (SWA) and jointly organized a volunteer activity themed "Flying Towards Our Dreams", which benefited more than 300 seniors.

Indonesia

We actively participated in the infrastructure construction surrounding the oilfield operation area.

We funded an eco-tourism area in the oilfield region to create jobs for local residents and promote local economic development.

We worked with the local government in natural disaster relief efforts.

Venezuela

We worked with local associations and communities to organize events for women, such as "Women in the Community" and the "Virgen del Valle" Festival etc. to educate local people about women's protection policies, provide vocational skills training, and offer health consultations.

We donated a fitness mini-plaza to local community.

We organized fire safety lectures for local elementary schools.

Promoting Localization

At CNPC, we embrace the localization strategy, with a preference for local products and services, so as to create opportunities for local contractors, suppliers and service providers to participate in our projects. We also support the development of local SMEs and community-based start-ups to create employment opportunities.

Human Resources

At CNPC, upholding the people-first philosophy, we attach great importance to its employees' legal rights and interests, provide an effective platform for employees' career development, deepen the reform of the talent development system, and work hard to build a competent workforce and maximize the value of talents. We pay close attention to the physical and mental health of employees, care about their lives, and ensure all employees can grow along with the Company while benefiting from the Company's development.

Employees' Rights and Interests

At CNPC, we strictly comply with international conventions on labor and human rights, respect and safeguard employees' legal rights and interests, and advocate employment policies focused on equality and non-discrimination. The Company continues to streamline the compensation and benefits system, and improve workplace democracy, so as to create a fair and harmonious working environment for employees.

Labor contract coverage
100%

Social insurance coverage
100%

Employment Policies

At CNPC, we always value and safeguard the lawful rights and interests of our employees in line with the people-first principle. We strictly comply with the *Labor Law of the People's Republic of China*, the *Labor Contract Law of the People's Republic of China*, the *Trade Union Law of the People's Republic of China*, relevant international conventions approved by the Chinese Government, and relevant laws and regulations of the host countries. We promote the employment policies of equality and non-discrimination and provide equal opportunities and fair treatment for all employees regardless of nationality, race, gender, religion or cultural background. We resolutely prohibit child labor and forced labor. We endeavor to create jobs in minority areas and poverty-stricken areas. We uphold the rights and interests of women and ensure that female employees have equal remuneration, benefits and career development opportunities. 100% of our employees are covered by labor contracts and social insurance in line with the *Social Insurance Law of the People's Republic of China.*

Remuneration and Incentives

At CNPC, we continue to deepen the market-oriented salary reform and improve the mechanism for differentiated compensations, focusing on the tasks in reform and innovation, quality improvement and efficiency enhancement, and talent-driven corporate development. We continue to perfect a gross payroll coordination mechanism with merit-based compensation, performance-driven benchmarking and salary adjustment; optimize the incentive schemes to encourage scientific and technological innovation and introduce high-level talents; streamline salary structure with priorities given to front-line workers, key and demanding positions, and technical professionals; and increase incentives for high-end management talents, key R&D talents, and high-skilled talents.

Employee Engagement

At CNPC, we fully respect the democratic and legitimate rights and interests of employees, value 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 Company affairs disclosure.

At CNPC, we have established various channels of communication with employees. Adhering to democratic procedures, we encourage employees to participate in the production and operation management by conducting multi-level communication through employee representative meetings and online interactions.

Career Development Platform

At CNPC, we understand the needs for career development of our employees at different stages, stress the importance of career planning, promote innovation in the environment and mechanism for talent development, and provide necessary resources to support talent development. All of these provide a great platform for employee self-realization.

Education and Training

At CNPC, based on the modern corporate training practices and focusing on building a world-class integrated international energy enterprise, we accelerate the gathering of high-level talents to serve the Company's core operations as well as emerging and future industries, and strengthen the top-level design of training schemes by introducing the *Guidelines for Further Strengthening Education and Training*. The mechanism for talent selection, training, and performance management was improved, focusing on onboarding certification, on-the-job empowerment, and promotion management. We launched a special empowerment and enhancement plan, in partnership with prestigious universities such as Tsinghua University and trained more than 1,100 people. Six international talent training classes were organized, highlighting the Company's internationalized strategy. In 2024, the Company spent RMB 3.23 billion on employee training to underpin efforts in talent empowerment, covering 68,000 training projects and more than 8.8 million person-times.

Over
8.8
million employees participated in training

The total training time reached
76.13
million hours

100%
training coverage for front-line employees

100%
training coverage for employees in high-skilled positions and key operating positions

Career Development

At CNPC, we attach great importance to career planning of employees,and enhance their values and support their career development. In 2024, the Company forged ahead with its talent programs for strategic sci-tech experts, scientific and technological leaders, and young scientists and 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.

Job skill competitions, in combination with on-the-job training programs, helped front-line employees to improve skill excellence and professionalism as well as facilitate the career development. In 2024, the Company, in collaboration with the Ministry of Human Resources and Social Security, organized four Class II national competitions for gas extraction workers, ethylene plant operators, well workover workers, and non-destructive testing technicians, using industrial benchmarks to foster the comprehensive competences of front-line employees. We also sent teams to the national vocational skills competitions for oil production workers, instrument and meter maintenance workers, and well logging workers, achieving outstanding results and enhancing the strengths of our front-line teams. The Company won 53 gold medals, 69 silver medals, and 99 bronze medals in national and industry competitions throughout the year, ranking first among Central SOEs in the oil and gas industry in terms of the number of award winners.

Liaoning Marketing: employee skills competition

Talent-Driven Corporate Development

CNPC implemented the Talent-Driven Corporate Development Program – Year of Advancement comprehensively in 2024 to strengthen the top-level design and introduce a long-term mechanism in line with the overall requirements of the talent-driven corporate development in the new era. The plan for staged-based objectives was deployed under the Talent-Driven Corporate Development Program, focused on the fulfillment of key tasks. The *Case Studies of Talent-Driven Corporate Development Program* and the *Newsletter on Talent-Driven Corporate Development Program* were compiled with insights from the practices and typical cases in relation to the Talent-Driven Corporate Development Program, in order to promote exemplary practices, recognize achievements and facilitate sharing of experience.

Winning the National Engineer Award

On January 19, 2024, the ceremony of the National Engineer Award was held at the Great Hall of the People in Beijing. One individual and one team from CNPC received this prestigious award.

Zhang Laiyong, chief expert of China Huanqiu Contracting & Engineering Co., Ltd., was awarded the title of National Outstanding Engineer.

The Chemical Flooding R&D Team of Daqing Oilfield was named the National Outstanding Engineering Team.

At CNPC, we have long placed high value on innovation and talent strengthening. We continue to improve the technological innovation framework and cultivate and gather top sci-tech talents to build a workforce with world-class capabilities.

In 2024

70 experts from CNPC were selected to receive the Special Government Allowances; **25** were recognized as high-level experts; the number of candidates under the Young Tech Talent Program reached **1,000**.

The Company held its inaugural award ceremony for recognizing **8** CNPC Masters, **100** technical experts and **200** Iron Man shift leaders.

As of the end of 2024

There were a total of **234** high-level experts and **344** skilled masters and skilled experts in the Company.

CNPC has established **128** corporate skilled expert workshops, including **38** national skilled master workshops.

Localization and Diversity

At CNPC, we embrace a culture of respect, openness and inclusiveness, taking a profession-based and market-driven approach to local employment. We continue to improve our HR procedures for recruitment, employment, performance review and reward/punishment under the applicable laws and regulations of the host country. Meanwhile, we encourage innovation and best practices in the management of locally hired employees, and attract and retain outstanding talents from the local community by providing them with a career development platform.

Amu Darya Company: inspection in the Samandepe gas terminal

Promoting Local Employment

At CNPC, 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 2024, the localization rate of employees in the Company's overseas investment business reached 92%.

In 2024, the localization rate of employees in the Company's overseas investment business reached

92%

CNPC trains Petrochemical Talents for Chad

On May 30, 2024, N'Djamena Refinery and Yumen Oilfield signed the *Strategic Memorandum on Training Program for Vocational Skills Certification*. Thirty Chadian employees from N'Djamena Refinery in Chad participated in a three-month training program at Yumen Oilfield. These employees were assessed after completing one-on-one training modules for vocational skills, safety and emergency response etc. Mohammed Gouiret Khan Mouchi, Deputy General Manager of N'Djamena Refinery in Chad, said, "For 16 years, Yumen Oilfield has been fully engaged in the construction of the refinery in Chad. Now, we have reached a consensus on strategic cooperation with Yumen Oilfield on talent training, making the refinery in Chad a cradle for Chad's national petrochemical talents."

Respecting Cultural Diversity

At CNPC, we give full accommodation to the personality, ability and background of employees, and cherish their varied talents. We take a firm stand against the employment and occupational discrimination, create a relaxing and inclusive working environment, and promote mutual respect and understanding among employees from different ethnic groups, nationalities and cultural backgrounds.

Employee Health

At CNPC, we attach great importance to employees' health. We continue to improve working conditions, roll out a series of policies and measures to provide a favorable working environment, and ensure that our employees can work in good physical conditions with positive attitudes.

Occupational Health

At CNPC, we give priority to improving occupational health of our employees, scale up efforts to build a "Healthy Enterprise", and build awareness through the publicity week of the *Law of the People's Republic of China on the Prevention and Control of Occupational Diseases*. In 2024, 100% of our employees received occupational physical examinations; the screening rate of occupational hazard factors was 100%, and occupational health files were prepared for 100% of our employees.

Coverage in occupational physical examinations
100%

Coverage in occupational hazard factors screening
100%

Coverage in occupational health files
100%

Mental Health

At CNPC, we take measures to continuously improve the employee recuperation and vacation system. We offer the employee assistance program (EAP), promote positive and healthy attitudes in our employees through psychological counseling hotline and website, as well as various forms of training on mental well-being.

Technology and Innovation

Focusing on self-reliance in state-of-the-art technologies and taking innovation as the key driving force for development, we improve the technological innovation framework, accelerate the commercialization of scientific and technological achievements, develop new quality productive forces, and promote high-quality development.

Technological Innovation System

At CNPC, we deepen the reform of the framework for innovation governance by strengthening top-level design and overall planning. We continue to improve our innovation capabilities, create high-level innovation platforms and promote the deep integration of the "innovation chain" and the "industrial chain." The National Technology Innovation Center for Geophysical Exploration was approved for construction, making it the first national technology innovation center in the oil and gas field. As of the end of 2024, the company had 29 national technological innovation platforms and more than 60,000 R&D personnel.

As of the end of 2024

The Company had

29

national technological innovation platforms and more than

60,000 R&D personnel

Reform of Innovation Governance Framework

- Continue to improve the three-tiered system for technological innovation management
- Continue to introduce and improve the "organized research" mechanism
- Continue to diversify types of incentives in R&D

Daqing Oilfield: research personnel in lab

Major R&D Achievements

At CNPC, we actively implement an innovation-driven strategy, focusing on major bottlenecks in key areas. We strengthen the debottlenecking in core technologies and forward-looking, basic and strategic research, and accelerate the commercialization of new technologies for productivity gains, with fruitful results in E&P, refining, chemicals and new materials, as well as low-carbon new energies.

Top 10 Technological Achievements in 2024

Significant progress in deep earth drilling exceeding 10,000 meters

Faced with challenges such as ultra-high temperatures, ultra-high pressures, and complex pressure systems in 10,000-meter ultra-deep wells, the Company has developed the core technology and equipment solutions, including 12,000-meter automated drilling rig, high-temperature-resistant wellbore working fluids and 10,000-meter-deep coring toolkit, which combined with the 10,000-meter drilling process, and enabled the drilling of Shenditake 1 Well to surpass the 10,000-meter depth at a record-setting speed in comparison to onshore drilling operations worldwide. In this process, CNPC obtained core sample data as valuable as "lunar soil", and reported oil and gas shows for the first time in formations deeper than 10,000 meters. Shenditake 1 Well as a national major project has set a new world record for the shortest time taken to drill a 10,000-meter onshore well, making it the first well in Asia and the second well globally to exceed 10,000 meters in vertical depth and marking a milestone in China's drilling engineering history.

Industrial application of independently developed metallocene catalysts

Metallocene polyethylene (mPE) exhibits excellent performance, and the mPE technology is a significant indicator to measure the development level of a nation's polyolefin industry. Metallocene catalysts, known as the "chip" for producing mPE, have long been relying on imports, which severely curb the development of high-end polyolefin operations. Focusing on key scientific and technical challenges in relation to the structure and performance of metallocene catalysts, CNPC has independently developed high-performance metallocene polyethylene catalysts and produced over 10,000 tons of mPE products based on large-scale commercialization.

Launch of 70-billion-parameter Kunlun Large Model

CNPC has created the Kunlun Large Model covering all upstream, midstream, and downstream operations to promote AI-powered new industrialization. The Kunlun Large Model is the first industry large model that is open to the entire energy and chemical sector and is available for public use. In November 2024, it was selected as one of the exemplary cases for "AI-powered new industrialization" organized by the Ministry of Industry and Information Technology, demonstrating an industry-leading influence. The Company will watch closely the trend in large models, develop first-class large model applications, and ramp up efforts in building an innovative application ecosystem.

Domestic substitution and industrial application of large geological engineering integrated fracturing software system

Breakthroughs have been made in 11 key technologies, including non-planar 3D fracture simulation, complex artificial fracture simulation and 4D geo-stress simulation, and the first domestic geological engineering integrated fracturing design software platform (FrSmart) has been developed and widely used in CNPC's oil and gas fields

The first set of mobile "NMR-Laser-CT" integrated equipment for well-site rock sample measuring

The high-fidelity near-in-situ measurement of the core in the first instance at the well site is the key to overcome the errors caused by oil and gas loss, stress and structural changes, and to accurately determine the reservoir physical properties and oil and gas bearing properties. CNPC has successfully developed the world's first mobile "NMR-Laser-CT" integrated measurement equipment, marking a major breakthrough in measuring well-site rock samples.

A 3000-m oSeis OBN for oil and gas exploration in ultra-deep water

CNPC has overcome challenges like ultra-high static pressure sealing and long-term timekeeping and developed China's first set of 3000-m oSeis OBN with state-of-the-art performance to ensure technological self-reliance in ultra-deep water seismic data acquisition.

An innovative whole petroleum system theory for discovering insource reserves in Fengcheng Formation, Northwest China's Junggar

The Fengcheng Formation in the Junggar Basin has a great potential for unconventional oil and gas exploration potential due to its fine-grained carbonate deposits in a saline lacustrine basin. However, unclear reservoir control factors and hydrocarbon accumulation mechanisms have hindered the exploration process. CNPC's multidisciplinary research team has developed an innovative whole petroleum system theory and supporting exploration technologies, leading to the discovery of 1-billion-ton insource unconventional resources in the Fengcheng Formation.

Major breakthrough in nylon 66 complete technology using benzene as a single raw material

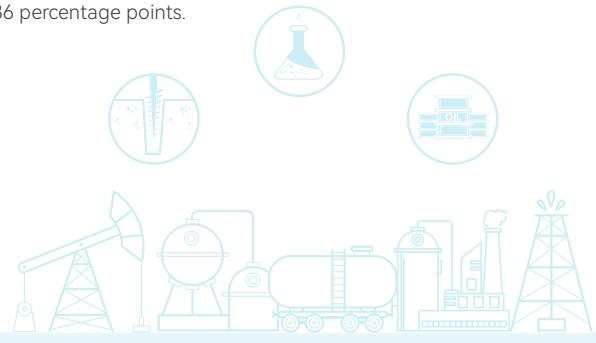
CNPC has independently developed a complete nylon 66 technology using benzene as a single raw material, leveraging benzene resources and creating an independent and controllable industrial chain. The first nylon 66 technical package using benzene as a single raw material has supported the construction of the Company's industry-leading nylon facility to produce adiponitrile at 50,000 t/a, hexamethylenediamine at 50,000 t/a, and nylon 66 at 100,000 t/a.

Development and commercialization of gas-phase polyolefin elastomer (POE) technology

CNPC has pioneered the development of POE technology in China by overcoming bottlenecks in high-content low-carbon α-olefin copolymerization, catalyst system, thermodynamic balance reconstruction etc. to support a gas-phase process that is shorter, more cost-effective, and more scalable than solution-phase processes, and enable technological self-reliance in key materials needed for the development of new energies.

1-MW downhole electrical heating-assisted steam dryness enhancement technology for effective recovery of deep heavy oil

Aiming to address sub-standard steam dryness in kilometer-deep heavy oil recovery, high energy consumption and high carbon emission of steam injection and the lack of a revolutionary alternative technology, CNPC has developed the first 1-MW downhole electrical heating-assisted steam dryness enhancement technology, based on innovative solutions for multi-umbilical structure, insulation main material, outer armor material and prefabrication process and technical breakthroughs in 38 mm outer diameter, 4 kV high-voltage insulation, 450°C high temperature and 5 kW/m high power density. A pilot-scale deployment of this technology in Liaohe Oilfield has successfully increased steam dryness by 36 percentage points.

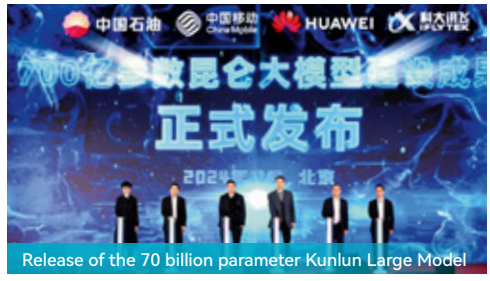


Digital and Intelligent Empowerment

The Company has established "Digital and Intelligent CNPC" as its fifth major strategic initiative and released the overall plan. CNPC (Beijing) Digital Intelligence Research Institute Co., Ltd. was established to promote IT Reinforcement, Digital Empowerment and Intelligent Operation. Significant achievements were made in the construction and application of the Service Station 3.0 Program, the Unified Office Platform, and the Engineering Intelligence Support Center etc. The Kunlun Large Model made two achievement releases; the pilot projects of digital transformation were burgeoning; the Yunmengze Smart Platform was up and running; network security and new infrastructure support capabilities were further enhanced. All these demonstrate significant progress in the transition to a Digital and Intelligent CNPC with a digital ecosystem for the intelligent energy and chemical operations, providing strong support to the Company's efforts in deepening reforms and building into a world-class enterprise.

Launch of 70-billion-parameter Kunlun Large Model

In 2024, the Company launched the 70-billion-parameter Kunlun Large Model, presenting 43 professional and general-purpose application scenarios designed for the petroleum industry. The Kunlun Large Model has passed the national registration for generative AI services, making it the first large model in China's energy and chemical industry to achieve this milestone. The Kunlun Large Model is jointly developed by CNPC, China Mobile, Huawei, and iFLYTEK, featuring the training of 8 large models, 18 application scenarios, extensive industry and specialized datasets, a customized AI mid-office, and an intelligent computing environment. This has led to the preliminary formulation of a methodology for implementing large models in major enterprises.



Release of the 70 billion parameter Kunlun Large Model

Pilot Launch of the Yunmengze Smart Platform

On September 30, 2024, the pilot version of Yunmengze Smart Platform, CNPC's first e-commerce service platform for the energy and chemical industry was launched. This platform aims to streamline all aspects of the industrial chain, including production, trading, and distribution. Employing an "Agile + Waterfall" implementation strategy, it leverages CNPC's existing digital infrastructure to rapidly integrate across systems, providing comprehensive ecosystem-based services such as trading, logistics, finance, data, and technology to the energy and chemical industry chain. As of December 31, 2024, the pilot phase included 743 functionalities, covering three core operations, i.e., chemical sales, logistics, and finance. The platform has been opened to internal and external users through a unified enterprise portal and App, demonstrating a leading role in bolstering the online, standardized, and digital transformation of CNPC's trading operations.

As of December 31, 2024

The pilot phase included

743 functionalities

Chemical sales

Logistics

Finance

Progress in Digital Transformation and Intelligent Development

Main Line	Target	Annual Progress
Business Development	Collaborative Optimization in the Oil and Gas Business Chain With the goal of maximizing the overall profitability and shareholder value of the upstream and downstream operations, CNPC actively pushed forward optimized resource allocation, integrated operational efficiency management, and coordinated emergency response.	◎ The Company made steady headway in building its production and operation platform. Engineering Intelligent Support Center (EISC) introduced an engineering management model, featuring "Headquarters EISC for coordinated remote support, regional center for full-process management, and direct instructions for on-site operations". New functionalities such as intelligent fracture risk identification and real-time oil testing monitoring were added, achieving comprehensive coverage of geophysical exploration, drilling, logging, well logging, fracturing, and oil testing operations. New features of intelligent production safety management were added, including safety management scenarios for well sites, stations, oil depots, and refineries and petrochemical facilities etc. The safety management interface expanded to cover production sites, significantly enhancing the capability to prevent disruptive risks. ◎ The Service Station 3.0 was fully launched, which innovatively introduced the industry's first pay-by-palm scenario Innovative scenarios of e-fueling, one-click shift closing, volume-based performance, and intelligent risk control, were deeply applied. Single-customer service time was significantly reduced. ◎ The intelligent operation system was further streamlined by incorporating key data monitoring for natural gas uploading, new energy power generation, and all drilling rig operations. The scope of production and operation monitoring further expanded to enable daily tracking of CNPC's full-chain production and operation plan execution and improve resource allocation capabilities in support of natural gas supply scheduling. ◎ The industrial vision system was fully deployed, substantially enhancing visual insights in production processes and emergency control capabilities. The centralized carbon asset management platform was launched and running, effectively facilitating the transition to facility-level carbon emission accounting.
	Transformation and Upgrading of Core Operations Technologies such as the Internet of Things (IoT), big data, and artificial intelligence (AI) were integrated into CNPC's core operations to support industrial transformation and upgrading.	◎ Intelligent Oil and Gas Fields: A new model designed to facilitate the transformation of our domestic oil and gas fields was introduced, featuring unmanned operation of key production sites, real-time sensing of equipment status, integrated exploration and development collaboration, intelligent connectivity and automatic optimization of the entire production process for wells, stations, plants, and equipment on the production site; and streamlined organizational and personnel structures. For overseas operations, a digital management and control mechanism for capacity construction and ground engineering was introduced; the pilot projects of unmanned operation rapidly advanced; and the management efficiency of oil and gas well production operations was further improved. Changqing Oilfield passed the Level 4 Maturity Evaluation for Digital Transformation, and Tarim Oilfield was included in SASAC's List of Digital Transformation Pilot Projects in State-owned Enterprises. ◎ Intelligent Refining & Chemicals: The next-generation production and operation models were taking shape to support comprehensive sensing, real-time monitoring, predictive warning, intelligent response, collaborative optimization, and precise execution. Dushanzi Petrochemical and Guangdong Petrochemical passed the Level 4 Maturity Evaluation for Intelligent Manufacturing, and Lanzhou Petrochemical was included in SASAC's List of Digital Transformation Pilot Projects in State-owned Enterprises. ◎ Intelligent Sales & Marketing: Based on a platform-enabled and ecosystem-driven approach, the Service Station 3.0 Program and the uSmile Mall Program supported CNPC's sales and marketing operations. The comprehensive management system of crude oil production and marketing was upgraded to support the unified management of crude oil by-product sales. The Sales & Marketing IoT achieved the full-coverage monitoring of all national-level key oil depots. ◎ Intelligent Natural Gas Sales & Marketing: New achievements included an integrated model for online and offline sales, an omni-channel intelligent customer service system, an efficient response mechanism, and intelligent stations with 24-hour monitoring.
Management Reform	CNPC enhanced decision support, operational management, collaborative office, collaborative R&D, and shared services through digital transformation to promote the modernization of the Company's governance system and governance capabilities.	◎ High-quality progress has been made in key projects for IT Infrastructure Revamping. In line with the four major goals of integrating logistics, capital flow, information flow, and workflow; integrating business and finance; coordinating production and operation; and coordinating upstream and downstream operations, the Company completed the blueprint design, centralized system implementation, and integrated testing with high quality with a focus on data, process and standardization. The full-chain verification of the first participating units achieved overall success with desired results. ◎ The Unified Office Platform was launched and running, providing a collaborative and personalized workbench based on the "platform + application" approach. It enables "one-click login and unified to-do list" and solving the problem of users logging into multiple systems, to promote the shift of work mode from "people-driven" to "task-driven." ◎ The global shared service system continued to expand, featuring a comprehensive quality management system with "risk management, regulatory compliance, standardization, and customer satisfaction" for shared financial services and the visualization of talent management and in-depth talent mining for shared HR services.

Main Line	Target	Annual Progress
Technological Empowerment	A leading industrial Internet system in the energy and chemicals sector was taking shape to empower CNPC's digital transformation.	◎ The Kunlun Large Model made two achievement releases, forming an industry large model with 70 billion parameters for language, 300 million parameters for vision, and 16 billion parameters for multi-modal processing. As the first nationally registered large model in China's energy and chemical industry, the Kunlun Large Model is selected as one of the exemplary cases by the Ministry of Industry and Information Technology. ◎ Based on its four data centers, CNPC continued to improve the complementary and integrated network and strengthen the IT infrastructure support capabilities. ◎ The Three-Year Data Governance Action Plan was completed, effectively improving data standards, consolidating the unified control foundation of data resources, and ensuring the integrity, efficiency and security of data transmission. The data catalog of CNPC was created, achieving "data retrieving on demand" across all data domains. The standardization of public data made progress, significantly improving the quality of operational management data.

Technological Exchange and Cooperation

At CNPC, we continue to deepen innovation cooperation, consolidate innovation resources to enhance innovation capabilities, and work closely with energy companies, associations and research institutes at home and abroad. We advocate for industry technology alliances and innovation consortia and strive to create an innovation ecosystem with in-depth integration of the industrial chain and the innovation chain.

Domestically

CNPC led the establishment of CCUS Innovation Consortium of Central SOEs jointly with China Huaneng Group, and participated in innovation consortia in high-end metal materials, basic components, building information modeling (BIM), production, storage and transportation of hydrogen energy, energy storage solutions and electronic specialty gases. Meanwhile, the Company made headway in strategic cooperation and R&D projects with Peking University, Beijing University of Chemical Technology, and Southwest Petroleum University etc. Under the "Technology + Finance" initiative, the Company invested in Fusion Technology (Anhui) and participated in technical research and construction of Burning plasma Experimental superconducting Tokamak (BEST) to tap into the supporting sectors in the nuclear fusion industry chain.

Internationally

CNPC bolstered scientific and technological cooperation within the framework of overseas strategic partnerships, with significant progress in technological exchanges and cooperation projects with companies like TotalEnergies. The Company actively participated in major international industry events such as the Abu Dhabi International Petroleum Exhibition and Conference (ADIPEC), the Society of Petroleum Engineers (SPE) Annual Technical Conference, the Asian Offshore Technology Conference (OTC Asia), the International Petroleum Technology Conference (IPTC), and the International Gas Research Conference (IGRC). The Company recommended its experts to serve as committee members and speakers at some industrial conferences to enhance its influence.

S&T Awards and Intellectual Properties

CNPC continued to improve its standardization system and enhance standardization capabilities to support high-quality development. In 2024, the Company led the development and revision of 11 international standards and advanced foreign standards.

Throughout the year, the Company filed 11,381 patent applications and was granted 3,850 patents. By the end of 2024, the Company had 37,871 vaild patents both at home and abroad. The independently developed "Key Technologies and Equipment for Onshore Wideband Wide-Azimuth High-density Seismic Exploration" won the first prize of the State Technological Invention Award.

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The independently developed "Key Technologies and Equipment for Onshore Wideband Wide-Azimuth High-density Seismic Exploration" won the first prize of the State Technological Invention Award.

CNPC wins the first prize of the State Technological Invention Award

On June 24, 2024, the 2023 National Science and Technology Awards were announced in Beijing. BGP's proprietary "Key Technologies and Equipment for Onshore Wideband Wide-Azimuth High-density Seismic Exploration" won the first prize of the State Technological Invention Award. It is CNPC's first prize for the first time.

To implement the national deep-earth development strategy and explore deeper and more complex oil and gas reservoirs, BGP's R&D efforts have been focused on original innovation in concepts, methods, high-end equipment and industrial software over the past 15 years, leading to the proprietary next-generation onshore seismic prospecting techniques. The world's first "broad band, wide azimuth and high density" onshore seismic prospecting techniques and equipment helped ensure comprehensive measurement, fast data acquisition and accurate prospecting in deep-earth exploration exceeding 10,000 meters.

Annual Business Review

The Company's four business segments operated in synergy with efficient coordination, resource sharing, enabling integrated planning and overall benefits to gradually materialize. Oil and gas industrial chains and other operations ran smoothly and efficiently, with key production indicators showing sound growth momentum and operating results reaching new historic highs.

Oil, Gas & New Energies

In 2024, with a focus on "stabilizing oil production and boosting gas output, green development, technological innovation and management enhancement", the Company pushed forward the Four Projects in E&P and Four Initiatives in new energies to achieve sustained growth in oil and gas production and rapid advances in new energies.

Domestic Exploration and Production

The Company achieved a number of major breakthroughs and important discoveries in exploration, with domestic oil and gas production exceeding the objectives of the Seven-Year E&P Action Plan. Specifically, crude oil production increased for the six consecutive years and natural gas output continued to grow rapidly.

Exploration

Emphasizing top-level planning and building up large-scale and high-quality reserves, the Company's exploration activities in new fields and plays brought about 6 major breakthroughs and 10 important discoveries. Leveraging research efforts in key areas and an enhanced mining rights-reserves alignment mechanism, concentrated exploration and optimized exploration led to the identification of nine 100-million-ton and eight 100-billion-cubic-meter hydrocarbon plays. Domestically, newly proven oil in place totaled 868.64 million tons and newly proven gas in place stood at 996.9 billion cubic meters.

nine 100-million-ton hydrocarbon plays

eight 100-billion-cubic-meter hydrocarbon plays

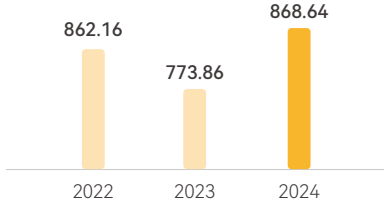
Domestically, CNPC's newly proven oil in place totaled **868.64** million tons

newly proven gas in place reached **996.9** billion cubic meters

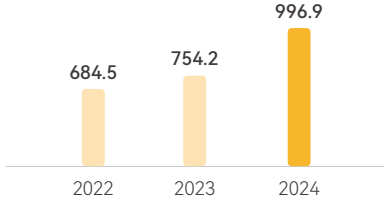
Reserves and Operating Data (Domestic)

	2022	2023	**2024**
Newly proven oil in place (mmt)	862.16	773.86	**868.64**
Newly proven gas in place (bcm)	684.5	754.2	**996.9**
2D seismic (km)	8,618	3,604	**3,491**
3D seismic (sq km)	20,236	25,078	**18,114**
Exploratory wells	1,316	1,356	**1,246**
Preliminary prospecting wells	658	684	**522**
Appraisal wells	658	672	**724**

Newly proven oil in place (mmt)



Newly proven gas in place (bcm)



Major Discoveries and Achievements in 2024

Oil	Natural Gas
A major breakthrough was achieved in the Carboniferous-Permian strata of the Kekeya structural belt in the southwest of the Tarim basin as significant new discoveries in exploration were made on both the east and west wings of the Fuman oilfield. A number of 100-million-ton reserve areas were confirmed, including Ordos Basin's Huanjiang and the Junggar Basin's Jimsar-Fukang Permian. The Xinbei-Tahucheng area of the Songliao Basin added a new 100-million-ton reserve area in the mid-shallow strata.	Multiple 100-billion-cubic meter reserve areas were confirmed in the Kelasu structural belt, eastern Fuman of the Tarim Basin, the eastern Yi-Sha slope of the Ordos Basin, and the Maokou Formation in the central Sichuan Basin.
Shale Oil	**Shale Gas**
Significant breakthroughs were made in the exploration of interbedded shale oil in the northern Songliao Basin. A new 100-million-ton reserve belt was confirmed for Jurassic shale oil in the northern Sichuan Basin's Yilong-Pingchang.	Important discoveries were made in the exploration of deep shale gas in the Cambrian Qiongzhusi Formation of the Sichuan Basin, confirming a new 100-billion-cubic meter reserve area.
Tight Gas	**Deep Coalbed Methane (CBM)**
New breakthroughs were made in the exploration of continental tight gas in the Zitong Depression of the Sichuan Basin. A new 100-billion-cubic meter reserve area in the Penglai-Jianyang was confirmed. New large-scale over-pressure tight gas reserve areas were discovered in the Xujiahe Formation of the Yilong-Pingchang. A new 100-billion-cubic meter reserve area was also confirmed in the Ordos Basin.	Comprehensive breakthroughs were achieved in deep CBM exploration in the Ordos Basin, confirming a 100-billion-cubic meter reserve area in central and eastern sections. Deep CBM exploration in the Longtan Formation of the Sichuan Basin yielded new discoveries.

Oil and Gas Production

Domestically, the Company produced 106.15 million tons of crude oil and 158.6 billion cubic meters of natural gas, up by 0.35 million tons and 5.7 billion cubic meters year-on-year respectively. The total oil and gas equivalent production hit a record high at 232.56 million tons.

Domestic oil and gas production

232.56 million tons in oil equivalent terms

Domestic crude production

106.15

million tons

Domestic natural gas production

158.6

billion cubic meters

Development of Key Oil and Gas Fields

The Company achieved steady output growth in major domestic oil and gas fields by strengthening the E&P activities in key oilfields. In 2024, oil and gas production of Changqing Oilfield was on the rise, standing above 60 million tons of oil equivalent for five consecutive years. Daqing Oilfield continued to maintain crude output at around 30 million tons. Tarim Oilfield produced more than 33 million tons of oil equivalent with steady growth. Natural gas production at Southwest Oil and Gas Field surpassed 40 billion cubic meters again. Xinjiang Oilfield achieved steady growth in production by strengthening the management of mature fields and production ramp-up in new blocks. Liaohe Oilfield maintained stable production around 10 million tons.

Stable Production from Mature Fields

Guided by the "Five Refocus" approach (reservoir reevaluation, technical path reselection, well pattern reconstruction, flow field readjustment, surface process reorganization), the mature field stabilization initiative expanded its scope. The "10 Oil + 9 Gas" demonstration projects played a crucial role in controlling natural decline, reducing costs, and adjusting operating models. The ten crude oil projects explored four new development optimization models, and the nine natural gas projects effectively provided a positive impetus, revitalizing mature fields and turning them into a new "growth driver".

Production Capacity Building

The Company continued to improve its professional management of capacity building and make steady progress in building a number of large-scale oil and gas fields, as key projects delivered robust results as a whole. The year 2024 saw an increase of 9.295 million tons in crude production capacity and 27.77 billion cubic meters in natural gas production capacity.

Unconventional Hydrocarbons

In line with the strategic planning of "accelerating E&P operations in the West, deepening E&P operations in the East, advancing onshore and offshore E&P operations, bolstering E&P operations in conventional and unconventional resources, and coordinating E&P operations in deep and shallow resources," CNPC enhanced R&D efforts and boosted the E&P operations for unconventional resources, leading to new progress in unconventional oil and gas development. Shale oil production achieved new breakthroughs. Unconventional natural gas formed a strategic succession pattern of "CBM in the north and shale gas in the south." Specifically, deep CBM showed robust growth momentum, indicating a strong potential for scale development.

Shale Oil	The shale oil capacity building projects at Qingcheng of Changqing Oilfield, Jimsar of Xinjiang Oilfield, and Gulong of Daqing Oilfield steadily advanced and achieved new breakthroughs. The Company produced 5.096 million tons of shale oil in 2024.
Tight Gas	Changqing Oilfield continued to expand the scope of tight gas development while pushing ahead with production adjustment in mature fields and cost-effective capacity building in new fields. Production ramp-up at Southwest Oil and Gas Field gathered pace. The Company produced 47.43 billion cubic meters of tight gas in 2024.
Shale Gas	Mid-deep shale gas production remained stable while the development of deep shale gas in Luzhou gained momentum. New shale gas formations in the Qiongzhusi and Wujiaping formations showed good production growth potential. The Company totally produced 15.32 billion cubic meters of shale gas in 2024.
Coalbed Methane	For mid-shallow CBM, development adjustment and rolling capacity building made orderly progress at mature fields, such as Fanzhuang and Baode. Capacity building at cooperation blocks such as Mabi further advanced. The Company made headway in the evaluation and development of deep CBM and accelerated the pilot testing for deep CBM recovery and trial production in mature wells in the Ordos Basin. The engineering technology system was upgraded to enhance the development of deep CBM resources through investment management and cost reduction. The Company produced 6.03 billion cubic meters of CBM in 2024 (including 2.3 billion cubic meters of deep CBM).

Gas Storage Facilities

The Company continued to expand the capacity of gas storage facilities. In 2024, four new gas storage facilities were put into operation. By the end of 2024, 23 gas storage facilities were operational. In 2024, the total gas injection stood at 18.43 billion cubic meters, with a cumulative peak-shaving capacity of 22.6 billion cubic meters.

Domestic E&P Projects with International Partnership

The Company deepened E&P cooperation in China with international partners, including Shell, TotalEnergies and Chevron, focusing on low-permeability reservoirs, heavy oil, shallow-water reservoirs, sour gas, high-temperature and high-pressure gas reservoirs, CBM, and tight gas, steadily advancing joint E&P projects.

In 2024, the total oil and gas output of CNPC's E&P operations in China with international partners remained steady at 12.67 million tons in oil equivalent terms, including 2.014 million tons of crude and 13.37 billion cubic meters of natural gas. The annual gas output of Changqing Oilfield's South Sulige Project stood above 4 billion cubic meters. The gas production from the Changbei project in Changqing Oilfield remained steady. Gas production at Southwest Oil and Gas Field's Chuandongbei (CDB) project reached a new high.

Overseas Oil and Gas Operations

The Company continued to bolster its overseas operations in Central Asia-Russia, Middle East, Africa, the Americas and Asia Pacific. Overseas E&P operations saw fruitful results as overseas oil and gas business remained steady and cost-effective. As of the end of 2024, the Company had conducted oil and gas investment business in 33 countries and regions around the world.

Oil and Gas Exploration

The Company strengthened its high-efficiency exploration efforts, resulting in a number of significant oil and gas discoveries overseas. Significant breakthroughs were achieved in the exploration of new formations and new areas of the Aktobe Project in Kazakhstan; the Alam Project in Brazil made headway in reserve ramp-up; the Bokhtar Project in Tajikistan showed promising exploration prospects; the Chad PSA Project and the Indonesian project made important discoveries; the volume of cost-effective reserves expanded at the Amu Darya Project in Turkmenistan.

Oil and Gas Production

Targeting stable 100-million-ton-scale output, the Company implemented project-specific plans under the "Overseas Ballast Program". By dynamically adjusting operations and tapping production potential through mature field stability and rapid new project development, overseas equity output reached 106.46 million tons in oil equivalent terms, including 81.073 million tons crude and 31.86 billion cubic meters gas.

The Phase II of the Al Yasat Project in Abu Dhabi, started production with the first shipment of 100,000 barrels of equity oil; the gas processing plant for the Halfaya Project in Iraq came online as supplementary agreements were signed and the dual-signature confirmation on production volume was completed to ensure the recovery and utilization of associated gas; the Mero-3 of Libra Project in Brazil started production, ensuring its deep-sea operations continued to expand. Meanwhile, the Phase I LNG Canada project and the North Field Expansion project in Qatar, progressed steadily, contributing to the development of CNPC's overseas LNG operations.

Halfaya Gas Processing Plant project in Iraq

Overseas equity output reached

106.46 million tons in oil equivalent termsreached

Including

81.073 million tons crude

31.86

billion cubic meters gas

The offshore block, Phase II of the Al Yasat Project in Abu Dhabi, announced first oil production

On March 27, 2024, the Belbazem offshore block, Phase II of the Al Yasat Project in Abu Dhabi, announced first oil production.

As the first cooperative project between CNPC and Abu Dhabi National Oil Company (ADNOC), Al Yasat saw the Phase I put into operation in March 2018. Phase II adopts an innovative shared development model to reduce capital and operating costs. At the same time, it utilizes digital technologies such as artificial intelligence modeling and reservoir data analysis to improve production efficiency, safety and reduce carbon emissions.

The Halfaya Gas Processing Plant in Iraq became operational

On June 8, 2024, the Halfaya Gas Processing Plant (GPP) was put into operation in Maysan Governorate, Iraq. As one of the strategic projects of Iraq's natural gas industry, the project provides strong support for Iraq's natural gas utilization and power generation needs.

Pipeline Construction and Operation

The transnational routes to northwest and southwest China delivered

22.83

million tons of crude oil

50.7

billion cubic meters of natural gas throughout the year

The Company's pipelines overseas maintained safe and stable operation. The transnational routes to northwest and southwest China delivered 22.83 million tons of crude oil and 50.7 billion cubic meters of natural gas throughout the year (including 22.83 million tons of crude oil and 45.5 billion cubic meters of natural gas transported domestically), continuously enhancing supply security.

Refining and Chemicals

CNPC's overseas refining and chemicals projects ran steadily, processing 37.868 million tons of crude oil throughout the year.

Asset Management

Major breakthroughs were achieved in securing new projects. Aiming at independent exploration, natural gas, and deep-sea development, the Company successfully won the bid for the 14th and 15th shallow-sea exploration blocks in Suriname, achieving a new breakthrough in offshore oil and gas business; successfully signed the EPSA contract for the Block 15 in Oman; delivered the Qatar North Field expansion project; further optimized the business layout in the Middle East; extended operator projects in Ecuador's T block and Aktobe's T1 and T2 blocks, achieving important progress in project extension; completed the handover of the West Qurna 1 project in Iraq and became the lead contractor of the project. The Company's integrated advantages were further enhanced.

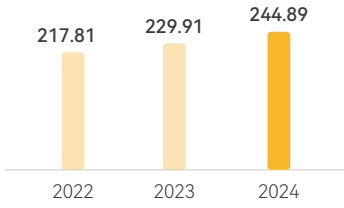
Natural Gas Marketing

Amid unexpected challenges posed by extreme climate and fluctuations in international oil and gas prices, the Company improved its market-oriented marketing system, introduced new trading models and strengthened market research to achieve steady growth in domestic sales. The full-year domestic sales totaled 244.89 billion cubic meters, up 6.5% year-on-year, covering 31 provinces, municipalities, autonomous regions and HKSAR.

The full-year domestic sales totaled **244.89** billion cubic meters

Up **6.5%** year-on-year

Domestic natural gas sales (bcm)



Natural Gas Market Expansion

The Company actively deepened its strategic planning to promote the high-quality natural gas market expansion. To further explore the high-end and high-value markets in response to the optimized allocation of productive factors, the Company focused on key industrial customers and strived to develop direct-supply and direct-sale customers. In the end-user market, the Company pushed ahead with the acquisition of stand-alone projects in county-level cities, while considering equity cooperation projects with other gas companies and seeking industrial park projects and new concession projects in local government tenders. Marketing efforts targeting urban gas end-users were stepped up, adding about 850,000 new end-users and implementing 8 new projects throughout the year. The full-year sales in the end-user market totaled 61.16 billion cubic meters, up 13.8% from a year earlier.

LNG

The Company expedited its layout of LNG terminals as the Fujian LNG Terminal and Jiangsu LNG Terminal (Phase III) Jetty started construction. As of the end of 2024, the Company had two LNG terminals in Jiangsu and Tangshan, with annual regasification and loading volume totaling 15.94 billion cubic meters. In 2024, the Company had 14 LNG plants in operation, with a total processing volume of 3.55 billion cubic meters.

The Company continued to expand offshore LNG refueling for ships and provided regular bonded LNG refueling at Yantian Port in Shenzhen and Zhoushan Port in Ningbo.

Rudong LNG terminal, Jiangsu Province

New Energies

The Company actively promoted energy transition to empower green and low-carbon development. A number of landmark projects were completed in key areas such as the wind and solar projects in the "Three-North" region and the geothermal projects in the Beijing-Tianjin-Hebei region, marking significant progress in the in-depth integrated development and continuous improvement in industrial structure. The ecosystem for integrated development covering wind, solar, geothermal, electricity and hydrogen was taking shape.

Wind and Solar Power Generation

As CNPC's largest single-capacity grid-connected wind power project, the Jilin Oilfield Angge 550 MW wind power project was put into operation last year. As of the end of 2024, the total installed capacity reached 10.25 million kilowatts (including visual progress).

Geothermal Energy

In 2024, the coverage of geothermal heating (and cooling) services added 15.71 million m^2 and totaled more than 50 million m^2 (including O&M). The Caofeidian New City project in eastern Hebei set a new record for China's largest single-capacity geothermal heating project in mid-deep strata.

Hydrogen Energy

In line with the market demand for hydrogen energy, the Company accelerated the construction of hydrogen supply centers near its refining and chemicals facilities to increase the supply of high-purity hydrogen. Throughout the year, CNPC's high-purity hydrogen capacity increased by 1,500 t/a to 8,100 t/a. The high-purity hydrogen projects of Changqing Petrochemical and Qingyang Petrochemical became operational. The high-purity hydrogen projects of Lanzhou Petrochemical Yulin Chemical and Karamay Petrochemical were under construction.

CNPC's largest single-site grid-connected wind power project went online

On September 29, 2024, CNPC's largest single-site wind power project – the Jilin Oilfield Angge 550 MW wind power project – became grid-connected and operational.

Located in the hinterland of the Anggelai Grassland in Qianguo County, Songyuan City, Jilin Province, the 550 MW wind power project spans an area of 173 square kilometers and comprises 88 wind turbines, each with a capacity of 6.25 MW. The project is expected to generate 1.63 billion kwh of green electricity annually, reducing CO_2 emissions by nearly 1.3 million tons per year.

Jilin Oilfield Angge 550 MW wind power project

Refining, Chemicals, Marketing & New Materials

The Company made headway in key projects for the transformation and upgrading of its refining and chemicals operations, with accelerated deployment of new-quality productive forces and continuous improvement in operating capabilities. The Company processed 188.217 million tons of crude oil and produced 120.607 million tons of refined products and 8.652 million tons of ethylene throughout the year. The full-year new materials output exceeded 2 million tons. Domestic refined products sales totaled 119.22 million tons.

The Company processed
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8.652
million tons of ethylene throughout the year

The full-year new materials output exceeded
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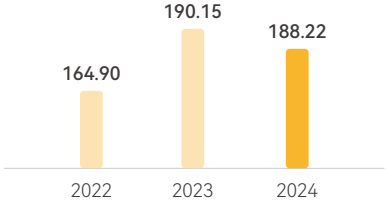
Domestic refined products sales totaled
119.22 million tons

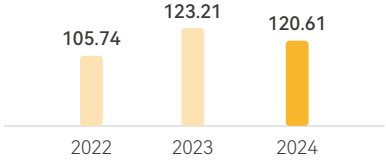
Refining and Chemicals

In response to changes in market demand, the Company intensified efforts in "reducing the output of refined products while boosting the output of new chemicals and specialty products." Leveraging its integrated advantages, the Company continued to promote a shift to high-quality and high-value products in its product portfolio and forge ahead with the transformation and upgrading campaign. The new materials acceleration program advanced significantly, and the deployment of new-quality productive forces picked up pace.

Crude runs (mmt)



Refined products output (mmt)



Refining and Chemicals Operating Data (Domestic)

	2022	2023	2024
Crude runs (mmt)	164.90	190.15	**188.22**
Utilization rate of refining units (%)	80.8	85.6	**84.7**
Refined products output (mmt)	105.74	123.21	**120.61**
Gasoline	43.51	49.78	**48.08**
Kerosene	8.58	15.04	**18.09**
Diesel	53.65	58.40	**54.44**
Lube oil output (mmt)	1.68	2.24	**2.41**
Ethylene output (mmt)	7.42	8.00	**8.65**
Synthetic resin output (mmt)	11.62	12.55	**13.29**
Synthetic fiber output (mmt)	0.03	0.03	**0.03**
Synthetic rubber output (mmt)	1.04	0.97	**1.01**
Urea output (mmt)	2.55	2.30	**2.93**
Synthetic ammonia output (mmt)	2.05	1.88	**2.28**

Karamay Petrochemical plant area

In 2024

135

new chemical products were developed

With a total output of

1.448 million tons

Optimization of Product Portfolio

The product portfolio of refining and chemicals operations continued to optimize, with a focus on increasing high-end, high-value products and maximizing profitability across the industry chain. The outputs of 16 categories of refined products and chemicals reached all-time highs. The Company enjoyed a leading market share in a number of areas, such as bonded bunker fuel, paraffin wax, low-sulfur petroleum coke, 25 of the 29 key technical and economic indicators for the Company's refineries improved from a year earlier.

The Company continued to push forward the R&D and production of new chemical products and specialty chemicals. In 2024, 135 new chemical products were developed, with a total output of 1.448 million tons.

Jinzhou Petrochemical's third needle coke unit put into production

On November 13, 2024, the third set of needle coke unit of Jinzhou Petrochemical successfully produced qualified products. Construction began on March 24, 2023. At full operation, the total production capacity of the needle coke plant will reach 350,000 t/a, enabling large-scale, categorized, graded, series-based, and customized production, and positioning Jinzhou Petrochemical as a world-leading producer of petroleum-based needle coke. This will help Jinzhou Petrochemical accelerate the extension into the high-end parts of the industry chain and facilitate the shift to specialty chemicals and new materials.

As of the end of 2024

The Company had

8 large integrated refining

Chemical complexes and

14 10 Mt/a refineries in China

Construction of Large Refining & Chemical Bases

As of the end of 2024, the Company had eight large integrated refining and chemical complexes and fourteen 10 Mt/a refineries in China.

Major projects were accelerated. Major ethylene projects such as Jilin Petrochemical's refinery-petrochemical transformation and upgrading project, Guangxi Petrochemical's refinery-petrochemical integration project and Dushanzi Petrochemical's Tarim Phase II were under construction. A number of major projects advanced rapidly, including Urumqi Petrochemical's paraxylene (PX) capacity expansion project and 2 Mt/a purified terephthalic acid (PTA) project.

Development and Application of New Materials

The Company strengthened planning, R&D and capacity building for new materials. The full-year production of new materials exceeded two million tons, a surge for three consecutive years, covering a number of flagship products such as ABS, nitrile butadiene rubber, SSBR, EPR, α-olefin, PETG, paraffin, lubricant and additives etc. The Company enjoyed a leading position in the domestic output and varieties of metallocene-based polyolefin, and a breakthrough was achieved in gas-phase polyethylene process for polyolefin elastomer (POE)production.

Blue Ocean New Materials (Tongzhou Bay) Co., Ltd. High-end polyolefin project started construction

On September 26, 2024, the high-end polyolefin project of Blue Ocean New Materials (Tongzhou Bay) Co., Ltd. started construction in Nantong, Jiangsu. The project is the part of the Company's ongoing efforts to accelerate the development of high-end chemicals and new materials. The main products of the project include polyolefin elastomer, ethylene propylene rubber (EPR) etc., which are widely used in aerospace, healthcare, automotive, photovoltaic and high-end packaging films.

Key new material projects development sped up. The high-end polyolefin project of Blue Ocean New Materials (Tongzhou Bay) and the 0.1 Mt/a nylon 66 project of Liaoyang Petrochemical started construction. A number of new material projects had been completed and put into operation, including the third set of needle coke unit of Jinzhou Petrochemical, the polypropylene 235 capacity expansion project, and the adaptive transformation project for polystyrene new materials of Dushanzi Petrochemical. The proprietary 1,000 t/a solution-process POE pilot unit achieved a long cycle with key product indicators comparable to those of foreign products. Daqing Petrochemical's 1-octene/1-hexene device produced qualified octene products and successfully applied in the downstream new material production.

Marketing

In 2024, the Company stepped up its efforts in boosting the quality and performance of its marketing operations through market research and expansion, with its operating indicators showing a steady and robust momentum.

Refined Products

The Company adopted a holistic approach to bolstering retail and wholesale operations, tie-in marketing for fuel & non-fuel products, oil-gas integration, and online + offline campaigns. The full-year domestic sales of refined products reached 119.22 million tons.

Marketing of Chemical Products

The Company optimized its marketing system and strengthened its market research capabilities. In 2024, the Company sold 45.05 million tons of chemical products, up 11.2% year-on-year.

Marketing Network

In 2024, the Company added 418 service stations and 5 hydrogen refueling stations. As of the end of 2024, the Company operated a total of 22,441 service stations across the country.

In response to the changes in market demand, the Company focused its efforts on green, low-carbon and digital empowerment operations. In 2024, the Company added 27,300 charging guns and operated 3,803 charging stations with 47,500 charging guns. The Kunlun Connected Electric Energy Technology platform continued to expand to support 100,000 charging guns.

Non-fuel Business

The Company optimized its marketing system and launched a wide range of marketing "fuel & non-fuel" and "non-fuel & non-fuel" bundling campaigns, with a focus on industry-leading brands, centralized procurement, own-brand lifecycle management, flagship products and product portfolio broadening. The sales revenue from non-fuel products totaled RMB 26.46 billion in 2024.

The 4th uSmile Shopping Festival opened

On June 22, 2024, the 4th uSmile Shopping Festival was held at Xi'an International Convention and Exhibition Center under the theme "Supporting Rural Revitalization for a Better Life." Over 300 formerly impoverished counties, 26 Central SOEs, 238 leading suppliers and 3 e-commerce platforms from across the country gathered together to promote products from rural areas in various forms, such as new product release, on-site showcasing, cooperation negotiation and live streaming marketing etc. These events helped expand sales channels and enhance the visibility for products from rural areas in support of rural revitalization.

International Trade

In 2024, faced with major challenges posed by geopolitical conflicts, energy restructuring and volatility in international oil and gas markets, the Company played an active role in collaborative optimization by implementing a new "refining and chemical + trade" model, optimizing its global natural gas resource pool, expanding the export of refined products and chemicals, ensuring the supply of imported oil and gas, and building up its own transport capacity. The Company's three international operation hubs for oil and gas trading in Asia, Europe and the Americas continued to shape up with a constantly expanding ecosystem of international trade partners. Based on an innovative approach to building the cargo fleet, the Company's maritime energy supply capabilities were significantly enhanced. The Company traded 530 million tons with sales revenue of USD 283.72 billion in 2024.

PetroChina launched ultra-low sulfur fuel oil ship refueling in Europe

On April 6, 2024, PetroChina International (Netherlands) utilized resources from a local oil depot to carry out ship refueling operations with ultra-low sulfur fuel oil at the Port of Rotterdam, refueling more than 2,000 tons using a bunkering vessel on charter. This marks the Company's first ultra-low sulfur fuel oil ship refueling operation in Europe, laying a foundation for expanding the European market.

Crude Oil

The Company continued to build up crude oil trading capacity and strengthen cross-regional crude oil trading. Benchmark oil trading in Singapore, London Platts eWindow and Shanghai International Energy Exchange Center achieved fruitful results.

Natural Gas

The Company actively improved the efficiency of natural gas supply and maintained smooth unloading operation of LNG, while the import volume reached a new historical high. In addition, the Company implemented well-paced LNG shipping schedules in response to the changes in the domestic natural gas market, continually explored Southeast Asia and South Asia markets to build stable short-to-medium-term profitability, and expanded carbon asset reserves to improve the Company's carbon asset management capabilities.

Refined Products

While deeply rooted in traditional fossil energy operations, the Company actively pushed forward business transformation and made new headway in low-sulfur ship fuel oil, onshore charging, and bio-aviation fuel operations. The Company expanded its partner ecosystem and worked closely with its business partners in refined products such as PV-storage-charging, biofuels, and project investment to achieve complementary advantages and mutual benefit.

Chemicals

The Company continued to expand exports, broaden access to resources and build warehousing and logistics facilities, making a solid step in bolstering its transport capacity for chemical products. The Green Mines team was established as a good start in the green mines business.

Maritime Shipping

The Company continued to expand its own cargo fleet and deepen the coordination of the resource pool and the transport capacity pool to secure transportation. Meanwhile, the Company actively explored external customers to improve the fleet profitability.

Support & Services

Leveraging its expertise, the Company implemented the "dual-driver" (management + technology) approach to bolstering service quality and market competitiveness in areas like oilfield services, engineering & construction, equipment manufacturing and research & consulting, providing strong support for high-quality development.

Oilfield Services

In line with the guidelines of "safety, compliance, efficiency and profitability", CNPC's oilfield services business continued to deepen reform and enhance operation management, which helped to improve its value creation capabilities and facilitated the building of a modern engineering and technological system.

Oilfield Services Data

		2022	2023	**2024**
Geophysical Prospecting	2D seismic data acquired (kilometers)	37,837	18,789	**16,094**
	3D seismic data acquired (square kilometers)	80,376	83,335	**82,066**
Drilling	Wells completed	12,440	9,452	**9,345**
	Drilling footage (million meters)	31.47	24.90	**24.98**
Well logging	Well logging operations (well-times)	99,460	94,205	**98,119**
Mud	Mud logging operations	11,241	9,609	**8,768**
Downhole operations	Downhole operations (well-times)	106,844	112,898	**121,839**
	Formation test (layers)	12,256	13,258	**14,234**
Offshore engineering	Offshore drilling footage (meters)	309,000	422,000	**430,000**

Geophysical Prospecting

Based on the widespread adoption of "broadband, wide-azimuth and high-density" seismic prospecting techniques, the Company continued to work on new technologies for data acquisition and promote the use of vibroseis and nodal exploration systems to embrace a new era of intelligent nodal acquisition. R&D efforts were focused on ultra-deep exploration, multi-wave and multi-component seismology, seismic-geological integration, all-digital nodes, and cloud computing for geophysical research. The Company consolidated its research and development resources and accelerated technological breakthroughs to provide strong support for high-efficiency exploration.

In 2024, CNPC acquired 16,094 kilometers of 2D seismic data and 82,066 square kilometers of 3D seismic data.

In 2024

CNPC acquired

16,094

kilometers of 2D seismic data

82,066

square kilometers of 3D seismic data

Drilling

The Company boosted efforts in speeding up and improving efficiency in key basins, ensuring the successful drilling of exploration wells in deep strata, developing unconventional oil and gas efficiently; and implementing professional technology management to achieve remarkable results in oilfield engineering.

In 2024, the Company spudded 9,511 wells and completed 9,345 wells, with a total drilling depth of 24.98 million meters.

Well Logging and Mud Logging

The Company achieved new breakthroughs in oil and gas exploration of more than 40 key wells, focusing on deep clastic rocks, fractured carbonate rocks, shale oil, deep CBM, low-permeability and tight oil and gas reservoirs etc. and highlighting the integration of logging acquisition, processing and interpretation for controlling factors. Annual logging operations totaled 98,119 well-times.

The "concierge service" approach to geological engineering integration proved effective at Shendichuanke 1 Well, and the OneToBar and logging quality monitoring system was introduced in support of digital transformation at Huabei Oilfield. In 2024, the Company completed mud logging operations for 8,768 wells.

Downhole Operations

In 2024, the Company completed 122,000 well-times of downhole operations, including 77,500 sections/intervals of fracturing.

Electric fracturing was applied more widely to enable a more cost-effective and eco-friendly fracturing process and deliver significant improvements in efficiency and performance.

Risk exploration and formation testing for ultra-deep wells continued to improve, leading to a number of new discoveries and high-yield oil and gas wells. Services capabilities for snubbing operations were strengthened and 1,339 new wells were successfully commissioned.

Offshore Engineering

In 2024, CNPC Offshore Engineering spudded 179 wells and completed 184 wells, with a total drilling footage of 430,000 meters.

The Company further explored international markets as the Ruya project in Qatar started on schedule, marking a new breakthrough in high-end international business.

BGP offshore operation vessel

Engineering and Construction

The Company enhanced project management and lean processes, optimizing market presence and business structure to achieve breakthroughs in high-end markets, carbon initiatives, emerging industries, and high-value operations.

Oil and Gas Field Surface Engineering

The Halfaya gas processing plant, the Dukouhe gas purification plant, the Wen-23 gas storage project, and the Jidong Nanbao No.1 gas storage surface engineering project were successfully commissioned as planned. The gas compression project of central gas field in Block B of Turkmenistan and the crude oil processing project of the West Qurna-1 Oil field in Iraq were under construction.

Storage & Transportation

The Eastern Russia-China Natural Gas Pipeline, the Fourth West-East Gas Pipeline (Xinjiang Section), the Jieyang Natural Gas Pipeline, the Zhangzhou LNG Outbound Pipeline, the Tianjing Nangang LNG Terminal Phase II & Phase III, the Huizhou LNG Terminal were completed and put into operation, contributing to the national strategy of coordinated regional development and ensuring natural gas supply. The Third West-East Gas Pipeline (Zhongwei-Zaoyang Section), the Fourth West-East Gas Pipeline (Ningxia Section), the Second Sichuan Pipeline (Weiyuan/Luxian-Tongliang Section), the Tangshan LNG Terminal Phase II & Phase III and the Jiangsu LNG Terminal were also under construction.

Refining & Chemicals Engineering

The installation of main facilities for the transformation and upgrading projects at Jilin Petrochemical and Guangxi Petrochemical were moving into top gear. The main facilities for the Tarim Ethylene Project Phase II entered the installation stage. The Blue Ocean New Materials project was under construction. Seven petrochemical enterprises, including Jilin Petrochemical, Dalian Petrochemical, Dushanzi Petrochemical completed their overhaul projects safely and smoothly.

Dual Carbon and Emerging Industries

The Company won the bid for the mainframe assembly of the compact fusion energy reactor, marking the Company's entry into the fusion energy engineering and construction sector. Jinzhou Petrochemical's needle coke plant became operational, and photovoltaic projects at Huabei Oilfield and Qinghai Oilfield were successfully delivered. The integrated new energy project in Xinjiang and the photovoltaic project in Shangku High-Tech Zone of Tarim Oilfield made steady progress.

Overseas Market Development

The Company optimized its global portfolio and delivered solid results in overseas market expansions. The Company signed multiple major projects, including the natural gas pipeline expansion in Saudi Arabia and the natural gas pipeline for the Bab and Bu Hasa oil fields in the UAE, marking a stronger presence in the Middle East market, with its project management and delivery capabilities widely recognized by international energy companies and national oil companies. The Company won bids for the engineering procurement construction management (EPCM) project at the Southeast Field, Northeast Bab, Bab and Bu Hasa oil fields in the UAE; the high-end, high-value-added projects such as the pre-EPC services project at the Bukhara Refinery in Uzbekistan, the detailed design for dehydration and mercury removal units of the Genting FLNG facility in Indonesia, marking new breakthroughs in the Company's business model and high-end management consulting services.

Equipment Manufacturing

In 2024, focusing on a shift to providing strategic support for technological self-reliance and self-strength, the Company's equipment manufacturing business acted on the plan for "digital R&D, intelligent production, integrated management, agile services, and ecosystem-based industry" in support of the Company's core operations, playing an active role in bolstering technological innovation, industry control and safety support function, and ensuring the smooth operation of national key projects.

Oil and Gas Equipment

The world's first two home-made 12,000-meter ultra-deep well automated drilling rigs, together with 900T variable frequency top drive, 70MPa high-pressure large-displacement five-cylinder pump and V150 high-strength drill pipe, made significant breakthroughs in performance, enabling an independent and controllable design and manufacturing process for high-end drilling rigs. The drilling rig was included in Guiding Catalogue for Promoting and Use of the First (Set) of Important Technical Equipment jointly released by the Ministry of Industry and Information Technology and the National Energy Administration and supported the drilling of Shenditake 1 Well and Shendichuanke 1 Well towards a depth of 10,000 meters. Pioneering in equipment manufacturing for the exploration and development of deep-earth and deep-sea resources, the Company participated in the completion and commissioning of Meng Xiang, China's first deep-ocean drilling vessel and deployed the 1.25-level and 2.0-level deep-water drilling risers in pilot tests.

Refining & Chemicals and Transportation Equipment

The application of domestic refining equipment made steady headway. The imported wheel discs of high-power flue gas turbines have achieved domestic substitution, while developing the first domestically made multi-channel coiled tube and the supercritical carbon dioxide straight seam welded pipe with the largest pipe diameter and wall thickness in China, which filled the gap in domestic products. The Company provided high-quality, high-performance pipes for the Third and Fourth West-East Gas Pipelines, the Second Sichuan-to-East Gas Pipeline, the China-Russia Far East Gas Pipeline, ensuring stable energy supply and meeting the energy needs in China.

New energies and Power Equipment

The domestic high-power high-speed reciprocating compressors were launched to support the successful commissioning of key projects such as the Tongluoxia gas storage facility and the first offshore gas storage facility Nanbao No.1. The product portfolio for green electricity and green heat equipment and zero-carbon, green and healthy barracks was taking shape. Green products such as high-power green electricity boilers and 3MW underground high-power electric heaters were developed. The Company deeply participated in the construction of Baotou-Linhe Line, the first hydrogen-blended long-distance and high-pressure gas transmission pipeline in China. All of those contributed to the accelerated advancement of the country's clean energy substitution.

Overseas Equipment Business

Based on the "six synergies" mechanism, a "small frontline & big backup" approach to international marketing was adopted to further improve the supply chain and marketing service network. Widely distributed in key international oil and gas producing areas such as Central Asia, Latin America, the Middle East, Africa, and Asia-Pacific, the Company's overseas operations covered more than 110 countries and regions and served more than 4,000 companies. The Company successfully expanded operations in 11 emerging markets including Ecuador, signed agreements on transport equipment and power equipment worth more than RMB 100 million in regional markets such as the Middle East and Turkmenistan, and achieved new breakthroughs in oil and gas equipment business in Central Asia and North Africa.

Capital & Finance

In 2024, facing the complex situation in the ever-changing financial sector, the Company proactively responded to macro-environment shifts, regulatory adjustments, and capital market volatility. Adhering to the principle of "industry-finance integration, finance enabling industry, holistic collaboration, and excellence in specialization," it strengthened market awareness, innovated marketing models, focused on serving core operations and the real economy, deepened industry-finance integration, and enhanced inter-financial synergy, achieving positive results across all initiatives.

CPF

Functions such as cash concentration, settlement, fund monitoring and financial services were performed through China Petroleum Finance Company (CPF) to support the centralized fund management and efficient utilization of funds. CPF launched special green credit products, such as Wind Power Loan, and for the first time, provided financial services for distributed energy projects, with a green credit balance of nearly RMB 33 billion.

Banking

Sticking to the business path of "serving niche, complex, specialized, and in-depth segments", Bank of Kunlun set up two Agile Teams for corporate and retail banking. Innovative products such as Tax E-Connect, Co-lending E-Loan, Kunlun E-Loan and On-Chain Kunlun were upgraded and launched to serve the needs of industry chain customers.

Trust

Kunlun Trust reaffirmed its commitment to the essence of trust services and core operations, focusing on providing financial services for cultivating new-quality productive forces, advancing technological self-reliance, green energy conservation, ESG initiatives, and social welfare across the energy industry chain. By pioneering a differentiated "Energy Trust" strategy, it added RMB 19.6 billion to its industry-finance portfolio in 2024, a 54% year-on-year increase.

Financial Leasing

Based on a systematic approach to high-quality transformation and development in support of the Company's core operations, Kunlun Financial Leasing implemented the "dual-driver" approach (industry finance + market-based business). Kunlun Financial Leasing ranked among the top financial leasing companies in terms of regulatory rating, and the quality of assets remained healthy in 2024.

Insurance & Insurance Brokerage

The Company's captive insurance business successfully entered Indonesia, expanding services to 56 projects across 24 countries. Generali China Insurance was rated as a Class–A life insurance company by the Insurance Association of China as its first-year premium exceeded RMB 20 billion for the first time. Kunlun Insurance Brokerage as a comprehensive insurance brokerage platform continued to broaden the scope of asset insurance, based on the principle of "all needs are covered".

Industrial Capital Investment

Kunlun Capital focused on emerging sectors of strategic importance and industries of the future. In 2024, it delivered 12 projects in new energies, new materials and controlled nuclear fusion, showing synergy in industry-investment collaboration and new progress in market-oriented operations. Actively managed funds, including Kunlun Gongrong Green Industry Investment Fund and Kunlun Beigong Green Venture Fund, were launched and in effective operation, with new fund offers for industry segments in the pipeline. Through the "R&D + Industry + Capital" model, it leveraged industrial capital's catalytic role to pioneer integrated fintech solutions for commercializing the Company's technological innovations.

Financial Statements

Consolidated Balance Sheet

million RMB yuan

Item	2022	2023	2024
Current assets			
Cash and cash equivalents	321,339.30	355,058.62	273,455.88
Funds lent*	296,316.59	287,486.71	298,704.22
Financial assets held for trading	113,037.23	123,562.59	122,838.64
Derivative financial assets	21,594.03	17,154.37	9,297.62
Notes receivable	67.09	551.28	1,268.18
Accounts receivable	102,591.20	96,854.06	104,795.79
Receivables under financing	3,940.97	10,643.63	8,185.79
Prepayments	118,387.67	85,000.14	69,346.21
Premium receivable*	116.43	120.69	50.70
Reinsurance accounts receivable*	1,030.42	861.60	302.07
Reinsurance reserves receivable*	1,547.59	1,485.42	663.89
Other receivables	68,112.21	49,217.73	51,504.56
Financial assets purchased under resale agreements*	28,615.78	8,751.04	11,560.64
Inventories	215,332.50	225,305.68	214,154.66
Contract assets	65,603.92	53,672.19	44,314.54
Assets held for sale	34.71	4.59	-
Non-current assets maturing within one year	130,274.67	146,588.82	158,344.89
Other current assets	129,953.99	165,008.12	150,831.88
Total current assets	1,617,896.30	1,627,327.28	1,519,620.16
Non-current assets			
Loans and advances issued*	117,241.62	97,892.28	93,946.29
Debt investments	77,621.50	87,343.63	83,163.17
Other debt investments	26,054.85	35,193.12	50,291.91
Long-term accounts receivable	52,776.95	59,321.07	61,832.89
Long-term equity investments	323,209.26	334,260.04	341,942.07
Other investments in equity instruments	18,547.03	24,128.34	26,927.98

Consolidated Balance Sheet (continued)

million RMB yuan

Item	2022	2023	2024
Other non-current financial assets	31,244.04	26,550.30	27,143.26
Investment properties	2,837.77	2,979.87	3,330.53
Fixed assets	631,236.74	636,009.99	658,675.08
Construction in progress	257,651.66	261,925.00	250,443.05
Oil and gas assets	976,946.05	1,009,852.25	1,030,642.98
Right-of-use assets	44,262.86	43,239.18	41,471.38
Intangible assets	108,299.30	107,859.08	107,730.69
Development expenditure	1,286.39	1,314.47	2,057.84
Goodwill	7,411.60	7,563.81	7,551.50
Long-term deferred expenses	35,194.49	39,078.66	40,232.92
Deferred tax assets	29,525.14	32,406.82	39,807.85
Other non-current assets	35,810.14	40,935.90	48,353.05
Total non-current assets	2,777,157.39	2,847,853.81	2,915,544.44
Total assets	4,395,053.69	4,475,181.09	4,435,164.60
Current liabilities			
Short-term loans	72,993.90	86,327.09	83,728.77
Borrowings from central bank*	6,179.35	7,570.25	9,037.31
Borrowing funds*	57,188.75	33,341.28	19,113.56
Trading financial liabilities	3,357.53	3,592.26	6,749.86
Derivative financial liabilities	14,837.45	14,527.82	9,519.89
Notes payable	55,649.38	64,256.72	33,657.77
Accounts payable	413,950.62	420,976.33	389,920.57
Receipts in advance	1,942.26	1,166.51	1,486.42
Contractual liabilities	109,490.50	114,313.63	112,686.85
Funds from sales of financial assets with repurchase agreement*	24,777.59	36,504.33	36,196.66
Deposits from customers and interbank*	237,020.14	263,512.57	285,466.25
Funds arising from acting trading of securities*	1	1	1

Consolidated Balance Sheet (continued)

million RMB yuan

Item	2022	2023	2024
Employee benefits payable	63,875.37	79,426.38	79,654.01
Taxes payable	67,435.27	87,623.26	71,412.69
Other payables	78,390.59	67,310.86	57,652.55
Handling charges and commissions payable*	25.58	18.30	1.36
Reinsurance accounts payable*	777.90	711.55	118.59
Non-current liabilities due within one year	132,384.76	124,462.45	58,135.18
Other current liabilities	92,909.43	52,084.69	51,364.99
Total current liabilities	1,433,186.38	1,457,726.29	1,305,903.29
Non-current liabilities			
Reserve for insurance contracts*	5,437.47	5,317.75	3,027.76
Long-term loan	49,876.70	61,372.32	59,270.99
Debentures payable	146,277.92	71,402.50	59,039.52
Lease liabilities	24,684.80	20,799.71	16,868.28
Long-term payables	13,202.98	12,606.98	12,401.87
Long-term employee remuneration payable	1,526.17	1,480.23	1,232.83
Accrued liabilities	160,990.04	162,761.72	179,625.17
Deferred income	9,453.51	10,422.60	11,635.44
Deferred tax liabilities	39,887.35	50,385.48	57,585.35
Other non-current liabilities	1,594.26	12,499.00	32,409.73
Total non-current liabilities	452,931.20	409,048.29	433,096.94
Total liabilities	1,886,117.58	1,866,774.58	1,739,000.23
Owners' equity			
Paid-up capital (or share capital)	487,055.00	487,055.00	487,897.99
Other equity instruments	66,656.79	30,205.15	10,950.28
Capital reserve	268,251.84	271,687.99	271,144.78
Other comprehensive income	-10,146.26	-7,636.16	-17,288.65
Special reserve	15,742.84	14,210.80	13,910.61
Surplus reserve	1,088,939.42	1,094,905.96	1,103,241.38
General risk provisions*	12,580.37	12,531.91	13,002.30

Consolidated Balance Sheet (continued)

million RMB yuan

Item	2022	2023	2024
Undistributed profit	189,686.57	294,059.69	385,571.23
Total equity attributable to CNPC	2,118,766.57	2,197,020.34	2,268,429.92
Minority interest	390,169.54	411,386.17	427,734.45
Total owners' equity	2,508,936.11	2,608,406.51	2,696,164.37
Total liabilities and owners' equity	4,395,053.69	4,475,181.09	4,435,164.60

Consolidated Income Statement

million RMB yuan

Item	2022	2023	2024
1. Revenue	3,400,008.13	3,160,827.04	3,136,221.27
Including: Operating revenue	3,372,646.46	3,127,804.49	3,102,283.94
Interest income*	24,698.03	30,202.56	30,806.21
Premiums earned*	1,178.39	1,402.54	1,665.74
Handling charges and commission income*	1,485.25	1,417.45	1,465.38
2. Total cost of operations	3,065,508.23	2,863,074.67	2,857,080.24
Including: Operating cost	2,532,026.58	2,301,003.46	2,332,104.09
Interest expenses*	9,945.67	11,891.17	9,287.52
Handling charges and commission expenses*	1,939.33	1,756.54	2,112.80
Net expenditure for compensation payments*	958.74	1,247.64	1,250.84
Net amount of provision for insurance contract*	-30.40	-100.19	132.09
Reinsurance costs*	166.58	155.00	173.22
Tax and surcharges	294,490.81	312,750.54	283,652.22
Selling expenses	74,816.95	76,820.68	70,301.99
Administrative expenses	93,580.35	98,362.23	93,144.92
R&D expenses	30,824.36	33,849.82	35,450.44
Finance expenses	-458.40	4,402.05	8,452.44
Other	27,247.66	20,935.73	21,017.67
Add: Other gains	19,150.64	23,065.78	21,088.88

Consolidated Income Statement (continued)

million RMB yuan

Item	2022	2023	2024
Gain from investment (Loss is represented by "-")	4,438.50	18,357.68	24,918.92
Exchange gain (Loss is represented by "-")*	99.96	-52.89	-87.70
Net exposure gains (Loss is represented by "-")	-	-	-
Gains from change in fair value (Loss is represented by "-")	-7,967.70	5,401.36	15,261.01
Credit impairment loss (Loss is represented by "-")	-8,458.10	-5,880.89	-4,243.20
Impairments loss of assets (Loss is represented by "-")	-44,771.93	-34,602.01	-20,782.10
Gain on disposal of assets (Loss is represented by "-")	1,494.89	1,637.44	1,155.06
3. Operating profit (Loss is represented by "-")	298,486.16	305,678.84	316,451.90
Add: Non-operating revenue	5,949.31	5,102.55	6,306.77
Including: Government grants	1,578.45	1,139.60	814.32
Less: Non-operating expenses	37,569.61	22,682.85	21,730.11
4. Earnings before taxes (Loss is represented by "-")	266,865.86	288,098.54	301,028.56
Less: Income tax expenses	86,510.38	92,854.01	95,157.96
5. Net income (Net loss is represented by "-")	180,355.48	195,244.53	205,870.60
(1) Classified by continuity of operations:			
Net income from continuous operation	180,355.48	195,244.53	205,870.60
Net income from discontinued operation	-	-	-
(2) Classified by ownership			
Net income attributable to CNPC	141,798.36	150,859.24	161,344.39
Minority interest	38,557.12	44,385.29	44,526.21

Note: Those with the * symbol are line items for financial companies.

Notes to the Financial Statements

A. Description of Principal Accounting Policies and Estimates

1. Accounting standard and system

CNPC (hereinafter referred to as the Company) follows the *Accounting Standards for Business Enterprises – Basic Principles* and the specific rules of accounting standards, guidelines for the application of accounting standards, interpretations of accounting standards and relevant regulations issued by the Ministry of Finance.

2. The fiscal period

The fiscal period of the Company starts on January 1 and ends on December 31 of each calendar year.

3. Standard accounting currency

The Company and most of its subsidiaries adopt RMB as the standard currency used in bookkeeping. The consolidated financial statements of the Company is listed in RMB.

4. Accounting basis and valuation

Accounting is based on the accrual system. The measurement attributes adopted include historical cost, replacement cost, net realizable value, present value and fair value.

5. Recognition of cash and cash equivalents

The cash presented in the Cash Flow Statement comprises cash on hand and the deposits available for payment at any given time. Cash equivalents presented in the Cash Flow Statement are short-term (mature within three months), and highly liquid investments that are readily convertible into cash and almost have no risk of change in value.

6. Foreign currency accounting and translation of financial statements in foreign currency

(1) Foreign currency accounting

Our foreign currency transactions are converted into RMB at the spot exchange rate on the days the transactions occurred; the monetary foreign currency items on the balance sheet date are converted into RMB at the spot exchange rate on the balance sheet date. The exchange gains and losses arising from these transactions that occurred in the production and operation period are recognized as financial expenses; those related to the acquisition and construction of fixed assets, oil and gas assets and other assets in line with the capitalization condition are handled according to relevant provisions on borrowing costs; and those occurred in the period of liquidation are recognized as liquidation gain or loss.

A non-monetary foreign currency asset measured at historical cost is converted into RMB at the spot exchange rate on the trading day, with its amount in RMB unchanged. A non-monetary foreign currency asset measured at fair value is converted into RMB at the spot exchange rate for the date when the fair value is determined, with the difference recognized in profit or loss for the current period as a change in fair value.

(2) Translation of financial statements in foreign currency

All asset and liability items presented in Foreign Currency Balance Sheet are converted into RMB at spot exchange rate on the balance sheet date; the owner's equity other than "undistributed profit" is converted at spot exchange rate when occurred. Foreign incomes and expenses presented in the Income Statement are generally converted at the average of reference rates for RMB announced by PBC on a daily basis over the period of time covered by the income statement. The exchange difference of Foreign Currency Balance Sheet arising from the conversions mentioned above is separately listed in "Converted Difference in Foreign Currency Statement" under the owner's equity. The exchange difference arising from monetary foreign currency items materially invested in foreign operation due to the change in exchange rate is also separately listed in the owner's equity when preparing consolidated financial statements. When disposing foreign operation, the related exchange difference is carried, in proportion, into profit or loss for the current period during which the operation is disposed.

The opening balances of cash and cash equivalents in the Foreign Currency Cash Flow Statement are converted at statement's initial exchange rate; and the closing balances are converted at the spot exchange rate on the balance sheet date. And other items are generally converted at the arithmetic average of reference rates for RMB announced by PBC on a daily basis over the period of time covered by the cash flow statement. The translation difference of cash flow statement arising from the conversions mentioned above is presented separately in "Effect of the Change of Exchange Rate on Cash".

7. Financial instruments

Financial instruments include cash at bank and on hand, equity securities other than those classified as long-term equity investments, receivables, payables, borrowings, debentures payable and share capital, etc.

(1) Classification of financial assets

Financial assets are classified, upon initial recognition, by form of management and cash flow characteristics into: financial assets measured at amortized cost, financial assets measured at fair value with changes in fair value recognized in other comprehensive income, and financial assets measured at fair value with changes in fair value recognized in profit or loss for the current period.

(2) Classification of financial liabilities

Financial liabilities are classified into: Financial liabilities measured at fair value with changes in fair value recognized in profit or loss for the current period and financial liabilities measured at amortized cost.

(3) Impairment of financial instruments

For financial assets measured at amortized cost, contractual assets, and debt investments measured at fair value with changes in fair value recognized in other comprehensive income, impairment losses and provisions should be based on expected credit loss.

8. Inventory

(1) Classification of inventory

Inventories include raw materials, work in progress and semi-finished goods, finished goods, and goods sold, etc.

(2) Measurement method of cost of inventories

Inventories are carried at the actual cost when acquired, using perpetual inventory method; the actual cost of delivered or sold inventories are carried at weighted average.

(3) Amortization of low-value consumption goods and packing materials

Low-value consumption goods and packing materials are amortized using one-off amortization method when they are put into use.

(4) Year-end inventory valuation, impairment recognition and provision

Year-end inventories are carried at the lower of cost and net realizable value. Based on wall-to-wall inventory at the end of the period, provision for inventory write-down is retained at the difference between cost and the net realizable value of inventory on the individual item basis in the following circumstances, where the net realizable value is lower than the cost. For inventory of large quantity and low unit price, provision for inventory write-down may be recognized by category. The net realizable value is defined by selling price deducts estimated complete cost, selling cost and related tax.

a. The market price of inventory continues to fall with no hope of recovery in the foreseeable future;

b. The product using the raw material is manufactured at a cost higher than the selling price thereof;

c. The existing raw material fails to meet the needs of new products as a result of product upgrading and the market price of such raw material is lower than its carrying cost;

d. The goods or services are obsolete or there is a preference-driven change in market needs, resulting in a gradual decline in the market price thereof;

e. Other circumstances demonstrating a substantial impairment of inventory.

9. Contractual asset

The right to receive consideration for goods transferred to the customer that depends on factors other than the passage of time is recognized as a contract asset. The unconditional right (that is, only dependent on the passage of time) to receive consideration from the customer is presented separately as a receivable.

10. Long-term equity investments

(1) Determination of investment costs

For a long-term equity investment obtained through a combination of entities under common control, the carrying value of the owner's equity in the combined entity stated in the ultimate controlling party's consolidated financial statements should be recognized on the combination date as the investment cost.

For a long-term equity investment obtained through a combination of entities not under common control, the combined cost should be accounted as the cost of the long-term equity investment.

For long-term equity investments obtained in a manner other than combination of entities, if a long-term equity investment is obtained through the payment of cash, the actual purchase price thus paid should be recognized as the initial cost of the long-term equity investment; if a long-term equity investment is obtained through issuing equity securities, the fair value of the equity securities being issued should be recognized as the initial cost of investment.

(2) Subsequent measurement and profit or loss recognition

a. Long-term equity investments by cost method

The Company's long-term equity investments in its subsidiaries are accounted by the cost method. Except for cash dividends or profit distributions declared but not yet distributed that have been included in the price or consideration paid in obtaining the investments, the Company recognizes its share of the cash dividends or profit distributions declared by the investee as investment income for the current period.

b. Long-term equity investments by equity method

Long-term equity investments in associates and joint ventures are accounted by the equity method. When the initial cost of investment is bigger than the proportionate share of the fair value of the investee's identifiable net assets at the time of investment, no adjustment to the initial cost of such long-term equity investment is made; When the initial cost of investment is smaller than the proportionate share of the fair value of the investee's identifiable net assets at the time of investment, the gain in profit is recognized.

The investor's share of the net profit or loss and other comprehensive income of the investee is recognized in investment income and other comprehensive income respectively, along with the adjustment to the carrying amount of the long-term equity investment; distributions of profits or cash dividends received from the investee reduce the carrying amount of the investment; adjustments in the carrying amount of the investment for the changes in the owner's equity other than those arising from the investee's net profit or loss, other comprehensive income and profit distribution are necessary and recognized as the owner's equity.

The investor's share of the net profit or loss of the investee is based on the fair value of the investee's net identifiable assets upon the acquisition of the investment and recognized after adjustment to the investee's net profit made in accordance with the investor's accounting policies and fiscal periods. Accounting of investments held should be based on the investor's share of the net profit, other comprehensive income and other changes in the owner's equity listed in the investee's consolidated financial statements.

The investor's share of the loss of the investee should be accounted as follows: i) writing down the carrying value of the long-term equity investment; ii) in the event that the carrying value of such long-term equity investment is not enough for write-down, investment loss should be recognized as much as the carrying value of long-term interests that, in substance, form part of the net investment in the investee to write down the carrying value of long-term receivables, etc.; and iii) additional obligations assumed by the investor under the investment contract or agreement should be recognized as estimated liabilities and taken into investment loss of the current period. If the investee makes a profit in subsequent periods, the carrying amount of estimated liabilities should be written down in reverse sequence after deduction of the share of unrecognized loss, and the carrying value of long-term interests that, in substance, form part of the net investment in the investee as well as the carrying value of the long-term equity investment should be restored with the investment income recognized accordingly.

c. Disposal of long-term equity investments

In the disposal of long-term equity investments, the difference between the carrying amount and the actual purchase price is accounted as profit or loss for the current period.

Upon the disposal of a long-term equity method investment, all amounts previously recognized in the Company's other comprehensive income in relation to that investment are accounted for on the same basis as would have been required if the investee had directly disposed of the related assets or liabilities. The changes in the owner's equity other than those arising from the investee's net profit or loss, other comprehensive income and profit distribution are transferred to profit or loss for the current period in proportion.

If the investor loses joint control or significant influence over an investee for reasons such as partial disposal of the equity investment, any retained interest should be recognized in profit or loss for the current period, and measured as a financial instrument at the difference between fair value and carrying value at the date when joint control or significant influence is lost. All amounts previously recognized under the equity method as other comprehensive income in relation to such equity investment are accounted for on the same basis as would have been required if the investee had directly disposed of the related assets or liabilities. The changes in the owner's equity other than those arising from the investee's net profit or loss, other comprehensive income and profit distribution are transferred to profit or loss for the current period.

In the event that the investor loses control over an investee for reasons such as partial disposal of the equity investment, when

preparing separate financial statements, equity accounting is required for retained interest with joint control or significant influence over the investee, and adjusted on the basis of equity accounting as would have been required upon acquisition of such interest; retained interest without joint control or significant influence over the investee should be recognized in profit or loss for the current period and measured as a financial instrument at the difference between the fair value and carrying value on the date of loss of control.

In the event that the equity interest being disposed of has been acquired through a combination of entities for reasons such as additional investment, when preparing separate financial statements, all amounts previously recognized under the equity method as other comprehensive income and other owner's equity in relation to such equity investment should be transferred in proportion, if retained interest is accounted for at cost or under the equity method; all amounts previously recognized as other comprehensive income and other owner's equity should be transferred entirely, if the retained interest is recognized and measured as a financial instrument.

(3) Determination of the basis for joint control and significant influence over the investee

Joint control means the contractually agreed sharing of control of an arrangement which exists only when decisions about the relevant activities require the unanimous consent of the parties sharing control. A joint venture is a joint arrangement whereby the parties that have joint control of the investee have rights to the net assets of the investee.

Significant influence means the power to participate in the financial and operating policy decisions of the investee but not control or joint control of those policies. For an investor with significant influence over the investee, the investee is considered an associate of the investor.

(4) Impairment test and provisions for impairment

At the end of the year, the long-term equity investment is reviewed and the provision for the impairment of the long-term equity investment is retained against the difference between the recoverable amount and the carrying value. Once the provision for the impairment of the long-term equity investment is retained, it should not be reversed during subsequent accounting periods.

Non-marketable long-term equity investment may be impaired in the following circumstances:

a. There is a change in the political or legal environment of the invested business, such as an enactment of or amendment to the tax and trade regulations, which may result in huge losses of the invested business;

b. The goods or services of the invested business are obsolete or there is a change in market needs, resulting in serious deterioration in the financial conditions of the invested business;

c. The invested business has lost its competitive edge due to major changes in production technology in the sector, resulting in serious deterioration in the financial conditions of the invested business such as clean-up or liquidation;

d. Other circumstances demonstrating a substantial failure of the invested business to generate economic benefits for the Company.

11. Right-of-use assets

The right-of-use asset is initially measured at cost, including: the initial measurement of the lease liability; the lease payments paid on or before the commencement date of the lease term, if there is a lease incentive, minus the amount of the lease incentive received; initial direct costs incurred by lessee; costs that are expected to be incurred to dismantle and remove the leased asset, restore the site on which the leased asset is located, or restore the leased asset to the condition agreed upon in the terms of the lease; excluding costs incurred to produce inventory.

After the start date of the lease term, the use right asset is subsequently measured using a cost model. The principle for determining the depreciation period of the right to use assets: if the lessee can reasonably determine that they will acquire ownership of the leased asset at the end of the lease term, depreciation shall be accrued within the remaining useful life of the leased asset. If it is impossible to reasonably determine that ownership of the leased asset can be obtained at the end of the lease term, depreciation shall be accrued during the shorter of the lease term and the remaining useful life of the leased asset. If the remaining useful life of the right to use asset is shorter than the first two, depreciation shall be accrued during the remaining useful life of the right to use asset.

12. Revenue

Revenue should be recognized when the performance obligation in the contract is fulfilled, i.e. control of goods or services by the customer. Where a contract has multiple performance obligations, the transaction price should be allocated to these performance obligations upon the effective date of the contract by reference to the relative proportion of standalone selling prices of promised goods or services and revenue should be measured accordingly.

13. Government grants

(1) Types of government grants

Government grants comprise mainly of treasury funding, interest subsidies, tax rebates and free allocation of non-monetary assets etc.

(2) Acknowledgment of government grants

The Company will acknowledge the government grants that it is eligible for and has received.

(3) Accounting for government grants

Asset-related government grants are recognized as deferred income which is taken into profit or loss for the current period appropriately and systematically during the lifespan of related asset.

Income-related government grants used to recover relevant costs, expenses or losses in the subsequent period are recognized upon receiving as deferred income which is taken into profit or loss for the current period during the verification of related costs, expenses or losses, or used to write down relevant costs, expenses or losses; those used to recover relevant costs, expenses and losses incurred by the Company are directly recognized as profit or loss for the current period, or used to write down relevant costs, expenses or losses.

(4) Measurement of government grants

Government grants in the form of monetary assets are measured at the amounts received or receivable. Government grants in the form of non-monetary assets are measured at fair value.

14. Deferred tax assets and deferred tax liabilities

Deferred tax assets and deferred tax liabilities are recognized at (temporary) difference between the carrying value of an asset or liability and the tax base of such asset or liability. Deductible losses and tax credits that are carried forward to reduce taxable income in future years under the tax provisions are deemed temporary differences and accounted for deferred tax assets. Deferred tax assets and deferred tax liabilities as of the balance sheet date are measured at the applicable rate for the period when such assets or liabilities are estimated to be recovered or settled.

Deferred tax assets are limited to the taxable income that is likely to be obtained to reduce temporary differences, deductible losses and tax credits. For recognized deferred tax assets, when it is unlikely to obtain sufficient taxable income to offset against deferred tax assets by the future period, a write-down of the carrying amount of deferred tax assets is necessary. If it is likely to obtain sufficient taxable income, the write-down amount should be reversed.

Deferred tax assets and deferred tax liabilities are presented on a net basis, provided that the following conditions are satisfied:

(1) Deferred tax assets and deferred tax liabilities are related to the income tax imposed by the same taxing authority on the same entity in the Company.

(2) Such entity in the Company has the legal right to offset current tax assets against current tax liabilities.

15. Lease

A lease is a contract whereby the lessor transfers the right to use the asset to the lessee for consideration within a certain period of time. On the contract inception date, assess whether the contract is a lease or contains a lease. A contract is or contains a lease if a party to a contract transfers its right to control the use of one or more identified assets for a period of time in exchange for consideration. To determine whether a contract transfers the right to control the use of an identified asset over a period of time, the following assessments should be made:

a. Whether the contract involves the use of the identified asset. An identified asset may be specified explicitly by the contract or implicitly when the asset is available to the customer and the asset is physically distinguishable, or if some part of the capacity or other part of the asset is physically indistinguishable but substantially represents the full capacity of the asset, so that the customer obtains almost all the economic benefits arising from the use of the asset. An asset is not an identified asset if the supplier of the asset has a substantial right to substitute the asset throughout the period of use;

b. Whether the lessee is entitled to almost all the economic benefits arising from the use of the identified assets during the period of use;

c. Whether the lessee has the right to direct the use of the identified assets during the period of use.

If the contract contains multiple separate leases at the same time, the lessee and the lessor shall split the contract and conduct accounting treatment for each separate lease. If the contract

contains both lease and non-lease components, the lessee and the lessor will split the lease and non-lease components. When splitting the lease and non-lease components included in the contract, the lessee allocates the contract consideration according to the relative proportion of the sum of the stand-alone prices of the lease components and the stand-alone prices of the non-lease components.

(1) The Company as the lessee

On the commencement date of the lease term, a right-of-use asset and a lease liability are recognized for the lease. The right-of-use asset is initially measured at cost, including the initial measurement of the lease liability, lease payments made on or before the commencement date of the lease term (net of any amount related to the lease incentives received), initial direct costs incurred, and costs that are expected to be incurred to dismantle and remove the leased asset, restore the site on which the leased asset is located, or restore the leased asset to the condition agreed upon in the terms of the lease.

Right-of-use assets are depreciated using the straight-line method. If it can be reasonably determined that the ownership of the leased asset will be obtained when the lease term expires, depreciation will be accrued over the remaining useful life of the leased asset. Otherwise, the leased asset is depreciated over the shorter of the lease term and the remaining useful life of the leased asset.

The lease liability is initially measured at the present value of the unpaid lease payments at the commencement date of the lease term, discounted at the interest rate implicit in the lease. If the interest rate implicit in the lease cannot be determined, the incremental borrowing rate is used as the discount rate.

(2) The Company as the lessor

On the lease commencement date, the Company classifies leases into finance leases and operating leases. A finance lease is a lease that transfers substantially all of the risks and rewards associated with ownership of the leased asset, regardless of whether the ownership is ultimately transferred. Operating leases refer to leases other than finance leases.

16. Changes in Accounting Policies

(1) From January 1, 2024, the Company has implemented the relevant provisions of the *Interpretation of Accounting Standards for Enterprises No. 17* (CK [2023] No. 21), and adjusted the amounts of relevant items in the financial statements based on the cumulative impact. This change in accounting policy has no significant impact on the financial statements of the Company.

(2) From January 1, 2024, the Company has implemented the relevant provisions of the *Interpretation of Accounting Standards for Enterprises No. 18* (CK [2024] No. 24), and adjusted the amounts of relevant items in the financial statements based on the cumulative impact. This change in accounting policy has no significant impact on the financial statements of the Company.

(3) From January 1, 2024, the Company has implemented the relevant provisions of the *Interim Provisions on Accounting Treatment of Enterprise Data Resources* (CK [2023] No.11). According to the provisions, enterprises should adopt the prospective application method. Expenditures related to data resources that have been expensed and included in profits and losses before the implementation of this regulation shall not be adjusted. The implementation of this regulation has no significant impact on the financial position and operating results of the Company.

(4) Generali China Life Insurance Co., Ltd. (hereinafter referred to as "GCL"), a joint venture of CNPC, has implemented the *Accounting Standard for Business Enterprises No. 25 - Insurance Contracts* (hereinafter referred to as the new insurance contract regulation), and the *Accounting Standard for Business Enterprises No. 22 - Recognition and Measurement of Financial Instruments, Accounting Standard for Business Enterprises No. 23 - Transfer of Financial Assets, Accounting Standard for Business Enterprises No. 24 - Hedge Accounting and Accounting Standard for Business Enterprises No. 37 - Presentation of Financial Instruments* (hereinafter referred to as the new financial instrument regulations), and retroactive adjustments were made to its financial information for the comparative period of 2023. As the Company accounted for its investment in GCL using the equity method, it simultaneously made retrospective adjustments to its financial information for the comparative period of 2023.

B. Main Types of Taxes

1. Corporate income tax

Corporate income tax shall be calculated on the basis of taxable income at the applicable tax rate of 15% and 25%.

The Ministry of Finance and the State Taxation Administration

jointly issued the *Announcement on Further Improving the Policy of Adding Deductions for R&D Expenses before Tax* (No. 7 of 2023), clarifying that, the actual R&D expenses incurred by the enterprises in carrying out R&D activities, which are not translated into intangible assets in the profit and loss of the current period, shall be deducted in accordance with the provisions on the basis of actual deduction, and followed by a pre-tax deduction of 100% of the actual amount incurred, starting from January 1, 2023; if intangible assets are formed, they will be amortized before tax in accordance with 200% of the cost of intangible assets from January 1, 2023 onwards.

According to the *Announcement on Further Implementation of Preferential Policies on Income Tax for Small and Micro Enterprises* (No. 13 of 2022) by the Ministry of Finance and the State Taxation Administration, from January 1, 2022 to December 31, 2024, the portion of the annual taxable income of small and micro enterprises between RMB 1 million and RMB 3 million will be reduced by 25% of the annual taxable income, and the enterprise income tax rate will be 20%.

In accordance with the *Announcement on Continuing the Corporate Income Tax Policy for the Western Development Strategy* (No. 23 of 2020) jointly issued by the Ministry of Finance, the State Taxation Administration and the National Development and Reform Commission on April 23, 2020, business establishments in the encouraged industries in the western region are still entitled to the reduced corporate income tax rate of 15% from January 1, 2021 to December 31, 2030.

Under the *Corporate Income Tax Law, Implementing Regulations of the Corporate Income Tax Law, Administrative Measures for the Determination of High and New Technology Enterprises* (GKFH [2016] No. 32) and *Guidelines for Eligibility Management of High and New Technology Enterprises* (GKFH [2016] No.195), the corporate income tax rate applicable to a high and new tech company is 15%. The Company's subsidiaries with the High and New Technology Enterprise Certificate are eligible for the preferential tax rate of 15%.

According to the *Announcement on Further Improving the Policy of Pre-Tax Super-Deduction of Research and Development Expenses* (No. 13 of 2023) issued by the Ministry of Finance and the State Taxation Administration, starting from January 1, 2023, for enterprises' actual expenses in conducting research and development activities, if they are not capitalized as intangible assets and are included in the current period's income and expenses, on the basis of being deducted as incurred in accordance with regulations, an additional 100% of the actual amount incurred can be deducted before tax. For intangible assets formed, starting from January 1, 2023, they shall be amortized at 200% of the cost of the intangible assets before tax. 1

According to the *Announcement of the Ministry of Finance and the State Taxation Administration on Tax Preferential Policies for Enterprises to Invest in Basic Research* (No. 32 of 2022) issued by the Ministry of Finance and the State Taxation Administration, starting from January 1, 2022, for the expenses invested by enterprises to non-profit scientific and technological research and development institutions, higher education institutions, and state natural science funds for basic research, the actual amount incurred can be deducted before tax when calculating taxable income. And it can be deducted at a rate of 100% before tax. Non-profit scientific research institutions, higher education institutions, enterprises, individuals, and other organizations are exempt from corporate income tax on their income from basic research funds.

According to the *Announcement on Issues Concerning Income Tax Policies for Third-Party Enterprises Engaged in Pollution Prevention and Control* (No. 38 of 2023) issued by the Ministry of Finance, the State Taxation Administration, the National Development and Reform Commission and the Ministry of Ecology and Environment, starting from January 1, 2024, to December 31, 2027, qualified third-party enterprises engaged in pollution prevention and control shall be subject to a reduced 15% tax rate for corporate income tax.

According to the *Announcement of the Ministry of Finance and the State Taxation Administration on Enterprise Income Tax Policies for Digital and Intelligent Transformation of Special Equipment for Energy Conservation, Water Conservation, Environmental Protection and Work Safety* (No. 9 of 2024), for the digital and intelligent transformation of enterprises' special equipment from January 1, 2024 to December 31, 2027, the portion not exceeding 50% of the original tax base at the time of purchase of such special equipment can be offset against the enterprise's tax payable for the current year at a ratio of 10%. If the tax payable by an enterprise in the current year is insufficient for tax credit, it may be carried forward to subsequent years, but the carry-forward period shall not exceed five years at the longest.

The overseas investment projects and subsidiaries of CNPC are subject to the applicable local tax rates in accordance with the contracts and relevant tax regulations of the host country.

2. Value-added tax (VAT)

The taxable amount in calculating the VAT is based on the value added. The VAT payable is calculated by multiplying the taxable sales amount by the applicable tax rate and deducting the input tax deductible in the current period. The applicable tax rates are 6%, 9%, or 13%.

According to the *Notice on the Import Tax Policy for the Exploration, Development and Utilization of Energy Resources during the 14th Five-Year Plan Period* (CGS [2021] No. 17) issued jointly by the Ministry of Finance, the State Taxation Administration, and the General Administration of Customs, from January 1, 2021 to December 31, 2025, for the construction of cross-border natural gas pipelines and imported LNG receiving, storage and transportation facilities approved by the National Development and Reform Commission, as well as the natural gas (including pipeline gas and liquefied natural gas) imported from the expansion projects of imported LNG receiving, storage and transportation facilities approved by the provincial government, a certain proportion of the import value-added tax will be refunded. Self-operated projects of oil (natural gas) exploration and development in specific onshore areas of China, the import of equipment, instruments, spare parts and special tools in conformity with the regulations, shall be exempted from import tariffs; Sino-foreign cooperative projects of oil (natural gas) exploration and development operations in onshore oil (natural gas) bidding blocks approved by the State, oil (natural gas) exploration and development operations in the sea of China, offshore oil and gas pipeline emergency rescue projects, and projects of coalbed methane exploration and development operations in China, the import tariffs and import linkage VAT shall be exempted.

According to the *Announcement on the Policy of Value-Added Tax Reduction and Exemption for Small-Scale Value-Added Tax Taxpayers* ([No. 19 of 2023), to further support the development of small and micro enterprises and individual businesses, the announcement of extending the value-added tax (VAT) reduction and exemption policy for small-scale VAT taxpayers is hereby made. VAT will be exempted for small-scale taxpayers with monthly sales of RMB100,000 or less (inclusive). For small-scale VAT taxpayers, the taxable sales revenue subject to a 3% levy rate shall be subject to VAT at a reduced levy rate of 1%. For VAT prepayment projects subject to a 3% prepayment rate, the prepayment rate shall be reduced to 1%. It will be implemented until December 31, 2027.

According to the *Announcement of the Policy of Value-added Tax Credits and Deductions for Enterprises in Advanced Manufacturing Industry* (No. 43 of 2023) issued by the Ministry of Finance and the State Taxation Administration, and the *Notice of Matters Relating to the Formulation of the List of Advanced Manufacturing Enterprises Enjoying the Value-added Tax Credit and Deductions Policy for the Year of 2024* (GXTC [2024] No. 248) issued by the General Office of the Ministry of Industry and Information Technology, the General Office of the Ministry of Finance, and the General Office of the State Taxation Administration, from January 1, 2023 to December 31, 2027, advanced manufacturing enterprises are allowed to offset the VAT payable by adding 5% to the creditable input tax for the current period. Advanced manufacturing enterprises refer to general taxpayers in the manufacturing industry among high-tech enterprises (including their unincorporated branches); and high-tech enterprises refer to enterprises recognized in accordance with the provisions of the *Notice on Revision and Issuance of "Administrative Measures for the Determination of High-tech Enterprises" by the Ministry of Science and Technology, the Ministry of Finance, and the State Taxation Administration* (GKFH [2016] No. 32).

Overseas subsidiaries are subject to the applicable local tax rates.

3. Surtaxes and surcharges

The urban maintenance and construction tax rate is 1%, 5% or 7% of the amounts actually paid for value-added tax and consumption tax. The rate of education surcharge is 3% of the amounts actually paid for value-added tax and consumption tax.

4. Consumption tax

The taxable amount in calculating the consumption tax is based on the sales volume of taxable products. The amount of the consumption tax payable is RMB 1.52 per liter for gasoline, naphtha, solvent oils and lubricants, and RMB 1.20 per liter for diesel and fuel oils.

According to the *Announcement on the Implementation Caliber of the Consumption Tax Policy on Some Oil Products issued by the Ministry of Finance and the State Taxation Administration* (No. 11 of 2023), starting from June 30, 2023, the consumption tax on alkylated oils (iso-octane) will be levied in accordance with gasoline; the consumption tax on petroleum ethers, crude white oils, light white oils, and some industrial white oils (including No. 5, No. 7, No. 10, No. 15, No. 22, and No. 32, No. 46) are subject to consumption tax in accordance with solvent oil; mixed aromatics, heavy aromatics, C_8 aromatic hydrocarbons, natural gasoline, light oil and light coal tar are subject to consumption tax in accordance with naphtha. The suspension of consumption tax

remains unchanged for jet fuel.

According to the *Notice on Continuing Consumption Tax Exemption for Recycled Oil Products from Used Mineral Oil issued by the Ministry of Finance and the State Taxation Administration* (No. 69 of 2023), industrial oils such as lubricant base oil, gasoline and diesel made from used mineral oil produced by taxpayers are exempt from consumption tax. This notice is valid until December 31, 2027.

According to the *Notice on Increase in Consumption Tax on Refined Products* (CS [2015] No. 11) of the Ministry of Finance and the State Taxation Administration, effective since January 13, 2015, the consumption tax has increased from RMB 1.4 per liter to RMB 1.52 per liter for gasoline, naphtha, solvent oil and lubricant, and from RMB 1.1 per liter to RMB 1.2 per liter for diesel, jet kerosene and fuel oil. The suspension of consumption tax remains unchanged for jet fuel.

In accordance with the *Notice on Consumption Tax Exemption for Oil Consumption in the Production of Oil Products* (CS [2010] No. 98) announced by the Ministry of Finance and the State Taxation Administration, the Company has been exempt from consumption tax since January 1, 2009 on self-produced refined oils used as fuel, power and raw materials to produce oil products.

In accordance with the *Provisional Measures on Consumption Tax Refund (Exemption) for Naphtha and Fuel Oil Used in Producing Ethylene and Aromatic Hydrocarbons* (No.36 of 2012) issued by the State Taxation Administration, the Company is exempt from consumption tax on self-produced naphtha and fuel oil for continuous production of ethylene and aromatic hydrocarbons, and also exempt from consumption tax on self-produced naphtha and fuel oil sold under the dedicated direct supply programs announced by the State Taxation Administration.

5. Resource tax

The taxable amount in calculating the resource tax is based on the sales volume of taxable resource products such as crude oil, natural gas and shale gas, and the applicable tax rate ranges from 1% to 6%.

In accordance with the *Resource Tax Law of the People's Republic of China*, CNPC is eligible for resource tax exemption for crude oil and natural gas used for heating during the process of crude oil production and transportation in oilfields and eligible for a resource tax reduction of 20% for crude oil and natural gas produced from low abundance fields; 30% for sour gas, and crude oil and natural gas produced by means of tertiary recovery or deep-water operations; and 40% for heavy oil and high pour point oil.

In accordance with the *Notice on Cutting Resource Tax on Shale Gas* (CS [2018] No. 26) announced by the Ministry of Finance and the State Taxation Administration on March 29, 2018, resource tax on shale gas is cut by 30% (from the standard rate of 6%) from April 1, 2018 to March 31, 2021 to boost shale gas production and increase gas supplies. On March 15, 2021, the Ministry of Finance and the State Taxation Administration jointly issued the *Announcement on Extending the Implementation Period of Some Preferential Tax Policies* (No. 6 of 2021); after the expiry of the existing preferential tax policies on March 31, 2021, the implementation period of such policies will be extended to December 31, 2023. On September 20, 2023, the Ministry of Finance and the State Taxation Administration issued the *Announcement on the Continuation of Preferential Policies on Reducing Resource Taxes on Shale Gas* (No. 46 of 2023), which continues to provide a 30% reduction of the resource tax on shale gas (at the prescribed rate of 6%) until December 31, 2027.

6. Special oil gain levy

The taxable amount in calculating the special oil gain levy is based on the excess income from the domestic crude oil sales with price exceeding a certain level, and the applicable tax rate ranges from 20% to 40%.

In accordance with the *Notice on Raising the Threshold for Special Oil Gain Levy* (CS [2014] No. 115) issued by the Ministry of Finance, with the approval of the State Council, the Ministry of Finance has decided to raise the threshold for special oil gain levy to $65 per barrel, effective from January 1, 2015, with the five-level progressive ad valorem rates remaining in place.

7. Mining Rights Transfer Proceeds

Proceeds from the transfer of mining rights include the transaction price of prospecting rights (mining rights) and the proceeds from the transfer of mining rights collected on an annual basis, with the transaction price of prospecting rights (mining rights) being recognized and collected at the time of the assignment. The proceeds from the transfer of

mining rights collected on a yearly basis are calculated and paid based on the annual sales revenue of mineral products, with the applicable tax rate ranging from 0.3% to 0.8%.

According to the *Notice on the Issuance of the Measures for the Collection of Proceeds from the Transfer of Mining Rights* (CZ [2023] No. 10) issued by the Ministry of Finance, the Ministry of Natural Resources and the State Taxation Administration, proceeds from the transfer of mining rights = the transaction price of the prospecting rights (mining rights) + proceeds from the transfer of mining rights collected on an annual basis. The transaction price of the prospecting rights (mining rights) is mainly determined by the area of the mining rights, taking into account such factors as the mineralization conditions, the specific level of exploration, changes in the market for mining rights and competition within the market, and is collected at the time of the assignment of the prospecting rights (mining rights). The proceeds from the transfer of mining rights collected on an annual basis = annual revenue from the sale of mineral products × the rate of return on the transfer of mining rights, with 0.8% for the rate of return on the onshore transfer of mining rights for oil, natural gas, shale gas and natural gas hydrates, 0.6% for the rate of return on the offshore transfer of mining rights, and 0.3% for the rate of return on the transfer of mining rights for coal-bed methane.

Major Events

January

Jan. 1

CNPC became the lead contractor of Iraq's West Qurna-1 oilfield.

Jan. 4

CNPC signed a strategic cooperation agreement with China Mobile Communications Group Co., Ltd.

Jan. 18

CNPC (Beijing) Digital Intelligence Research Institute Co., Ltd. was inaugurated.

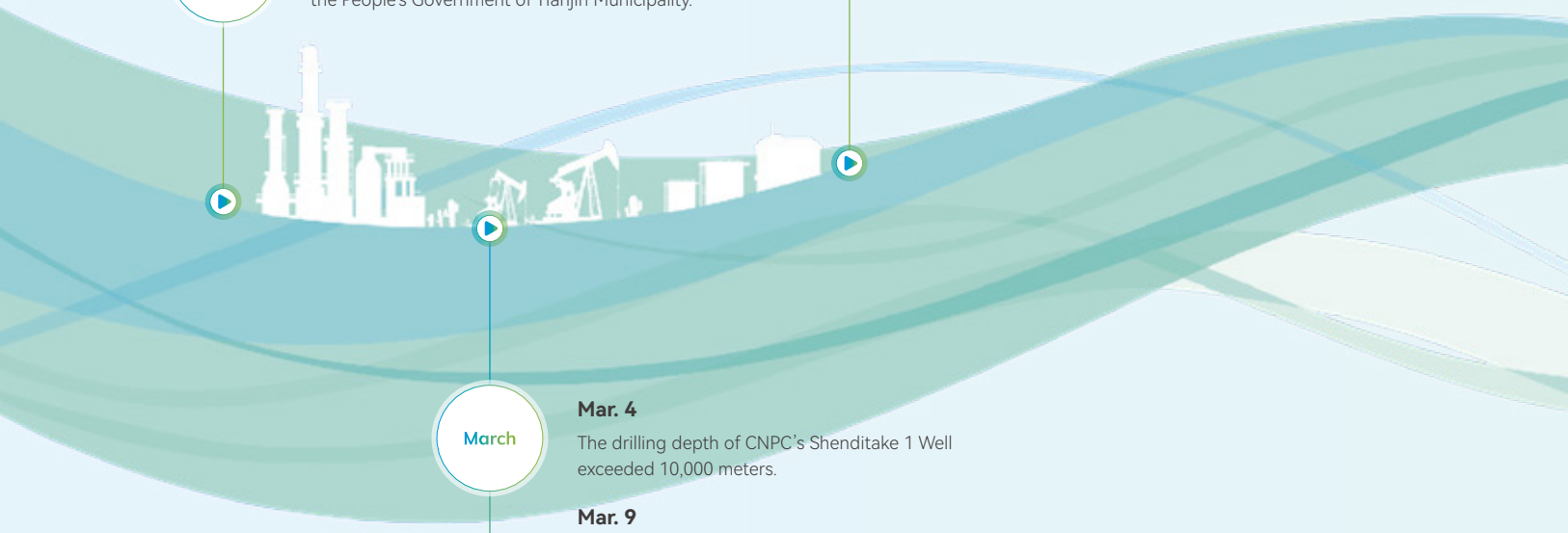
Jan. 24

CNPC signed a strategic framework agreement on expanding energy cooperation with the Ministry of Energy of Uzbekistan.

February

Feb. 23

CNPC signed a strategic cooperation agreement with the People's Government of Tianjin Municipality.



March

Mar. 4

The drilling depth of CNPC's Shenditake 1 Well exceeded 10,000 meters.

Mar. 9

The CNPC-led national key project "Research and Application of Key Technology Standards for Carbon Storage in Large Oil and Gas Reservoirs" kicked off.

Mar. 16

The production facility of CNPC's first large-scale water electrolysis-based hydrogen production project went into operation in Yumen Oilfield.

Mar. 19

CNPC reached the Contract Extension Agreement on Block T with the Ministry of Energy and Mines of Ecuador.

May

May 11

CNPC signed a strategic cooperation agreement with the People's Government of Jiangsu Province.

June

Jun. 8

The Halfaya Gas Processing Plant in Iraq was officially put into operation.

Jun. 24

The Company's "Key Technologies and Equipment for Onshore Wideband Wide-Azimuth High-density Seismic Exploration" won the first prize of the State Technological Invention Award.

Jun. 28

CNPC, together with Sinopec, CASIC, China Electronics Technology Group, SINOMACH, Dongfang Electric Group, China Baowu, China Minmetals and China Machinery Engineering Academy, jointly established an innovation consortium in deep and ultra-deep oil and gas exploration and development.

July

Jul. 9

CNPC welcomed the visit of nearly a hundred of diplomatic envoys from all over the world.

Jul. 10

CNPC Carbon Asset Management Platform was launched.

Jul. 23

The 6th China-Russia Energy Business Forum was held.

Jul. 24

A strategic cooperation agreement was signed with Abu Dhabi National Oil Company.

Jul. 30

CNPC signed a Memorandum of Understanding on strategic cooperation with SNAM.

August

Aug. 8

The Company was awarded the Huapu Award, the highest prize of the 18th China Brand Festival in 2024.

September

Sep. 1

CNPC Signed a PSC on Block 15 with Ministry of Energy and Minerals of Oman.

Sep. 13

CNPC signed a PSC on Blocks 14 and 15 of Suriname Shallow Sea with Surinam Staatsolie.

Sep. 26

The high-end polyolefin new material project of Blue Ocean New Materials (Tongzhou Bay) Co., Ltd. started construction.

Sep. 29

CNPC's largest single-capacity wind power project – the Jilin Oilfield Angge 550 MW wind power project – became grid-connected and operational.

November

Nov. 5

The Company was recognized by *Fortune* magazine's lists for the Most Admired Companies All-Stars and the Most Admired Companies Industry-Stars for the petroleum, chemicals & coal industry in China.

Nov. 6

The CNPC International Cooperation Forum & Signing Ceremony was held during the 7th China International Import Expo.

Nov. 6

CNPC signed a Memorandum of Understanding on strategic cooperation with Petronas.

CNPC signed a strategic cooperation agreement with Halliburton Energy Services.

CNPC signed a strategic cooperation agreement with Schlumberger Oilfield Holdings Ltd.

Nov. 26

The CCUS Innovation Consortium of Central SOEs jointly led by CNPC and China Huaneng was officially launched.

Nov. 28

The construction results of the 70-billion-parameter Kunlun Large Model were officially released.

December

Dec. 3

The 1.1 gw PV power project in the Tarim Oilfield generated over 800 million kilowatt-hours of electricity.

Dec. 12

CNPC became the official sponsor of oil, gas and clean energy of the 9th Asian Winter Games.

Glossary

Proven reserves

According to China National Standards, proven reserves are estimated quantities of mineral deposits. They can 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 20%.

Oil equivalent

Oil equivalent is the conversion coefficient by which the output of natural gas is converted to that of crude oil by calorific value. In this report, the coefficient is 1,255, i.e. 1,255 cubic meters of natural gas is equivalent to one metric ton of crude oil.

Recovery rate

The percentage of oil/gas in place that is recoverable from underground.

Decline rate

A decline in production occurs in an oil or gas field that has been producing for a certain period of time. The natural decline rate is defined as the negative relative change of production over a period of time, without taking into account an increase in production resulting from EOR (enhanced oil recovery) techniques. The general decline rate is defined as the rate of decline in the actual production of such an oil or gas field, taking into account an increase in production from the new wells and EOR techniques.

Water injection

The pressure of the reservoirs continues to drop after the oilfield has been producing for a certain period of time. Water injection refers to the method where water is injected back into the reservoir through the water injection wells to raise and maintain the pressure, increase oil recovery, and thereby stimulate production.

Tertiary recovery

Tertiary recovery is also called enhanced oil recovery and is abbreviated as EOR. It is a method to increase the recovery of crude oil by injecting fluid or heat to physically or chemically alter the oil viscosity or the interfacial tension between the oil and another medium in the formation, in order to displace any discontinuous or hard-to-tap oil in reservoirs. EOR methods mainly include thermal recovery, chemical flooding and miscible flooding.

ASP flooding

A flooding system is prepared with alkali, surfactant and polymer. It not only has a high viscosity but also can create ultra-low water-oil interfacial tension to improve the oil-washing capability.

LNG

Liquid 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.

Horizontal well

A class of directional wells where the wellbore axis is near horizontal, or more or less 90 degrees deviation. A horizontal well may produce at rates greater than a vertical well, enhance recovery efficiency and prolong the production cycle. Meanwhile, the environmental costs or land use problems can be reduced by the use of horizontal wells.

HSE management system

The HSE management system provides a framework for managing all aspects of health, safety and the environment. It is defined by the organizational structure, responsibilities, practices, procedures, processes and resources for implementing health, safety and environmental management.

Occupational disease

A disease or ailment caused due to excessive exposure to dust, radioactive substances, and other toxic and harmful substances in a working environment.

Internet +

China's "Internet +" action plan refers to the application of the internet and other information technology in conventional industries. It is an incomplete equation where various internets (mobile Internet, cloud computing, big data or Internet of Things) can be added to other fields, fostering new industries and business development in China.

Volatile Organic Compounds (VOCs)

In accordance with the *Guidelines for Identification of VOC Sources in Petrochemical Industry* (HB [2015] No.104) and other national standards, volatile organic compound means any organic compound participating in atmospheric photochemical reactions or any organic compound measured or determined according to the prescribed methods.

Carbon capture, utilization and storage (CCUS)

CCUS is a process of separating carbon dioxide (CO_2) from emission sources of industry or related energy sectors and having it sequestrated in geological structures or utilized to prevent CO_2 from being released into the atmosphere. It is a technical system aimed at reducing man-made carbon dioxide emissions.

About this Report

In this report, the expressions "CNPC", "the Corporation", "the Company" and "we" are used for convenience where references are made to China National Petroleum Corporation. This report is presented in Chinese and English. In case of any divergence of interpretation, the Chinese text shall prevail.

Recycled/recyclable paper is used for this report.

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

Address: 9 Dongzhimen North Street, Dongcheng District,
Beijing, P. R. China

Postcode: 100007

www.cnpc.com.cn