



## 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

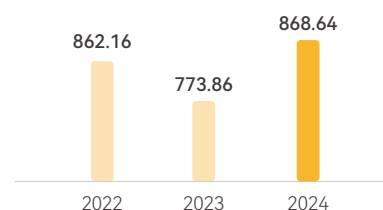
**996.9**

billion cubic meters

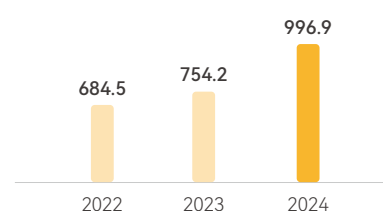
#### Reserves and Operating Data (Domestic)

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

#### Newly proven oil in place (mmt)



#### Newly proven gas in place (bcm)



### Major Discoveries and Achievements in 2024

Oil	Natural Gas
<p>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.</p>	<p>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.</p>
Shale Oil	Shale Gas
<p>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.</p>	<p>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.</p>
Tight Gas	Deep Coalbed Methane (CBM)
<p>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 Xujiache Formation of the Yilong-Pingchang. A new 100-billion-cubic meter reserve area was also confirmed in the Ordos Basin.</p>	<p>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.</p>

### 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 terms reached

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.



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

## Pipeline Construction and Operation

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.

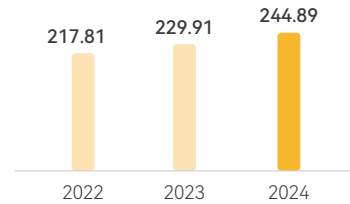
## Asset Management

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 14<sup>th</sup> and 15<sup>th</sup> 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.

Domestic natural gas sales (bcm)



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

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

## 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<sup>2</sup> and totaled more than 50 million m<sup>2</sup> (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<sub>2</sub> 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  
**188.217**  
million tons of crude oil

The full-year new materials  
output exceeded  
**2** million tons

Produced  
**120.607**  
million tons of refined products

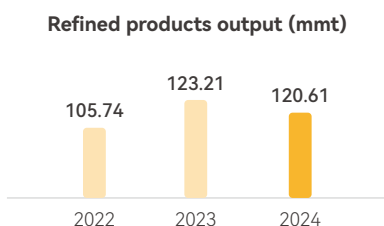
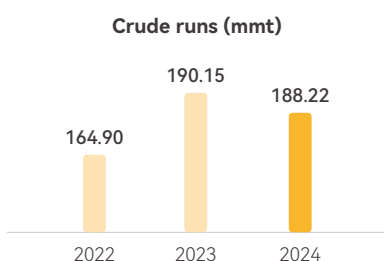
Domestic refined products  
sales totaled  
**119.22** million tons

**8.652**  
million tons of ethylene  
throughout the year



### 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.



#### Refining and Chemicals Operating Data (Domestic)

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



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,  $\alpha$ -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 4<sup>th</sup> uSmile Shopping Festival opened

On June 22, 2024, the 4<sup>th</sup> 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.



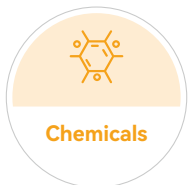
The Company continued to build up crude oil trading capacity and strengthen cross-regional crude oil trading. Benchmark oil trading in Singapore, London Platts eWindow and Shanghai International Energy Exchange Center achieved fruitful results.



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.



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.



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.



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

### 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.

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### 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.