

An aerial photograph showing a lush green landscape with a river winding through it. In the foreground, there is a drilling rig and several white modular buildings. The background features rolling hills and a small village with traditional houses.

**Energize** efforts in finding  
more clean energy

**Harmonize** production and  
environmental protection

**Realize** sustainable growth






China National Petroleum Corporation

**China National Petroleum Corporation (CNPC) is an integrated international energy company, with businesses covering oil and gas operations, oilfield services, engineering and construction, equipment manufacturing, financial services and new energy development.**



## CNPC — A world-leading integrated international energy company

-  Every day we produce **2.83** million barrels of crude oil.
-  We deliver **8.02** billion cubic feet of natural gas every day.
-  Our daily crude runs total **2.92** million barrels.



CNPC plays a leading role in China's petroleum industry.

Data accounting for the nation's total:



Crude production 53%



Natural gas production 75%



Crude runs 35%



Mileage of pipelines operated 70%



Market share of refined products 43%

## International Operations

Oil and gas assets and interests in **33** countries

**1,077** engineering and technical service crews and construction crews working in **66** countries

Materials and equipments exported to **70** countries

International trade volume reached **253** million tons



# Caring for Energy, Caring for You



# Responsible Operation

We strive for harmonious relationships between operation and safety, energy and the environment, corporate and community interests, and employers and employees.

We are committed to finding more clean energy, maximizing resource utilization, and minimizing environmental impact.



More than fifty years of development and practice have made CNPC an international energy company, integrating the business portfolios of both oil companies and oilfield service companies. CNPC is China's most important oil and gas producer and supplier and ranks fifth among the world's top oil companies, with operations covering the entire oil industry chain.





Based on domestic resources, we have overcome exploration and development difficulties under various geological and geographic complexities through technological innovation. We have discovered and developed a number of large oil and gas fields including Daqing, Changqing, Liaohe, Tarim, Xinjiang, and Sichuan. In China, our crude production and natural gas production account for 53% and 75% of the nation's total respectively.



We operate 26 modern refineries in China, as well as 18,000 service stations across the country, providing quality oil products and services to end users.



We have built three LNG terminals in Jiangsu, Dalian and Tangshan. Additionally, we are making progress in exploring more unconventional gas resources such as CBM, tight gas and shale gas.



## Boost Natural Gas Development



Since large-scale natural gas exploration and production began in China's Sichuan Basin in the 1950s, CNPC has discovered 175 gas fields in major petroliferous basins, such as the Sichuan, Tarim, Ordos, Qaidam, Songliao and Bohai Bay basins, with cumulative proven recoverable gas reserves of 2.87 trillion cubic meters and remaining recoverable reserves of 2.44 trillion cubic meters. Four natural gas provinces have been built — Sichuan, Tarim, Changqing

and Qinghai, and three of them, except for Qinghai, have an annual production capacity of more than 10 billion cubic meters respectively. In 2011, CNPC's natural gas production reached 75.6 billion cubic meters, accounting for 75% of the total in China.



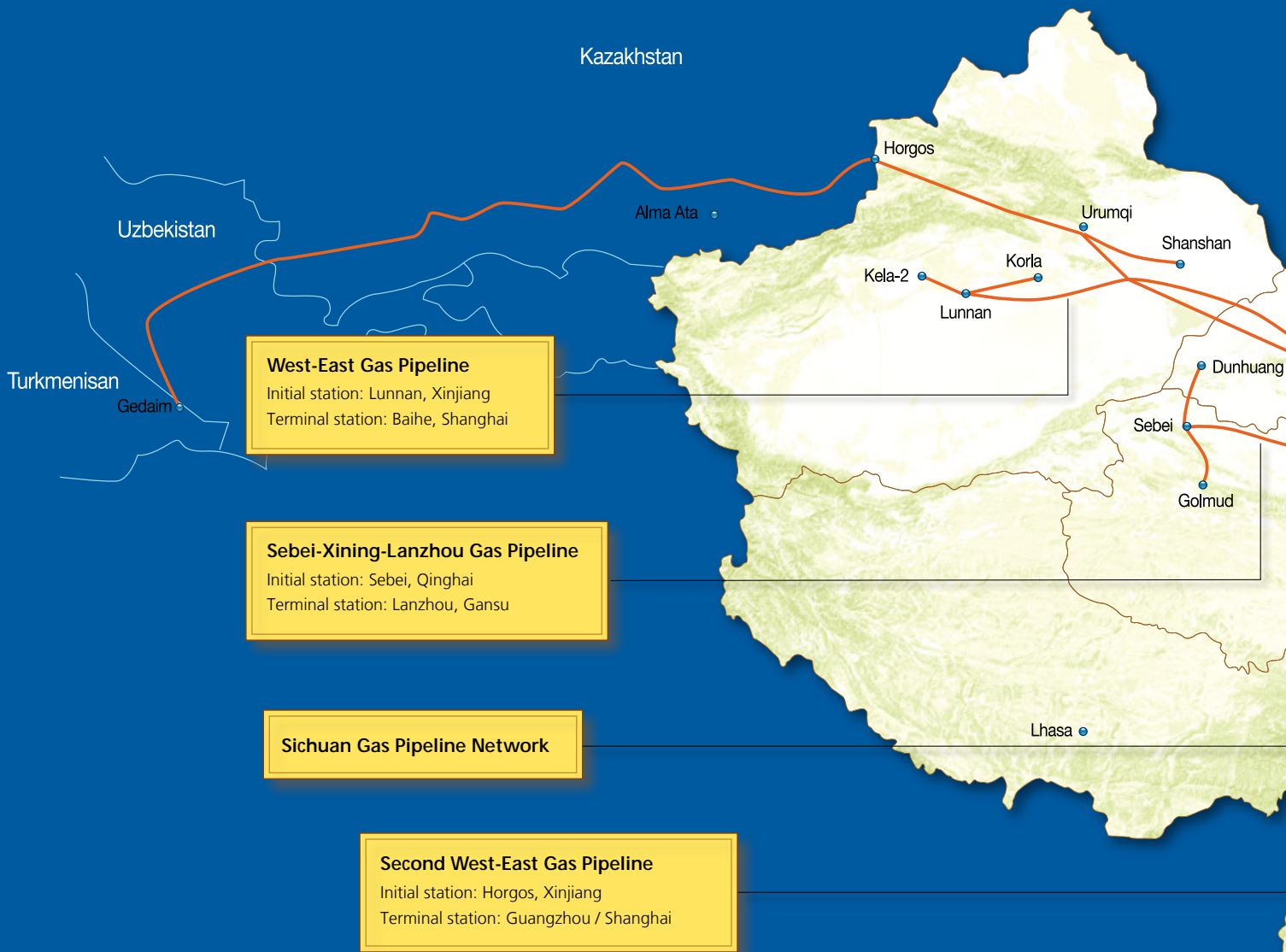
In 1963, CNPC built China's first long-distance natural gas pipeline from Baxian in Sichuan to Chongqing. Today, our natural gas pipeline network has nationwide coverage, including trunk lines such as West-East, Shaan-Jing, Zhongxian-Wuhan and Sebei-Xining-Lanzhou. CNPC operated gas pipelines have a total length of 24,000 kilometers, accounting for over 80% of the nation's total.



In order to optimize pipeline operations and adapt to the rapid development of the pipeline business, an Oil & Gas Pipeline Control Center was established in Beijing on May 8, 2006. At present, 34 of CNPC's in-service long-distance oil and gas pipelines in China, with a total length of more than 40,000 kilometers, have been under the control of the center for integrated dispatch and monitoring. The center is one of such in the world that manages the operation of most long-distance oil and gas pipelines with the most complete transportation media.



# CNPC Operated Gas Pipeline Network

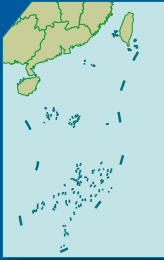




**Second Shaan-Jing Gas Pipeline**  
 Initial station: Jingbian, Shaanxi  
 Terminal station: Beijing

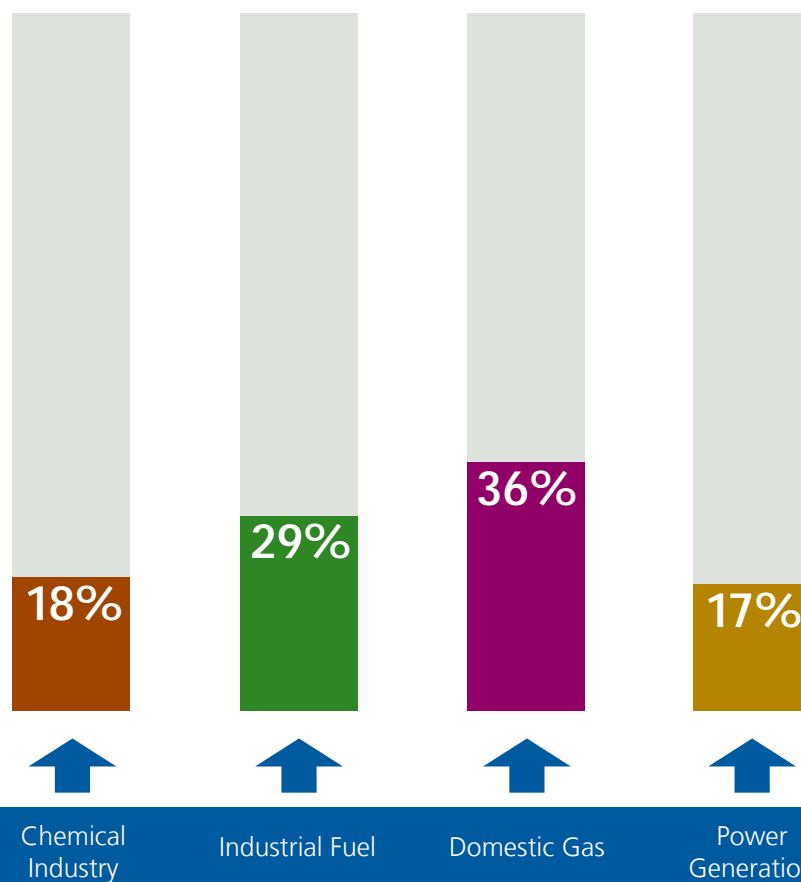
**First Shaan-Jing Gas Pipeline**  
 Initial station: Jingbian, Shaanxi  
 Terminal station: Beijing

**Zhongxian-Wuhan Gas Pipeline**  
 Initial station: Zhongxian, Sichuan  
 Terminal station: Wuhan, Hubei



CNPC supplies natural gas to 28 provinces, municipalities and autonomous regions in China with its sales volume growing at an annual rate of 20%. The gas is mainly used in the natural gas chemical industry, industrial fuel, domestic gas and power generation.

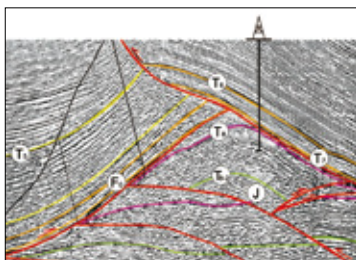
### Natural Gas Usage





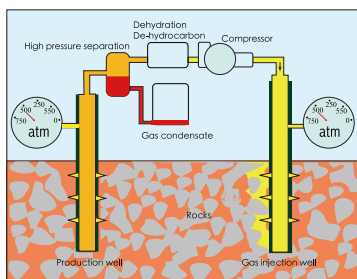
## Natural Gas Technology

CNPC has developed a series of unique development technologies for different types of gas reservoirs as a result of years of research and practice.



### Kela-2 Gas Field in Tarim Basin

Kela-2 is an abnormally high pressure and ultra-high yield gas field at a mountain front high-steep structure that is rare in the world. It has proven gas reserves of 284 billion cubic meters and a formation pressure of 74.5 MPa. We have successfully tackled technical difficulties in the geological evaluation of the mountain front high-steep structure, the drilling and completion of abnormally high pressure wells, and high-pressure gathering and processing, building Kela-2 into a large gas field capable of producing 10.7 billion cubic meters of natural gas a year.

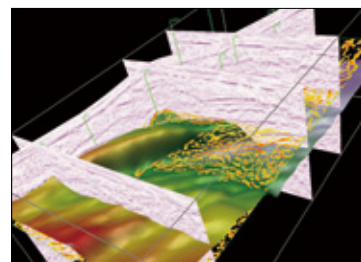


### Tabai Gas Field in Tarim Basin

Tabai is a high-pressure condensate gas field with an average reservoir burial depth of over 5,000 meters, a formation pressure of over 50 MPa and a wax content of more than 15%. We have successfully solved the difficulties in geology and development for condensate gas reservoirs with high wax content, and developed a package of advanced technologies for an integrated high-pressure gas gathering, processing and injection system, high-pressure cyclic gas injection and well drilling in bad ground conditions. Tabai has been developed by cyclic gas injection at a pressure of 50MPa with a daily injection volume of 3.5 million cubic meters, achieving a recovery efficiency of over 50%.

### Sulige Gas Field in Ordos Basin

Sulige is a low permeability, low pressure and low abundance gas field with a reservoir burial depth of 3,300-3,600 meters and a formation permeability of 0.1-1.0mD. The gas resources are difficult to tap in a cost-efficient way by using conventional or even some advanced technologies due to the tight, thin and dispersive heterogeneous reservoirs. Through technological integration and innovation, well location optimization as well as separate layer fracturing and commingled production, single well output has been increased. Surface gathering and transportation at low and medium pressure has been realized by using downhole choking technology. And highly efficient management of the gas field has been achieved via remote control and digitized means. As a result, Sulige Gas Field has been developed in a cost-efficient manner.



# Major Gas Provinces



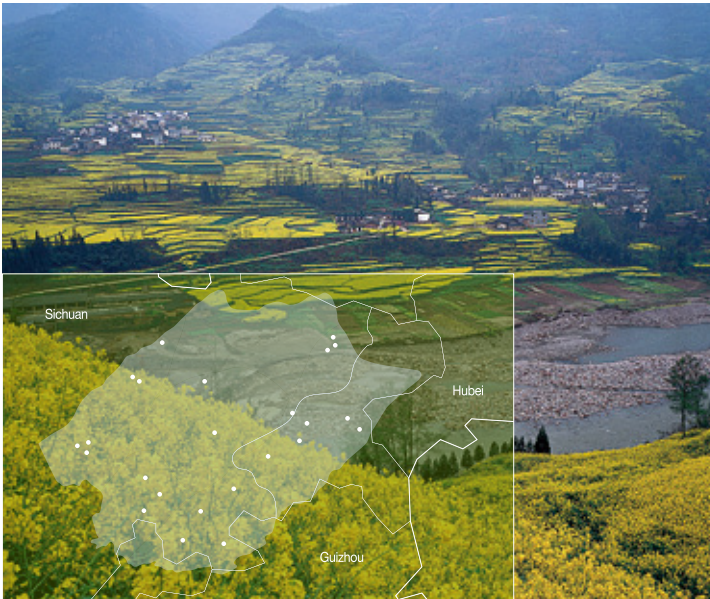
## Tarim Gas Province

Located in the Tarim Basin, the Tarim gas province mainly consists of the Kuche-Tabei, Bachu-Taxinan and Tadong natural gas enrichment zones, where 15 gas fields were proved with recoverable reserves of 593.3 billion cubic meters. Kela-2, Dina-2, Yaha and Hetianhe gas fields have been developed to build an annual production capacity of more than 20 billion cubic meters, making Tarim the biggest gas producing province in China as well as a major source for the West-East Gas Pipeline.

## Changqing Gas Province

Located in the Ordos Basin, Changqing gas province has nine proven gas fields, including Sulige, Jingbian, Yulin, Wushenqi and Zizhou. With recoverable reserves of 940.9 billion cubic meters and an annual production capacity of 25.8 billion cubic meters, Changqing gas province ensures gas supply to the Shaan-Jing Gas Pipeline network.



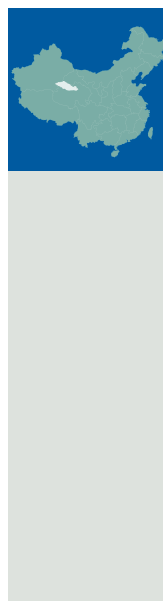


## Sichuan Gas Province

Located in the Sichuan Basin, Sichuan gas province has 112 proven gas fields, including Guang'an, Hechuan, Datianchi, Luojiashai, Moxi, Wolonghe, Weiyuan, Tieshanpo and Dukouhe. With recoverable reserves of 710.2 billion cubic meters and an annual production capacity of about 15 billion cubic meters, Sichuan gas province is the gas source for the Sichuan Gas Pipeline Network and the Zhongxian-Wuhan Gas Pipeline.

## Qinghai Gas Province

Located in the Qaidam Basin, Qinghai gas province has the highest-altitude of its kind in the world. It consists of six proven gas fields, including Sebei-1, Sebei-2 and Tainan. With recoverable reserves of 157.9 billion cubic meters and an annual production capacity of 7.7 billion cubic meters, it ensures gas supply to the Sebei-Xining-Lanzhou Gas Pipeline network.



## Unconventional Natural Gas

Unconventional natural gases, such as CBM and shale gas, are important supplement to conventional hydrocarbon resources in meeting ever increasing energy demands. We exert efforts to explore applicable technologies for CBM and shale gas development and utilization.



Biomass Energy



Fuel ethanol

Aviation biofuel





Dalian LNG Terminal



**Energize · Harmonize · Realize**

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