

INDUSTRY OVERVIEW

We believe that the sources of this information are appropriate sources for such information and have taken reasonable care in extracting and reproducing such information. We have no reason to believe that such information is false or misleading or that any fact has been omitted that would render such information false or misleading. The information has not been independently verified by us, the Sole Sponsor, the Underwriters or any other party involved in the Global Offering and no representation is given as to its accuracy.

ENERGY SUMMARY OF CHINA

Overview

China was the largest primary energy generator in the world in 2007, accounting for approximately 14.9% of the world's annual total primary energy production. In 2009, total primary energy production in China reached 2.8 billion tons of SCE an increase of 5.8% from the previous year. China is also the second greatest primary energy consumer (behind the United States), accounting for approximately 19.5% of the world's total annual primary energy consumption. China's energy demand has been increasing rapidly and is expected to grow expediently in the future.

As a result of the make-up of its energy resources, China's energy consumption has concentrated on coal, which in 2008 accounted for approximately 68.7% of the country's total energy consumption, while petroleum and natural gas only accounted for approximately 18.7% and 3.8%, respectively, of total energy consumption in China according to *China Statistical Yearbook 2009*. This energy structure is different from that of the rest of the world, where the average consumption of oil, natural gas and coal accounted for 34.8%, 23.8%, and 29.4% of the total primary energy consumption, respectively, in 2009. The following tables set forth natural gas and other energy sources as a percentage of total energy production and consumption in China:

Year	Total Energy Production (10,000 tons of SCE)	As Percentage of Total Energy Production (%)			
		Coal	Crude Oil	Natural Gas	Hydro-power, Nuclear Power, Wind Power
2000	128,978	72.0	18.1	2.8	7.2
2001	137,445	71.8	17.0	2.9	8.2
2002	143,810	72.3	16.6	3.0	8.1
2003	163,842	75.1	14.8	2.8	7.3
2004	187,941	76.0	13.4	2.9	7.7
2005	205,876	76.5	12.6	3.2	7.7
2006	221,056	76.7	11.9	3.5	7.9
2007	235,415	76.6	11.3	3.9	8.2
2008	260,000	76.7	10.4	3.9	9.0

Year	Total Energy Consumption (10,000 tons of SCE)	As Percentage of Total Energy Consumption (%)			
		Coal	Crude Oil	Natural Gas	Hydro-power, Nuclear Power, Wind Power
2000	138,552	67.8	23.2	2.4	6.7
2001	143,199	66.7	22.9	2.6	7.9
2002	151,797	66.3	23.4	2.6	7.7
2003	174,990	68.4	22.2	2.6	6.8
2004	203,227	68.0	22.3	2.6	7.1
2005	224,682	69.1	21.0	2.8	7.1
2006	246,270	69.4	20.4	3.0	7.2
2007	265,583	69.5	19.7	3.5	7.3
2008	285,000	68.7	18.7	3.8	8.9

Source: *China Statistical Yearbook 2009*

INDUSTRY OVERVIEW

China's consumption bias towards coal has led to certain environmental problems such as acid rain and air pollution in certain regions of the country and has put additional pressures on China's economic development and environmental protection policies.

Petroleum

China's proven oil reserves were estimated to be 14.8 billion barrels as at the end of 2009; these are mostly located in the northeastern part of the country, though most of the onshore exploration takes place in the western part of the country. About 85.0% of China's oil production currently comes from onshore sources. At present, China is the fifth-greatest oil producing country and accounts for approximately 4.9% of the world's total annual crude oil production. China's growing demand for oil has greatly outstripped its domestic production capabilities and in the early 1990s it became a net oil importer; by the year 2030, China may have to import more than 80.0% of the oil it annually consumes. China is already the second-greatest oil-consuming country (behind the United States) and now accounts for approximately 10.4% of the world's total annual oil consumption. The following table sets forth an historical summary of crude oil production and consumption in China for the indicated periods:

	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>
Production											
(thousand barrels per day)	3,213	3,252	3,306	3,346	3,401	3,481	3,627	3,684	3,743	3,901	3,790
Consumption											
(thousand barrels per day)	4,477	4,772	4,872	5,288	5,803	6,772	6,984	7,410	7,771	8,086	8,625

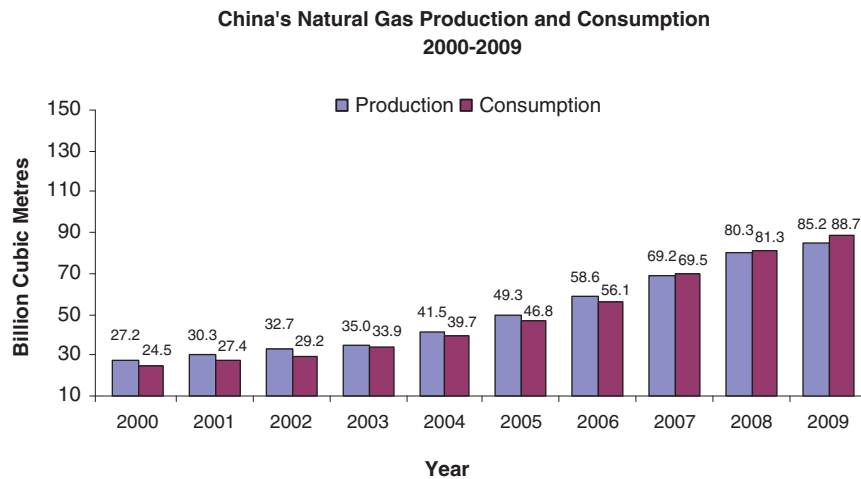
Source: BP Statistical Review of World Energy 2010

Natural Gas

China has proven reserves of natural gas of approximately 2.46 trillion m³ as at the end of 2009. In 2009, it has consumed approximately 88.7 billion m³ of natural gas. Most of China's gas fields are in the northwestern and southwestern parts of the country, though offshore basins are becoming increasingly important. China does not yet heavily rely on natural gas in its energy supply mix, and only obtained around 3.0% of its primary energy supply from natural gas in 2006. China's annual production ranks it in the top ten natural gas producers, and accounted for around 2.8% of the world's total annual gas production. With major new pipelines to bring gas into populous regions in the eastern and southern parts of the country, the production of natural gas in China has leaped from approximately 25.2 billion m³ in 1999 to approximately 85.2 billion m³ in 2009, which represented a growth of 238.0% within the 10-year period. LNG is also expected to play an important role in China's future energy needs, and plans are underway to construct terminals along China's southeastern coast where LNG from Australia can be imported.

INDUSTRY OVERVIEW

Most of the natural gas presently consumed in China is for industrial uses, especially as a chemical feedstock. In 2007, residential use accounted for approximately 19.0% of the natural gas consumption, with another 11.5% used for electric power, gas and water production supply. An historical summary of natural gas production and consumption in China for the indicated periods is set forth below:



Source: BP Statistical Review of World Energy 2010

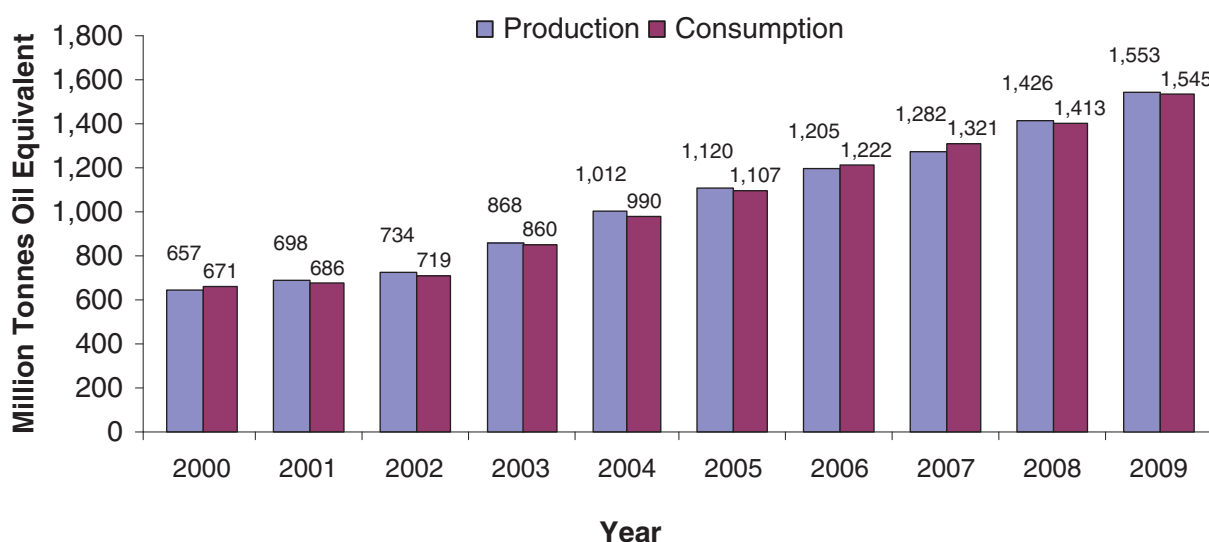
Coal

As at 31 December 2009, China had proven recoverable coal reserves of approximately 114.5 billion tonnes. According to *BP Statistical Review of World Energy 2010*, 54.3% of China's proved coal reserves are composed of hard coal (anthracite and bituminous coal) and 45.7% are composed of brown coal (sub-bituminous coal and lignite). A majority of proved coal reserves in China, that are of good mining conditions, are deposited in northern parts of the country and there are 27 provinces that produce coal in China.

INDUSTRY OVERVIEW

China is presently the world's greatest coal producer and accounts for nearly 45.6% of the world's total annual coal production. China is also the world's greatest coal consumer, accounting for more than 46.9% of the world's total annual coal consumption and a 129.0% increase since 2000. Domestically, coal accounted for approximately 70.0% of China's total primary energy consumption in 2007, where 94.8% of energy was used in industries and 3.1% was for household energy. While coal's share of China's energy consumption will decline in the coming years, the demand for coal is expected to increase as China is becoming increasingly open to foreign investment in the coal sector, particularly in an effort to modernize existing large-scale mines and introduce new technologies into China's coal industry. The following table sets forth the coal production and consumption in China for the period indicated:

**China's Coal Production and Consumption
2000-2009**



Source: BP Statistical Review of World Energy 2010

THE NATURAL GAS INDUSTRY

Overview of Natural Gas

Natural gas is the cleanest of all fuels, as it consists primarily of methane. The main products of combustion of natural gas are carbon dioxide and water vapor, which are the same compounds exhale by humans when breathing. In comparison, coal and oil comprises more complex molecules. A high carbon ratio and higher nitrogen and sulfur contents, therefore a higher level of harmful emissions, including a higher ratio of carbon emissions, nitrogen oxides and sulfur dioxide, will be released during the combustion. In contrast, natural gas is created by methanogenic organisms in marshes, bogs and landfills and it is widely used as fuel source and feedstock for fertilizers.

INDUSTRY OVERVIEW

Fossil Fuel Emission Levels — Pounds per Billion Btu of Energy Input

Pollutant	Natural Gas	Oil	Coal
Carbon Dioxide	117,000	164,000	208,000
Carbon Monoxide	40	33	208
Nitrogen Oxides	92	448	457
Sulfur Dioxide	1	1,122	2,591
Particulates	7	84	2,744
Mercury	0.000	0.007	0.016

Source: EIA — Natural Gas Issues and Trends 1998

Natural gas is a very popular energy source due to its relatively clean nature, which provides numerous benefits. The main benefits of using natural gases are:

- *Environmentally clean.* Natural gas is the cleanest burning fuel as its combustion process is almost perfect where very few byproducts are emitted into the atmosphere as pollutants. No unpleasant soot, ash or odors will be left behind as natural gas burns cleanly. Also, as the transport of natural gas mainly involves pipelines, the need for underground storage tank, which are potential threats for oil spill, soil contamination and costly environmental clean-up, is eliminated. Most importantly, natural gas is non-toxic and the use of natural gas can reduce pollution and maintain a clean and healthy environment by the reduction of smog and acid rain formation as well as improving air quality.
- *Economical and efficient.* As natural gas is supplied directly to the users' facilities through safe, efficient pipeline system, the use of natural gas is considered to be convenient as there will be no disruption of supply during storms or power outages. When the entire cycle of producing, processing, transporting and using energy is considered, natural gas is delivered to each user with a total energy efficiency of approximately 90% and is therefore considered as an efficient fuel.
- *High calorific value and multi-usage.* Calorific value of natural gas is higher than that of coal. High calorific value of natural gas makes it suitable for the manufacturing of certain industrial products such as chinaware and glassware. In addition to being used as energy, natural gas can also be used as feedstock, such as fertilizer.
- *Safe, consistent and reliable.* An odorant is added to natural gas by the producer and when the smell of gas is detected, it signals that a leakage exists and should be fixed. The consistency and reliability characteristics are defined by the fact that the pipeline system that transports natural gas cannot be easily damaged by weather or affected by weather conditions. Also, the worry of supply and delivery arrangement can be eliminated, as natural gas is delivered by a reliable pipeline system and is ever present when users turn on the power.
- *Multipurpose.* Natural gas can have multiple usages. It can provide constant heating to residential households as well as power different types of household electric appliances, new residential uses range from fireplace and air conditioners to microturbines and fuel cells, without being affected by the weather or interruptions to gas delivery schedules.

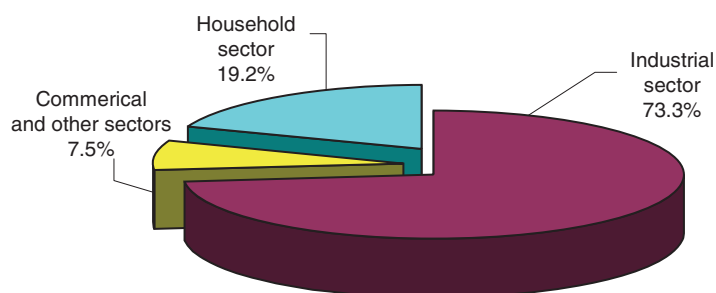
INDUSTRY OVERVIEW

Natural Gas Demand in China

Historically, natural gas was never a dominant fuel in China. However, given China's domestic proved reserves of natural gas, which stood at 2.5 trillion m³ for the year ended 2009, and the environmental benefits of using gas, China has embarked on a major expansion of its gas infrastructure. According to the *BP Statistical Review of World Energy 2010*, Chinese consumption of natural gas in 2009 ranked fifth in the world and grew by 9.4% from 2008. China has maintained a CAGR of over 15% in the ten-year period from 1999 to 2009.

Facing an ever-increasing demand for energy and dwindling supply of new sources of crude oil, China, like other countries, treats exploration, production and consumption of natural gas as an important alternative that can improve the energy consumption composition of the country. Nonetheless, China is behind in these efforts as compared to other countries. In 2009, the total natural gas volume consumption of China amounted to approximately 79.8 million tonnes oil equivalent, where as the total primary energy consumption of China amounted to approximately 2,177 million tonnes oil equivalent. From 2000 to 2010, the percentage of natural gas in the energy consumption composition of China ranged generally from 2.4% to estimated 5.3%, which is significantly below the global and Asian average levels of 25.0% and 8.8%, respectively in 2010. With increasing consumption demands in China for natural gas in power generation, industrial use and urban fuels, the PRC Government anticipates the total natural gas demand will reach approximately 203.7 billion m³, boosting the share of natural gas as part of total energy consumption to 10.0% by 2020.

Natural gas is used in China mainly for electricity generation, industrial and urban consumption, and petrochemical feedstock. According to the *China Statistics Year Book 2009*, the extraction of petroleum and natural gas and the manufacture of raw chemical materials and chemical products account for a major proportion of natural gas consumption in China. In 2007, the volume consumed in these sectors accounted for approximately 45.2% of nationwide natural gas consumption. The following diagram sets out the percentage composition of natural gas consumed by different sectors in 2007:

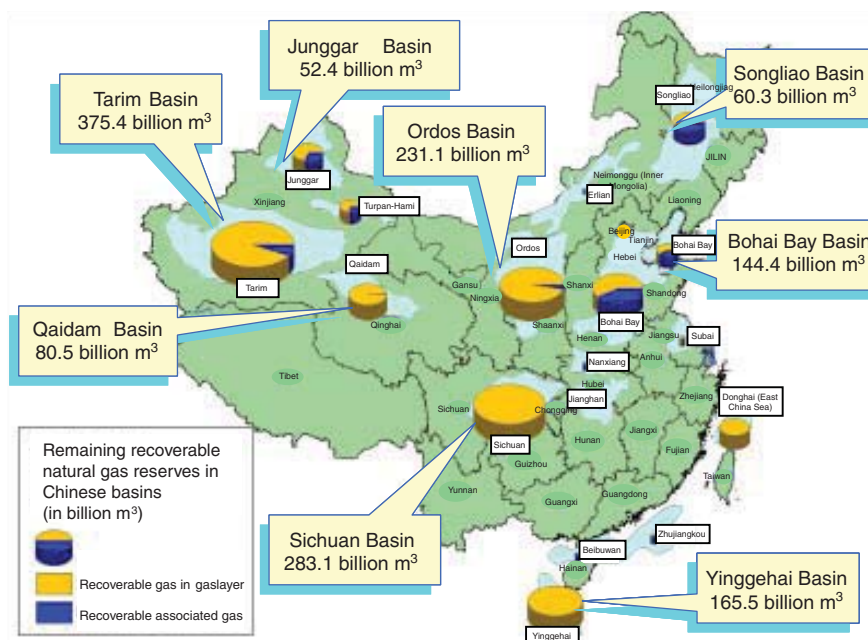


Natural Gas Supply in China

China's production of natural gas has rapidly increased since 1990s. Production totaled 25.2 billion m³ in 1999, 41.5 billion m³ in 2004, and reached 85.2 billion m³ in 2009, with 6.4% growth from the previous year and a growth rate of more than three times during the ten-year period. In 2009, China possessed approximately 2.5 trillion m³ natural gas proved reserves.

INDUSTRY OVERVIEW

Most natural gas reserves exist in the mid-western parts of China, where major gas regions, such as Tarim, Qaidam, Shaanxi, Gansu, Ningxia and Sichuan, are the traditional and largest production areas in China, accounting for almost 87.0% of the nation's total reserves. The following map indicates the major gas fields and their reserves.



Source: *Institute of Energy Economics, Japan 2003 (based on 1994 official figures)*

The statistics showed that China's apparent consumption of natural gas in 2009 amounted to 88.7 billion m³, surging by 9.4% year-on-year. It is estimated that the domestic shortage of natural gas will reach more than 40 billion cubic meters by the end of 2010. Natural gas consumption saw annual double-digit growth, amounting to 88.7 billion m³ in 2009, which is more than three times that of 2000. China's domestic output was 85.2 billion m³ in 2009, increasing by 6.4% year-on-year. The gap between supply and demand hit nearly 3.5 billion m³ hence China became a net importer of natural gas.

In addition, the PRC Government has undertaken feasibility studies and will continue participating in construction projects for transporting natural gas to China from adjacent countries. Countries such as Kazakhstan, Russia, Turkmenistan and Uzbekistan were endowed with rich natural gas resources with an aggregate amount of 56.0 trillion m³ in proven natural gas reserves in 2009, accounting for 29.9% of the world's total proven natural gas reserves. Russia, in particular, had 44.4 trillion m³ proven natural gas reserves in 2009. It is estimated that over the next 5 years, China will import 40 to 60 billion m³ of natural gas from these countries per annum.

In recent years, the production of natural gas in China has increased rapidly and substantially in response to both the rapid increase in demand for clean energy led by national economic development and an increase in proven reserves of natural gas in China. In 2000, China produced a total of 27.2 billion m³ of natural gas. By the end of 2009, however, China has increased its annual production of natural gas to 85.2 billion m³, representing a CAGR of 13.5% for the eight-year period. With the recent completion of the main and branch pipelines of the Second West-East Natural Gas Transmission Pipeline (西氣東輸二期) and the construction of the Offshore Gas Pipelines (海氣登陸), natural gas production in China is expected to grow continuously. In 2009, all gas fields and oil fields in China produced a total of 85.2 billion m³ of natural gas.

INDUSTRY OVERVIEW

As at May 2009, there are approximately 839 natural gas companies in China on the supply side. Among all, the big three, namely, CNPC (China National Petroleum Corporation), Sinopec (China Petroleum and Chemical Corporation) and CNOOC (China National Offshore Oil Corporation), accounted for more than 90% of the total national production. In particular, CNPC accounted for more than 70% of total national production in 2008.

The country's largest reserves of natural gas are located in the southwestern region of China, necessitating a significant further investment in pipeline infrastructure to carry it to eastern cities. Natural gas has therefore to be transported through long-distance natural gas pipelines to urban areas, where local natural gas transportation and distribution providers sell natural gas to end-users through urban branch pipeline networks. At present, the nationwide onshore gas transportation pipeline networks has been gradually established with the First West-East Natural Gas Transmission Pipelines (from Luntai, Xinjiang to Shanghai), Second West-East Natural Gas Transmission Pipelines (from Turkmenistan, Xinjiang to Guangdong), Zhong-Wu Pipeline (from Zhong County, Chongqing to Wuhan), Se-Ning-Lan Pipeline (from Germu to Xining to Lanzhou), the first Shaan-Jing Pipeline (from Shaanbei to Beijing) and the second Shaan-Jing Pipeline, which is still under construction.

The First West-East Natural Gas Transmission Project

The First West-East Natural Gas Transmission Project, which formally began commercial operation on 31 December 2004, is a key foundation construction project of China. Targeting the Yangtze River Delta Area, the First West-East Natural Gas Transmission Pipeline (西氣東輸一期) is intended to transport natural gas produced from gas fields in the Tarim Basin in Xinjiang Province and Chang Qing Gas Fields (長慶氣田) in the region of Shaanxi, Gansu and Ningxia provinces to central and eastern parts of China where the need for clean energy is imperative. The total length of the First West-East Natural Gas Transmission Pipeline is approximately 4,000 km with a designed annual transportation capacity of 12 billion m³. The project operates by extracting natural gas resources from the Tarim Basin, with the Chang Qing Gas Fields supplementing and regulating gas sources for the gas supply to provinces and cities such as Shanghai, Jiangsu, Zhejiang, Anhui and Henan. It starts from Lunnan in Tarim and transverses from west to east through Xinjiang, Gansu, Ningxia, Shaanxi, Shanxi, Henan, Anhui, Jiangsu to Shanghai.

The Second West-East Natural Gas Transmission Project

The construction of the Second West-East Natural Gas Transmission Project, which began in February 2008 and is yet to be completed, is also a key foundation construction project of China. Targeting the Zhujiang Delta Area, the Second West-East Natural Gas Transmission Pipeline (西氣東輸二期) is intended to transport natural gas produced from gas fields of neighboring countries in Central Asia, such as Turkmenistan, to the central and southern China where clean energy is urgently required. The total length of the Second West-East Natural Gas Transmission Pipeline is approximately 9,100 km with a designed annual transportation capacity of 30 billion m³. The project is based on the natural gas resources of Turkmenistan and Kazakhstan for the gas supply to provinces and cities such as Henan, Anhui, Hubei, Hunan, Guangdong and Guangxi. It joins the Central Asia natural gas pipeline in Khorgos and transverses from west to east through Xinjiang, Gansu, Ningxia, Shaanxi, Henan, Anhui, Hubei, Hunan, Jiangxi, Guangxi and Guangdong.

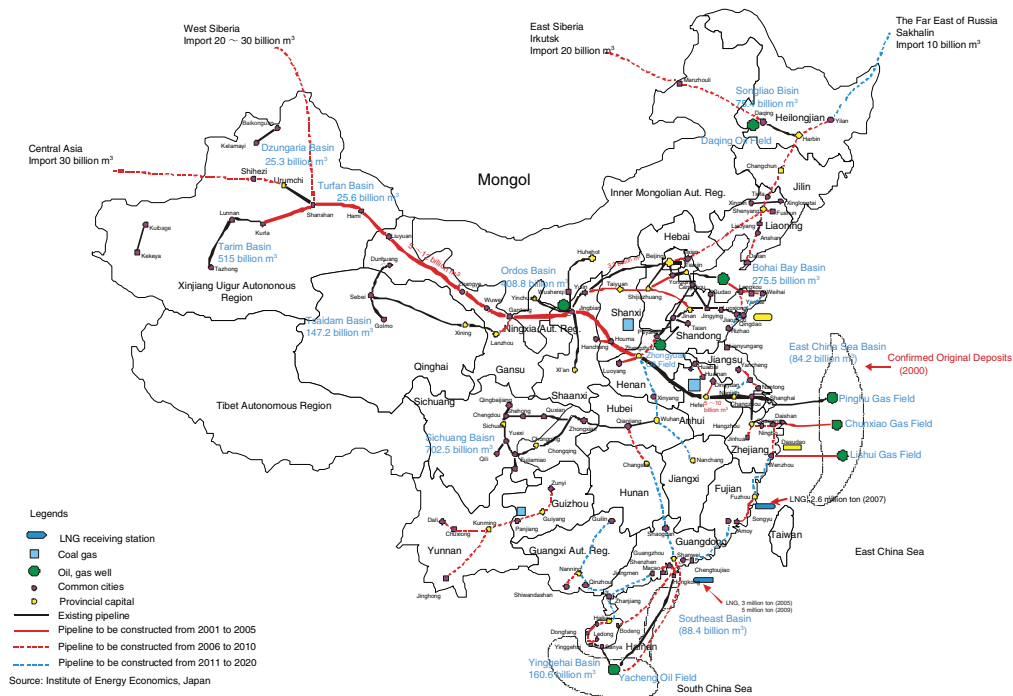
Offshore Gas Pipelines (海氣登陸)

In addition to the onshore natural gas transportation pipelines, the Offshore Gas Pipelines (海氣登陸) can transport the offshore natural gas to the economically well-developed coastal regions.

INDUSTRY OVERVIEW

China National Offshore Oil Corporation is planning to construct a north-south trans-provincial coastal natural gas pipeline network system covering the Bohai Economic Region, Changjiang Delta Area and Zhujiang Delta Area. Upon completion, the Offshore Gas Pipelines can transport natural gas from the offshore gas fields of Liaodong Bay near Jinzhou, Bohai West near Tianjin, Pinghu near Shanghai, Yacheng near Nanhai and Beibu Gulf in Guangxi to the economically well-developed coastal regions.

Existing and Planned Natural Gas Pipelines in China



Cost and Pricing of Natural Gas in China

Natural gas is used as feedstock for petrochemical industries and as fuel for residential, commercial, heating and cooling and other industrial purposes.

In China, the natural gas providers, including us, currently price natural gas supplied to the end-users by the cost-plus pricing method. As such, the selling price chargeable to the end customers of natural gas is mainly the sum of ex-factory price and transportation cost, both of which are regulated by the authorities. China's natural gas reserves are mostly located in the western regions of the country with complicated geological terrains and conditions, which include thin production layers, low gas density, deep gas reserves and unfavorable land surface conditions. These geological complications significantly increase the costs of natural gas exploration and exploitation in China. Additionally, because the natural gas reserves in China are mainly located in the western and central regions, which are far away from the economically well-developed eastern regions that consume most of the natural gas produced, natural gas suppliers have invested significant amount of capital and resources to construct long-distance pipeline networks to transport natural gas from the western regions to the eastern regions of the country. The significant capital investment on the construction of pipelines coupled with costs associated with the operation and maintenance of the natural gas pipelines further increases the cost of selling of natural gas.

INDUSTRY OVERVIEW

The price of natural gas generally consists of two elements: the connection charges and the natural gas fees. For residential customers, natural gas suppliers generally charge a flat connection charge whereas for industrial and commercial users, the determination of connection fees is based on the designed capacity of the gas appliances and equipments installed at the customers' premises.

Natural gas fees are based on actual usage on a per cubic meter basis. The price of natural gas comprises pre-determined ex-factory price and pipeline transportation cost. The pre-determined ex-factory price, an effective base price, is set by the NDRC and is generally adjusted every year. The price of natural gas that a gas supplier may charge is subject to price ceilings imposed by respective local pricing control authorities. Any attempt to adjust the price of natural gas must receive prior approval from the relevant authorities.

During the Track Record Period, the pre-determined ex-factory price of natural gas were generally lower than that of the regulated price of coal gas in Henan Province, although it has almost attained parity with the price of coal gas in 2010 for industrial users.

The following table sets forth the NDRC pre-determined ex-factory price for natural gas as compared to the Henan Development and Reform Commission regulated price for coal gas in Henan Province from 2005 to 2010:

	Natural Gas		Coal Gas
	Other Users ⁽¹⁾	Industrial Users	All Users
2005	0.52	0.52	0.85
2006	0.56	0.56	0.85
2007	0.56	0.56/0.96 ⁽²⁾	0.85
2008	0.56	0.96	0.85/1.00 ⁽²⁾
2009	0.616	0.96	1.00/1.30 ⁽²⁾
2010	0.616/0.869 ⁽²⁾	0.96/1.309 ⁽²⁾	1.30

(Unit: RMB/m³)

Notes:

(1) Include residential and commercial user among others.

(2) Prices were adjusted in their relevant year.

URBAN PIPELINED GAS INDUSTRY

Development of Urban Pipelined Gas Industry

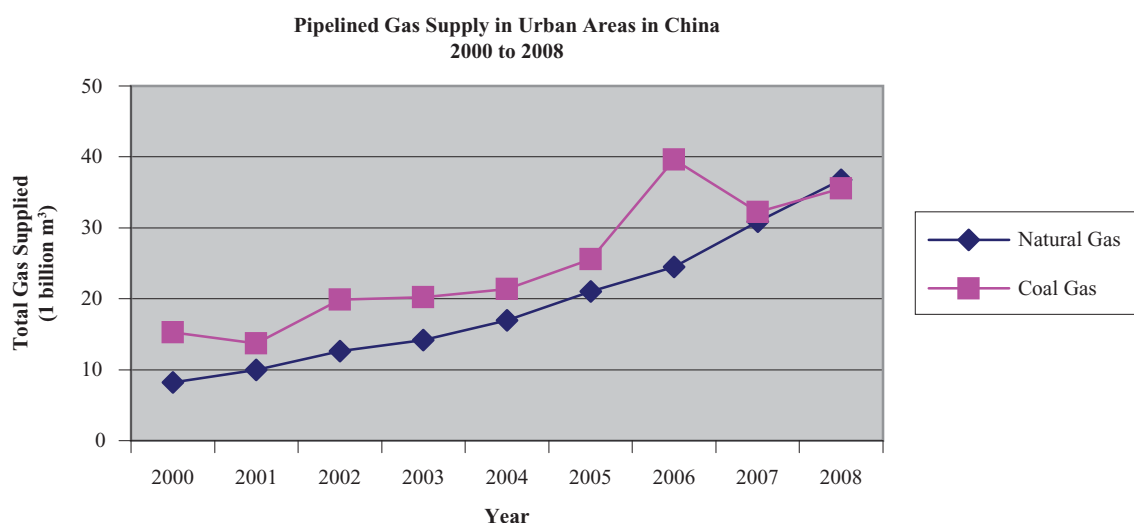
The demand for natural gas and coal gas in large cities has recently grown rapidly. In light of the growing trend, China stipulated a policy to raise the share of natural gas in the country's Eleventh Five-Year Plan (2006-2010).

Historically, the growth in pipelined gas consumption in urban areas throughout China, including Henan Province, has been hindered by the price structure of pipelined gas, the inefficiencies of pipelined gas enterprises and the lack of capital. Natural gas prices rose due to long-distance transport and high production costs. In order to promote and develop urban consumption of natural gas, China plans to reform the existing pipelined gas price structure, enhance the efficiency of state-owned pipelined gas enterprises and attract foreign investments. Pipelined gas enterprises will inevitably face market competition after the monopoly structure and government subsidies are gradually phased-out.

INDUSTRY OVERVIEW

As part of its plan to reduce pollution and to enhance energy utilization rate, the PRC Government has, by implementing policies and constructing infrastructures over the past few years, encouraged the use of natural gas in large and medium-sized cities and the use of LPG in suburban areas where natural gas supply networks are not in place. The statistics published by the *Ministry of Construction of China* indicates that in 2008, the total natural gas supply in urban areas was 36.8 billion m³. The natural gas supply in urban areas maintained a higher growth compared to other gases, an increase of approximately three times from 2000 to 2008, indicating the country's steady progress in replacing other gas energies, such as coal gas with natural gas in urban areas in recent years. According to *China Urban Construction Statistics Yearbook 2008*, from 2000 to 2008, the users with access to natural gas in urban areas of China increased from approximately 25.8 million to 121.7 million, representing a growth rate of over four times within the eight-year period. The total natural gas consumption by residential natural gas users in urban areas of China increased from approximately 2.5 billion m³ in 2000 to approximately 7.8 billion m³ in 2008, representing an increase of over three times.

The following chart illustrates the pipelined gas supply in urban areas in China from 2000 to 2008:



Source: *China Urban Construction Statistics Yearbook 2008*

INDUSTRY OVERVIEW

It was estimated that, in 2010, only 270 out of 662 prefecture-level cities (地級市) and sub-prefecture-level cities (縣級市) in China will be installed with urban natural gas transportation pipelines. The top three provinces in China which have the greatest length of gas supply pipeline are Jiangsu, Sichuan and Shandong, respectively, where the three provinces in China with the least gas pipeline coverage are Gansu, Yunnan and Guizhou, respectively. The following table sets forth the top five and bottom five gas pipeline coverage provinces, as compared to Henan, in China.

Natural Gas Coverage in Provinces of China (Year 2008)

Province	Length of Gas Supply Pipeline (in km)	Total Gas Supply (in 10,000 m ³)	Number of Household with Access to Gas (in unit)
Top Five			
Jiangsu	19,178	299,726	2,884,950
Sichuan	18,064	594,963	4,102,026
Shandong	15,327	257,433	3,000,575
Shanghai	12,877	298,601	3,103,121
Chongqing	10,853	187,936	2,454,315
Bottom Five			
Hainan	1,025	14,947	139,202
Qinghai	764	118,383	76,045
Gansu	648	53,394	524,118
Yunnan	149	743	11,950
Guizhou	85	1,378	18,655
Henan	9,759	101,008	1,661,931

Source: *China Urban Construction Statistics Yearbook 2008*

Gas-related constructions such as the construction of urban gas distribution pipeline networks, introduction of new gas consumption projects and expansion of gas-driven utilities which involve large amount of capital investment will delay the growth of natural gas consumption. As such, the PRC Government will encourage interested parties to raise funds from various channels for the construction of natural gas transportation pipeline and gas consumption projects. The PRC Government will also encourage cooperative modes of operation and foreign investments to participate in the construction of natural gas transportation pipeline or in the downstream gas consumption projects such as in power generation and chemical industries.

Pipelined Gas Supply and Consumption in Henan Province

Henan Province is located in central China with a total population of approximately 99.7 million in 2009. The total quantity of natural gas supplied to Henan Province in 2008 amounted to approximately 1.0 billion m³, which accounted for 2.7% of the nation's total supply of natural gas. Henan Province recorded an annual GDP of RMB1.8 trillion in 2008 according to the *Henan Statistical Yearbook 2009*, ranking the fifth among all provinces and municipalities in China in 2008. As at the end of 2008, there were 17 prefecture-level cities and 21 sub-prefecture-level cities in Henan Province, among which 5.86 million persons had access to natural gas.

Demand for natural gas in Henan Province has increased rapidly from 720 million m³ in 2000 to 1.5 billion m³ in 2005, an average consumption rate of 41.5% per annum. Demand for natural gas in Henan Province is predominately derived from industrial fuel, petrochemical industry and for residential and city gas utilities. Henan local government's *Eleventh Five-Year Plan (2006-2010)* estimated that natural gas demand will reach 14.6 billion m³ in 2010.

INDUSTRY OVERVIEW

Henan Province's two main exploration sites, Zhongyuan Oil Field and Henan Oil Field, have already entered into late stages of its exploration development. Due to geological complexities of Zhongyuan Oil Field, raising production output of natural gas will be difficult within a short period of time, therefore creating a large supply gap in the market. Henan Province in 2007 experienced a gas shortfall of more than 500 million m³. By 2010, shortfall in the supply of natural gas in Henan Province is expected to reach more than 5 billion m³. Demand for natural gas in Henan Province has surpassed its production capacity, therefore the current supply cannot satisfy the consumption level.

Ever since the West-East Natural Gas Transmission Project traversed through Henan Province, not only did it promote the development of the natural gas industry, but it also boosted the usage of other gases, such as man-made coal gas, CBM, biogas and LPG in order to resolve the supply shortage in Henan Province. During the *Eleventh Five-Year Plan* period, Henan Province continued to use natural gas supplied from the First West-East Natural Gas Transmission Pipeline, the Second West-East Natural Gas Pipeline and Ordos pipeline as its main gas pipelines. Coal gas from Yima County, CBM and biogas are used as auxiliary gases to supplement the supply gap of the main pipelines, for the efficient allocation of scarce resources to meet the consumption level of Henan Province.