

Natural Gas and Pipelines

With a focus on strengthening the connectivity and coordination of production, transportation, marketing, storage and trade activities, the company's natural gas and pipeline operations stabilized supply and achieved double-digit sales growth in 2018, thanks to the progress made in pipeline network optimization, intelligent pipeline system, pipeline connectivity projects and natural gas marketing network improvement.

Oil and Gas Pipelines

The company pushed ahead with its pipeline network optimization in 2018. Our crude transportation volume hit a new historical high through reinforced planning management on crude pipelines. The refined products pipelines have been upgraded to meet the demand for transporting National VI fuel oil. As to the natural gas pipelines, we enhanced flow allocation and inventory management to meet increased wintertime demand, ensuring adequate and stable supply.

By the end of 2018, CNPC-operated pipelines in China totaled 86,734 kilometers, including 20,736 kilometers for crude oil, 54,270 kilometers for natural gas, and 11,728 kilometers for refined products, accounting for 69.9%, 75.2% and 42.8% of the nation's total respectively.

Key Pipeline Projects

The company's key pipeline projects gathered pace and made significant headway in 2018. A number of key projects aimed at strengthening gas pipeline connectivity went on stream. The Jinzhou-Zhengzhou Refined Products Pipeline (trunk line) was completed; the Qinzhou-Nanning-Liuzhou Refined Products Pipeline, Kunming Branch of the Yunnan Refined Products Pipeline and Fushun-Jinzhou Refined Products Pipeline became operational; the Russia-China Gas Pipeline (Eastern Route) proceeded smoothly; and the Fujian-Guangdong Branch of the Third West-East Gas Pipeline started construction.

Natural Gas Pipeline Connectivity Projects

In view of bolstering the value chain of our natural gas operations, we proceeded with the gas pipeline connectivity projects, as well as underground gas storages and LNG terminals, to build a gas pipeline network that is well planned, wide-reaching, highly integrated, safe and efficient. We worked with Sinopec and CNOOC on 24 pipeline connectivity projects. These projects are designed to tackle connectivity issues in natural gas transportation and scheduling and optimize national and regional pipeline systems, in a bid to boost natural gas supply.



National VI-compliant pipeline upgrading

Under the national standards for motor vehicle gasolines and diesel fuels, National VI-compliant products have been available in the domestic market since January 1, 2019. National VI standards impose more rigorous sulfur content requirements, as compared with National V, in a bid to further reduce pollutant emissions.

Pipeline upgrading is a prerequisite for the implementation of the new fuel regulations. Necessary upgrades and replacements were made efficiently, thanks to coordinated efforts among member companies. The Lanzhou-Zhengzhou-Changsha, Lanzhou-Chengdu-Chongqing, and Yunnan refined products pipelines have been revamped. By the end of 2018, all of the company's refined products pipelines had been ready for delivering National VI-compliant gasolines and diesel fuels to the market.

Qinzhou-Nanning-Liuzhou Refined Products Pipeline

Located in Guangxi, the pipeline runs 363 kilometers to deliver refined products from Guangxi Petrochemical to Liuzhou Oil Depot. The pipeline was put into operation in August 2018 with a design capacity of 5 million tons per year. It will enable better energy security for Guangxi's economic development by improving the energy mix and refined products deliverability in the region.

Fushun-Jinzhou Refined Products Pipeline

The pipeline is designed to link four large refineries in Northeast China, i.e. Fushun Petrochemical, Liaoyang Petrochemical, Liaohu Petrochemical and Jinzhou Petrochemical. The pipeline runs 431 kilometers with a design capacity between 3 million and 7.5 million tons per year. Becoming operational in September 2018, the pipeline, together with the Jinzhou-Zhengzhou Pipeline and the Lanzhou-Zhengzhou-Changsha Pipeline, will create an important refined products pipeline network in China.



Natural Gas Sales

There was a surge in natural gas consumption in 2018, as a result of China's heightened air pollution control, growing demand from natural gas-fueled power generation, headway made in implementing the "Natural Gas as An Alternative to Coal" Initiative and "2+26 Cities" Clean Winter Heating Initiative. Leveraging these opportunities, we worked proactively with our clients in optimizing sales planning and resources allocation and managed to increase the supply of pipeline gas and imported LNG in response to market demand. In 2018, we sold 172.4 billion cubic meters of natural gas in China, up 13.6% year-on-year.

We continued to explore the market and expand our distribution network to optimize the overall value chain, effectively ensure smooth sales channel and enable integrated marketing throughout the upstream and downstream sectors. By the end of 2018, our gas distribution network covered 32 provinces, municipalities and autonomous regions and maintained a leading position in the northern, southwestern, northwestern, central and northeastern parts of China, while gaining a larger presence in the eastern and southern markets. We secured a total of 275 new clients in 2018, adding 2.1 billion cubic meters of natural gas sales.

In 2018, our end-user markets of natural gas grew rapidly, registering gas sales of 24.6 billion cubic meters, up 14.5% year-on-year. By the end of 2018, we owned and operated 445 CNG filling stations, 393 LNG filling stations and 411 LNG refueling points, ranking top in terms of the number of CNG and LNG filling stations in China.

Liquefied Natural Gas (LNG)

The company stepped up to strengthen its natural gas peak-shaving capability. Based on a holistic approach to LNG operation planning, we built new LNG facilities and expanded existing ones to create an offshore natural gas resource hub. Shenzhen LNG peak-shaving station, Tangshan and Jiangsu LNG Terminal expansion project were under construction. These peak-shaving systems have helped us ensure ample gas supply during peak consumption periods. In 2018, our three LNG terminals in Jiangsu, Dalian and Tangshan unloaded 15.13 million tons of LNG, up 45% from a year earlier.

The installed capacities of our 21 LNG plants in Hubei, Sichuan and Shaanxi, etc. amounted to 22.9 million cubic meters per day, accounting for approx. one-fifth of China's total LNG capacity. We processed 1.06 million tons of LNG for the full year, up 16.9% year-on-year.