

Appendix

Milestones

On February 5, 2002, the press conference for the West-East Gas Pipeline Project was held in the Media Center in Beijing. At the conference, it was announced that the feasibility study report of the West-East Gas Pipeline Project had been officially approved by the State Council, and that CNPC could start river-crossing work with long construction periods and pilot work in the water network in regions south of the Yangtze River.

On July 4, 2002, the groundbreaking ceremony of the First West-East Gas Pipeline was held in the Great Hall of the People. Starting from Lunnan, Xinjiang, and passing through 10 provinces (municipalities and autonomous regions), it was China's longest gas pipeline with the largest investment, the largest delivery capacity, and the most complex construction conditions at the time.

2002



On June 10, 2003, the 518 m-long tunnel across the Yellow River in Yanshuiguang, one of the three major control works of the First Line, was completed. Located at the Shaanxi-Shanxi Grand Canyon between Yanchuan, Shaanxi Province and Yonghe, Shanxi Province, it was the first tunnel for the gas pipeline across the Yellow River.

On July 26, 2003, the 1,992 m-long Shield Tunnel in Sanjiangkou of the Yangtze River was fully completed. It was one of the three major control works of the First Line.



2003

On August 27, 2003, the development project of Kela-2 Gas Field was started.

On September 15, 2003, pipe jacking across the Yellow River in Zhengzhou, the last major control work of the First Line, was completed. It was the first project to apply long-distance pipe jacking technology to underwater pipeline-crossing in China.

On November 20, 2003, the main pipeline for the western section of the First Line was fully completed.

In January 2004, the eastern section of the First Line was completed and put into operation.

On March 1, 2004, the toll-free number (8008200375) was set to report emergencies related to the project.

On July 1, 2004, two sets of high-power compressor units were installed at Jingbian Compressor Station. It was the first time for China to successfully install high-power compressor units in long-distance, large-diameter natural gas pipelines.

On August 3, 2004, the last welding joint for the First Line was welded in Yumen, Gansu Province, marking the completion of welding, pressure testing, and drying for the trunk line in the west section of the First Line.

2004



On September 6, 2004, natural gas delivered from Tarim reached Jingbian Station in Shaanxi Province, connecting gas sources in Tarim Gas Field and Changqing Gas Field.

On October 1, 2004, the western section of the First Line was fully completed and put into operation, indicating the overall operation of the First Line, as gas from Tarim and Changqing gas fields was delivered to the eastern section.

On October 24, 2004, the fuel-driven compressor unit at Jingbian Station, the first compressor unit of the project, was ignited.

On October 28, 2004, high-yield gas flow was obtained from Well 2-7 in Kela-2 Gas Field, with daily gas production of 500 cubic meters. It is the first development well completed at the gas source of the project.

On December 1, 2004, Kela-2 Gas Field was put into production, and started to supply natural gas to the project.

On December 30, 2004, a conference was held in the Great Hall of the People in Beijing to celebrate the operation of the First Line, indicating the official commercial operation of the project.

On May 23, 2006, at the National Soil & Water Conservation Working Conference held by the Ministry of Water Resources, the project was ranked the first among the third group of 34 soil and water conservation demonstration projects for development and construction.

On June 9, 2006, the project was granted the first award of the National Environmental Friendly Project.

On December 16, 2006, Huai-Wu Branch Line, a cross-link line connecting the First West-East Gas Pipeline and Zhongxian-Wuhan Gas Pipeline, was put into trial operation.

2005

On January 13, 2005, the news on the *First West-East Gas Pipeline's commercial operation* was selected as one of the "top 10 sci-tech news events of 2004" by the Chinese Academy of Sciences and the Chinese Academy of Engineering.

On March 12, 2005, Ji-Ning Cross-link Line, connecting the First West-East Gas Pipeline and the Second Shaan-Jing Gas Pipeline, successfully crossed the Weiyun River, with a crossing length of 1,434 meters. It was the longest directional drilling crossing project with the largest pipeline diameter in China at the time, and also the longest river crossing project with a diameter of 1,016mm in Asia.

On July 7, 2005, Jingbian Compressor Station was connected with the Second Shaan-Jing Gas Pipeline.

On August 3, 2005, the trunk line of the First Line was completed.

2006



On March 1, 2007, the feasibility study for the Second West-East Gas Pipeline Project was launched.

On April 25, 2007, Yingmaili Gas Field, the second largest major gas field of the project, was completed and put into production. 1.475 billion cubic meters of natural gas and 647,700 tons of condensate were produced in 2007.

On June 21, 2007, Ji-Ning Cross-link Line, connecting the First West-East Gas Pipeline and the Second Shaan-Jing Gas Pipeline, was fully completed. As Lan-Yin, Huai-Wu and Ji-Ning cross-link lines were completed and put into operation, the first and second Shaan-Jing Gas Pipelines, Sebei-Xining-Lanzhou Gas Pipeline, First West-East Gas Pipeline and Zhongxian-Wuhan Pipeline were connected, and Xinjiang, Changqing, Sichuan and Qinghai gas provinces were connected.

2007

2008



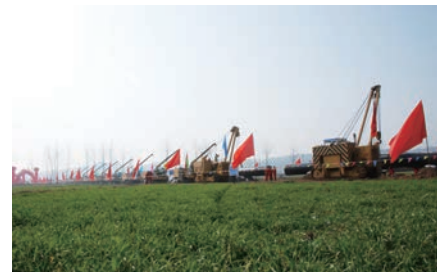
On January 30, 2008, the feasibility study report of the Second West-East Gas Pipeline was approved.

On February 22, 2008, the groundbreaking ceremony of the Second West-East Gas Pipeline was held in the Great Hall of the People. The project passes through 14 provinces (municipalities and autonomous regions). The trunk line and 8 branch lines extend a distance of 8,819km. With designed annual delivery capacity of 30 billion cubic meters of gas and a total investment of RMB 142.2 billion, it is China's first large pipeline to introduce foreign natural gas.

On January 6, 2009, the eastern section of the Second Line was approved by the Chinese government.

On February 7, 2009, construction of the eastern section of the Second Line was started.

On August 25, 2009, the West-East Gas Pipeline Project was listed among the national top 100 projects to mark the 60th anniversary of the founding of the People's Republic of China.



2009

On September 4, 2009, the main pipeline at the Guozigou Tunnel Group, the key control work of the western section of the Second Line, was fully welded, one month ahead of schedule.

On September 15, 2009, Shanxi coal bed methane pipeline of the project was completed and put into operation in Qinshui, Shanxi Province. Coal bed methane from Shanxi Province was delivered to the trunk line and mixed with natural gas from West China for the first time.

In September 2009, six oil and gas pipeline projects, including the gas supply project from the Second West-East Gas Pipeline to North Xinjiang, Hui'anpu-Yinchuan Oil Pipeline, Shikong-Lanzhou Oil Pipeline and Shandong Gas Pipeline, were successively started.

On October 30, 2009, the project won the Gold Medal of the National Outstanding Engineering Design.

On November 24, 2009, the directional crossing for the Second West-East Gas Pipeline across the Pi River in Sheqi County, Henan Province was completed. With a crossing distance of 711m and a diameter of 1,219mm, it has set a record in large-diameter pipeline directional crossing.

On December 5, 2009, natural gas from Turkmenistan was delivered to the Horgos Metering Station at 23:58 (Beijing Time) through Uzbekistan and Kazakhstan. The Central Asia-China Gas Pipeline was ready for pressure boosting after displacement operation.

On October 11, 2010, the research on digital pipeline technology and its application in major projects was granted the Second Prize of Geo Information Science and Technology Progress for 2010 by the National Administration of Surveying, Mapping and Geo Information.

On October 15, 2010, the research on the technology for optimized operation of CNPC's Trunk Gas Pipelines was granted the second prize by China Petrol and Chemical Industry Association (CPCIA).

On October 26, 2010, Line B of the Central Asia-China Gas Pipeline was completed and put into operation.

On November 18, 2010, the Zhongwei-Huangpi Line of the eastern section of the Second Line was completed and put into operation.

2010

On December 10, 2009, PetroChina Tarim Oilfield Company had supplied a total of 60 billion cubic meters of natural gas to the West-East Gas Pipelines.

On December 14, 2009, Line A of the Central Asia-China Gas Pipeline was completed and put into operation.

On December 14, 2009, capacity boosting work of the West-East Gas Pipeline Project was completed. Including 12 new compressor stations and 8 modified compressor stations, the annual gas transmission capacity was increased from 12 billion cubic meters to 17 billion cubic meters.

On December 31, 2009, the western section of the Second Line was completed and put into operation.



On December 8, 2010, the Zaoyang-Shiyan Branch Line (Zaoyang-Xiangfan Section) of the Second Line (East Section) was completed and put into operation.

On December 8, 2010, the 3D fine geological modeling and integrated geological research on salt strata of gas storage (Jintan) for the West-East Gas Pipeline Project and the research and application of geological hazard assessment and emergency protection technology for oil and gas pipelines won the second prizes of the CNPC Science and Technology Advancement Award.

On January 14, 2011, the Second West-East Gas Pipeline Project passed construction acceptance, winning the first prize of the National Science and Technology Advancement Award.

On June 30, 2011, the trunk pipeline of the Second Line was completed and put into operation, transmitting natural gas from Turkmenistan to Guangzhou.

In July 2013, the Horgos-Urumqi Section of the Third Line was put into operation.

In December 2013, the Urumqi-Lianmuqin Section of the Third West-East Gas Pipeline was put into operation.

2011

On May 31, 2012, an investment partnership framework agreement was signed for the Third West-East Gas Pipeline Project. Under the agreement, CNPC, together with the National Council for the Social Security Fund and Baosteel Group, will jointly invest in and build the Third West-East Gas Pipeline.



2012

On October 16, 2012, construction of the Third Line was started. The 6,840 km-long pipeline will run through 10 provinces (municipalities and autonomous regions) including Xinjiang and Gansu. Consisting of one trunk line and five branch lines, its designed annual delivery capacity is 30 billion cubic meters.

In December 2012, the Second West-East Gas Pipeline, consisting of one trunk line and eight branch lines, was completed and put into operation.

2013

Terminology

- **Pipe jacking:** a method for pipeline laying and installation with no or minimal excavation.
- **Treatment percentage of disturbed land:** the ratio of treated area to the total disturbed land within the targeted area for soil erosion control.
- **Controlled percentage of erosion area:** the ratio of the controlled area to the total soil erosion area within the targeted area for soil erosion control.
- **Controlled ratio of soil erosion modulus:** the ratio of the permitted soil erosion amount to the actual soil erosion amount after control within the targeted area of soil erosion control.
- **Percentage of dammed slag or ashes:** the ratio of actual spoil (slag or ashes) dammed to the total amount of spoil (slag or ashes) within the targeted area for soil erosion control.
- **Recovery percentage of forestry and grass:** the ratio of the area of restored forestry and grass to the area of vegetation restorable (under the current technical and economic conditions) within the targeted area for soil erosion control.
- **Percentage of forestry and grass coverage:** the ratio of forestry and grass area to the total land area within the targeted area for soil erosion control.