

LNG projects are changing China's energy mix



Photo: Bloomberg

By John Goss

The energy mix in China is beginning to change for the better as the government's long-term planning start to take effect and the country's power generation fuels move away from their heavy reliance upon thermal coal for its base load generation.

All along the country's vast coastline, especially on the eastern coast, China's oil and gas companies are building or have already built and are now operating a growing number of liquefied natural gas (LNG) receiving terminals.

With a long-term investment that totals billions of yuan China's energy companies and their partners are steadily improving the nation's energy mix towards cleaner energy resources from the country's reliance on thermal coal for close to 80 percent China's energy resources.

Among the latest among these LNG projects is the Zhejiang LNG receiving terminal developed by China National Offshore Oil Corp (CNOOC). China's third largest oil company announced during July 8 '09 that the LNG

project has recently been approved by the central government of China. The project is scheduled to be fully operational in 2012 and is CNOOC's fourth such LNG terminal in China. The first phase of the project, costing around RMB 7 billion yuan, will be able to receive 3 million tons of LNG product per year.

The Deputy General Manager of CNOOC, Zhou Shouwei said that CNOOC is currently operating two LNG projects in Fujian and Guangdong. The company is building its third LNG project in Shanghai. CNOOC has stated that it plans to have 50 million tons per year of LNG receiving capacity by 2020.

This target figure will be approximately eight times the total receiving capacity of the first phase of two LNG terminals that CNOOC has brought on line since 2006. The continuing expansion of the company's LNG receiving facilities is in line with China's long-term efforts to increase the use of natural gas to reduce the country's dependence on the heavily polluting thermal coal.

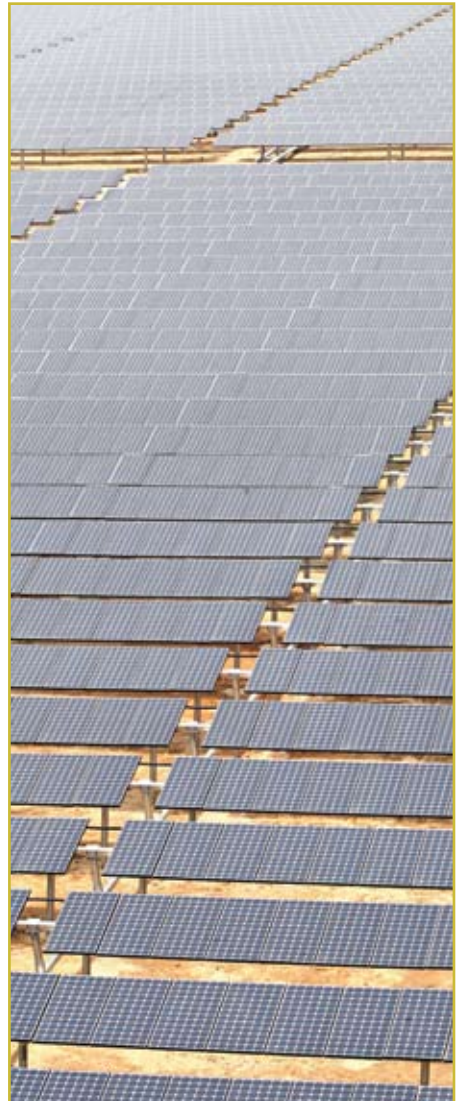
There are a number of other energy companies in China who have also decided to attention to developing LNG terminals. China's largest oil and gas producer, China National Petroleum Corp (CNPC) is at present building LNG receiving terminals in China's Liaoning and Jiangsu provinces.

In order to deliver the natural gas to the gas fired power plants, domestic oil companies are also speeding up construction of China's natural gas pipelines. Last year CNPC started to build the country's second west to east natural gas pipeline. The natural gas pipeline project is the largest of its kind in the world as it includes one trunk line and eight sub-lines with a total length of 9,102 km. The project, which will cost RMB 142.2 billion yuan, will traverse 14 of China's provinces, autonomous regions and municipalities.

The giant gas pipeline will carry 30 million cu m of natural gas every year from Central Asia and Xinjiang to China's eastern and southern areas including Shanghai and Guangdong. It is envisaged that the pipeline will greatly boost natural gas consumption in China.

It is estimated that once the pipeline is put

into operation in 2011, China will raise the ratio of natural gas in its total energy consumption by 1 to 2 percentage points. Using natural gas from the project, as opposed to coal, could reduce China's carbon dioxide emissions by 130 million



tons a year and sulfur dioxide emissions by 1.44 million tons a year.

China's first west-east gas transmission pipeline was completed by CNPC in 2004. The 4,000 km project crosses 10 provinces, autonomous regions and municipalities, linking Xinjiang's gas-rich Tarim Basin to Shanghai. The gas pipeline has a designed capacity of 12 billion cu m a year and provides natural gas to more than 200 million people in China.

It is generally reported in China that oil and natural gas pipelines are safer, more economical and more convenient than other transportation methods and that the country will experience a booming development in the natural gas sector in the next few years.

Industry plans to boost gas output

The parent company of listed CNOOC, China National Offshore Oil Corp is planning to spend many billions of yuan to develop a series of deepwater natural gas wells in the South China Sea with the goal of producing some 40 billion to 50 billion cubic metres (bcm) of natural gas by 2020. The company's Vice President, Zhou Shouwei said at an industry seminar in late July that the target includes an unknown portion to be contributed by the company's foreign partners, according to the Chinese News Agency Xinhua. During 2008, CNOOC, which owns the parent company's oil and gas production assets, produced a reported 6.76 bcm of natural gas.

A China National Offshore spokesman said that under the current circumstances it is not possible to estimate how much of the target volumes could be attributed to CNOOC.

It is widely reported that CNOOC is entitled to a 51 percent stake in oil and gas discoveries made by foreign energy companies in China's waters offshore waters but the amount can vary according to technical difficulties of the fields.

A significant portion of the 2020 target will most likely come from an offshore discovery made by Canada's Husky Energy in the northern South China Sea in 2006.

The Husky Energy project in the South China Sea is expected to start production in late 2012 or early 2013 with a projected first phase

output target of 5 bcm to 10 bcm a year. The field is estimated to hold up to 169.9 bcm of recoverable resources.

China's government has stated that it wants natural gas to account for 8 percent of the country's energy consumption by 2010. However, due to the faster growth in coal fired power generation and consumption and the comparative slow progress in the signing of gas import deals the ratio stood at just over 3 percent last year. The government in Beijing has estimated China's energy organisations will need to import 80 bcm by 2020 to meet demand.

China National Offshore has said that it aims to raise its capacity to import and regasify 50 million tonnes of liquefied natural gas annually by 2020. The total capacity of energy projects already built in Guangdong and Fujian provinces and two others being built in Shanghai and Zhejiang province is about 12.3 million tonnes.

The company has stated that it plans to have 40 million tonnes of annual oil refining capacity by 2020. The company says that it will be achieved by raising capacity of its sole refinery in Guangdong to 22 million tonnes by 2012 from 12 million tonnes. Plus, new energy acquisitions and renovations of old plants in Shandong, Hebei and Jiangsu provinces.

Greater investment into deepwater resources is now a major trend in the oil and gas industry globally as offshore exploitation has matured and that deep water production is the next hurdle to jump, especially in China.

