

# Home supplies to cut imports

## Gas

### Unconventional sources are set to reduce dependence on imports, says Leslie Hook

China's hunger for energy may soon be met by domestic supplies of natural gas, if the country's policy planners have their way. Natural gas provides 4 per cent of the country's energy today, but the government wants to boost that to 8 per cent in five years.

"China is set to enhance exploration efforts, build gas reserves and increase natural imports to meet the goal," said Wu Yin, deputy head of the NEA, earlier this year. "The 4 per cent level is low compared with the 24.1 per cent average globally."

Natural gas is favoured because it is cleaner burning than coal, which accounts for 70 per cent of the country's energy supply, and because gas is available domestically.

"China's gas demand is outpacing domestic supply and the government is determined to stimulate domestic exploration and development to reduce reliance on oil-indexed imports," notes a recent Wood Mackenzie report.

"By 2015, gas demand is expected to reach at least 20bn cubic feet a day and import dependency is forecast to increase to about 30 per cent."

In the long term, the strategy will hinge on China's ability to develop unconventional gas resources such as shale gas and coal bed methane that are typically more expensive and difficult to produce. China's unconventional gas resources are thought to be significant, but questions remain over how quickly they can be accessed. Gas production has been stunted by state-set prices that discourage firms from making large investments.

The pricing mechanism has also damped overall supply by creating disincentives for companies that import natural gas, because they often have to do so at a loss. Recent government signals suggest that may be about to change. In June, a 25 per cent rise in the state-set price of natural gas was announced, and analysts

expect further price rises will boost investment in gas infrastructure.

Coal bed methane is already subsidised by the government at 0.2 yuan a cubic meter, and a shale gas subsidy is in the works.

Partly because of government encouragement, China's energy companies have planned huge investments in unconventional gas, with PetroChina announcing a \$1.5bn coal bed methane plan this year. Sinopec aims to produce 2.5bn cubic meters of unconventional gas by 2015, and China United Coalbed Methane aims to produce 10bn cubic meters by 2020.

Coal bed methane has been produced commercially in China for several years, and the sector is expected to grow rapidly thanks to recent regulatory changes. Macquarie, the Australian investment bank, forecasts production in 2020 could be 20 times greater than today, because of gas price increases and regulatory encouragement.

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China's coal bed methane resources could be much larger than those of the US

those of the US," says Steve Zou, head of Asian American Gas, a China-focused CBM company. He notes however that basic geological exploration and data on China's potential CBM areas lag behind the US.

CBM producers in China benefit from tax breaks as well as the price subsidy.

Shale gas, another key unconventional source, has yet to catch up with CBM in terms of production, but is expected to have a big impact once it comes online. The advent of shale gas in the US has changed the energy landscape and many are waiting to see whether shale gas technology can unlock similar reserves across the Pacific.

Gavin Thompson of Wood Mackenzie says: "There is no shale gas production in China yet, no shale gas regulation. It hasn't been tested."

However, several foreign firms, including Shell, are working on shale gas exploration. And Chinese companies are making investments overseas that will give them access to relevant technologies.

China's pipeline network will also play a key role in determining how fast the sector can develop. With 38,000km of gas pipelines at present, it is far short of the necessary infrastructure.

Pipeline build-up has quickened during the past two years on the back of a 4,000bn yuan stimulus package, but the current infrastructure will need to triple that over the next 10 years to meet demand, according to estimates from Macquarie.



Producing coal bed methane is expensive and difficult