

# China chases new energy ‘superhighway’

**Damon Evans**  
SINGAPORE

A NEW commodity superhighway is set to emerge in China that will drastically alter energy trade flows and will offer significant investment opportunities in the country’s western provinces.

The new superhighway will affect energy trade flows within China and outside through the new Silk Road routes, which will link the country’s east to west, onwards to Central Asia and beyond, analysis from energy research firm Wood Mackenzie shows.

The plan often dubbed “China’s silver bullet” is already under way to ensure long-term economic expansion as the economically dominant eastern coastal region matures.

As a result, coastal regions, where much of China’s energy demand stems from, will have to upgrade their industries to higher value sectors, such as services, while traditional industry will move inland westwards.

This is shifting the regional distribution of demand centres and power generation with the effects becoming more apparent over the next two decades, said Cynthia Lim, principal Asia economist at Wood Mackenzie.

The rise of the commodity superhighway will have three main implications, reckons Frank Yu, an Asian power specialist at the firm.

Firstly, power generation in the central and western regions will almost triple from around 3,200



Looking ahead: China is planning for a bright future

terrawatt hours (TWh) in 2015 to almost 9,600TWh in 2035. In contrast, the coastal region’s generation will only rise from under 3,000TWh to 6,000TWh.

The bulk of rising power generation will stem from coal, but gas-fired power will expand as the need for peaking generation rises, while the government is expected to resume approving inland nuclear power plants next year, Yu told *Petroleum Economist*.

He also sees more renewable power coming into play, with hydro, wind and solar expected to make up some 22% of the generation mix by 2035.

The second implication is that eastern coastal regions will become

more reliant on the west to meet energy demand. Western China has an abundant supply of energy, making up more than 65% of China’s marketable coal and gas reserves. As coal remains the dominant fuel, coal-fired power plants in central and western provinces will generate more power to feed demand-heavy coastal centres through long-distance power transmission grids.

On top of this, the west holds the bulk of renewable energy potential – hydropower, wind and solar. While Wood Mackenzie also expects nascent shale-gas production to ramp up, particularly from Sichuan, Shaanxi and Xinjiang, to around 140 billion cubic metres by 2035.

Thirdly, the build up of planned transport infrastructure will open up new markets in Central Asia and spark energy imports into China through its western border. Two main routes are planned – the new land-borne “Silk Road Economic Belt” and the “21st Century Maritime Silk Road”, from south-east China to west Asia, via the South China Sea. Consequently, Xinjiang will become a major gateway for commodity trade between China, Central Asia and Russia.

“Xinjiang is strategically important because of its rich energy resources and as a transport hub with oil and gas supplies from Central Asia and Russia converging before being distributed for use in the east,” said Lim.

But significant investment is needed in energy production and transport infrastructure if China’s West is to fulfill its growth potential.

**Figure 1: China’s growth**

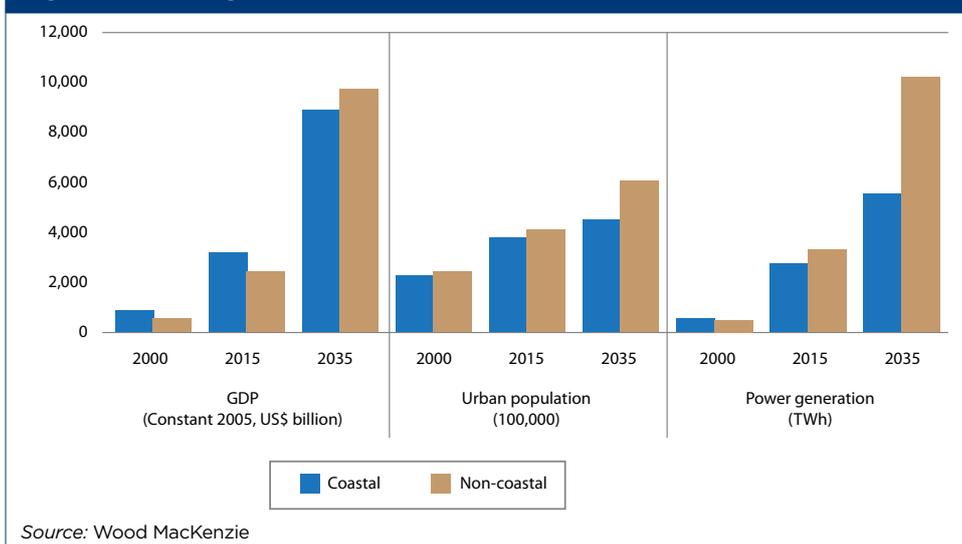


Figure 1: China's commodity superhighway



Source: Petroleum Economist, Wood Mackenzie

Wood Mackenzie estimates that investment in new power generation capacity and coal mines in Xinjiang will total \$140 billion and \$120 billion respectively over the next 20 years.

Still, there are risks, warns Lim.

The pace and scale of economic and energy reforms will be key. If restructuring provincial government debt and introducing market pricing for gas and power proves slow then it could subdue western development.

But Yu said China is making a strong push to roll out market pricing and power reforms across the nation.

Beijing recently approved further power reform pilots in Sichuan, Anhui, Ningxia and Hubei – all central and Western provinces – on top of the first two in Shenzhen (Guangdong eastern coastal province) and Inner Mongolia (Western province).

The rate of building infrastructure for power transmission will also be crucial to the success of trade routes with coastal China and Central Asia.

While scarcity of water – an essential raw material for coal mining and power production – could push costs up too.

Lastly, political risks need to be

managed – including diplomatic relationships with China's Central Asian neighbours in building new trade routes, as well as potential domestic unrest in Xinjiang.

Ultimately, China's western region, with its energy resources, cost advantages, and policy support, could drive robust economic growth for China in the longer run. To boot it could bolster the nation's economic and political influence with its neighbours. It's no surprise therefore that the success of the "Go West" strategy is a major government priority, concluded Lim. ●