

CHINA ECONOMIC UPDATE AUGUST 2021



Approaching the peak: China's long-term coal consumption looks set to decline

NAB Group Economics

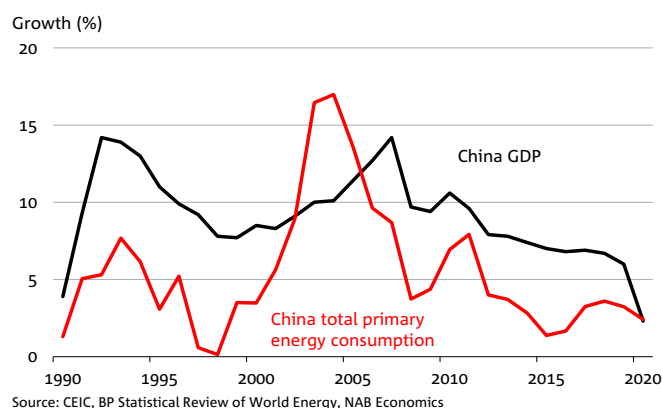
Coal has traditionally been at the centre of China's energy mix – helping to fuel the spectacular industrial growth over the past twenty years. However mounting air pollution concerns in the past decade has driven the growth of alternative fuel sources, including renewables. Ongoing changes to China's fuel mix are anticipated over coming years – with the country's coal consumption likely to peak in the next few years and subsequently decline.

CHINA'S RAPID GROWTH FUELLED BY COAL CONSUMPTION

There is a close connection between economic growth and energy consumption – particularly in the early stages of industrial development (which is more energy intensive than the services sector). Growth in China's energy consumption was particularly strong in the decade to 2010 – when it increased at an annual average rate of 9.4% a year – before growth slowed to a relatively modest 3.4% a year in the decade to 2020 (when China's economy was driven by the services sector).

ECONOMIC AND ENERGY GROWTH

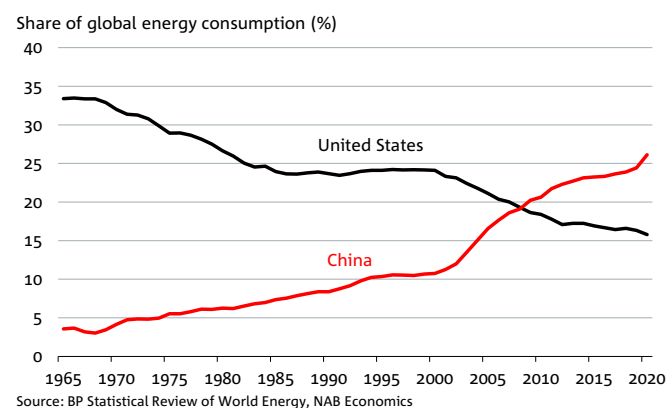
Close relationship between energy and economic growth



China became the world's largest energy consumer in 2009, when it overtook the United States. Its share of global consumption has continued to increase, accounting for around 26.1% of the total in 2020 (compared with 15.8% for the US).

GLOBAL ENERGY CONSUMPTION

China the leading consumer

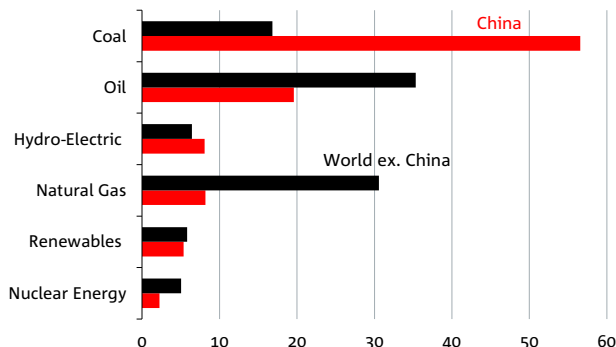


When compared with other countries, coal has always had an outsized share of China's fuel mix. In part, this reflects China's sizeable domestic coal reserves, which were rapidly developed in an effort to secure a high degree of self-sufficiency. In the second half of the 1960s, coal accounted for over 80% of China's primary energy consumption, albeit the country's energy consumption was relatively modest given its early stage of economic development. This share gradually declined over the following decades – largely reflecting the increased consumption of oil as a transport fuel – with the combined share of coal and oil exceeding 90% of China's total primary energy consumption until 2008, before subsequently drifting lower, with hydroelectric and renewable sources increasing more rapidly.

CHINA'S FUEL MIX

Coal still has an outsized share of China's mix

Share of primary energy consumption 2020 (%)



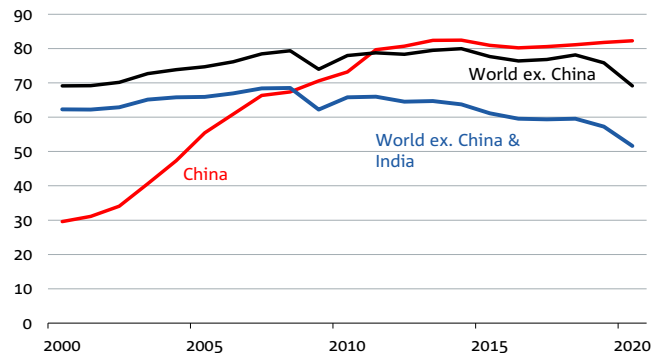
Source: BP Statistical Review of World Energy, NAB Economics

Although coal's share of energy consumption has declined, coal consumption has continued to grow strongly over time. In 2011, China accounted for over half of global coal consumption for the first time and this share has continued to increase slowly (reflecting in part the downward trend in global consumption outside of China and India since 2008 on environmental concerns).

GLOBAL COAL CONSUMPTION

Falling consumption outside China

Coal consumption (EJ)



Source: BP Statistical Review of World Energy, NAB Economics

This consumption came at significant cost. Air pollution (particularly in North East China) became a major concern in late 2013, prompting a shift in energy policies. A range of major cities implemented tighter environmental standards – including banning the use of coal in small furnaces for heating purposes – as well as tighter emissions standards for electricity generation. As a result, overall coal consumption declined from 82.4 exajoules in 2013 to 79.1 exajoules in 2016 (BP). However, coal consumption has subsequently risen (up to 82.3 exajoules in 2020) and is expected to increase for the next few years.

CHINA SEES PEAK COAL CONSUMPTION COMING

The China National Coal Association expects coal consumption will increase in 2021, reflecting the stronger economic growth this year, and that consumption will be 6% higher than 2020 levels in 2025. That said, this level could prove to be near the peak for China's coal consumption.

US President Joe Biden hosted a virtual Leaders Summit on Climate in April 2021. At this event, President Xi Jinping announced that China will strictly control the development of new coal fired electricity generation and limit the increase in coal consumption during the 14th Five-Year Plan (which runs from 2021 to 2025). In the 15th Five-Year Plan period (from 2026 to 2030), China will phase down its coal consumption.

Some observers have interpreted this statement as meaning that China's coal consumption will peak in 2025 and decline after this time. Analysts at Platts forecast the peak slightly later – in 2027 – before subsequently declining, which would also be consistent with President Xi's announcement. It is not clear how rapidly consumption would fall. China consumed around 4.2 billion tonnes of coal in 2020, and it is unlikely that other fuels could rapidly replace coal in the country's fuel mix, meaning that the decline is likely to be gradual.

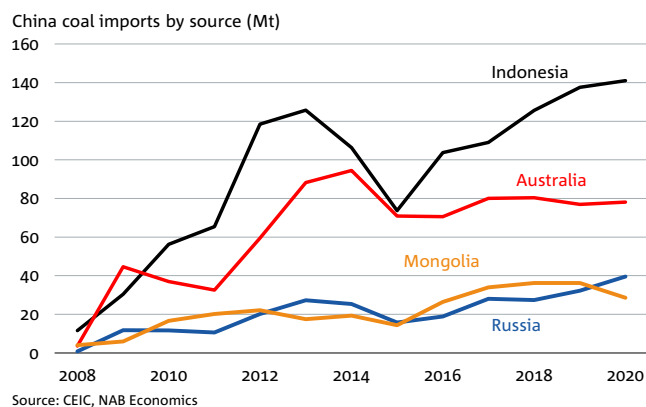
CONCLUSIONS – WHAT DOES IT MEAN FOR COAL TRADE?

Despite being the world's largest producer of coal, China has also been a major importer of the fuel over the past decade. In 2020, imports provided around 7.2% of China's total apparent coal consumption (which excludes any changes to coal stockpiles). This has reflected a range of factors – including the relative cost of domestic and international supplies, the differing characteristics (such as energy content or the presence of impurities) of coal from different regions and constraints in the supply chains.

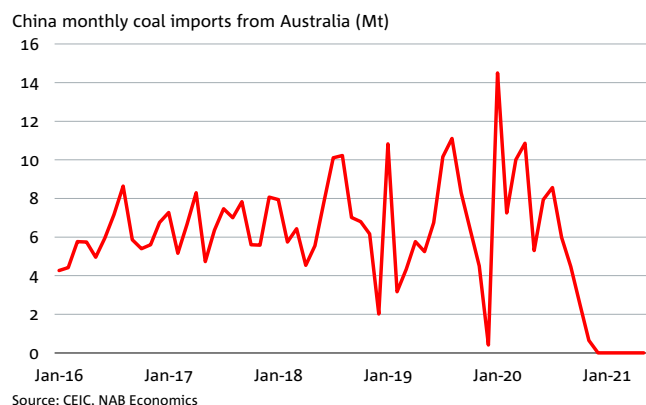
The largest source of China's coal imports over the past decade has been Indonesia, followed by Australia, Mongolia, and Russia. That said, the diplomatic dispute between the Australian and Chinese governments resulted in China unofficially blocking imports of Australian coal – with volumes dropping to zero in December 2020, along with no imports in the first five months of 2021. This has resulted in a realignment of trade, with Chinese importers seeking volumes from other suppliers, while Australian exporters have increased shipments to other markets (primarily in Asia).

CHINA'S COAL IMPORTS BY SOURCE

Indonesia leads, followed by Australia...



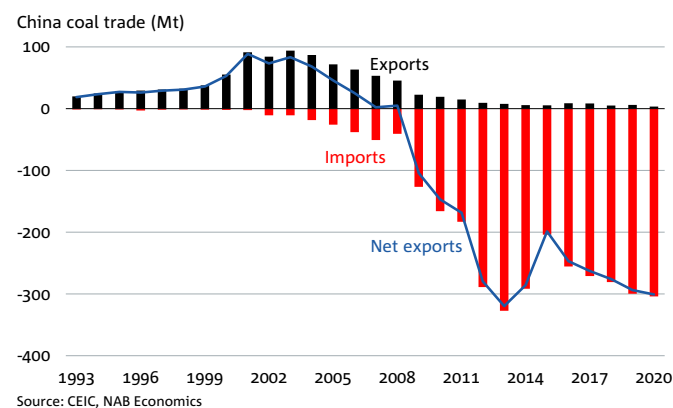
...but imports from Australia have fallen to zero as diplomatic tensions have increased



It is not entirely apparent what a longer-term decline in China's coal consumption would mean for the country's coal production. In the early 2000s, China produced more coal than its domestic market required, with exports peaking at almost 94 million tonnes in 2003 – with fears at the time that China could overtake Australia to become a major coal supplier. Given the decline in coal consumption outside China and India, it is arguable that there would be limited market opportunities for China to become a major exporter once again – given that this would likely result in sharply reduced prices (which would negatively impact profitability).

CHINA'S NET COAL TRADE

From major exporter in early 2000s to even larger importer in the 2010s



It remains possible that the level of production and consumption decline at similar rates, which would mean that China continues to present a viable market for international exporters, including Australia should diplomatic tensions abate.

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