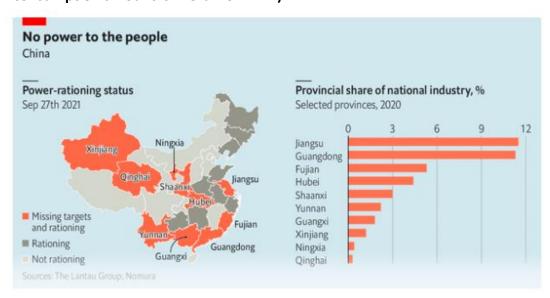


10 October, 2021

China's power shortfalls threaten supply chain disruption and higher prices

China's power supply crisis ratcheted up a notch in Sept and Oct with more than half of the country enduring power cuts, making it one of the most extreme examples of energy rationing in the nation's history. China is struggling with widespread power shortfalls, at least 19 of China's provinces, including many of its industrial heartlands, have suffered power shortages in recent weeks, with some unplanned and indiscriminate cuts. Electricity crunch add to a global energy squeeze that risks upsetting the post-pandemic economic recovery, prompting a slash to the recovery of the second-largest economy and threatening disruption to global supply chains and further heightened inflationary pressure around the world.

According to National Energy Administration, China's electricity consumption in August is 760 billion kWh in Aug, which is the 2nd highest consumption amount in 2021 (the highest is July and the consumption amount is 775 billion kWh).



Sources: The Lantau Group

The power shortage owing to a combination of factors such as surging demand for Chinese exports, more green policies launched by the Chinese government, price control on electricity price, shortage of coal supply and the skyrocket of coal price. For example, Beijing's carbon reduction targets and safety measures newly set this year have forced many local provincial governments to impose more strict measures on coal production and electricity production, such as requiring the coal miners to follow a higher requirements on safety measures, requiring the power plant to lower the carbon emission and change to more green energy sources. The measures had significantly impacted the coal and electricity production.

Curbs

A total of 16 of mainland China's 31 provinces are rationing electricity in Sept due to shortage of electricity. Some of the reasons may be due to their race to meet Beijing's annual emissions reduction targets. Indeed, power rationing had already began in some provinces in late August but started to spread across the country in mid-September, when the shortage began to hit households in northeastern China, which experienced sudden blackouts.

The National Development and Reform Commission (NDRC), the country's top economic planning agency, criticized the 'energy consumption intensity' of 9 provinces – Guangdong, Jiangsu, Yunnan, Fujian, Shaanxi, Guangxi, Ningxia, Qinghai and Xinjiang – for actually increasing their energy use instead of reducing it. Following the warning, the provinces stepped up their efforts to cut power.

In August, China's economic planning agency released a report card that identified a number of provinces as being off-track in meeting their energy-efficiency requirements. In mid-September, these provinces began to target some high-energy industries in their power rationing. Starting on October 1, manufacturers in China's industrial powerhouses of Guangdong to rust belt in the northeast have rolled out electricity rationing measures, triggering widespread alarm among much of the population and plunging the nation's industrial sector into chaos. The local government said that it could only operate four days a week, instead of the usual six. In addition, it must adhere to a power-usage cap, which cuts the capacity of the factory by about one-third as a result. Moreover, a traffic light warning system has been established to enforce the energy controls.

Restriction on electricity supply could slow down the economic growth and exacerbate the slowdown caused by problems in China's residential construction sector, President Xie said in a note. Chinese factory activity shrunk to the lowest it had been since February 2020, when coronavirus lockdowns crippled the economy.

Reason for the power shortage – Unusual high power needs due to pent up demand from pandemic

As the world starts to reopen after the pandemic, foreign demand for Chinese goods is surging and the factories making them need a lot more power. According to NDRC, electricity consumption from January to August increased 13% compared to the same period last year (and increased 15% compared to the

same period in 2019) vs. only single digit increases during 2012-2019. Much of the increase in energy demand is due to the boom in the industrial sector, according to Lin Boqiang, dean of the China Institute for Energy Policies Studies at Xiamen University. "China is the first major economy to recover from the COVID-19, and so many overseas orders have gone to Chinese factories," he said. It is very consistent with the electricity consumption figures as the demand for electricity has soared since the end of China's pandemic-induced shutdown since Apr 2020. The foreign demand for Chinese goods is surging further again since July as the spread of COVID-19 had become severe in many south-east Asian countries and disrupt their manufacturing production.

Reason for the power shortage - Coal shortage

In recent months, China is facing a significant shortage of coal, which has led to a sharp spike in coal prices. In China, coal-based producers account for more than 70% of the country's electricity generation. Thus, a sharp spike in coal prices had led to negative impact to electricity production.

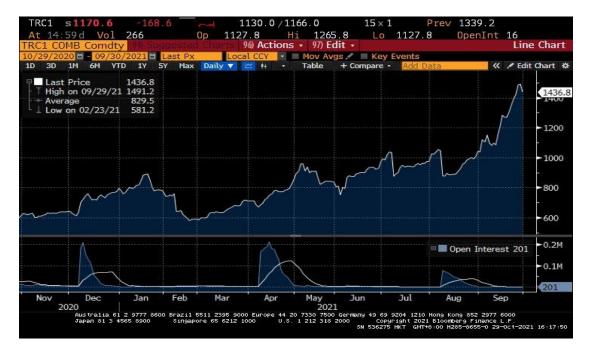
The coal prices increase was due to two reasons. First of all, the coal imports have been constrained by geopolitical tensions. China has banned coal imports from Australia, previously a major supplier, since late last year which accounted for up to 10% of Chinese coal consumption. Given that political tensions between China and Australia remain high, which prompt uncertainty for coal supply in China.

Another reason for coal prices increase is due to the tighter environmental and safety measures imposed by the Chinese government to the coal miners early this year. As a result, the coal production is substantially limited by the new measures and thus the supply is not able to keep up with the increase in demand.

Reason for the power shortage - Price control on electricity

The power shortage has been exacerbated by the electricity price cap imposed by the Chinese government. "In China, coal prices can increase and be determined by the market, but not electricity prices," the official said. The Chinese government wants to keep utility prices low, which are low among global standards. Facing the higher and higher coal price and price control on electricity, power companies are not allowed to pass through their higher production costs to users. That significantly reduced power plants' incentive to produce more power as they are not allowed to rise the electricity price. Even worst, as the prices of coal kept surging significantly, many coal-fired power plants have even suffered losses. Thus, they are even unwilling to increase the production as it will further increase the loss. In contrast, some power plants even using maintenance as an excuse to reduce the production in order to limit the loss. According to the China Electricity Council, about 70% of coal-fired power plants in the county suffered losses as of June as coal prices soared.

Prices have risen around 40% in Sept, from around 900 yuan (US\$140) a tonne in mid-August to around 1,200-1,400 yuan a tonne in recent weeks. Power plants are suffering massive losses due to skyrocketing coal prices.



Source: Bloomberg

Reason for the power shortage - Policy driven (implementation of green policy)

China is an industrial powerhouse and the planet's biggest emitter of carbon dioxide. In September 2020, President Xi Jinping pledged that China would strive to reach peak carbon emissions before 2030 and China would become carbon neutral by 2060, a broad goal that has flowed into wide-ranging effort to enforce carbon reduction and energy-efficiency targets, leading to widespread ban of production and use of dirty coal.

Indeed, China is having enough electricity generation capacity and enough coal underground. The coal and electricity shortage happening this year in some extent is just due to the production constrained by the green measures newly set this year.

"For the coal industry, the production had continuously been restricted by environmental and safety inspections this year" said Shougang Fushan Resources Group Ltd., a producer based in China's biggest coal province.

Conclusion - Power shortage will not last long

We expect that the power shortage situation will be greatly improved in a short period of time. It is because the Chinese government had already realized the seriousness of the matter and already changed the policy to restore the order.

In response to the power shortfall in China, the National Development and Reform Commission (NDRC), has already outlined a number of measures to resolve the power shortage problem. It includes work closely with power generating firms to increase output, ensuring full supplies of coal and relax the control on electricity price. The China Electricity Council, has said that coal-fired power companies were now 'expanding their procurement channels at any costs' to guarantee winter heat and electricity supplies.

In response to coal shortage, on September 27, Vice Premier Han Zheng, who supervises the nation's

energy policies, summoned leaders of the country's top state-owned energy companies to a closed-door meeting and ordered them "to increase coal supplies by all means". If the Chinese government really relaxes the environmental and safety regulation on the coal miners, it is highly likely that coal supply could increase substantially in a short period of time.

Source: Bloomberg, WSJ, Investing.com, Fortune.com, NYtimes, SCMP, Flipboard, Reuters, Dailyadvent

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