China Runs on Coal: From Deng to Xi

In 1978-89, energy demand increased by 37%, of which 75% was from coal. China remained self-sufficient on energy and GDP grew much faster than energy demand.

Demand grew by over 53%. Oil demand more than doubled and China became a net oil importer in 1993. Coal accounted for 2/3 incremental energy during this time.

Following WTO accession, China's energy demand exploded. China surpassed the U.S. as the biggest energy consumer in 2010.

Despite rapid growth in renewables, China continues to run on coal (60%). In fact, it set record coal consumption for three consecutive years: 2019-21.

China runs on coal. Coal accounted for 60% of China's primary energy demand in 2020.

Source: Batt Odgerel, EPRINC analysis, historical data from IEA WEB
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EPRINC Chart of the Week (Oct 19, 2022)

Coal Consumption: China vs. World

- China's coal consumption surpassed that of the rest of the world in 2011.
- Record consumption in 2021.

Source: Batt Odgerel, EPRINC analysis, historical data from IEA WEB
Thanks to cheap and abundant coal resources, China has witnessed rapid economic growth under different leaderships in the past 40 years. Under Jiang Zemin and his premier Zhu Rongji, China successfully bid for WTO accession, which helped boost energy demand in the years that followed.

Hu Jintao oversaw the unprecedented growth in demand on the back of coal burning, but his administration's policy largely failed to put a check on the growing energy intensity as energy demand grew faster than GDP.

Under Xi Jinping, the shares of alternative energy sources grew significantly from their small base, and carbon peaking and carbon neutrality targets have been announced. Nevertheless, China continues burning more coal and building more coal power plants.

Despite China's carbon neutrality target by 2060, the country will continue to run on coal in the years to come due to the considerations of energy security and industrial competitiveness.

According to IEA data, China hit record levels of coal consumption for three consecutive years from 2019 to 2022. In 2021, China started the construction of 33 GW of coal power plants, the most new coal-fired power capacity China added since 2016 (CREA).

Relatedly, China is the largest producer and consumer of EVs (electric vehicles). The electricity that is used to charge China's EVs will be primarily from coal-powered generation. Any pledges and efforts to lower CO2 emissions from China's transport sector will effectively be cancelled by the electricity with which they charge these EVs.