Press release

China’s coal power spree could see over 300 coal plants added before emissions peak

BEIJING, 29 August 2023 - As much of the northern hemisphere reels under the devastating impact of climate change brought out in clear relief during the summer of 2023, China continues unveiling more coal projects, defying both the government’s plans and the state of the world.

The latest briefing from Global Energy Monitor (GEM) and the Centre for Research on Energy and Clean Air (CREA) shows that in 2023, China has continued a coal power plant permitting spree that started in 2022. The first half of 2023 saw 52 gigawatts (GW) of new coal power permitted, maintaining the previous rhythm of permitting two coal power plants per week. One gigawatt is the equivalent of one large coal power plant.

Coal power plant commissioning also doubled year-on-year, with 17.1 GW added to the grid in the first half of 2023. This is the first time that the results of the accelerated permitting of new projects and restarting of suspended projects in 2020 are seen.

After the permitting spree of the past year, China currently has 243 GW of new coal power plants under construction, or permitted for construction. When plants currently announced or in the preparation stage but not yet permitted are included, this number rises to 392 GW of capacity at 306 different coal power plants. This means that coal power capacity could increase by 23% to 33% from 2022 levels, implying either a massive increase in coal power generation and emissions or a massive drop in plant utilization, implying financial losses and potentially asset stranding.
The analysis shows that none of the official reasons given for new projects pans out: most new projects are in locations where there is no need for new coal power capacity to support grid stability or the integration of variable renewables. The provinces adding large amounts of new coal-fired power are getting most of their added power generation from coal, contradicting the framing of coal power as a “supporting” source for clean energy.

The excessive permitting of new coal capacity points to a lack of enforcement of the government policies that are meant to keep China on track to reach peak CO2 emissions before 2030 and carbon neutrality by 2060.

“The coal power spree is a last-minute push by China’s coal industry to lock in capacity and emissions before China’s CO2 emissions are due to peak late this decade. This is happening even as clean energy installations are rapidly expanding. China is on track to start delivering all of electricity consumption growth from solar, wind, nuclear and hydropower, leaving no space for power generation from coal to grow,” said Lauri Myllyvirta, co-author of the report and Lead Analyst at CREA.

Unless permitting is stopped immediately, China won’t be able to reduce coal-fired power capacity during the 15th five-year plan (2026–2030) without subsequent cancellations of
already permitted projects or massive early retirement of existing plants. This would make it harder and costlier to implement Xi Jinping’s pledge to reduce coal consumption from 2025 onwards, as it would mean leaving much of the expanded coal power capacity heavily under-utilized.

“China can pick its poison. Continuing to permit more coal capacity will either result in massive emissions increases, or plants sitting idle, generating losses, and perpetuating the power system’s dependence on coal. As the world turns its back on new coal projects, China is making the path towards its energy transition and climate commitments more complicated and costly,” emphasised Flora Champenois, co-author of the report and Research Analyst at Global Energy Monitor (GEM).

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Contacts

Flora Champenois
Research Analyst
GEM
flora.champenois@globalenergymonitor.org
+1-650-862-7498

Lauri Myllyvirta
Lead Analyst
CREA
lauri@energyandcleanair.org
+358 503 625 981

About Global Energy Monitor (GEM)

Global Energy Monitor (GEM) develops and shares information on energy projects in support of the worldwide movement for clean energy. By studying the evolving international energy landscape, and creating databases, reports, and interactive tools that enhance understanding, GEM seeks to build an open guide to the world’s energy system.

www.globalenergymonitor.org
About the Centre for Research on Energy and
Clean Air (CREA)

CREA is an independent research organisation focused on revealing the trends, causes, and health impacts, as well as the solutions to air pollution. We use scientific data, research and evidence to support the efforts of governments, companies and campaigning organisations worldwide in their efforts to move towards clean energy and clean air.

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About the data

The changes in coal power project status analyzed for this briefing are based on the latest July 2023 update of Global Energy Monitor’s Global Coal Plant Tracker (GCPT), with a few minor amendments, and the tracker’s historical information available upon request. The GCPT is an online database that identifies and maps every known coal-fired generating unit and every new unit proposed since January 1, 2010 (30 MW and larger). The tracker uses footnoted wiki pages to document each plant and is updated biannually. GCPT is the most detailed dataset available on the global coal power fleet, and has provided biannual updates on coal-fired generating capacity since 2015.