China can have clean air using the latest coal-fired power plants

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Delin Fang et al. wrote an article entitled "Clean air for some: Unintended spillover effects of regional air pollution policies" (1). According to IEA report (2), China coal demand is forecasted that in coal-power generation of China, coal supplies will be over 55% of China's energy demand in 2022 (2). Because coal is inexpensive, coal still remains the main energy source to produce electricity. The global coal demand reaches 5530 Mtce (Million tonnes of coal equivalent) in 2022 (2). China has been consuming more than a half of the global coal demand (2). In China, coal-fired power plants have been mainly contributing to emissions of hazardous air pollutants and PM2.5. Is China returning to coal-fired power? (3). According to IEA, 2752 Mtce coal demand in 2017 and 2673 Mtce coal in 2023 were expected respectively in China (4). Carbon Capture and Storage (CCS) plays a key role in negative emission technologies for reducing air pollution including CO2 and PM2.5 (5). 921, co2-intensity coal-fired power (g/kWh) of China can be significantly reduced by Japanese IGCC (Integrated coal Gasification Combined Cycle) with 650 around 2020 and/or IGFC (Integrated Coal Gasification Fuel Cell Combined Cycle) with 590 around 2025 (6).

References:

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