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When the Asian superpower set its energy targets in 2020, aiming to achieve peak emissions by 2030 and carbon neutrality by 2060, most dubbed it ambitious. To support these "ambitious" goals, the government committed to constructing 1,200 GW of renewable capacity by 2030.

However, China is now on track to achieve this target a remarkable five years ahead of schedule. The monumental increase in solar power is further complemented by a 20.7 percent rise in wind power generation capacity, showcasing the country"s commitment to clean energy.

In a report, Reuters revealed that the utilization time at China’s larger generation facilities declined, indicating that capacity growth outpaced the growth in energy demand. In contrast, hydropower generation experienced a decrease of approximately 5.6 percent last year, as per data from the National Bureau of Statistics.

Not only does this achievement solidify China’s position as a renewable energy powerhouse but also eclipses the entire solar fleet of the United States, the world’s second-largest solar market, according to Bloomberg.

Taking its status as a top global polluter seriously, China also added 75.9 gigawatts of wind power, another record-breaking achievement, to its solar-heavy portfolio. According to the International Energy Agency, the adoption of renewables reached a globally combined record of 510 gigawatts last year.

Estimates suggest that China likely account for 58 percent of global solar installations and an even more impressive 60 percent of global wind installations in 2023, positioning China as a key player in combating climate change, but also putting the world on track to meet targets set at the COP28 climate summit.

Despite the remarkable strides in renewables, Bloomberg reported that China continues to grapple with the challenges posed by its reliance on coal-fired power stations, which still contribute to 59 percent of the country’s electricity.

Although they assure that coal consumption will decline from 2025, officials argue that new coal plants are necessary to serve as backup for intermittent solar and wind generation. Nevertheless, the data reveals an increase in thermal generation capacity by 57.93 gigawatts in the past year, raising questions about the country’s dual-track approach to energy.

The surge in solar and wind installations comes with its set of challenges for China’s energy landscape. Fierce competition among local manufacturers forced prices of panels and turbines to record lows, which in turn, fuelled renewable generation to record highs, outpacing the country’s grid capacity and

raising concerns about infrastructure limitations in certain regions.

Some areas are implementing stricter regulations on new projects to address these issues, highlighting the need for continued investment in grid infrastructure.

Despite these challenges, BloombergNEF analysts expect China to sustain its gains in renewables, forecasting a seven percent increase in solar installations and an 11 percent rise in new wind capacity in the coming year, immense for the nation and the global effort to combat climate change.

China added almost twice as much utility-scale solar and wind power capacity in 2023 than in any other year. By the first quarter of 2024, China"s total utility-scale solar and wind capacity reached 758 GW, though data from China Electricity Council put the total capacity, including distributed solar, at 1,120 GW. Wind and solar now account for 37% of the total power capacity in the country, an 8% increase from 2022, and widely expected to surpass coal capacity, which is 39% of the total right now, in 2024.

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