



FTMRS SOLAR

# How much of China's green communications base stations are owned by Huawei





## Overview

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How many 5G base stations are built in China?

As 5G serves as the foundation for the construction of new infrastructure, China, as the world leader in 5G base station construction, has already built over 1.4 million 5G base stations in 2021 alone. In the same year, 5G base stations in China produced approximately 49.2 million tons of CO<sub>2</sub> eq.

Does China have a 5G network?

Given that China currently has the largest 5G network in the world (~1.53 million base stations by the end of 2021, Table S1) and that base station number was projected by up to 6–8 million by 2030 (CCID Consulting, 2020), concerns are being expressed regarding 5G mobile networks' environmental effects and sustainability.

How many base stations and mobile users are there in China?

Monthly data on the numbers of base stations and mobile users in each province are released by the Ministry of Industry and Information Technology of the People's Republic of China 27. Base stations are fundamental elements of mobile networks and are their principal energy consumers 9.

How much CO<sub>2</sub> will China's 5G network produce?

Under the model predicted 5G base stations, China's 5G network could yield 0.15–0.29 GtCO<sub>2</sub> /yr emissions subject to the nation's BDDL from 40 to 80 % by 2030. Both 5G base stations and CO<sub>2</sub> emissions are significantly lower than the previous estimates.



## How much of China's green communications base stations are owned ...

Ambitious 5G base station plan for 2025

Nov 23, 2025 · Technicians from China Mobile check a 5G base station in Tongling, Anhui province. [Photo by Guo Shining/For China Daily] China aims to build over 4.5 million 5G base ...

Green networks in action: China Mobile

Nov 19, 2024 · In Xiong'an New Region, China Mobile's low-carbon initiatives like cooling cubes and outdoor base stations are saving hundreds of thousands of kWh annually, making a big ...

Huawei Green Network Power Series Help Carriers Reduce ...

The latest statistics show that China has built more than 1 million 5G base stations, accounting for more than 70% of the world's total. The number of 5G end users in China has exceeded 400 ...

China to construct over 4.5 million 5G base ...

Jan 2, 2025 · With 4.19 million 5G base stations already operational across China, the MIIT emphasized that "promoting 5G revolution and 6G ...

China to construct over 4.5 million 5G base stations in 2025

Jan 2, 2025 · With 4.19 million 5G base stations already operational across China, the MIIT emphasized that "promoting 5G revolution and 6G innovation will be one of the priorities" for ...

Low-Carbon Sustainable Development of 5G Base Stations in China

May 4, 2024 · As 5G serves as the foundation for the construction of new infrastructure, China, as the world leader in 5G base station construction, has already built over 1.4 million 5G base ...

The carbon footprint response to projected base stations of China's ...

Apr 20, 2023 · We decomposed the CO<sub>2</sub> footprint of China's 5G networks and assessed the contribution of the number of 5G base stations and mobile data traffic to 5G-induced CO<sub>2</sub> ...

Low-carbon upgrading to China's communications base stations ...

Nov 21, 2025 · These outcomes demonstrate that upgrading to low-carbon base stations not only ensures economic feasibility but also delivers significant environmental and public health ...

China Mobile - Renewable energy and green base station ...

Aug 7, 2025 · China Mobile added 467,000 5G base stations while achieving a 2% reduction in overall base station energy consumption in 2024.

The carbon footprint response to projected base stations of China's ...

Apr 20, 2023 · Under the scenario of business-estimated six million base stations in 2030, the share of electricity consumed by China's 5G networks in 2030 could reach 8.4 % of the ...



Carbon emissions of 5G mobile networks in China

Aug 17, 2023 · Here we develop a large-scale data-driven framework to quantitatively assess the carbon emissions of 5G mobile networks in China, where over 60% of the global 5G base ...

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