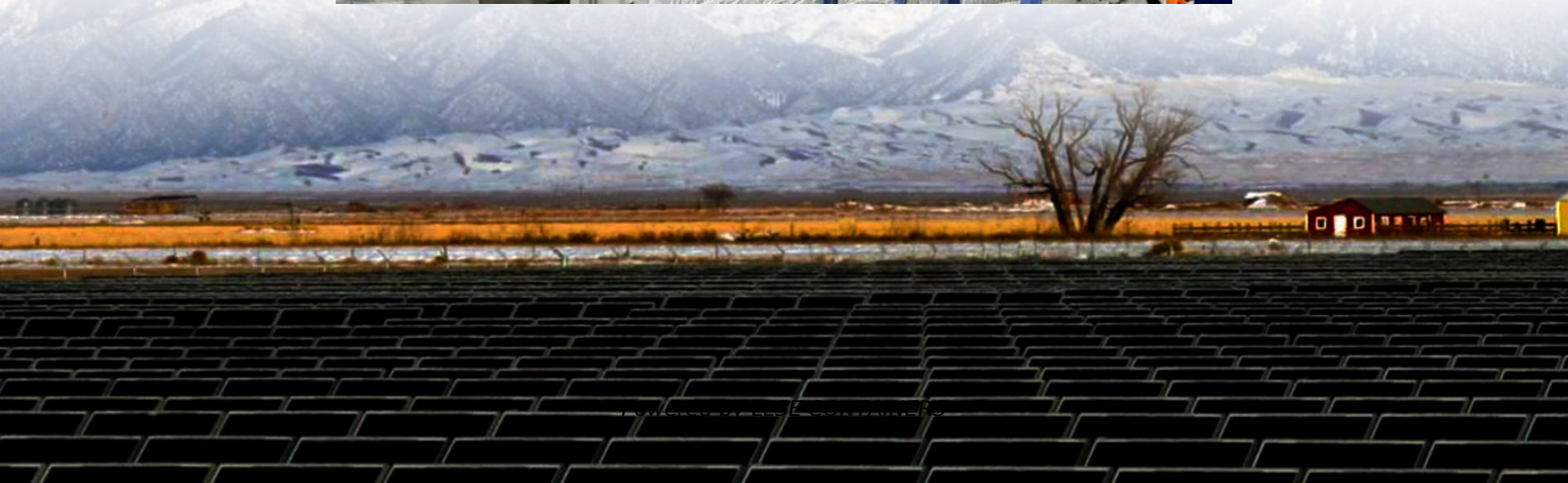


# **Foreign media commented on whether 5G base stations consume electricity**





## Overview

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How much power will a 5G base station use in 2025?

The Small Cell Forum predicts the installed base of small cells to reach 70.2 million in 2025 and the total installed base of 5G or multimode small cells in 2025 to be 13.1 million. "A 5G base station is generally expected to consume roughly three times as much power as a 4G base station.

Does 5G affect energy use?

The researchers did a literature review to examine whole network level assessments of the operational energy use implications of 5G, the embodied energy use associated with 5G, and indirect energy use effects associated with 5G-driven changes in user behaviour and patterns of consumption and production in other sectors of the economy.

Will MIMO increase the energy consumption of 5G base stations?

As a result, there are many more hardware components per base station. Björnson believes this will probably increase the total energy consumption of 5G base stations compared to 4G. But as massive MIMO technology develops, its energy efficiency may also improve over time.

How much power does a 5G base station consume?

That's almost a threefold increase compared to 4G (5). One 5G base station is estimated to consume about as much power as 73 households (6), and 3x as much as the previous generation of base stations (5), (7).



## Foreign media commented on whether 5G base stations consume electricity



### [5G base stations consume too much electricity. How can we ...](#)

Sep 27, 2021 · As the number of 5G base stations continues to increase, the cost pressure on major operators is also increasing, and electricity expenses will rise sharply. Energy saving ...

### [Is 5G a waste of electricity? Experts say it's complicated](#)

Nov 16, 2022 · A 5G base station consumes "four times more electricity" than its 4G counterpart, said Ding Haiyu, head of wireless and terminals at the China Mobile Research Institute, during ...



### [Modelling the 5G Energy Consumption Using Real-world ...](#)

Sep 15, 2025 · Accurate energy consumption modeling is essential for developing energy-efficient strategies, enabling operators to optimize resource utilization while maintaining network ...



### [Energy Consumption of 5G, Wireless Systems and the ...](#)

UK Parliament  
Finnish Transport and Communications Agency Traficom  
2020 Study by The Haut Conseil Pour Le Climat  
Readings on The Energy Use of 5G  
Information and



Communication Technology (ICT), including data centres, communication networks and user devices, accounted for an estimated 4-6% of global electricity use in 2020. Increasing demand for ICT is expected to lead to an increase in global ICT energy use over the next decade."See more on ehitrust jrseco

## How much power does 5G consume? - JRS ...

One 5G base station is estimated to consume about as much power as 73 households (6), and 3x as much as the previous generation of base ...

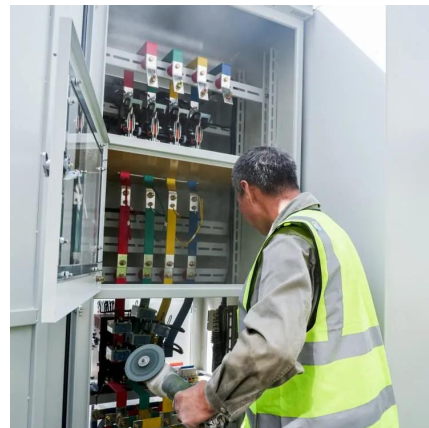


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### [Modelling the 5G Energy Consumption using Real-world Data: Energy](#)

Jun 13, 2024 · The introduction of 5G technology has revolutionized communications, enabling unprecedented capacity, connectivity, and ultra-fast, reliable communications. However, this ...





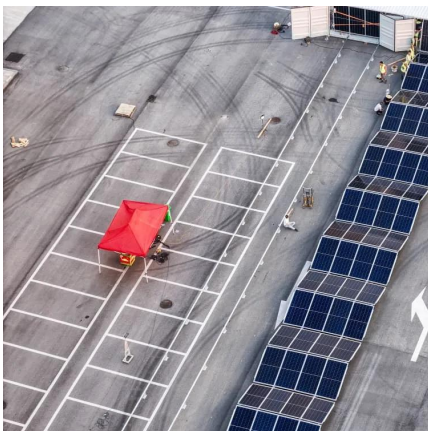
### Impact of 5G base station participating in grid interaction

Apr 17, 2022 · This paper summarizes the communication characteristics and energy consumption characteristics of 5G base stations based on domestic and foreign literature, and ...



### Why does 5g base station consume so much power and how ...

Apr 3, 2025 · The power consumption of the 5G base station mainly comes from the AU module processing and conversion and high power-consuming high radio frequency signals, the ...



### The energy use implications of 5G: Reviewing whole network ...

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