

## ContainerPower Energy Solutions

# How much electricity does a 5G base station generate per day

50KW modular power converter



#### Flexible Configuration

- Modular Design, Expanding as Required
- Small&Light, Wall Mounted
- Installed in Parallel for Expansion



#### Powerful Function

- Support PV+ESS
- Grid Support, Equipped with SVG Technology
- On-Grid and Off-Grid Operation



#### Reliable Protection

- Outdoor IP65 Design
- Sufficient Protection Functions Equipped

## Overview

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How much power does a 5G base station use?

“A 5G base station is generally expected to consume roughly three times as much power as a 4G base station. And more 5G base stations are needed to cover the same area,” -IEEE Spectrum, 5G’s Waveform Is a Battery Vampire.

Are 5G base stations causing more energy consumption?

However, Li says 5G base stations are carrying five times the traffic as when equipped with only 4G, pushing up power consumption. The carrier is seeking subsidies from the Chinese government to help with the increased energy usage.

How much energy does a 5G small cell BS consume?

Simulation results reveal that more than 50% of the energy is consumed by the computation power at 5G small cell BS’s. Moreover, the computation power of 5G small cell BS can approach 800 watt when the massive MIMO (e.g., 128 antennas) is deployed to transmit high volume traffic.

How much electricity does 5G use?

To achieve gigabit speeds, the plan with 5G is to have it operate at very high frequencies of 24-26 Gigahertz. For this reason, 5G requires millions of new so-called “small cells,” for example, transmitters in lampposts. Billions of new wireless devices will soon be available worldwide. All of the above consumes electricity.

How will 5G affect the energy consumption of mobile operators?

Edge compute facilities needed to support local processing and new internet of things (IoT) services will also add to overall network power usage. Exact estimates differ by source, but MTN says the industry consensus is that 5G will double to triple energy consumption for mobile operators, once networks scale.

Does 5G use more energy than 4G?

Carriers have been looking at energy efficiency for a few years now, but 5G will bring this to top of mind because it's going to use more energy than 4G. Telcos spend on average 5% to 6% of their operating expenses, excluding depreciation and amortization, on energy costs, according to MTN Consulting.

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