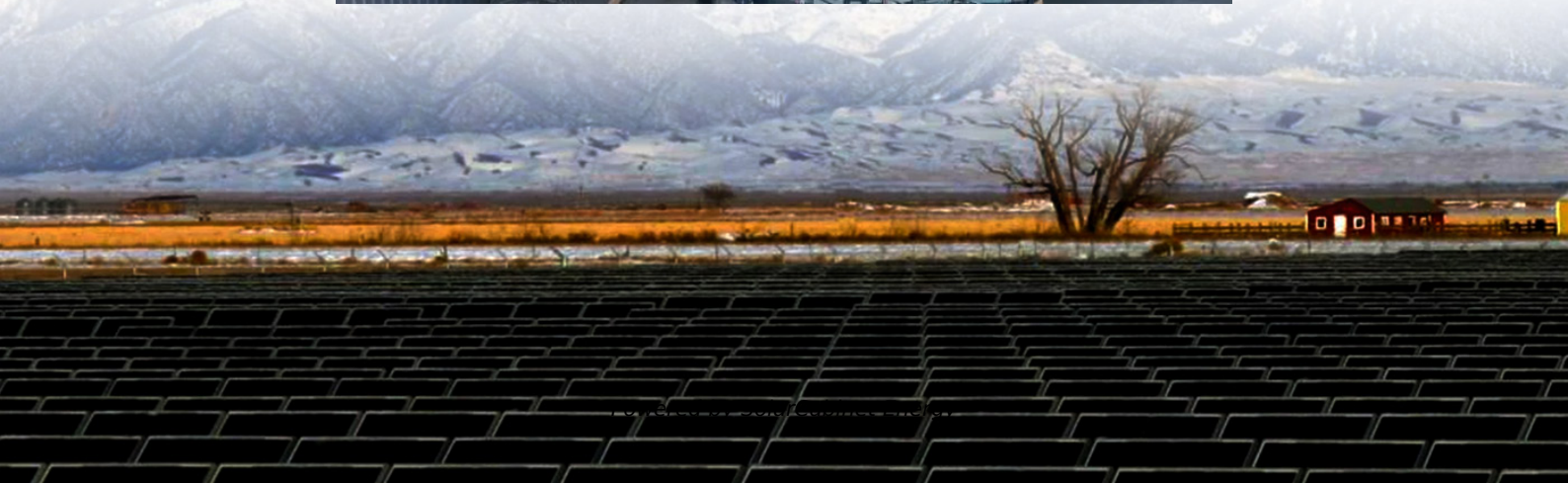


How is the electricity consumption of 5G base stations





Overview

In this post, we explore the energy saving features of 5G New Radio and how this enables operators to build denser networks, meet performance demands and maintain low 5G energy consumption.

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 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).

Why does 5G use more power than 4G?

The data here all comes from operators on the front lines, and we can draw the following valuable conclusions: The power consumption of a single 5G station is 2.5 to 3.5 times higher than that of a single 4G station. The main factor behind this increase in 5G power consumption is the high power usage of the active antenna unit (AAU).

How does mobile data traffic affect the energy consumption of 5G base stations?

The explosive growth of mobile data traffic has resulted in a significant increase in the energy consumption of 5G base stations (BSs).

What is 5G BS power consumption?

The 5G BS power consumption mainly comes from the active antenna unit (AAU) and the base band unit (BBU), which respectively constitute BS dynamic and static power consumption. The AAU power consumption changes positively with the fluctuation of communication traffic, while the BBU power



consumption remains basically unchanged , , .

How can we improve the energy efficiency of 5G networks?

To improve the energy efficiency of 5G networks, it is imperative to develop sophisticated models that accurately reflect the influence of base station (BS) attributes and operational conditions on energy usage.



How is the electricity consumption of 5G base stations

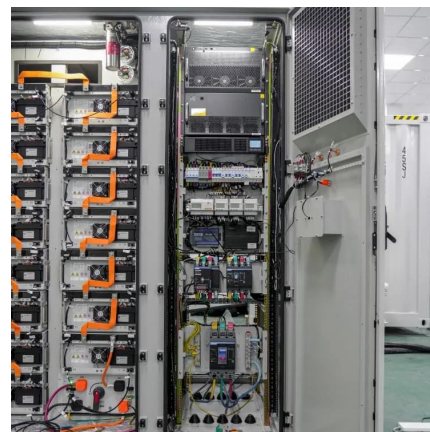


5G Power: Creating a green grid that slashes costs, emissions & energy use

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[Optimal configuration for photovoltaic storage system capacity in 5G](#)

Base station operators deploy a large number of distributed photovoltaics to solve the problems of high energy consumption and high electricity costs of 5G base stations. In this ...



[Final draft of deliverable D.WG3-02-Smart Energy Saving of ...](#)

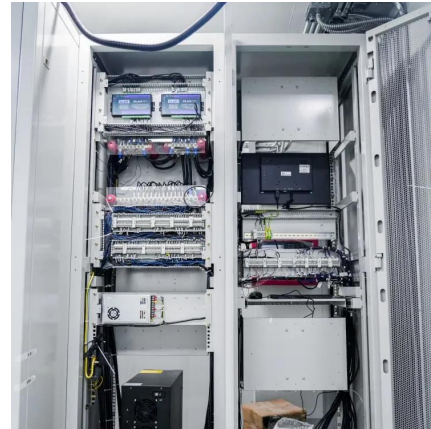
Change Log This document contains Version 1.0 of the ITU-T Technical Report on "Smart Energy Saving of 5G Base Station: Based on AI and other emerging technologies to forecast and ...

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of these stations is required for actual 5G deployment, ...



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