



WALMER ENERGY

Power consumption of 5G base stations in Africa





Overview

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).

Should power consumption models be used in 5G networks?

This restricts the potential use of the power models, as their validity and accuracy remain unclear. Future work includes the further development of the power consumption models to form a unified evaluation framework that enables the quantification and optimization of energy consumption and energy efficiency of 5G networks.

How many 5G networks are there in Africa?

There are now commercial 5G networks in more than 10 countries in the region, with stakeholders in many more countries expecting commercial 5G to be available in their markets by 2025. By the end of this decade, there will be more than 340 million 5G connections in Africa, equivalent to a fifth of total mobile connections.

Does 5G increase energy consumption?

However, this technological leap comes with a substantial increase in energy consumption. Compared to its predecessor, the fourth-generation (4G) network, the energy consumption of the 5G network is approximately three times higher .



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Exploring the Complex System of Energy Consumption ...

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