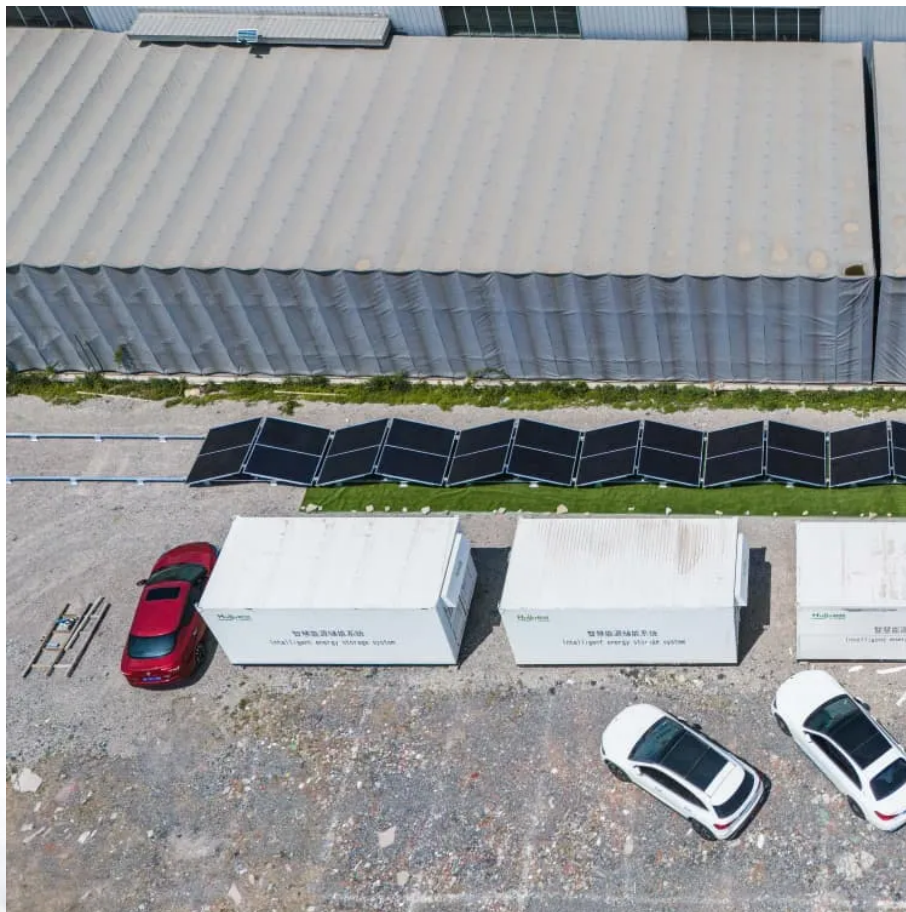


Power consumption of base station communication equipment





Overview

What is a base station power consumption model?

In recent years, many models for base station power consumption have been proposed in the literature. The work in [1] proposed a widely used power consumption model, which explicitly shows the linear relationship between the power transmitted by the BS and its consumed power.

How do base stations affect mobile cellular network power consumption?

Base stations represent the main contributor to the energy consumption of a mobile cellular network. Since traffic load in mobile networks significantly varies during a working or weekend day, it is important to quantify the influence of these variations on the base station power consumption.

Do base stations dominate the energy consumption of the radio access network?

Furthermore, the base stations dominate the energy consumption of the radio access network. Therefore, it is reasonable to focus on the power consumption of the base stations first, while other aspects such as virtualization of compute in the 5G core or the energy consumption of user equipment should be considered at a later stage.

Is there a direct relationship between base station traffic load and power consumption?

The real data in terms of the power consumption and traffic load have been obtained from continuous measurements performed on a fully operated base station site. Measurements show the existence of a direct relationship between base station traffic load and power consumption.



Power consumption of base station communication equipment

Measurements and Modelling of Base Station Power Consumption under Real

Base stations represent the main contributor to the energy consumption of a mobile cellular network. Since traffic load in mobile networks significantly varies during a working or weekend ...

Application of smart power usage on the communication base station

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Comparison of Power Consumption Models for 5G Cellular Network Base

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Power consumption based on 5G communication

Oct 17, 2021 · This paper proposes a power control algorithm based on energy efficiency, which combines cell breathing technology and base station sleep technology to reduce base station ...

Measurements and Modelling of Base Station Power Consumption ...

Mar 28, 2012 · The real data in terms of the power consumption and traffic load have been obtained from continuous measurements performed on a fully operated base station site. ...

Power consumption models of base station : measurements ...

The study also explores power consumption models in new radio and idle power consumption modes. Furthermore, this paper investigates power consumption in wireless networks, ...

Application of smart power usage on the ...

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