

Energy base station communication principle





Overview

What is the impact of base stations?

The impact of the Base Stations comes from the combination of the power consumption of the equipment itself (up to 1500 Watts for a nowadays macro base station) multiplied by the number of deployed sites in a commercial network (e.g. more than 12000 in UK for a single operator).

How BS affect the energy consumption of a cellular network?

To contribute to the expansion of mobile traffic, a large number of BS are required. In a regular cellular network, the BSs consume more than half of the total energy, therefore their increased numbers have a significant influence on the overall energy consumption.

What are the first steps taken in cellular energy management?

One of the first actions taken has been to monitor and understand where and by which cellular equipments the energy is consumed.

How much energy does a BS consume?

In the BS itself, the air interface i.e., radio and power amplifier (PA) consumes approximately 50%, while the digital signal processing consumes approximately 15% of the total energy of the network . The term “Green Cellular Network” has gained huge popularity since the current telecom industry is more cautious about the improvements in EE.



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[Energy-Efficient Base Stations , part of Green Communications](#)

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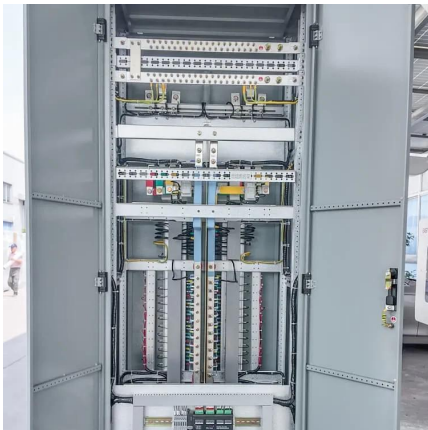
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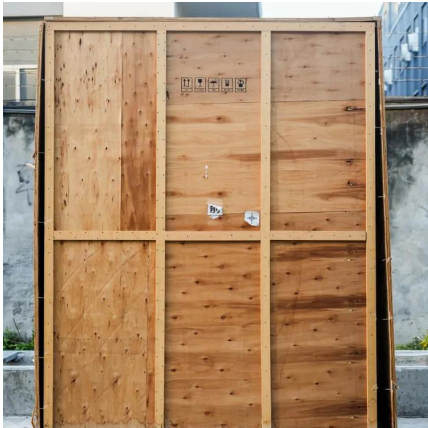
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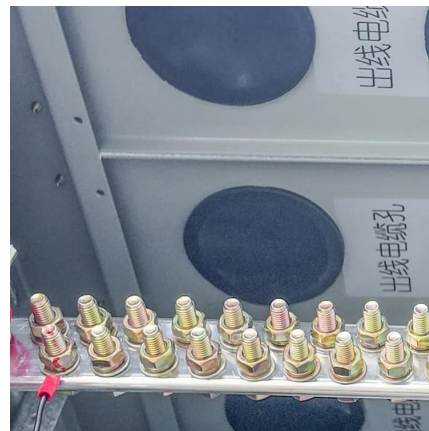


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