

Base station energy communication principle





Overview

How does a base station work?

As shown in Figure S3 each user accesses a base station, and the BS then allocates a channel to each new user when there is remaining channel capacity. If all of the channel capacity of a BS is occupied, a user cannot access this BS and must instead access another BS that is farther away.

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).

What is a BS in energy management?

The MG is managed by an energy management controllers (EMCs) that coordinates the dispatch of energy in the MG by interacting with information from other EMCs. This information can be interacted with through a communication network. Therefore, BSs are the main intermediaries between communication and energy systems.

What is a BS in a communication network?

For the communication network, a BS is an important transfer point for wireless information transmission. For the distribution network, it is the main communication device and consumes electricity. The communications operator is responsible for the construction of BSs.



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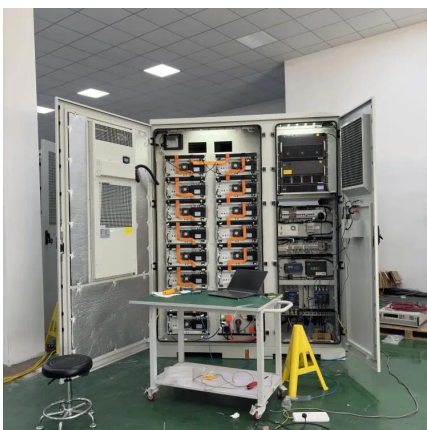


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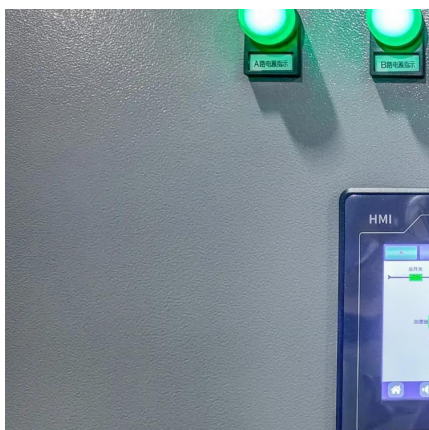
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