

Base station energy storage ESS communication signal





Overview

What is a 5G base station?

At the same time, a large number of 5G base stations (BSs) are connected to distribution networks, which usually involve high power consumption and are equipped with backup energy storage, giving it significant demand response potential.

What are the parameters of BS Energy Storage?

The channel bandwidth B allocated by the user is 1 MHz, the upper limit of the BS's traffic processing capacity L_{\max} is 10 4 Mbps, and the traffic demand L_j of a single user is 100 Mbps. The detailed parameters of the BS energy storage are shown in Table 1. ω is taken as small as 0.14 Yuan/kWh to encourage energy storage participation.

How to set the backup time of BS Energy Storage?

The backup time of the BS energy storage should be set according to the power supply reliability of the distribution network where BS is connected. For example, in areas with high power supply reliability, the backup time of energy storage can be reduced. Fig. 3. Schematic diagram of energy storage capacity division of BS.

Can a 5G base station enter a hibernation state?

If the communication load can only connect to one 5G BS, the base station cannot enter a hibernation state by load migration. In addition, the capacity of 5G BS to carry the communication load has an upper limit, dependent on the transmission traffic constraints and transmission power constraints, as shown in Equations (10), (11).



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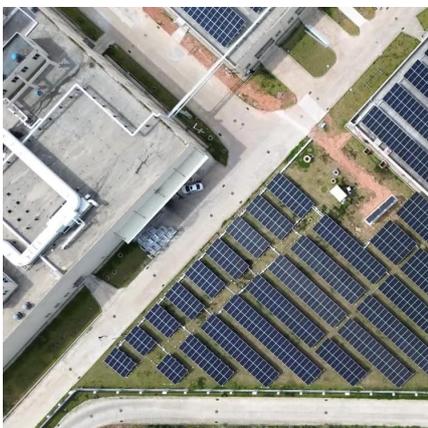
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