The range of signals sent by flow batteries in communication base stations

Are cellular base stations a flexible resource for power system frequency regulation?

Abstract: Cellular Base Stations (BSs) are equipped with backup batteries. These batteries have some spare capacity over time while maintaining the power supply reliability,so they are potential flexible resourcesfor power systems. This letter exhibits the insight to explore the BS dispatch potential towards power system frequency regulation.

How many batteries does a communication base station use?

Each communication base station uses a set of 200Ah·48V batteries. The initial capacity residual coefficient of the standby battery is 0.7,and the discharge depth is 0.3. When the mains power input is interrupted,the backup battery is used to ensure the uninterrupted operation of communication devices.

Why do cellular base stations have backup batteries?

[...]Cellular base stations (BSs) are equipped with backup batteries to obtain the uninterruptible power supply (UPS) and maintain the power supply reliability. While maintaining the reliability,the backup batteries of 5G BSs have some spare capacity over time due to the traffic-sensitive characteristic of 5G BS electricity load.

When does a base station need a backup battery?

When the power supply of the grid is good or the base station load is in a state of low energy consumption,the backup battery of the base station is usually idle. Reasonable evaluation of the reserve energy required by the base station is the premise of its response to the grid dispatching.

How is the schedulable capacity of a standby battery determined?

In this article,the schedulable capacity of the battery at each time is determined according to the dynamic communication flow,and the scheduling strategy of the standby power considering the dynamic change of communication flow is proposed. In addition,the model of a base station standby battery responding grid scheduling is established.

What is a scheduling strategy reserve battery?

The scheduling strategy reserve battery is considered when the communication traffic changes,and base station backup battery model participating in power grid scheduling is established,which solves the problem of dynamic change of base station reserve demand.

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Dec 16, 2020 In recent years, with the rapid deployment of fifth-generation base stations, mobile communication signals are becoming more and more complex. How to identify and classify ?

Dec 19, 2023 ge of communication flow is proposed. In addition, the model of a base station standby battery resp nding grid scheduling is established. The simulation results show that the ?

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