

Russian communication base station energy storage system project

How can a base station save energy?

Energy saving is achieved by adjusting the communication volume of the base station and responding to the needs of the power grid to increase or decrease the charge and discharge of the base station's energy storage. However, the paper's pricing of energy interaction ignores the operating loss costs of the operator's energy storage equipment.

How to determine backup energy storage capacity of base stations?

For the determination of the backup energy storage capacity of base stations in different regions, this paper mainly considers three factors: power supply reliability of the grid node where the base station is located (grid node vulnerability), the load level of the grid node and communication load.

What is a base station energy storage capacity model?

Based on the base station energy storage capacity model established in contribution (1), an objective function is established to minimize the system operating cost in the fault area, and the base station energy storage owned by mobile operators is used as an emergency power source to participate in power supply restoration.

Does a base station energy storage model improve the utilization rate?

Where traffic is high, less base station energy storage capacity is available. Compared with the fixed backup time, the base station energy storage model proposed in this article not only improves the utilization rate of base station energy storage, but also reduces the power loss load and power loss cost in the distribution network fault area.

How is energy sharing between base stations achieved?

Energy sharing between base stations is achieved through resistive power lines. However, the error of the energy storage capacity model obtained by linear fitting is large because the variation of the communication volume in different regions does not have a linear law, and there are spatial and temporal differences.

Can base station energy storage participate in emergency power supply?

Based on the established energy storage capacity model, this paper establishes a strategy for using base station energy storage to participate in emergency power supply in distribution network fault areas.

The system includes photovoltaic module, integrated optical storage inverter, wind turbine, fan controller and vanadium redox battery. Reserve Diesel / oil generator and load interface for ...

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