

Mobile 5g base station power supply method





Overview

This paper proposes a distribution network fault emergency power supply recovery strategy based on 5G base station energy storage. This strategy introduces Theil's entropy and modified Gini coef.

What is a 5G power supply?

The power supply equipment manages the distribution and conversion of electrical energy among equipment within the 5G base station. During main power failures, the energy storage device provides emergency power for the communication equipment.

What equipment is used in a 5G base station?

AAU is the most energy-consuming equipment in 5G base stations, accounting for up to 90% of their total energy consumption. Auxiliary equipment includes power supply equipment, monitoring and lighting equipment. The power supply equipment manages the distribution and conversion of electrical energy among equipment within the 5G base station.

What is a 5G base station energy storage device?

During main power failures, the energy storage device provides emergency power for the communication equipment. A set of 5G base station main communication equipment is generally composed of a baseband BBU unit and multiple RF AAU units. Equation 1 serves as the base station load model:.

Why are 5G base stations important?

The denseness and dispersion of 5G base stations make the distance between base station energy storage and power users closer. When the user's load loses power, the relevant energy storage can be quickly controlled to participate in the power supply of the lost load.



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