



BUHLE POWER

5G base station emergency power supply





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.

Can 5G base station energy storage be used in emergency restoration?

The massive growth of 5G base stations in the current power grid will not only increase power consumption, but also bring considerable energy storage resources. However, there are few studies on the feasibility of 5G base station energy storage participating in the emergency restoration of the power grid.

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.

What factors affect the energy storage reserve capacity of 5G base stations?

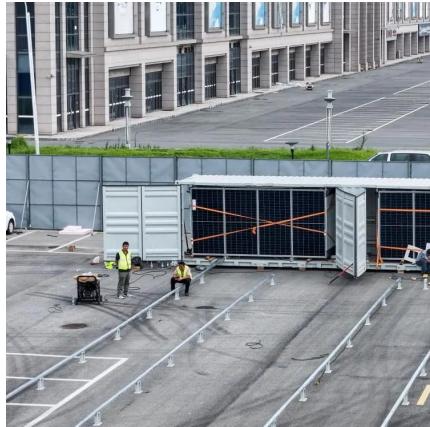
This work explores the factors that affect the energy storage reserve capacity of 5G base stations: communication volume of the base station, power consumption of the base station, backup time of the base station, and the power supply reliability of the distribution network nodes.

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.



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Selecting the Right Supplies for Powering 5G Base Stations

Additionally, these 5G cells will also include more integrated antennas to apply the massive multiple input, multiple output (MIMO) techniques for reliable connections. As a result, a

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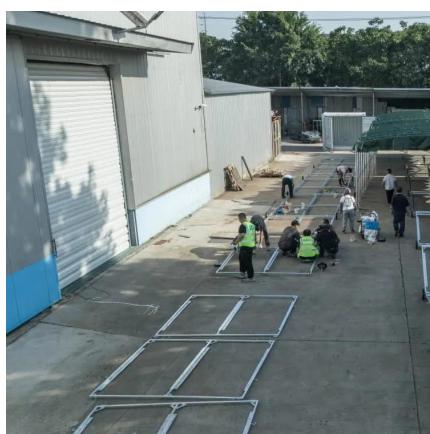


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May 25, 2025 · Building better power supplies for 5G base stations Authored by: Alessandro Pevere, and Francesco Di Domenico, both at Infineon Technologies



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