Ma Xiangyu Microgrid

How to optimize photovoltaic storage capacity of 5G base station microgrid?

The outer model aims to minimize the annual average comprehensive revenue of the 5G base station microgrid, while considering peak clipping and valley filling, to optimize the photovoltaic storage system capacity. The CPLEX solver and a genetic algorithm were used to solve the two-layer models.

What is a 5G base station microgrid?

In the 5G base station microgrid, the traffic of the macro and micro base stations exhibits obvious periodicity in time, and the upward and downward trends are in step. Therefore, the flow load of the macro base station is set to X times that of the micro-base station.

What are the standard deviations of 5G base station microgrids?

The standard deviations of the 5G base station microgrids in the university,park,and business districts are 3.6,1.3,and 2.8,respectively. The typical daily load curves of each type of 5G base station microgrid obtained before and after the hibernation algorithm are shown in Fig. 4.

Do 5G base station microgrids contribute to a delayed power grid upgrade?

With respect to the power grid,the participation of the 5G base station microgrids in the power grid interaction introduces the benefits of delayed power grid upgrading. In this study,only typical days are considered,and the typical days of four quarters are selected to represent the entire year.

Why should a 5G base station microgrid have a sleep mechanism?

The 5G network is always designed with the maximum traffic load that the system can withstand during deployment,which leads to energy waste. The sleep mechanism can further optimize the power consumptionof the 5G base station microgrid .

What is P0 in 5G microgrid?

P0 is the base power consumptiongenerated by the four base stations when there is no traffic load. In the 5G base station microgrid,the traffic of the macro and micro base stations exhibits obvious periodicity in time,and the upward and downward trends are in step.

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microgrid, this paper proposes a comprehensive strategy which can be ... Xiying Ding, Shaohua Ma, Xiangyu Han are with the institute of electrical engineering, Shenyang University of ...

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