
Communication 5g base station cooperation

What is a distributed collaborative optimization approach for 5G base stations?

In this paper, a distributed collaborative optimization approach is proposed for power distribution and communication networks with 5G base stations. Firstly, the model of 5G base stations considering communication load demand migration and energy storage dynamic backup is established.

What is the energy consumption of 5G communication base stations?

Overall, 5G communication base stations' energy consumption comprises static and dynamic power consumption. Among them, static power consumption pertains to the reduction in energy required in 5G communication base stations that remains constant regardless of service load or output transmission power.

What is a collaborative optimal operation model of 5G base stations?

Afterward, a collaborative optimal operation model of power distribution and communication networks is designed to fully explore the operation flexibility of 5G base stations, and then an improved distributed algorithm based on the ADMM is developed to achieve the collaborative optimization equilibrium.

What is a 5G base station?

At the same time, a large number of 5G base stations (BSs) are connected to distribution networks, which usually involve high power consumption and are equipped with backup energy storage, giving it significant demand response potential.

With the increasing amounts of terminal equipment with higher requirements of communication quality in the emerging fifth generation mobile communication network (5G), the energy ...

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Recently, 5G communication base stations have steadily evolved into a key developing load in the distribution network. During the operation process, scientific dispatching ...

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Optimizing energy consumption and aggregating energy storage capacity can alleviate 5G base station (BS) operation cost, ensure power supply reliability, and provide ...

First, it established a 5G base station load model considering the communication load and a 5G base station energy storage capacity schedulable model considering the energy ...

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The construction of the novel power system (NPS) mainly based on renewable energy is an important direction for the transformation and development of China's energy and power ...

The fifth-generation mobile network (5G) supports Internet of Things (IoT) devices and processes large-scale data volumes through mobile devices. With this facility, we find a ...

