

SolarMax Energy Systems

Equipment required for hybrid energy in communication base stations



Overview

What is a hybrid control strategy for communication base stations?

The objective of this paper is to present a hybrid control strategy for communication base stations that considers both the communication load and time-sharing tariffs.

What is a 5G communication base station?

The 5G communication base station can be regarded as a power consumption system that integrates communication, power, and temperature coupling, which is composed of three major pieces of equipment: the communication system, energy storage system, and temperature control system.

Why do communication base stations use battery energy storage?

Meanwhile, communication base stations often configure battery energy storage as a backup power source to maintain the normal operation of communication equipment [3, 4]. Given the rapid proliferation of 5G base stations in recent years, the significance of communication energy storage has grown exponentially [5, 6].

What types of communication systems are used in general transmission equipment solutions?

The deployment of communication systems for general transmission equipment solutions encompasses: the Packet Transport Network (PTN), Base Band Unit (BBU), and Active Antenna Unit (AAU). The network architecture is shown in Figure 2. Figure 2. The main composition diagram of the communication system.

What is a base station energy storage system?

A single base station energy storage system is configured with a set of 48 V/400 A-h energy storage batteries. The initial charge state of the batteries is assumed to obey a normal distribution, assuming that the base station has a

uniform specification and its parameters are shown in Table 2. Table 2. Parameters of the energy storage system.

Can a power grid model reduce the power consumption of base stations?

The analysis results demonstrate that the proposed model can effectively reduce the power consumption of base stations while mitigating the fluctuation of the power grid load.

Equipment required for hybrid energy in communication base station



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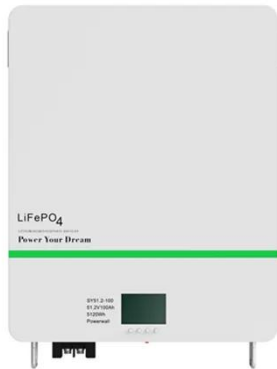
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site consists of the energy required to power the base station equipment, the transmission equipment (that transports ...

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