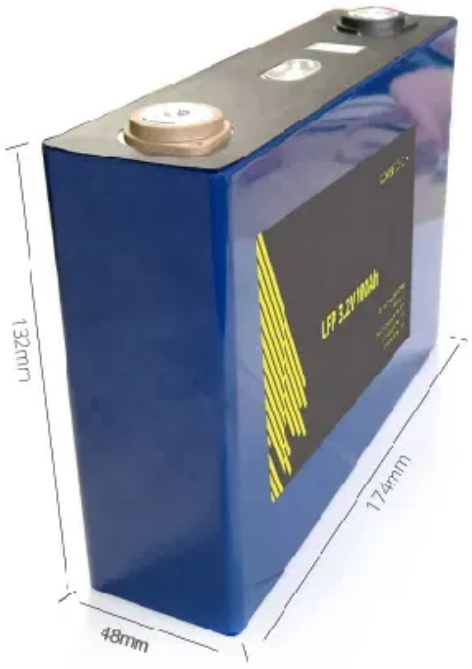
SolarInnovate Energy Solutions

Is the electricity cost of communication base stations high



Overview

Why are 5G base stations being powered off every day?

Selected 5G base stations in China are being powered off every day from 21:00 to next day 9:00 to reduce energy consumption and lower electricity bills. 5G base stations are truly large consumers of energy such that electricity bills have become one of the biggest costs for 5G network operators.

How does mobile data traffic affect the energy consumption of 5G base stations?

The explosive growth of mobile data traffic has resulted in a significant increase in the energy consumption of 5G base stations (BSs).

Who makes the most mobile base station equipment in the world?

According to Taiwan based market research firm TrendForce, the big three China and European telecom equipment manufacturers captured more than 85% market share in the global mobile base station industry in 2019, with Sweden-based Ericsson, China-based Huawei, and Finland-based Nokia as the three largest suppliers.

How much electricity will a 5G base station save a year?

The current 200,000 base stations can save 1.2 billion annually. By the end of this year, 1 million 5G base stations will be built, saving 6 billion in a year. If there are more than 2 million base stations, 12 billion electricity can be saved a year, which is equivalent to China Unicom’s total profit in one year.

How many base stations are required in Hongqiao District?

The total area of Hongqiao District is 23.5 square kilometers. According to the plan, about 50 base stations are required per square kilometer. If 5G base stations are covered nationwide, 9.6 million x 50=480 million base stations are required. The electricity bill is equivalent to several hundred times the annual profit of China Unicom.

How much power does a BBU use?

Data shows the power of the BBU is relatively stable and is affected very little by the workload, while AAU is opposite, with power consumption growing as the load increases. With S111 configuration and 100% load, the power consumption of a single station can even reach 3852.5W.

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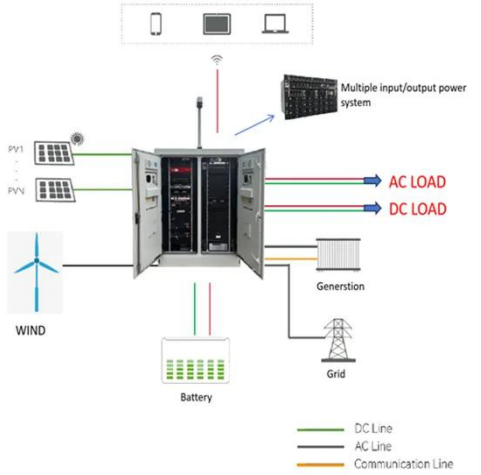

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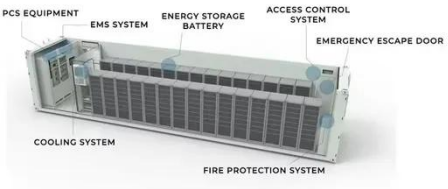

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