

## ContainerPower Energy Solutions

# Battery bidding for 5g base station



## Overview

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Why do cellular base stations have backup batteries?

Abstract: Cellular base stations (BSs) are equipped with backup batteries to obtain the uninterruptible power supply (UPS) and maintain the power supply reliability. While maintaining the reliability, the backup batteries of 5G BSs have some spare capacity over time due to the traffic-sensitive characteristic of 5G BS electricity load.

How much power does a 5G base station use?

Each nation has a different 5G strategy. For 5G, China uses 3.5GHz as the frequency. Then, a 5G base station resembles a 4G system, but it's on a much larger scale. For sub-6GHz in 5G, let's say you have a macro base station. The power levels at the antenna range from 40 watts, 80 watts or 100 watts.

Do 5G BS batteries have a spare capacity?

While maintaining the reliability, the backup batteries of 5G BSs have some spare capacity over time due to the traffic-sensitive characteristic of 5G BS electricity load. Therefore, the spare capacity is dispatchable and can be used as flexibility resources for power systems.

What is a 5G base station?

As part of a network's wireless telephone system, a 5G base station is a fixed communication point that connects using a single or several antennas. It comprises a wireless receiver and a short-range transceiver with an antenna and analog-to-digital converters (ADCs) to convert radio frequency impulses to digital signals.

What are the prospects of the 5G base station market?

Because of the increased need for high-speed data with low latency, the 5G base station market is likely to develop significantly throughout the forecast period. Furthermore, the growth of the 5G IoT ecosystem and vital

communication services is expected to provide lucrative prospects for the 5G base station market to expand.

Can backup batteries reduce 5G BS electricity bills?

Case studies show that the proposed methodology can effectively evaluate the dispatchable capacity and that dispatching the backup batteries can reduce 5G BS electricity bills while satisfying the reliability requirement. References is not available for this document. Need Help?

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