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Why do cellular base stations have backup batteries?
[...]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.

Which battery is best for telecom base station backup power?
Among various battery technologies,Lithium Iron Phosphate(LiFePO4) batteries stand out as the ideal choice for telecom base station backup power due to their high safety,long lifespan,and excellent thermal stability.

How long do base station batteries last?
After using BatAlloc to allocate suitable numbers of battery groups for base stations,the average battery lifetime has achieved to 4.3 years,roughly 1.8 times longer than that of the original allocation. The results indicate that our framework can also better protect base station batteries and significantly pro-long their average lifetimes.

How does a battery group work in a base station?
The equipment in base stations is usually supported by the utility grid,where the battery group is installed as the backup power. In case that the utility grid interrupts,the battery discharges to support the communication switching equipment during the period of the power outage.

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May 17, 2022 · 4.1.2 Temporal Dimension The time-varying traffic and power demands of BSs can also be exploited to further cut down the backup power cost. For example, with prior ...

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