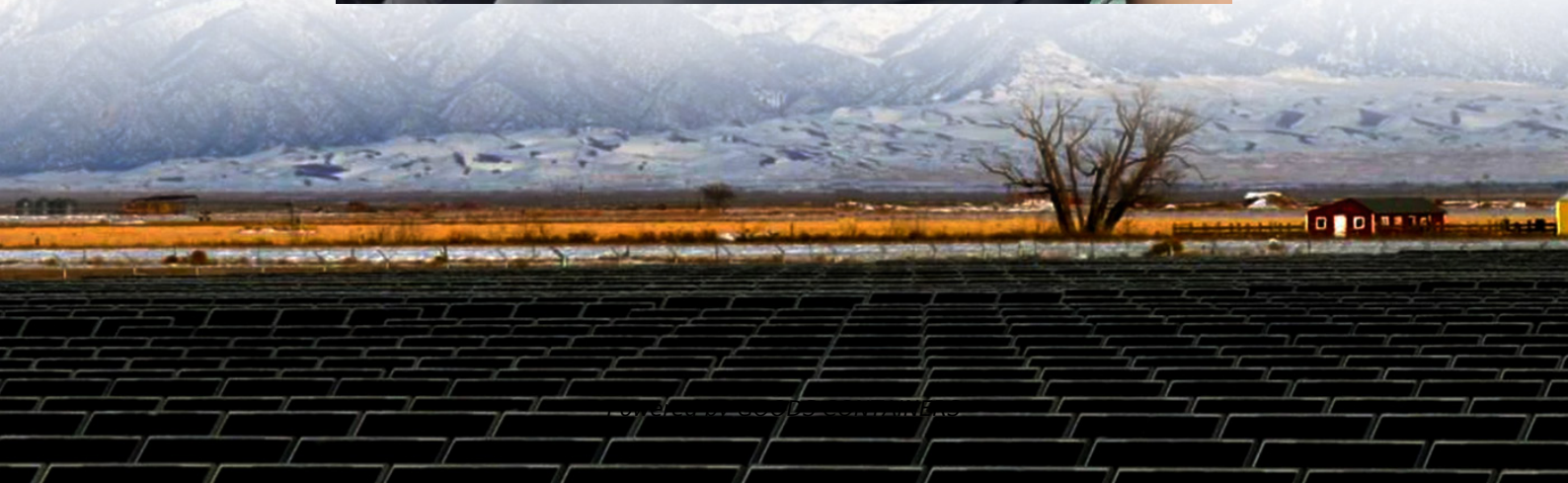
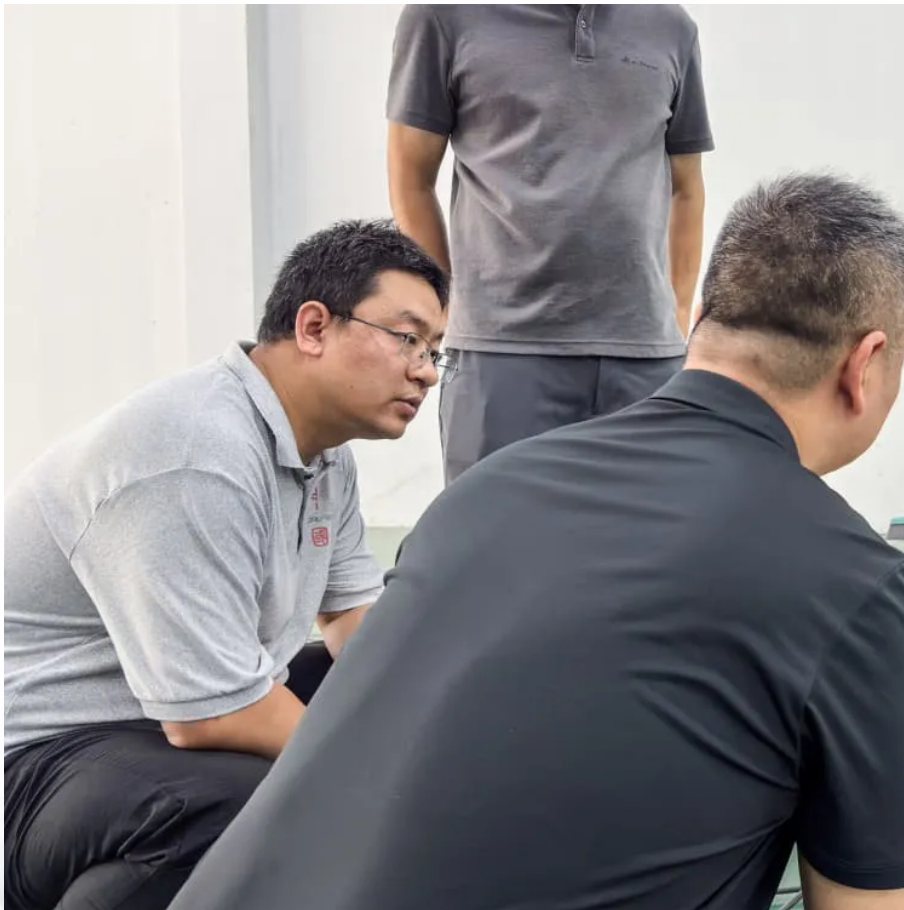


The frequency of uninterrupted power supply in the base station room





Overview

Are cellular base stations a flexible resource for power system frequency regulation?

Abstract: Cellular Base Stations (BSs) are equipped with backup batteries. These batteries have some spare capacity over time while maintaining the power supply reliability, so they are potential flexible resources for power systems. This letter exhibits the insight to explore the BS dispatch potential towards power system frequency regulation.

Can BS be used for power system frequency regulation?

This letter exhibits the insight to explore the BS dispatch potential towards power system frequency regulation. For each BS, the feasible dispatch boundaries of participating in frequency regulation are estimated. Then a framework is proposed to coordinate BSs to provide frequency support.

How to improve power system frequency performance?

For each BS, the feasible dispatch boundaries of participating in frequency regulation are estimated. Then a framework is proposed to coordinate BSs to provide frequency support. By incorporating massive distributed BSs, the power system frequency performances can be improved.

What is secondary frequency support performance?

Secondary frequency support performance The modified Kundur system shown in Fig. 1 is used as an example system. This system, introduced by Prabha S. Kundur in 1994, comprises two similar areas with significant capacities (in bus 7 and 9) and are proven to be susceptible to instability in power disturbances.



The frequency of uninterrupted power supply in the base station room



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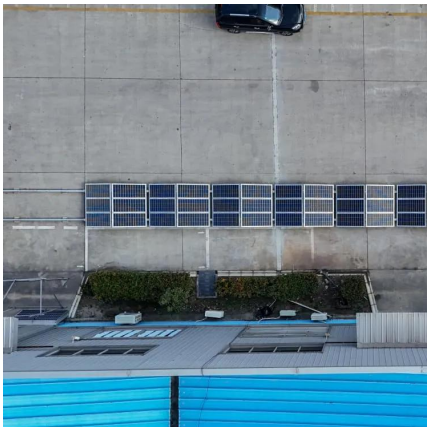
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