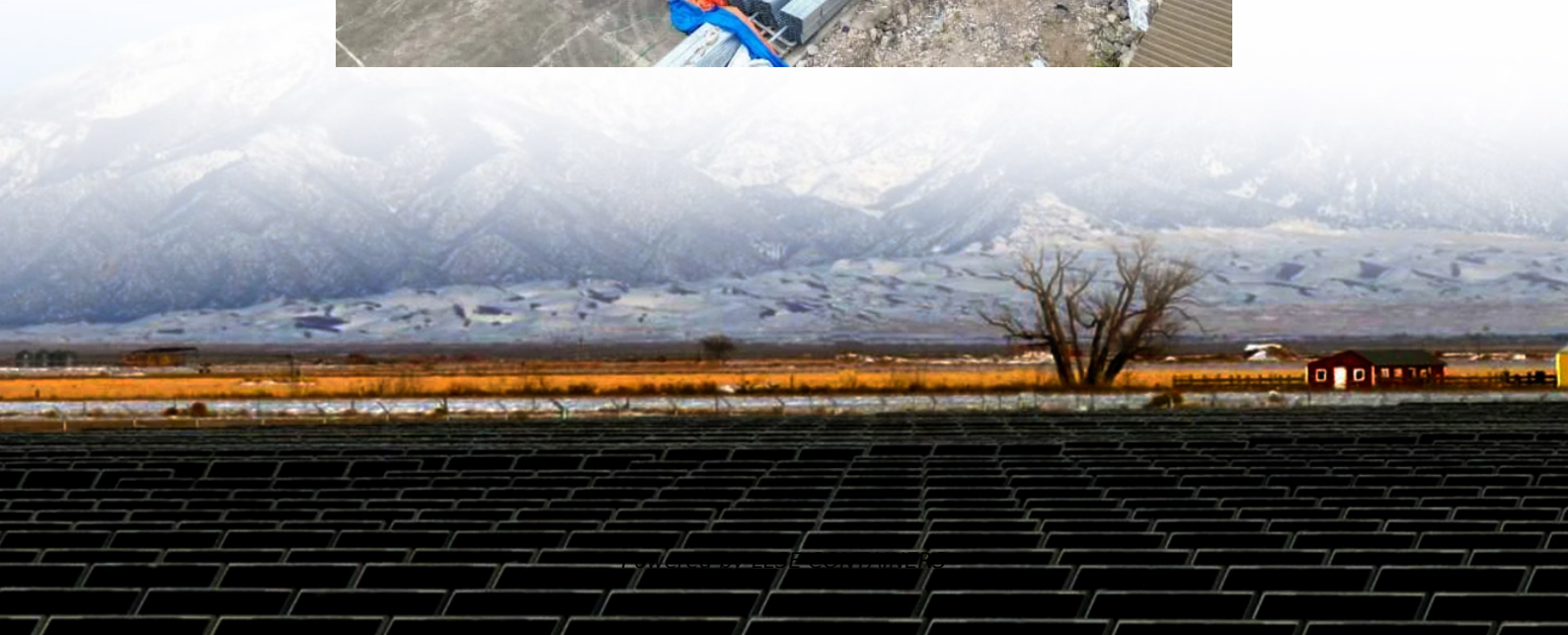


# **Will batteries be necessary for energy storage in the future**





## Overview

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It is no exaggeration to say that Lithium-ion batteries have shaped the modern era, but emerging technologies offer a glimpse of a future where energy storage is not only more efficient but also more sustainable. Why do we need a battery energy-storage technology (best)?

BESTs are increasingly deployed, so critical challenges with respect to safety, cost, lifetime, end-of-life management and temperature adaptability need to be addressed. The rise in renewable energy utilization is increasing demand for battery energy-storage technologies (BESTs).

Why are batteries so important?

In an era of climate-friendly mobility, energy transition and digitalisation, batteries are at the heart of storage technology. However, as the world moves towards a more sustainable energy supply, the demands placed on batteries are also increasing.

Are battery energy-storage technologies necessary for grid-scale energy storage?

The rise in renewable energy utilization is increasing demand for battery energy-storage technologies (BESTs). BESTs based on lithium-ion batteries are being developed and deployed. However, this technology alone does not meet all the requirements for grid-scale energy storage.

What is the future of battery storage?

Batteries account for 90% of the increase in storage in the Net Zero Emissions by 2050 (NZE) Scenario, rising 14-fold to 1 200 GW by 2030. This includes both utility-scale and behind-the-meter battery storage. Other storage technologies include pumped hydro, compressed air, flywheels and thermal storage.



## Will batteries be necessary for energy storage in the future

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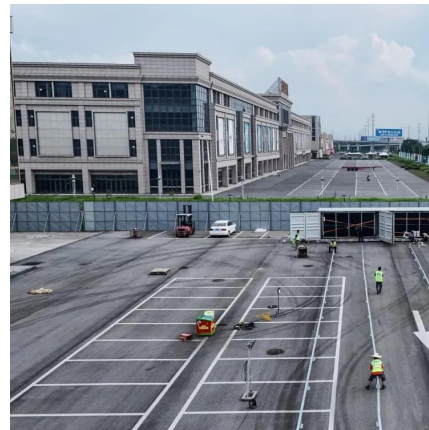


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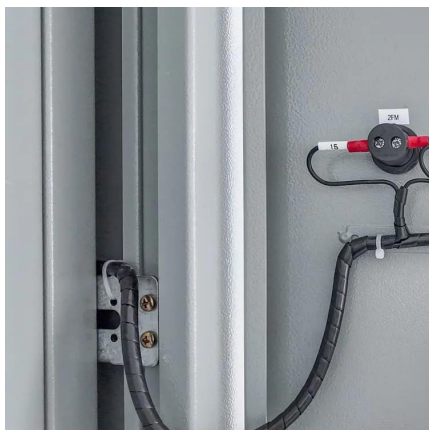
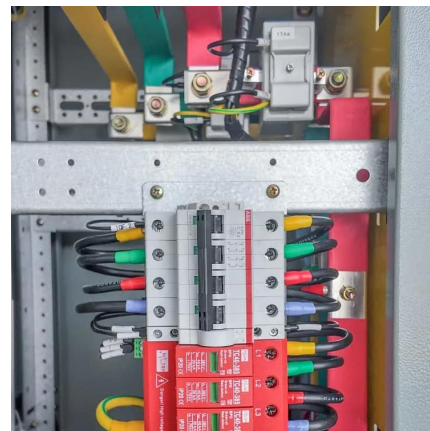


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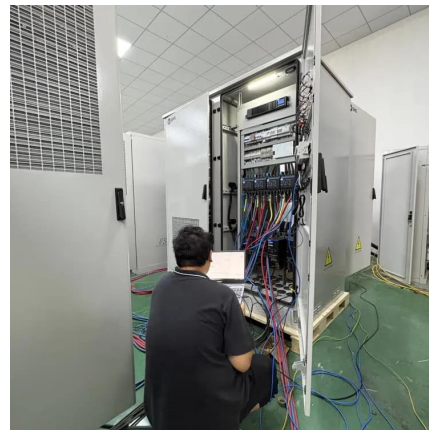
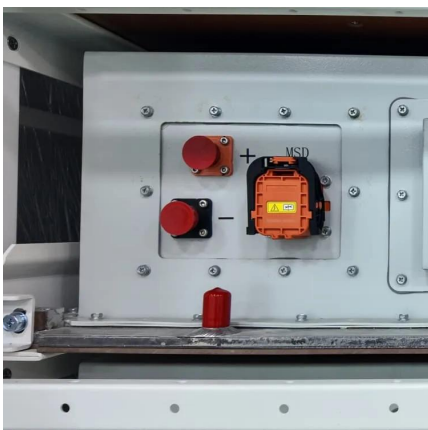
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