

# The level that energy storage batteries need to reach





## Overview

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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.

How much lithium-ion battery storage does the world need?

Meng projects that a future version of the world that relies on clean energy will require between 200 TWh and 300 TWh of lithium-ion battery storage. That is an intimidating figure, she acknowledged, given that so far, the world's battery industry has achieved only 1 TWh annual production of lithium-ion battery capacity.

Is behind-the-meter battery energy storage a problem?

Behind-the-meter battery energy storage is facing challenges on its own. In many jurisdictions, legacy electricity tariff structures do not reward the deployment of behind-the-meter battery storage, which continues to fall behind grid-scale battery energy storage in the projections of the World Energy Outlook 2022.

Why is battery energy storage important?

In the electricity sector, battery energy storage emerges as one of the key solutions to provide flexibility to a power system that sees sharply rising flexibility needs, driven by the fast-rising share of variable renewables. The ongoing decline in the cost of battery packs is crucial to this.



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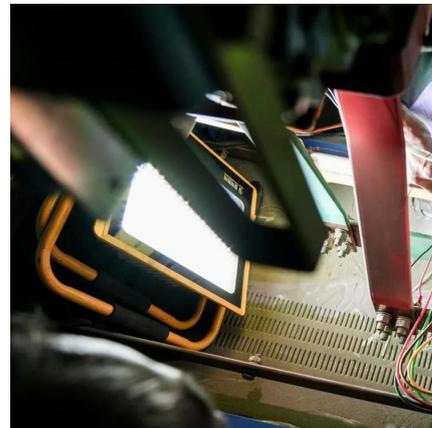


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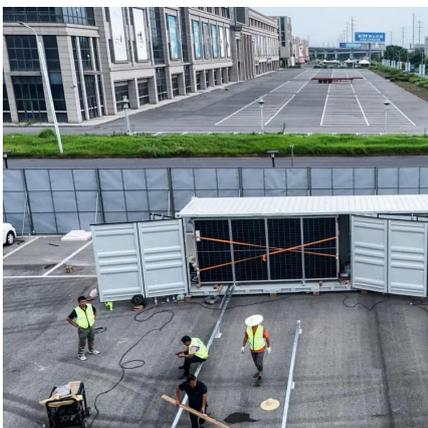
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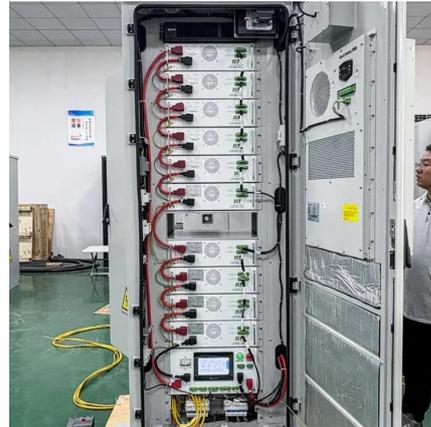
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