

# **Cost-effectiveness analysis of long-term mobile energy storage containers for field research**





## Overview

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What is long duration energy storage (LDEs)?

Long Duration Energy Storage (LDES) enables extended storage of power and helps stabilize intermittent power supply when integrated with renewable energy. Technologies such as compressed air energy and thermal energy storage are being developed within the LDES field, offering low-cost solutions with substantial storage capacity.

Which energy storage technologies are included in the 2020 cost and performance assessment?

The 2020 Cost and Performance Assessment provided installed costs for six energy storage technologies: lithium-ion (Li-ion) batteries, lead-acid batteries, vanadium redox flow batteries, pumped storage hydro, compressed-air energy storage, and hydrogen energy storage.

What is energy storage analysis?

This analysis identifies optimal storage technologies, quantifies costs, and develops strategies to maximize value from energy storage investments. Energy demand and generation profiles, including peak and off-peak periods.

How much does energy storage cost?

Among them, gravity storage has the highest global average cost at USD 643 per kWh of storage<sup>2</sup>. The next highest is flow batteries at USD 444/kWh, followed by lithium-ion (Li-ion) batteries at USD 304/kWh and compressed air energy storage at USD 293/kWh. The lowest-cost technology is thermal energy storage at USD 232/kWh.



## Cost-effectiveness analysis of long-term mobile energy storage con

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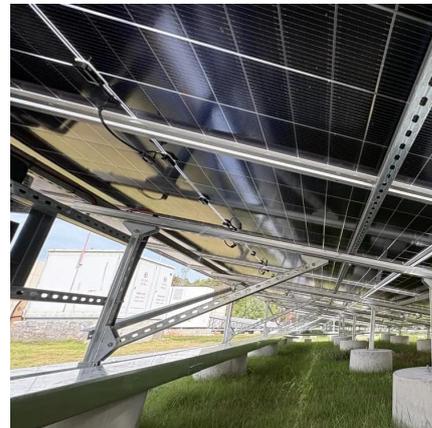


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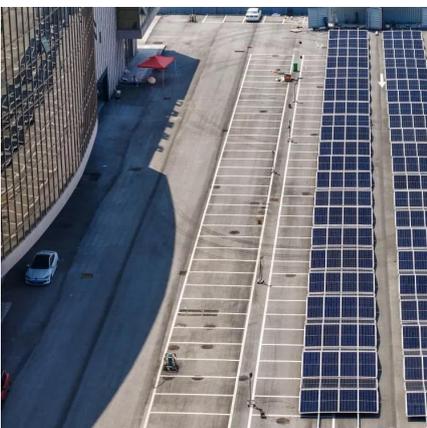
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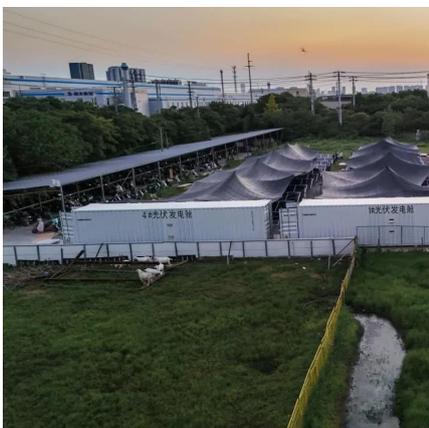
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