

# **Preliminary review of land use for energy storage projects**





## Overview

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Why do energy storage projects have a large energy rating?

Long-duration energy storage projects usually have large energy ratings, targeting different markets compared with many short duration energy storage projects. The large energy rating raises concerns about the footprint measured in m<sup>2</sup> /MWh.

Can a liquid air energy storage system support regional energy storage demand?

Liquid air energy storage and innovative CAES-hydro combined technologies like Hydrostor share similar land footprint and deliverable size with Energy Vault, and thus could also support regional level inter-day storage demand but not seasonal due to idle loss.

Why are solar & battery storage lease rates increasing?

The increasing demand for land suitable for solar and battery storage projects has driven up lease rates in recent years, especially because of the incentives offered by the IRA Renewable Energy. As the industry expands, competition for land is intensifying, particularly in regions with favorable solar and wind resources.

What is the future of underground energy storage?

2023: Research directions in UHS and other underground energy storage technologies further expanded, emphasizing enhancing storage efficiency, ensuring safety, and maximizing the renewability of stored energy.



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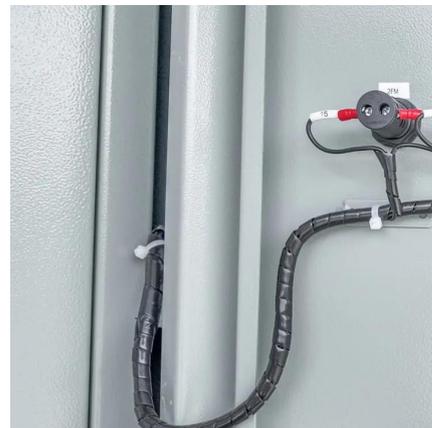
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