

Cost-effectiveness of low-pressure energy storage containers





Overview

What is compressed air energy storage?

Compressed air energy storage (CAES) is one of the many energy storage options that can store electric energy in the form of potential energy (compressed air) and can be deployed near central power plants or distribution centers. In response to demand, the stored energy can be discharged by expanding the stored air with a turboexpander generator.

Is liquid air energy storage efficient?

Liquid air energy storage (LAES) technology is helpful for large-scale electrical energy storage (EES), but faces the challenge of insufficient peak power output. To address this issue, this study proposed an efficient and green system integrating LAES, a natural gas power plant (NGPP), and carbon capture.

How much does energy storage cost?

A notable part of the study is the analysis of the “levelized cost of storage” (LCOS), which measures the cost of storing energy over a system’s lifetime. The findings indicate an LCOS of approximately \$60 per megawatt-hour for LAES.

Could liquid air energy storage outperform batteries?

MIT and NTNU research shows liquid air energy storage (LAES) offers a cost-effective, efficient solution for long-duration grid storage. With competitive LCOS and reliable performance, LAES could outperform batteries and pumped hydro for a decarbonized power network.



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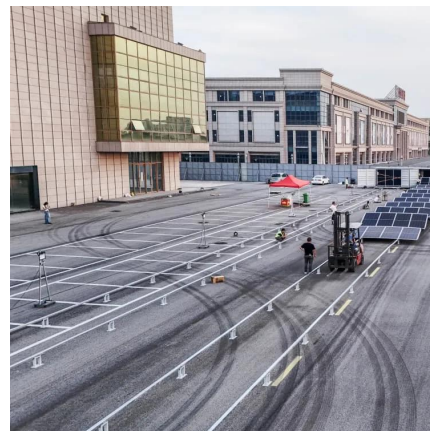


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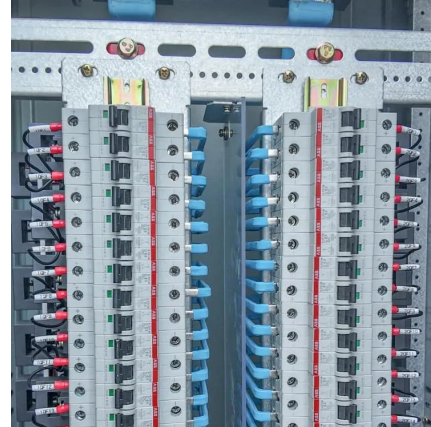
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