

San Diego Compressed Air Energy Storage Power Station





Overview

Liquid air energy storage, a recently introduced grid-scale energy storage technology, has attracted attention in recent years due to its unique characteristics: geographic location independent.

Can San Diego develop a pumped storage energy project?

When energy demand is high, the stored water is released downhill to turn turbines that produce energy. The Water Authority and City of San Diego are evaluating the feasibility of developing a pumped storage energy project at the City of San Diego's San Vicente Reservoir near Lakeside.

What is compressed air energy storage (CAES)?

As the world transitions to decarbonized energy systems, emerging long-duration energy storage technologies are crucial for supporting the large-scale deployment of renewable energy sources. Compressed air energy storage (CAES) is a promising solution for large-scale, long-duration energy storage with competitive economics.

How much energy would a San Diego water reservoir store?

It would store 4,000 megawatt-hours per day of energy (500 megawatts of capacity for eight hours), enough energy for about 135,000 households. The San Diego County Water Authority, which owns approximately two-thirds of the reservoir's water storage capacity, is partnering with the City on this potential project.

What are the challenges of a compressed air energy storage system?

Traditional CAES systems face two big challenges: wasted heat and inconsistent power output. Willow Rock's advanced compressed air energy storage system (A-CAES) technology solves these problems: Thermal energy capture: Conventional CAES loses around 50% of energy during the air compression process.



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Compressed Air Energy Storage Technology

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Technology Strategy Assessment

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Electricity and Energy Storage

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San Vicente Energy Storage Facility

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A small-scale CAES (compressed air energy storage) system ...

Dec 15, 2014 · In this paper, a novel CAES system (compressed air energy storage) is proposed as a suitable technology for the energy storage in a small scale stand-alone renewable



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Overview of compressed air energy storage projects and ...

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