

Swedish compressed air energy storage project





Overview

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.

Should we study the Swedish energy system at national scale?

Hitherto studies have predominantly focused on electricity sector. Nevertheless, the targets for 2045 necessitates studying the Swedish energy system at national scale in the context of sector coupling & storage.

What is the future of Swedish energy system?

Summary of literature review. In case of the Swedish energy system, there are uncertainties surrounding the future of nuclear power plants, the anticipated increase in wind and solar PV installations, electrification trends, and the role of hydrogen in the steel industry [34, 35].

Is energy transition a key to achieving Sweden's national climate goals?

Energy transition plays a crucial role in reaching Sweden's national climate goals. This study demonstrates how integrating different sectors through power-to-x strategies can utilize excess electricity in systems with intermittent sources. It aligns with UN Sustainable Development Goals 7 (affordable and clean energy) and 13 (climate action).



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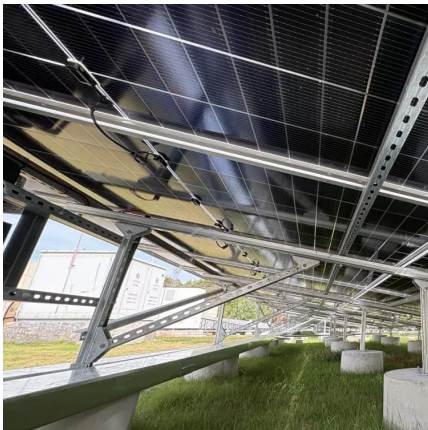
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Apr 16, 2021 · The Canadian federal government is financially supporting the development of a large-scale advanced compressed air energy storage (A-CAES) project capable of providing ...



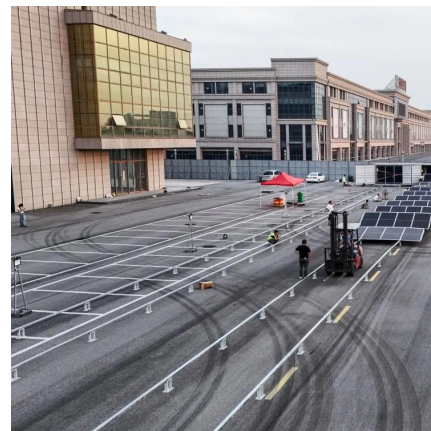
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Aug 18, 2024 · The first step consisted of basic conceptual studies, and was conducted from 1985 through 1992 by a combination of Swedish energy companies. These studies principally ...



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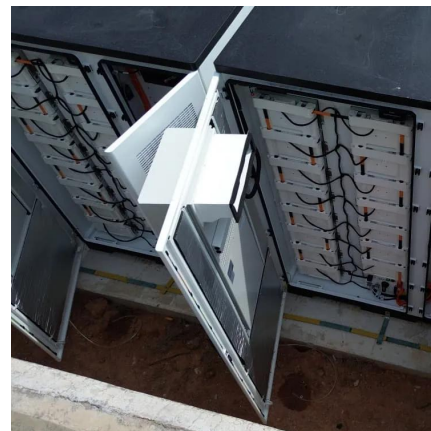


[Compressed Air Energy Storage: Status, Classification and](#)

Compressed air energy storage (CAES) is an established technology that is now being adapted for utility-scale energy storage with a long duration, as a way to solve the grid stability issues ...

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Faludden Reservoir Thickness Faludden Structure Faludden Reservoir and Cap Rock Properties To date, no detailed structural maps of the Faludden reservoir beneath Gotland have been published. Therefore, an important part of this assessment was to generate a top structure map for the Faludden reservoir. This was accomplished using about 500 seismic lines for interpretation alongside well data. A small map detailing the locations of the 2D See more on link.springer Author: Daniel Sophereriyabv [PDF]



Is compressed air energy storage feasible - eriyabv

By comparing different possible technologies for energy storage, Compressed Air Energy Storage (CAES) is recognized as one of the most effective and economical technologies to conduct ...



[Compressed Air Energy Storage \(CAES\): A Comprehensive ...](#)

Jan 30, 2025 · 15. Conclusions Compressed Air Energy Storage (CAES) represents a versatile and powerful technology that addresses many of the challenges associated with integrating ...

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