

**SolarInnovate Energy Solutions**

# **London Compressed Air Energy Storage Power Plant**



## Overview

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Shortlisted for the 'Innovation in Commerce' Award at the Green Expo Awards 2023, this project saw Axis successfully securing planning permission for EDF Energy (Gas Storage) Ltd to allow the development of the UK's first-of-its-kind Compressed Air Energy Storage (CAES) demonstration facility, a groundbreaking solution towards decarbonising the energy sector. What is compressed air energy storage (CAES)?

The case for AACAES in the UK energy transition Compressed air energy storage (CAES) is quickly becoming recognised as a key component in the shift toward renewable energy. As the demand for efficient, scalable energy storage grows, CAES stands out as a sustainable, adaptable, and cost-effective option.

Can compressed air energy storage improve grid resilience?

Compressed air energy storage, and especially Sherwood Power's AACAES system, has the potential to meet this demand, helping businesses, governments, and the energy sector as a whole reduce costs and improve grid resilience.

Can compressed air energy storage save energy?

However, as new technologies, like the proposed Compressed Air Energy Storage one, are developed, this energy can be stored for longer, helping manage electricity generation variations and increasing resilience, while also maximising value for money.

Which energy storage technology is suitable for large scale energy storage?

In addition to widespread pumped hydroelectric energy storage (PHS), compressed air energy storage (CAES) is another suitable technology for large scale and long duration energy storage. India is projected to become the most populous country by the mid-2020s .

What is CAES energy storage capacity in India?

Total CAES capacity in India. Total electricity demand in India is estimated at 10 9 MWh annually , therefore the total underground CAES energy storage capacity potential stands at approximately 10 times greater than annual demand if all available land were utilised for this underground storage of air.

Where is a 50MW L-CAES project being developed?

We are also aware of a 50MW L-CAES project that has been developed in Carrington at Trafford Energy Park by Highview Power, with another 200MW facility being developed in North Yorkshire. Due to the governments current Net Zero Strategy: Build Back Greener, there is now a legally binding target to become net-zero by 2050.

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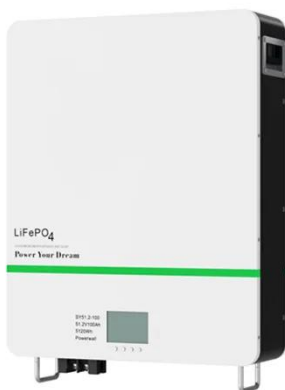


### StrataStore: An innovative Compressed Air Energy Storage ...

May 4, 2022 · As part of the first round of funding, EDF thermal generation alongside EDF UK R& D, io consulting and Hydrostor Inc. has secured £1 million from the Department for Energy ...

### From sunlight to stored power: how hot air could solve solar energy...

Mar 11, 2025 · As the world shifts toward renewable energy, one major challenge remains: efficient energy storage. An EU-funded research team is exploring the use of compressed air ...



### Pumped Hydro Capability No Geographical Constraints

Dec 27, 2019 · sworth Landfill facility in Greater Manchester, UK. In addition to providing energy storage, the liquid air plant will harvest low-grade waste heat (fr ks) and testing for US regional ...

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Dec 18, 2013 · Storelectric, a UK start-up, intends to bring to market a compressed air energy storage (CAES) technology that the developer claims is capable of efficiencies of 70%, or ...



## Overview of current compressed air energy storage projects ...

Apr 1, 2021 · Compressed air energy storage (CAES) is an established and evolving technology for providing large-scale, long-term electricity storage that can aid electrical power systems ...

## Compressed Air Energy Storage: How LDES Could Revolutionise UK Energy

3 days ago · By bridging the gap between intermittent generation and consistent energy demand, LDES systems like compressed air energy storage (CAES) support grid resilience, enable the ...



## Techno-economic analysis of



## bulk-scale compressed air energy storage ...

Jan 15, 2021 · Taking the UK power system as a case study, this paper presents an assessment of geological resources for bulk-scale compressed air energy storage (CAES), and an optimal

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