

# **Canberra Air Energy Storage Project**





## Overview

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Can compressed air energy storage improve the profitability of existing power plants?

Linden Svd, Patel M. New compressed air energy storage concept improves the profitability of existing simple cycle, combined cycle, wind energy, and landfill gas power plants. In: Proceedings of ASME Turbo Expo 2004: Power for Land, Sea, and Air; 2004 Jun 14-17; Vienna, Austria. ASME; 2004. p. 103-10. F. He, Y. Xu, X. Zhang, C. Liu, H. Chen.

How does compressed air storage work?

One such storage solution revolves around compressed air, offering a reservoir for surplus electricity when demand is low. CAES is a proven method of storing energy in compressed air, which can later be harnessed for power generation during peak demand or when other energy sources are unavailable.

What is compressed air energy storage (CAES)?

Storage needs to be cost effective, and it needs to be efficient, that is, we need to get a high proportion of the energy we put into storage back out again. Compressed air energy storage (CAES) is a promising, cost-effective technology to complement battery and pumped hydro storage by providing storage over a medium duration of 4 to 12 hours.

How does compressed air work in Australia?

The compressed air is sent down a shaft into a purpose-built underground cavern. When energy is required, compressed air is sent back up the shaft to drive a turbine, which generates electricity that can be used to stabilize the local grid, provide energy for Broken Hill, or be sold into Australia's National Electricity Market (NEM) grid.



## Canberra Air Energy Storage Project

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Jul 25, 2022 · The Australian Capital Territory government has firmed its commitment to deliver one of the largest battery storage systems in the ...

### [Advanced Compressed Air Energy Storage Systems: ...](#)

Mar 1, 2024 · Compressed air energy storage (CAES) is an effective solution for balancing this mismatch and therefore is suitable for use in future electrical systems to achieve a high ...



### [Hydrostor's 1600MWh Australia project approved](#)

Feb 26, 2025 · Rendering of Hydrostor's Silver City 200MW/1,600MWh advanced compressed air project, in development in New South Wales, Australia. Image: Hydrostor. Canada ...



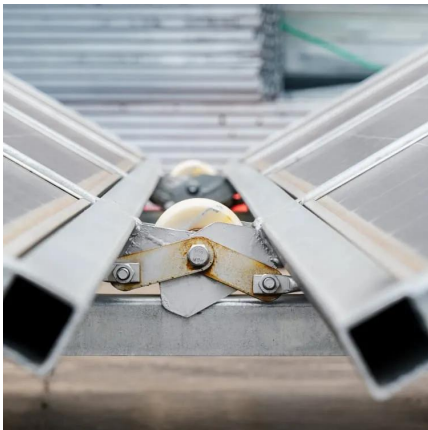
### [Canberra energy storage project](#)

The project will store renewable energy for peak demand, powering one-third of Canberra for two hours, and will provide essential grid services. The ACT government and Eku Energy partner ...



### [Canberra Energy Storage Reservoir Progress: Powering ...](#)

Why the Canberra Energy Storage Project Is Making Headlines Australia's capital is stepping into the renewable energy spotlight with its ambitious Canberra energy storage reservoir project. ...



### [Australia gives go-ahead to 1.6 GWh ...](#)

Feb 25, 2025 · Broken Hill is closer to becoming one of the world's largest renewable energy microgrids with the New South Wales (NSW) ...



### [Underground storage of compressed air](#)

Mar 14, 2025 · Underground storage of compressed air Compressed air technology pressurises atmospheric air, converting it into stored potential energy (like compressing a spring). When ...





## [Harnessing Compressed Air for Renewable Energy](#)

Oct 6, 2023 · Energy storage systems, a vital solution to this challenge, can enhance the output and efficiency of power plants. One such storage solution revolves around compressed air, ...



## [Eku Energy breaks ground on 250-MW Aussie ...](#)

Nov 22, 2024 · Eku Energy, the UK battery platform of Macquarie's Green Investment Group (GIG), held a ground-breaking ceremony for its 250 ...

## [This long duration compressed air energy ...](#)

Jan 11, 2025 · GEM A-CAES has received a \$1.76B conditional loan guarantee from the DOE to build long-duration compressed air energy ...



## [Hydrostor's 1600MWh Australia project ...](#)

Feb 26, 2025 · Rendering of Hydrostor's Silver City 200MW/1,600MWh advanced compressed air project, in development in New South Wales, ...



## Advancing Canberra's Energy Landscape with Community Battery Energy

Jan 13, 2025 · With a \$1.5 million investment and support from Evoenergy, Canberra's electricity distribution network service provider, the new project aims to bring energy storage closer to ...



## Hydrostor advances 1.6 GWh compressed air storage project ...

Sep 18, 2025 · Hydrostor, a Canadian long-duration energy storage developer, has secured AUD 82.6 million (\$54.7 million) in funding to support its 200 MW Silver City Energy Storage Centre ...

## Australia gives go-ahead to 1.6 GWh compressed air storage project

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## [Harnessing Compressed Air for Renewable ...](#)

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## Canberra CAES Project A Game-Changer for Renewable Energy Storage

The Canberra CAES project isn't just local news - it's a blueprint for global energy transition. By combining proven physics with modern engineering, compressed air storage offers a ...

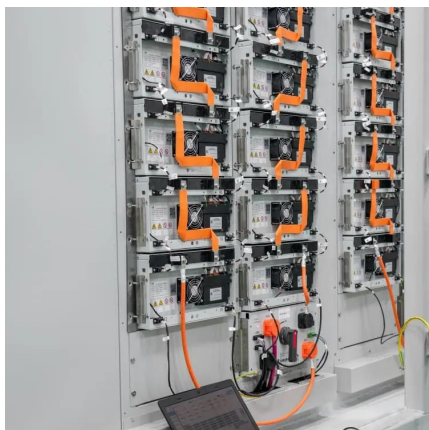
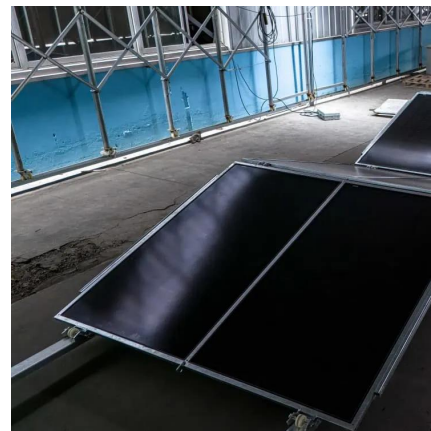


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Jan 13, 2025 · With a \$1.5 million investment and support from Evoenergy, Canberra's electricity distribution network service provider, the new ...

### [Eku Energy Finalizes Funding for 250-MW Battery Project](#)

Nov 7, 2024 · Eku Energy secures funding for a groundbreaking 250-MW battery project in Canberra, set to revolutionize renewable energy storage and power grid stability by 2026.



### [Canberra air energy storage project 2025](#)

The large-scale battery storage system will deliver 250 megawatts (MW) of power, store renewable energy and support grid reliability. This is enough energy to power one-third of ...



## HYBRID ENERGY SUPPLY PROJECT IN IGALIKU GREENLAND

Summary of wind-solar hybrid energy storage system In a multi-scenario energy environment, the hybrid wind-solar energy storage system, driven by wind and solar energy, uses compressed ...

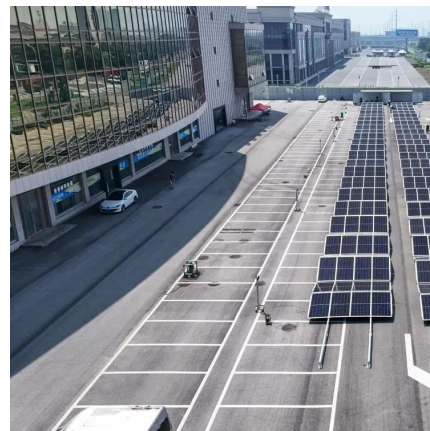


## Underground storage of compressed air

Mar 14, 2025 · Underground storage of compressed air Compressed air technology pressurises atmospheric air, converting it into stored potential ...

## Solar Thermal Foundation Project Final report: project ...

Australian National University SG4 "Big Dish", Canberra, Australia As part of the foundation project, the Australian National University also evaluated the solar air turbine technology used ...



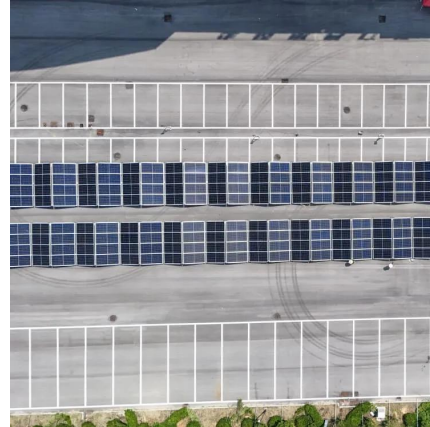
## Ekuland contract to deliver 500 MWh ...

Apr 13, 2023 · Venture capital fund Macquarie Group's new battery storage platform Ekuland Energy has been tapped by the Australian Capital Territory ...



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

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



## [Macquarie's Eku gets green light for 500 ...](#)

Jul 23, 2024 · The way has been cleared for construction to begin on a 250 MW / 500 MWh battery energy storage system that will help "future proof" ...

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