



**HYDROSTOR**

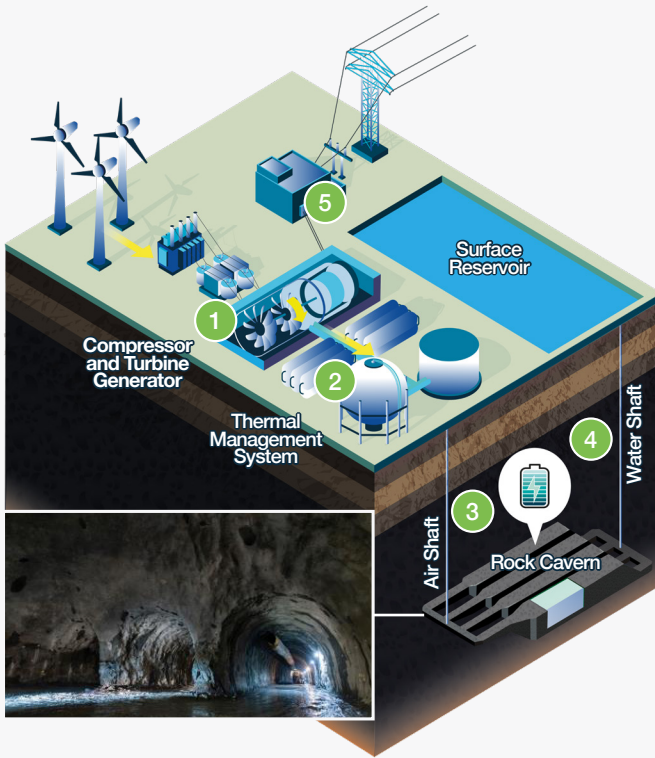
## Rock-Solid Energy Storage Solutions

Hydrostor is a technology company dedicated to developing foundational long duration energy storage solutions. Hydrostor's technology operates on a compact footprint with flexible siting to deliver energy storage capacity of eight hours or more.

Using air, rock, water, an established supply chain, and skilled labor force, Hydrostor's pioneering technology is expanding the grid's capacity and accelerating the integration of renewable power supplies for a more reliable and resilient energy future.

[hydrostor.ca](https://hydrostor.ca)

## How A-CAES Works?



### 1. Compression

Off-peak renewable electricity powers a compressor, that compresses the air and generates heat in the process

### 2. Heat exchange

Heat generated during compression is extracted from the air and captured by the thermal management system for reuse

### 3. Air storage

Compressed air is pumped into a purpose-built, water-filled cavern to be stored

### 4. Water displacement

Compressed air displaces water, forcing it up the shaft to the surface reservoir

### 5. Fully charged state and discharge

Once reservoir is filled, the plant is ready to provide energy on-demand by reversing the process and turning the above-ground turbine to generate electricity

## A cost effective solution for the most difficult energy challenges

### Fossil plant replacement

- Provides identical synchronous generation on the grid, improving reliability without emissions
- Reduces costs for construction by reusing existing interconnection, buildings, intakes, and more

### Transmission deferral

- Serves as non-wires alternative to defer network infrastructure investment
- Alleviates grid congestion during peak periods
- Locatable, reliable power for critical areas and infrastructure

### Renewable integration

- Provides baseload wind and solar
- Optimizes solar/ wind project economics through time shifting
- Reduces curtailment
















### Data center and industry

- Improves reliability and reduces electricity grid charges (on-grid)
- Reduces or eliminates fuel costs and logistics (off-grid)
- Repurposes legacy mining infrastructure



Goderich Energy Storage Center – Ontario, Canada

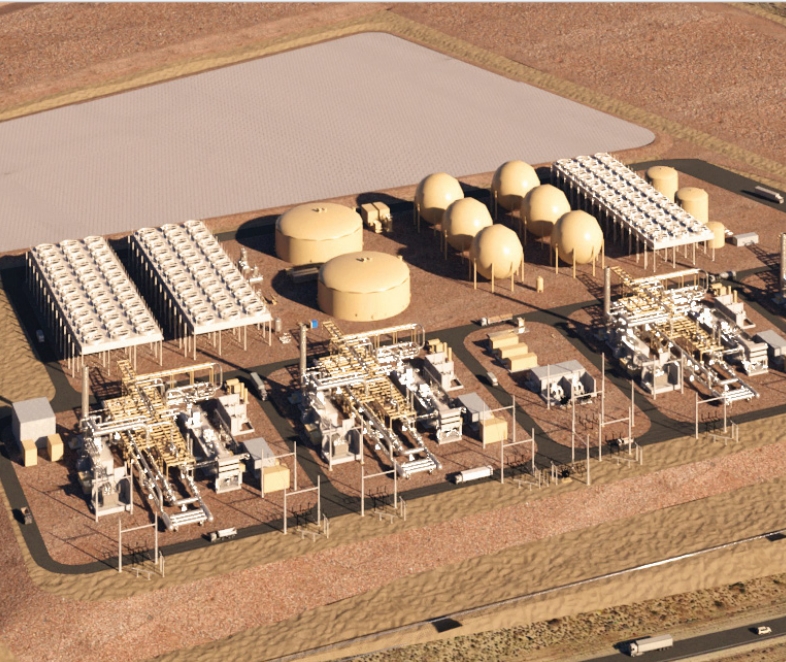
## Integrating proven technology and construction approaches

- |  |   |  |
|--|---|--|
|  Utility-Scale (500+ MW)      |  Existing Supply Chains          |  Using Air, Rock, & Water |
|  Long-Duration (8+ Hours)     |  Warranty & Bonding              |  Highly Scalable          |
|  Cost Effective               |  Customized System Design        |  Patented Process         |
|  Flexible Siting & Low Impact |  Zero Degradation                |  50+ Year Asset Lifetime  |
|  Emission Free Operation      |  Effective, Unrestricted Cycling |  Synchronous Inertia      |

A-CAES offers equivalent capacity as pumped hydro storage, while using up to **10x less land** and **20x less water**\*

\*Dam height of 120 meters. Total land requirement for A-CAES range from 120,000–260,000 m<sup>2</sup> (12–26 ha) depending on system size (200–500MW, 6–12+ hr). Total water requirement for A-CAES at 600m depth = 170 M3/MW

## Project snapshots



500 MW project in Kern County to help meet California's requirement for utilities to procure 1,000 MW of long-duration storage resources and ensure reliability statewide.

**Ownership:** 100% Hydrostor  
**Site:** Secured  
**Offtake contracts:** 3CE (200MW)  
 Shortlisted (300MW)  
**Interconnection:** LGI Signed (500MW)  
**Permits:** CEC Application Submitted



Precedent setting project that is providing transmission reliability service with a 200MW, 8-hour (1,600 MWh) long-duration storage project.

**Ownership:** 100% Hydrostor  
**Site:** Secured  
**Offtake contracts:** TransGrid Agreement  
 LTESA Contract  
**Interconnection:** Yes (200MW)  
**Permits:** EIS Submitted

### Investors:

**Goldman Sachs** | Asset Management

**CPP Investments**

### Select memberships:



### Learn more:



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