

# HYDROSTOR



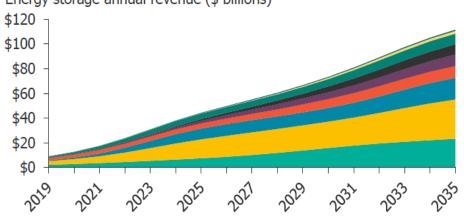
#### The Energy Transition is Accelerating

The need for day-long storage is increasing rapidly, driven by global renewable growth and retirements of conventional generation

Hydrostor offers the lowest cost, long duration energy storage technology deliverable to the grid today

#### Global stationary storage market forecasts

Energy storage annual revenue (\$ billions)



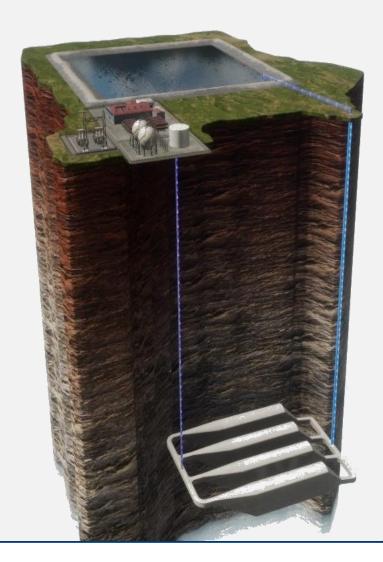








#### A-CAES Offers a Breakthrough Solution



Advanced-CAES improves on the mature Compressed Air Energy Storage (CAES) technology by eliminating emissions, increasing efficiency & providing location flexibility

A-CAES uses only water, pressurized air and standard equipment with proven construction techniques

Offers the equivalent low-cost, long-duration, and long-life as pumped hydro storage, but with the key advantage of being able to flexibly locate where the grid needs it



**Lowest Cost** 



**Patented Process** 



Flexible Siting



Successful Projects



**Emission Free** 



Proven



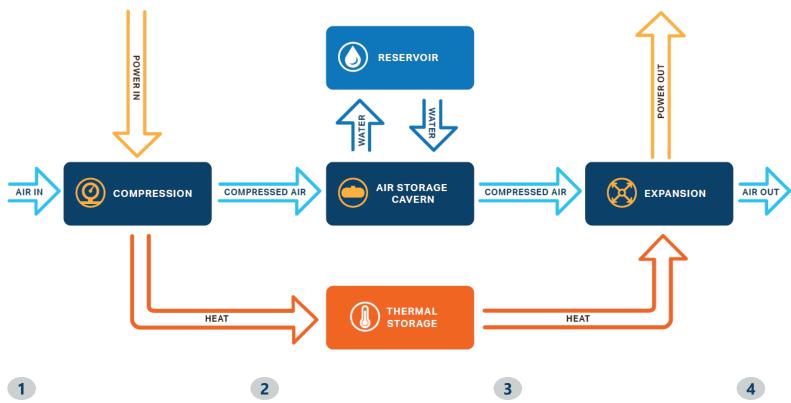
Scalable Design



Bankable



#### **Advanced-CAES Process Overview**



An electrical air compressor is operated to convert ambient air into hot, pressurized air

The heat is then stripped out of the airstream and stored in a hot thermal store

The cold, pressurized air is stored in an isobaric (i.e. constant pressure) hard rock air cavity that is hydrostatically-compensated with the displaced water moved to a surface reservoir

On discharge, the reservoir water backfills into the cavern and the pressurized air recollects the heat and drives an air turbine producing electricity before the air is returned to the environment



#### **Attractive & Plentiful Project Applications**



## Fossil Fuel Plant Replacement

- Synchronous dispatchable power generation
- Alternative to new natural gas plant
- Ability to locate at sites of decommissioning coal
- Provide dispatchable or baseload renewables
- Optimize solar/wind project economics
- Alleviate curtailment and enable more renewables
- Synchronous generation for voltage support







### Transmission Deferral

- Non-wires alternative to new grid investments
- Long duration storage alleviates grid congestion
- Generate market revenues at non-peak times



#### **Advanced & Rapidly Growing Project Pipeline**

**3MW, 10MWh**Completed Small-Scale
Facilities

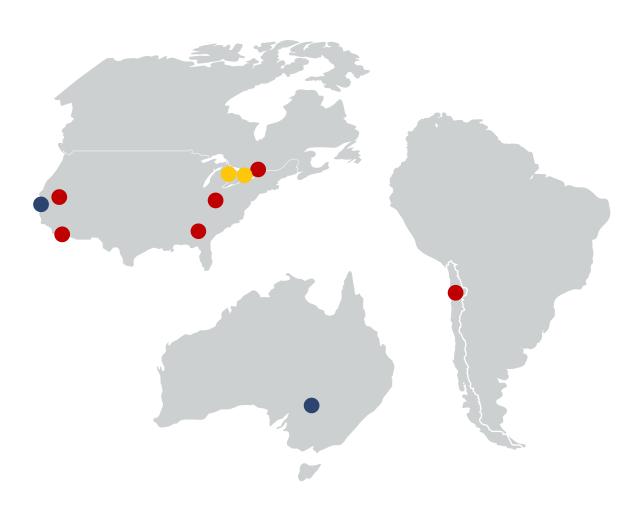
Toronto (2015), Goderich (2019)

**700MW, +5.6GWh**Advanced Stage
Development Projects

Rosamond/Gem (USA), Broken Hill (Australia)

+1.5GW, +12GWh
Direct Sale & Earlier Stage
Development Projects

Pecho (USA), Ontario (Canada), Tarapacá (Chile), Several major utilities (USA)



Projects Being Added & Advanced Regularly





#### Enabling the Energy Transition

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