Adiabatic Compressed Air Energy Storage

Your challenges
- Absorbing renewable energy that might otherwise be curtailed
- Regulatory requirements of black-start capabilities, resulting in bound capital and resources
- Balancing load with new mix of generating assets and end client expectations
- Volatile fossil prices cause increase in OPEX

Our storage systems enable
- Energy and ancillary services without CO₂ and NOx emissions
- Increased grid capacity utilization, balancing and reserve services
- Decarbonization by high utilization of renewable energy sources
- Flexible cycling operations by independent operation for compression and expansion train
- District heating and process heat supply

Our offerings
- Entire surface plant scope including CAES cycle, balance of plant, and construction
- Future-ready design: Deep decarbonization by unlocking synergies between thermal storage and traditional compressed air energy storage
- GWh-scale energy storage solution
- Proven components coupling together for unlocking a new market

Typical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power range</td>
<td>up to 5000 MWₜₐ*</td>
</tr>
<tr>
<td>Discharge time</td>
<td>up to 12 hours</td>
</tr>
<tr>
<td>Reaction time</td>
<td>5–15 min</td>
</tr>
<tr>
<td>Storage size</td>
<td>6000 MWhₜₐ</td>
</tr>
<tr>
<td>Storage period</td>
<td>Multiple days</td>
</tr>
</tbody>
</table>

Benefits

- **Efficiency**: low impact high
- **Availability**: low impact high
- **Flexibility**: low impact high
- **CO₂ reduction**: low impact high

* Power range is per expansion train