



Energy Storage.  
Clean and Simple.

# Clean energy systems need **clean batteries**

**Introducing the first safe and sustainable battery**



# What's inside matters.

- + At Aquion Energy, we make clean and safe saltwater batteries.
- + Our Aspen battery series is based on our patented Aqueous Hybrid Ion (AHI™) chemistry, which has a unique environmentally-friendly electrochemical design.
- + Aspen batteries contain no heavy metals or toxic chemicals and are non-flammable and non-explosive, making them the safest batteries in the world — designed for use in pristine environments, island locations, homes and businesses.

## AHI™ Battery Chemistry

STAINLESS STEEL



Stainless Steel Current Collector

BASE OXIDE



Manganese Oxide Cathode

COTTON



Synthetic Cotton Separator

CARBON

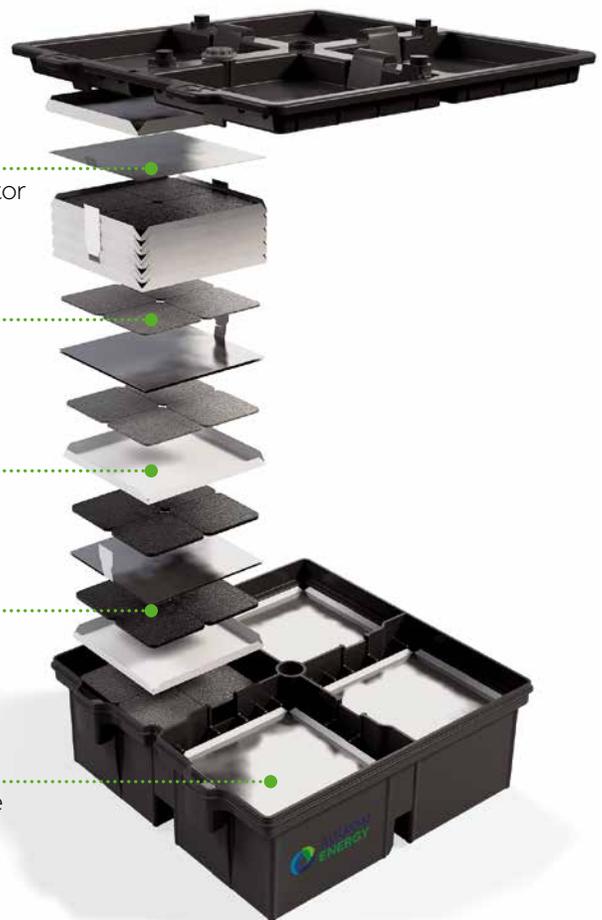


Carbon Titanium Phosphate Composite Anode

SALTWATER



Alkali-ion Saltwater Electrolyte



# Meet the Aspen battery.

## ASPEN 48S\*

- + ~2 kWh
- + Nominal 48V output
- + Standard building block for flexible system design



## ASPEN 48M\*

- + ~25 kWh
- + Nominal 48V output
- + 12 batteries in parallel
- + Pre-wired and forklift-ready for easy deployment



## System Configuration Examples

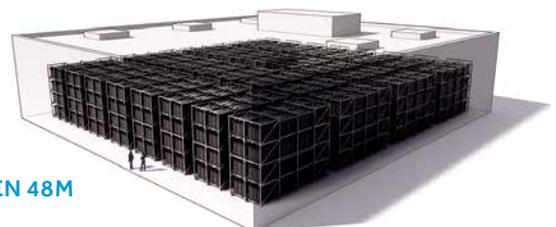
### 12 x ASPEN 48S



### 16 x ASPEN 48M



### 2,048 x ASPEN 48M



\* See product specification sheets for details.



## RESIDENTIAL SOLAR

**Solar Self-Consumption:** Store and consume all the solar energy you generate

**Backup Power and Islanding:** Use storage to ensure you have critical power during grid outages

**Time of Use Optimization:** Control energy costs by using energy stored in batteries during the highest-cost daytime grid hours

**Demand Charge Reduction:** Avoid peak demand charges by dispatching energy from your battery system to keep below the peak power threshold



## OFF-GRID AND MICROGRIDS

**Solar Self-Consumption:** Increase use of renewables and reduce reliance on fossil fuels

**Islanding with Renewables:** Store energy for later use to enable islanding and independence from the grid

**Power Quality:** Ensure access to critical power, manage intermittency and ensure stability



## ENERGY MANAGEMENT

**Demand Response:** Shift energy use from the grid to batteries at times of high demand

**Backup Power:** Use storage to ensure you have critical power during grid outages

**Peak Shaving/Demand Charge Reduction:** Use batteries to avoid peak power demand charges

**Solar Self-Consumption:** Store energy generated on-site to maximize use of renewables and offset using energy from the grid during peak times

# Our batteries are different.

## How We Stack Up

Aspen batteries are a safe, environmentally friendly, long-lasting, and easy-to-use alternative to lead acid and lithium ion. They'll give you and your customers a hassle-free experience, peace of mind, and pride in their new clean energy storage system.

### TECHNOLOGY COMPARISON

	AHI™	Li-ion	PbA
System Life	●	●	○
Maintenance	●	●	○
Partial State of Charge	●	●	○
Temperature Tolerance	●	○	○
Safety	●	○	○
Sustainability	●	○	○
Energy Density	○	●	○
Power Delivery	○	●	●
System Cost	○	○	●

## Hassle-free



## Peace of Mind



NON-FLAMMABLE  
NON-EXPLOSIVE



## Robust Performance



TEMPERATURE  
TOLERANT



TOUCH SAFE



PARTIAL STATE OF CHARGE  
CYCLING TOLERANT



LONG LIFE

Cradle to Cradle Certified™ is an independent, third-party verified certification program that assesses products and materials for safety to human and environmental health, design for future use cycles, and sustainable manufacturing. Cradle to Cradle Certified™ is a certification mark licensed by the Cradle to Cradle Products Innovation Institute.

# Select Global Installations

**BAKKEN HALE**  
1 MWh  
Kiholo Bay, HI, USA



**NIDON**  
12 kWh  
Aiea, HI, USA



**REDWOOD GATE RANCH**  
20 kWh  
Jenner, CA, USA



**QINOUS**  
80 kWh  
Berlin, Germany



**BLITZABILITY**  
22 kWh  
Brisbane, Australia



**HEADQUARTERS**  
32 39th Street  
Pittsburgh, PA 15201  
412.904.6400

**MANUFACTURING**  
1001 Technology Drive  
Mount Pleasant, PA 15666

To contact our sales team, visit us at [www.aquionenergy.com/how-buy](http://www.aquionenergy.com/how-buy)

