

## CLEAN, LONG-DURATION ENERGY STORAGE: ACCELERATING THE ENERGY TRANSITION

Premier technology. Unmatched sustainability. Guaranteed.



### THE TIME HAS COME FOR STORAGE. THE PLACE TO COME IS ESS

ESS iron flow battery solutions are the most environmentally responsible and cost-effective energy storage systems on the market.

#### CLEANER

- Made with food grade, earth-abundant materials: iron, salt and water electrolyte
- No noxious fumes
- The least environmentally harmful battery chemistry to produce

#### SAFER

- Environmentally safe, non-toxic electrolyte
- Non-flammable, non-explosive
- No hazardous materials: no risk to personnel, no hazmat compliance plan required
- Ships in dry state and hydrated on site

#### MORE SUSTAINABLE AND USER FRIENDLY

- No cooling/air conditioning requirement
- Designed for 25-year operating life with minimal annual operations and maintenance (O&M) requirements
- Easy to recycle or reuse electrolyte at end of life

#### LOWEST COST, LONG DURATION

- Long duration (6–12 hours) for renewables shifting and demand charge reduction
- Unlimited charge/discharge cycles
- Optional power configurations between 33 kW and 100 kW

#### ESS ENERGY STORAGE SOLUTIONS CHECK ALL THE BOXES:

- CAPACITY FOR RESILIENCY, PEAK SHAVING & RENEWABLES INTEGRATION
- LONG DURATION FOR MAXIMIZING RENEWABLES INVESTMENTS
- THE CLEANEST LIFECYCLE OF ANY OTHER LEADING BATTERY CHEMISTRY: VANADIUM, ZINC OR LITHIUM-ION<sup>1</sup>



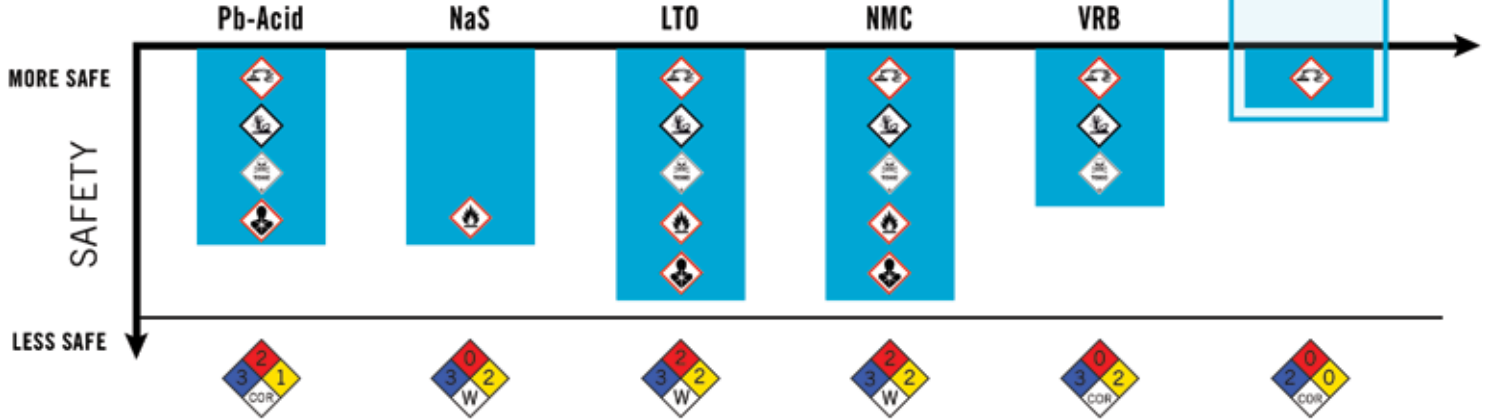
**ECO-FRIENDLY**  
NON-TOXIC • EASILY RECYCLABLE

### *Battery chemistries matter.*

*Some come with high mining and environmental costs. Some are risky to work with and hard to recycle at end of life. But you don't face these problems with iron flow batteries from ESS. Ours are the greenest, lowest lifecycle cost energy storage systems you can buy.*

# ESS: THE CLEANEST WAY TO CLEAN UP YOUR GRID

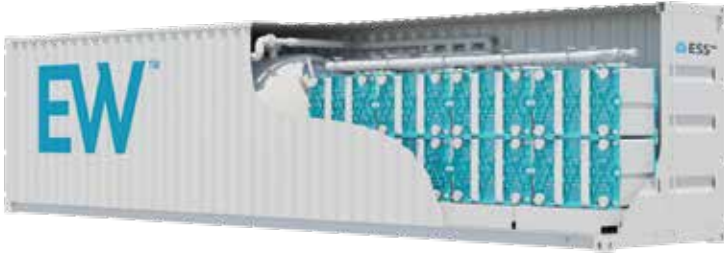
## HAZARD-FREE ENERGY STORAGE



## ESS SOLUTIONS SIMPLIFY INSTALLATION AND OPERATION

ESS batteries are comprised of earth-abundant iron, salt and water, not hazardous chemicals or costly rare-earth metals, making them environmentally benign to produce and the easiest-to-permit storage technology in the world. Iron flow batteries have no fire, chemical or explosive risk, eliminating the need for fire suppression, secondary containment and hazmat requirements. In addition, ESS solutions are substantially recyclable at end-of-life.

## VALUE ON BOTH SIDE OF THE METER: SOLUTIONS FOR UTILITIES AND C&I CUSTOMERS



**The Energy Warehouse™:** Designed to serve commercial and industrial customers, this compact unit has an energy storage capacity of 400 kWh and a 25-year design life. It can be configured to provide storage durations of 4 to 12 hours.

## GUARANTEED PERFORMANCE

ESS Inc. has partnered with Munich RE to launch industry-first insurance coverage of our flow batteries. The innovative policy means the battery modules in our storage solutions come with up to 10 year extended warranty backed by a global investment-grade insurer.



**The Energy Center™:** Created for utility-scale applications, this battery-in-a-building delivers a configurable range of power capacities starting at 3 MW and energy durations ranging from 6 to 12 hours. A one-acre footprint supports up to 6 MW and 90 MWh.

## ABOUT ESS INC.

ESS Inc. designs, builds and deploys the most environmentally sustainable, lowest-cost, iron flow batteries for long-duration commercial and utility-scale energy storage applications requiring from 4 to 12 hours of flexible energy capacity. The Energy Warehouse™ and Energy Center™ use earth-abundant iron, salt, and water for the electrolyte, resulting in an environmentally benign, long-life energy storage solution for the world's renewable energy infrastructure. Established in 2011, ESS Inc. enables project developers, utilities, and commercial and industrial facility owners to make the transition to more flexible non-lithium-ion storage that is better suited for the grid and the environment. For more information visit [www.essinc.com](http://www.essinc.com).

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