

CLEAN, SAFE, AND SUSTAINABLE ENERGY STORAGE



CATALYZING A CLEANER FUTURE



IF YOU WANT CLEAN, SAFE, AND SUSTAINABLE ENERGY STORAGE...

IF YOU NEED FOUR OR MORE HOURS OF STORED ENERGY...

IF YOU WANT TO MAKE YOUR GRID MORE FLEXIBLE AND RESILIENT...

THE ESS ENERGY WAREHOUSE IS THE SOLUTION.

The limitations of lithium-ion batteries – cycle life, safety, disposability – will become a greater issue as the need for more flexible, longer-duration storage increases.

WHY ENERGY STORAGE SOLUTIONS FROM ESS INC.?

With non-toxic, non-hazardous, and easily recycled materials, unlimited charge/discharge cycles, and up to 8 hours of flexible storage, we offer the cleanest and most cost-effective energy storage system on the market.

CLEANER

- Food grade, earth-abundant iron, salt, and water electrolyte
- Non-corrosive: allows for the use of simple materials
- No noxious fumes
- Enables greater penetration of renewables and enhances integration

SAFER

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

MORE SUSTAINABLE

- No cooling requirements means low (<2%) auxiliary loads
- Designed for 25-year operating life with minimal annual operations & maintenance (O&M) requirements
- Recycle or reuse electrolyte at end of life

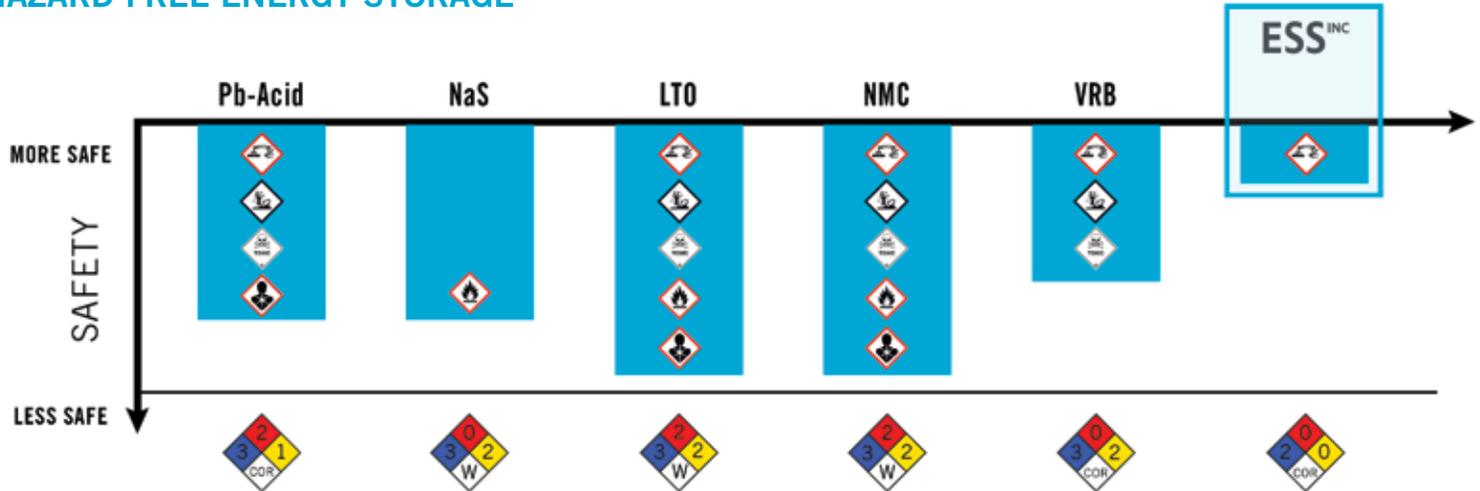
LOWEST COST, LONG-DURATION

- Long duration (4+ hours) for renewable shifting and demand charge reduction
- Ability to distribute energy how it's needed, when it's needed



With its safe, earth-abundant, proven all-iron flow battery technology, ESS is helping project developers, utilities, and EPCs deliver the lowest cost, longest life energy storage system that is better suited for the grid and the environment.

HAZARD-FREE ENERGY STORAGE



ESS INC. IS THE CATALYST FOR A SUSTAINABLE ENERGY FUTURE

The Energy Warehouse™ (EW), is comprised of earth-abundant iron, salt and water. The system's environmentally benign characteristics, containing no hazardous chemicals or rare-earth metal, make it the easiest-to-permit storage technology in the world. The EW has no fire, chemical or explosive risk, eliminating the need for fire suppression, secondary containment, and hazmat requirements. In addition, the system is fully recyclable at end-of-life.

APPLICATIONS AND USE CASES

ESS Inc. energy storage systems are suitable for many applications in the utility, commercial and industrial markets, both on- and off-grid.

- Renewable energy time shifting
- Demand charge management
- TOU tariff arbitrage
- Energy security
- Utility ancillary services
- Deeper penetration of renewables
- Demand response
- Capacity reserve
- Infrastructure support
- Run generators at peak efficiency
- Microgrid stabilization, energy shifting



An Energy Warehouse is operating as part of an advanced microgrid at University of San Diego, CA. With its small footprint and non-toxic, non-flammable chemistry, the system was easily sited on the campus.

OUR BATTERY STORAGE IS NOW BANKABLE—WE'RE PAVING THE WAY FOR RENEWABLE ENERGY

At ESS Inc., our mission is to bring to market the cleanest, lowest-cost long-duration energy storage systems.

ESS Inc. has partnered with Munich RE to launch industry-first insurance coverage of its flow batteries. The innovative policy means our long-duration storage solutions are now backed by a full 10-year performance guarantee, regardless of project size or location.

ABOUT ESS INC.

ESS Inc. manufactures low-cost, long-duration iron flow batteries for commercial and utility-scale energy storage applications requiring 4+ hours of flexible energy capacity. Its product, the Energy Warehouse™ (EW), uses iron, salt, and water for the electrolyte, and delivers an environmentally safe, long-life energy storage solution for the world's renewable energy infrastructure.

In 2017, BASF, the world's leading chemical company, became a significant investor in ESS Inc., joining forces to deliver energy storage solutions for a sustainable future.

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