



Powering the AI Revolution with High-Performance, Non-Flammable, Sodium-ion Batteries

24/7 Reliable Energy. Rapidly Deployable. Without the Fire Risks.



Data center operators are caught in a “power crunch” where traditional energy infrastructure cannot keep pace with AI-driven demand.

- AI workloads require constant power, yet tightening grid reliability makes securing 24/7 power a challenge**
- Utility interconnection queues are delaying power-on dates by years**
- Operators are under pressure to eliminate diesel but have no viable alternatives for baseload backup power**
- Concerns over lithium-ion flammability and toxicity risk are driving permitting hurdles and community opposition**

The Alsym Solution: Safety Without Compromise

- Unmatched Safety:**
 Alsym’s non-flammable NFPP+ chemistry does not go into thermal runaway or emit dangerous toxic gases, even if damaged.
- Extreme Resilience:**
 Stable cell structures maintain performance in temperatures from -40°C to 60°C, removing the need for costly cooling and auxiliary HVAC systems.
- Flexible Siting:**
 With no fire or toxicity hazards, Alsym batteries can be safely deployed inside facilities, on rooftops, or in basements.
- Secure Supply Chain:**
 Using globally abundant, non-FEOC (Foreign Entity of Concern) sourced materials ensures long-term price stability and protects against geopolitical bottlenecks.
- Lower Cost:**
 No expensive, energy-intensive cooling systems or specialized fire suppression infrastructure needed, so Alsym significantly reduces the total cost of ownership (TCO) compared to lithium-ion systems.

A Better Battery for Data Centers



Optimized for Diverse Data Center Use Cases

The Alsym Na-Series provides a versatile energy asset that supports both uninterrupted facility runtime and grid-interactive power management.

Peak Shaving & Arbitrage

Lower demand charges and energy costs by storing low-cost power and discharging during peak-price periods.

Long-Duration Storage (LDES)

Reliable 2-12+ hour backup with minimal self-discharge (<3% monthly) for interday and multiday resilience.

Renewable Pairing

Turn intermittent wind and solar into 24/7 firm, clean power for continuous data processing.

Data Without Diesel

A zero-emission backup that safely discharges to 0% SOC without degradation, maximizing available runtime.

UPS & Frequency Regulation

Instantaneous response to stabilize power quality and bridge grid fluctuations for short-duration needs.



Na-Series: Technical Overview

Cycle Life	10,000+
Energy Efficiency	95%+ Round Trip Efficiency (RTE)
Charge/Discharge	2C / 2C (continuous) 2C / 4C (30s pulse)
Operating Range	0% to 100% SoC (no degradation at 0%)
Safety Certs	UL 9540A (pending) & UL 1973 (pending)

Accelerate Your Path to Power

Alsym Energy empowers data center operators to make power a great, strategic asset. Our batteries are not just a backup—they are a tool to achieve faster permitting, lower lifetime costs, and always-on, reliable power.

Visit www.alsym.com/datacenters or contact our team to discuss how the Na-Series can support your next facility.