

Powering Industrial Infrastructure with High-Performance, Non-Flammable, Sodium-ion Batteries







Industrial battery energy storage: reliable power for high hazard and 24/7 operating environments



Industrial-Grade Sustainability: Replace Diesel Generators with Safe, High-Performance Sodium-Ion

- ➖ Adding flammable lithium-ion batteries to production sites, chemical plants, or refineries is a major safety non-starter.
- ➖ Grid instability disrupts 24/7 operations, costing millions while waiting years for grid upgrades.
- ➖ Extreme heat and industrial dust cause standard battery cooling systems to clog and break.
- ➖ Deeply discharging standard batteries during long grid failures causes permanent, expensive capacity loss.

The Alsym Solution: Safety Without Compromise

-  **Safe for Critical Operations:**
Deploy energy storage without thermal runaway risk in heavy industry and critical infrastructure. NFPP+ chemistry is non-flammable, emitting no toxic gases if damaged.
-  **Resilient On-Site Performance:**
Operate reliably in extreme heat and dirty environments without delicate, high-maintenance cooling. Stable cell structure thrives in unconditional spaces from -40C to 60C.
-  **Resilient, Heavy-Duty Power:**
Secure instant, high-power backup to keep production lines running during interruptions without using fossil fuels. Our systems provide the 2C pulse discharge needed for heavy machinery.
-  **100% Usable Energy:**
Fully discharge the system to survive long outages without degrading the battery's long-term health. You can utilize the entire State of Charge (SoC) from 0% to 100%.
-  **Global Supply Chain Security**
Protect project timelines from geopolitical bottlenecks using non-FEOC, globally abundant materials, while ensuring long-term price stability and ethical sourcing.
-  **Lower Total Cost of Ownership:**
Eliminate the "parasitic load" of active HVAC and specialized fire suppression infrastructure. This significantly reduces upfront capital costs and ongoing monthly operating expenses.

A Better Battery for Industrial Infrastructure



Optimized for Industrial Applications

Alsym Na-Series is a rugged energy asset delivering mission-critical reliability and black-start augmentation for heavy industry, infrastructure, and remote mining operations.

Demand Charge Management

Avoid expensive peak-hour tariffs by cycling your battery twice daily. High-efficiency cycling supports daily revenue generation without burning through the 10,000+ cycle asset life.

High Power Support

Respond to power strikes from heavy equipment without straining the local grid. The high C-rate flexibility of NFPP+ supports fast-response industrial applications and volatile loads.

Critical Process Backup

Secure instant backup to keep production lines running during grid interruptions. This prevents millions in downtime costs and protects sensitive command centers and robotics.

Remote Mining Operations

Replace or hybridize diesel generators in remote sites like the Australian Outback. These systems withstand extreme outdoor heat and provide reliable power for remote workers and equipment.

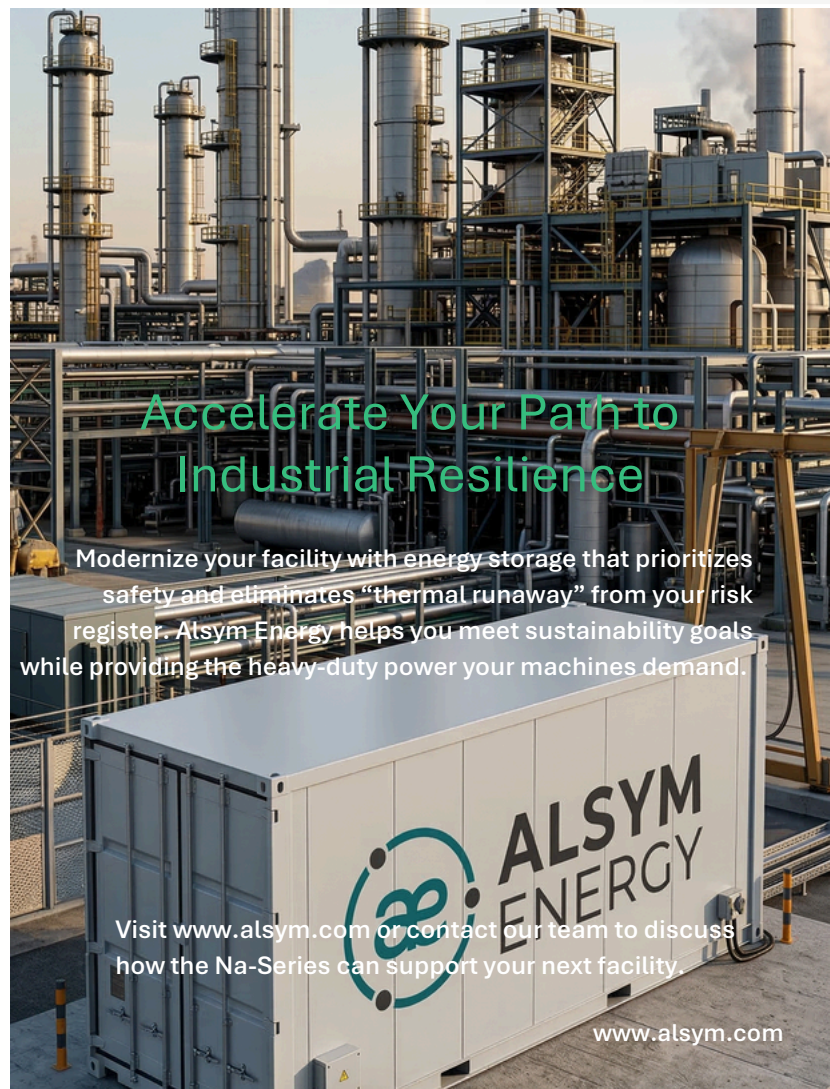
Black-Start Augmentation

Use the Na-Series to provide the massive “kick” of energy needed to restart industrial systems after a total blackout. This ensures your facility can recover quickly without grid assistance.



Na-Series: Technical Overview

Cycle Life	10,000+
Energy Efficiency	95%+ Round Trip Efficiency (RTE)
Duration	1 - 100 hour backup
Charge/Discharge	2C - C/100
Operating Range	0% to 100% SoC (no degradation at 0%)
Safety Certs	UL 9540A (pending) & UL 1973 (pending)



Accelerate Your Path to Industrial Resilience

Modernize your facility with energy storage that prioritizes safety and eliminates “thermal runaway” from your risk register. Alsym Energy helps you meet sustainability goals while providing the heavy-duty power your machines demand.

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

www.alsym.com