

POWER AHEAD GROUP

Sodium-Ion Battery Energy Storage System ("BESS")

Purpose-Built for AI Data Center Infrastructure

THE LITHIUM PROBLEM IN YOUR FACILITY



Fire Risk

Lithium thermal runaway is a code-level liability. NFPA 855 requirements may significantly impact site footprint and deployment economics.



Short Lifespan

Lithium systems require replacement every 10–15 years. In a 30-year Data Center ("DC") lifecycle, that is 1–2 complete replacements – each with downtime and CAPEX risk.



Hidden TCO

Liquid cooling, fire suppression systems, and insurance premiums add 20–35% to the true lifetime cost of lithium BESS deployments.

THE PAG MEGASIB SOLUTION



No Thermal Runaway

NFPP zero-oxygen chemistry eliminates thermal runaway at cell level. Mitigates fire suppression overhead. Full NFPA 855 compliance without footprint penalties.



30-Year Design Life

Install once. Matches your DC's 30-year lifecycle – thus no mid-contract replacement cycles, no unplanned CAPEX, no downtime.



PAG Proprietary HVAC Thermal Management

PAG's proprietary HVAC thermal management architecture requires no liquid cooling loops, eliminates leak risk, and removes separate cooling CAPEX -> dramatically lowers O&M costs over the full facility lifecycle.

MEGASIB (HIGH LEVEL) TECHNICAL SPECIFICATIONS

Cell Format	Design Life	Cycle Life	Cooling System
120 mm × 420 mm Ultra-Large Cylindrical	30 Years	12,000+ Cycles	PAG Proprietary HVAC Thermal Management (Air-Cooled, No Liquid)

HEAD-TO-HEAD: PAG MegaSIB vs. Lithium BESS

Parameter	PAG MegaSIB (Na-Ion)	Typical Lithium Ion BESS
Design Life	30 Years	10–15 Years
Thermal Runaway / Fire Risk	None — NFPP chemistry	Yes — requires suppression systems
Cooling Requirement	Air-cooled (HVAC only)	Liquid cooling required
NFPA 855 Compliance Cost	Standard — no spacing penalty	High — 15–25% floor area penalty
Replacements per DC Lifecycle	Zero	1–2 replacements over a 30-Year Facility Lifecycle
UL Certifications	UL 1973 (cell) + UL 9540A (system)	Varies — often incomplete
ESG / Carbon Profile	Non-toxic, no cobalt/nickel	Cobalt mining, toxic disposal
Insurance Premium Impact	Low — no fire hazard	High — thermal runaway liability

CERTIFICATIONS & COMPLIANCE ROADMAP

UL 1973	UL 9540A	UL 9540	NFPA 855 / 70
Cell-level certification: UL 1973 Certified	Cell-level certification: UL 9540A Certified	System-level ESS: Full roadmap by Sept 2026	NEC + fire code compliant: Full analysis available

COMMERCIAL DEPLOYMENT STAGE: PAG's MegaSIB platform is at the commercial deployment stage. Cell-level UL 1973 and UL 9540A certifications are in place. Full UL 9540 system-level certification roadmap targeted for completion in September 2026. Technical documentation and certification packages available upon request.

REQUEST A TECHNICAL BRIEFING

What We Offer:

20-minute technical overview call
Full certification package (UL 1973 + UL 9540A)
TCO comparison model for your facility size
Site-specific deployment feasibility review

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