Hybrid energy storage

Blue Planet Energy

Sodium-ion batteries, supercapacitors and control software in one system. The supercapacitors take the brief, high-power events; the batteries carry sustained demand; the software decides which one answers, moment by moment. Systems are modular and sized for each site.

TWO SYSTEMS, ONE SET OF MODULES

SYSTEM	TYPICAL SITES	FOOTPRINT	SCALE
Rack systems	Telecom sites, network cabinets and smaller commercial buildings, in standard 19-inch racks	One or two racks	Tens of kilowatt-hours
High-capacity systems	Data centers, EV charging hubs, industrial plants and grid support	Multiple bays, added as the site grows	Hundreds of kilowatt-hours and up

WHAT THE SYSTEM DOES

- Cuts billed peak demand and holds a site under its grid connection limit
- Covers motor starts, pulsed loads and other short, heavy draws
- Smooths the fast swings from solar, wind and computing loads
- Supports generator starts and carries critical load through outages
- Recharges from spare grid capacity or on-site generation

DESIGN CHARACTERISTICS

Chemistry	Sodium-ion cells with supercapacitor power modules
Materials	No lithium, cobalt or nickel
Cell rating	Suppliers rate the cells and supercapacitor modules from –40 °C to +65 °C
Cooling	Cells that tolerate a wider range need less cooling around them
Response	Supercapacitors for seconds to tens of seconds, batteries for minutes to hours
Growth	Both systems are built from the same modules, so a site can start small and add capacity

WHAT WE SUPPLY

- Sodium-ion energy modules
- Supercapacitor power modules
- Control software, and the measurement it needs at the grid connection

WHAT COMES FROM YOUR INTEGRATOR

- The bidirectional power converter between our DC storage and your AC system
- Switchgear, protection and site wiring
- Enclosure or room, and installation

VERIFICATION

- Peer review of the cells at Concordia University by Dr. Karim Zaghib
- Third-party accelerated cycle-life testing of the combined architecture
- UL 9540 listing and UL 9540A fire testing submitted to an independent laboratory

LEGACY SYSTEMS

- Blue Ion LX and Blue Ion HI (LFP) remain supported, with documentation and warranty service