

Zn Zinc-air Energy Storage System



Progress
in Power



Zinc-air System
2014(H) x 1000(W) x 1000(D) mm

Highest network availability and lowest total cost of ownership, featuring:



Anti-Theft

Battery cells won't function once removed from the system and they contain no valuable raw materials and can't be repurposed in any way.



Scalable Modular Systems

The modular architecture makes it possible to increase battery capacity over time with seamless integration of both new and old cells. It's simple, adjustable and provides the ultimate, flexible solution for applications that will anticipate load growth.



24/7 Integrated Remote Monitoring

Cellular (3G/4G), Wi-Fi, and satellite enabled data collection, allowing operators to remotely manage and operate the systems from a central command or Network Operating Center. This improves system reliability, reduces operations and maintenance costs and significantly improves overall power availability.



Smart Battery

The only battery with programmable integrated intelligence at the cell level. Performance can be optimized remotely.



Safety

Battery electrolyte and electrodes are non-flammable. No lithium-type thermal runaway events. No lead-acid chemical gassing events.



Environmentally Friendly

Electrolyte is non-toxic and all battery components are fully recyclable. No lead content, toxic or diesel pollutants. No lead content, toxic or diesel pollutants.



Eliminate Diesel Gensets

NantEnergy storage systems are capable of storing large amounts of energy and discharging nonstop for 8, 12, or over 24 hours eliminating the reliance on diesel gensets and fossil fuel.



No Depth of Discharge Limitations

System performance and life are not impacted by dept of discharge or state of charge requirements.



Operates in all Environments

System operates outdoors in ambient temperatures up to 50°C/122°F without the need for auxiliary cabinet cooling.



10 Year+ Design Life

The NantEnergy storage system with its simple design and replacement cells delivers more than 10 years of system life.



Earth Abundant Materials

Battery electrodes use zinc and nickel, two of the most abundant chemical elements.



Hybrid Capability

NantEnergy hybrid energy storage systems provide best-in-class performance and cost by seamlessly hybridizing Zinc-air and Lithium-ion.



Low Cost

Zinc-air electrode raw material costs are 85% lower than those used in Li-ion electrodes and Zinc-air manufacturing costs are 95% lower than Li-ion for the same manufacturing capacity (GWh).

System Voltage	48VDC
Modules per System	4
Cells per Module	10
Zinc-air Cell Nameplate Capacity	750 Wh (C/20)
System Nameplate Capacity	30.0 kWh (C/20)
System Peak Power	2.6 kW
System Discharge Capacity (Net)*	28.0 kWh @ 48VDC (C/20)
Usable Depth of Discharge	100%
Installation	Outdoor, Pad mounted
Storage time (w/o intervention)	> 3 yrs (-20°C to 50°C)
Environmental Operating Temperature Limits**	- 20°C to 50°C
External Cabinet Dimensions	2014(H) x 1000(W) x 1000(D) mm
System Acoustics	< 52 dB at 1 meter
System Weight	1,180 kg
Cabinet Environmental Protections	IP55 Rated
Product Warranty	3 years standard, extended warranties up to 10 years
Battery case material	Polypropylene (UL94V0)
Cell Terminals (+/-)	Front access, M5x10mm Bolt
System Cables (+/-)	2 AWG (Copper); 0 AWG (Aluminum) (from rectifier)
Certifications	UL1973, UL1741, UL1998, FCC Part 15, RoHS
Wireless Telematics	GPRS / 3G Modem
Local Communications Interface	DE-9 (RS232, RS422, RS485), RJ45 (CAN, Ethernet)
Supported Protocols	Modbus, SNMP, TCP/UDP, HTTPS, Dry Contacts
Genset Control Integration	Yes

* Does not include losses associated with outdoor cabinet or telematics

**Optional heating element required below 0° C ambient temperature