



Eos Cube

Fully-containerized, zinc-powered
battery energy storage system





An ingenious storage system for a more positive energy ecosystem.

The Eos Cube—powered by our aqueous zinc batteries, built using a modular racking design, and coupled with our proprietary Eos Battery Management System (BMS) and a full suite of support services—has been purpose-built to meet the wide range of customer needs in an increasingly decentralized, democratized, and decarbonized energy ecosystem.

Optimized for 3- to 12-hour applications

More than 10 years ago, we anticipated that technological advances would fundamentally reshape energy market dynamics. Today, that progress is making solar and wind increasingly efficient and affordable—so much so that almost anyone, anywhere can produce clean power. But the shift to renewable production creates highly variable output over a 24-hour cycle. That’s why we designed the aqueous zinc batteries that power our Eos Cube system to allow for a full 3- to 12-hour discharge period—the long duration needed to smooth clean energy supply and better match daily consumption patterns.

Safe, scalable, efficient, and sustainable

In every aspect of our Eos Cube system we’ve considered where and how storage will be used in a renewables-based energy future. Our zinc-powered Cubes are safe to install even in dense commercial and residential environments, use readily-available materials and a modular racking design that scale easily to meet growth in overall demand or at a single customer installation, allow real-time changes in charge and discharge times to ensure efficient use, and are as sustainable as the clean energy generation they support.

Eos Cube

Plug-and-power simplicity.

Our containerized Eos Cube can fit in almost any site and weather almost any climate, bringing affordable and reliable energy storage to even the harshest, remotest locations. Suitable for commercial, industrial, and utility-scale projects, whether behind- or front-of-the-meter, it's a truly "plug-and-power" system—easy to install, run, and maintain.

All-in-one innovation

Shipped ready for deployment, our 125kW/500kWh-rated Eos Cube comes with all batteries and electrical equipment pre-integrated into a standard 10 x 20 foot ISO outdoor-rated shipping container. Loaded with our Eos Znyth® battery modules—the current generation of our zinc-powered technology—a single Cube includes two racks of 12-battery strings, each stacked six high, for a total of 144 Znyth batteries, plus DC control panels. Simple venting in the Cube exterior provides airflow to dissipate heat, eliminating the need for ancillary HVAC or fire suppression systems. And since each individual Znyth battery is fully sealed, no flow pumps or external tanks are required. So no matter how big the installation—a single or multi-Cube project—balance-of-plant requirements are minimal.

Streamlining sites and servicing

Eos Cubes can either be placed on a basic concrete pad or a series of simple pilings, as appropriate to the site, to accommodate the ~50,000 lb. load per container. In installations with multiple Cubes, a bit of clearance between containers is all that's required to ease truck and crane access, or, if space is at a premium, Cubes can be stacked two high, effectively doubling the power density per square foot. Regardless of the arrangement, hinged doors on three sides of each Cube ensures maintenance teams can quickly reach the battery racks and DC control panels housed inside.



Based on your power and space requirements, an Eos Cube project can range from a single to a multi-Cube installation. A single-stacked Cube installation rated at 10MW/40MWh requires approximately 25,000 square feet.

For gigawatt-scale installations where even greater power density is required, we offer the Eos Hangar, while for smaller, indoor applications where weather-rated housing is not needed, we offer the Eos Stack.

Eos Cube

Bigger storage system benefits. Lower total cost of ownership.

The inherent safety, scalability, efficiency, and sustainability benefits of our zinc-powered battery chemistry and simple design of the Eos Cube all add up to a significant reduction in levelized cost of storage (LCOS).



More than 25% lower LCOS for a 10MW/40MWh system vs. traditional lithium ion technology.

No system oversizing

20% more kWh vs. same-sized lithium-ion system

Because Eos systems have minimal AC loss, a flat degradation curve over a 20+ year lifespan, and 100% depth of discharge, an Eos Cube can deliver up to 20% more energy (kWh) at the point of interconnect as a same-sized lithium-ion system.

Lower ancillary costs

More than 30% vs. lithium ion

Because Eos zinc-powered batteries are non-flammable and tolerate wide temperature ranges, costly HVAC and fire suppression systems are not required for Cube systems, reducing Capex for installation and maintenance up to 30%.

Minimal auxiliary load

Just 2% of delivered energy

The lower power needs of the simple forced-air ventilation used in an Eos Cube system relative to the complex HVAC of lithium ion installations—2% versus 7% of delivered energy—result in meaningful annual Opex savings.

High salvage value

Up to 30% of the original cost of materials

As all components used in Eos zinc-powered batteries are fully recyclable in standard facilities, the residual value of our Cube systems can reach up to 30% of the original cost of materials, making end-of-life disposal activities cost-neutral.



Eos Cube

The future is even more powerful.

Our Znyth™ battery was a breakthrough in energy storage, but we've not stopped looking for ways to make our technology ever better. Using the same proprietary aqueous zinc chemistry but smaller dimensions and numbers of electrodes, we've developed a next-generation battery—the Eos Z3™—that substantially increases the power density of our Cube systems.

A Cube that stores 40% more energy*

Reducing the height of the electrode to leverage fluid dynamics and improve surface utilization while cutting the number of cells per module from 40 to 20 results in an Eos Z3 battery that operates at approximately 15% higher energy density at one fourth the size and weight of the Znyth. A single Z3-powered Cube system will include 576 batteries with a rating of 115kW/460 kWh—in an enclosure that is half the size of the Znyth Gen 2.3 20-foot shipping container.

Reducing total system and operating costs

The voltage of a Z3-powered Cube will incorporate DC converters for voltage control of each string, while producing the same voltage profile at lower average temperature, maximum temperature, and temperature change per cycle. As a result, Cube systems powered by Z3 batteries will be even simpler to manufacture, configure, operate, and service.

* Versus previous Eos Cube performance with Znyth 2.3 batteries

Eos BMS

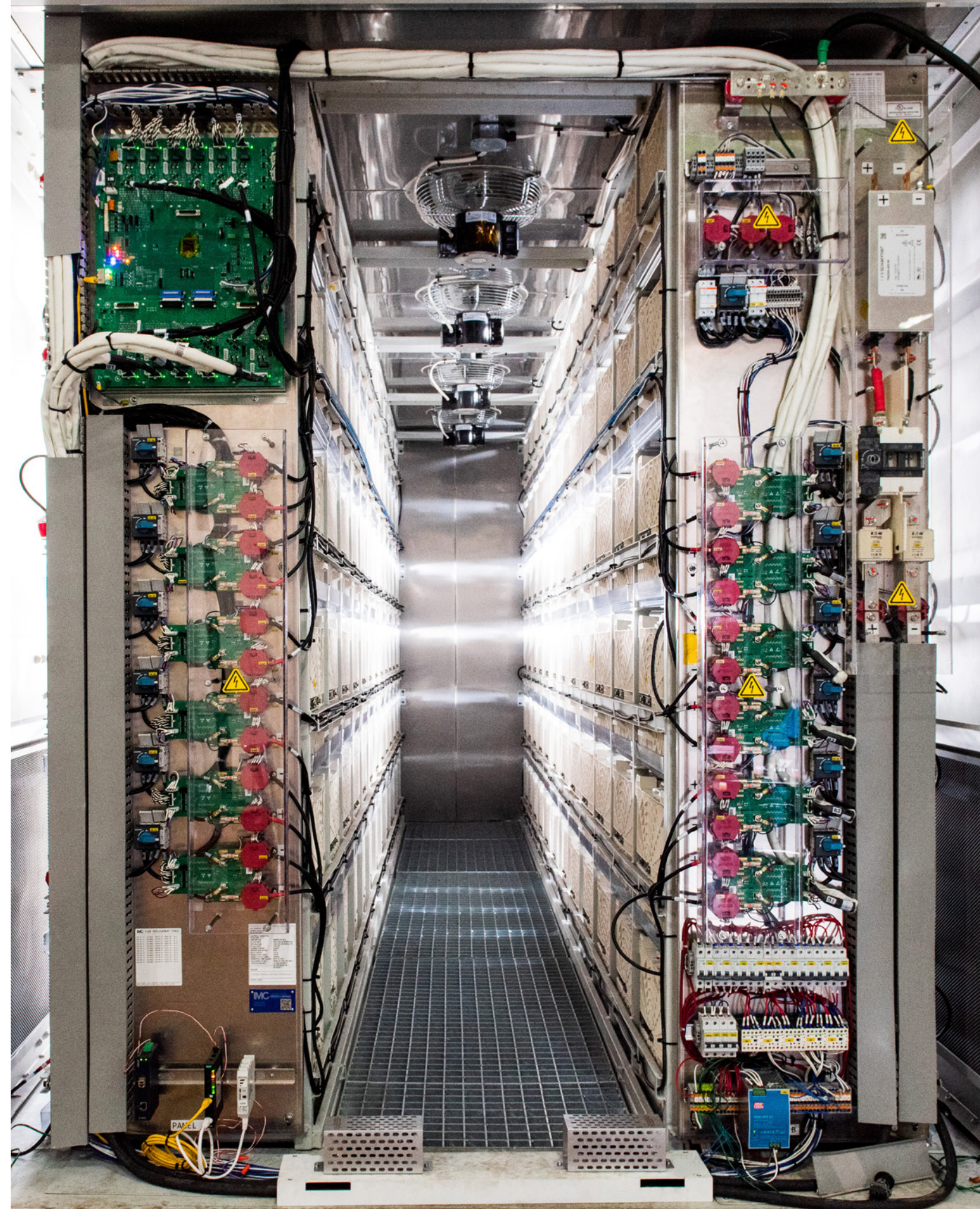
Protecting health and performance.

The Eos BMS is an integrated electronics package that provides real-time operational telemetry and status, automatic protections and, in conjunction with the site controller, executes use cases and controls the Eos Cube systems, all to minimize battery stress and wear while maximizing output energy capacity.

- 1** Direct measurements of voltages, temperatures, and currents are taken at both the individual battery module and series string levels.
- 2** Collected data is processed to determine the operating conditions of the overall Cube system as well as to calculate valuable derived data, such as state-of-charge.
- 3** Performance optimization or protection actions, such as the isolation of faulty batteries or strings, are initiated to respond to identified conditions.
- 4** Power limits are published to external power conversion equipment for further optimization of the battery power and energy performance.

Maintenance made easy

On-board logging and self-test functions in our BMS simplify diagnostics and streamline servicing. And all field-serviceable components are fully accessible, minimizing mean time to repair, while our built-in maintenance resistor enables stand-alone repair operations without putting demands on the site power conversion equipment.





Eos Services

Charged with your success

Eos is committed to accelerating the adoption and optimizing the use of clean energy storage. That's why we've built a suite of services to support customers of every size and at every stage in their project's lifecycle.

Flexible financing

Whether it's through a competitive, long-term, lease-to-own agreement for Eos Cube system assets, full project financing for a solar + storage microgrid, or a partnership investment in an early-stage renewable energy initiative, we're ready to help get your project off the ground with our flexible financing arrangements.

Full-service EPC

Installing an energy storage system isn't something everyone does every day—unless you're one of our team members or EPC partners. From initial project management through to final system commissioning, we'll put our experience to work and get your Eos Cube system up and running.

Performance maintenance

Sign up for an Eos maintenance contract to get access to our remote monitoring and onsite technical service—including an annual maintenance inspection—to ensure your Cube system is always performing at optimal levels.

Extended warranty

While a 2-year manufacturer's warranty is included with all Cube systems, Eos is proud to offer one of the industry's only extended performance warranties, covering a full 20-year period—the expected lifespan of our Znyth batteries—and guaranteeing your contracted degradation curve and energy output.

Positively ingenious.

Since our founding in 2008, Eos has been on a mission to accelerate the shift to clean energy with positively ingenious solutions that transform how the world stores power.

Our breakthrough fully-sealed zinc-powered battery was designed to overcome the limitations of conventional lithium-ion technology. Safe, scalable, efficient, sustainable—and manufactured in the U.S.—it's the core of our innovative Stack, Cube, and Hangar systems that today provide utility, industrial, and commercial customers with a proven, reliable energy storage alternative for 3-12 hour applications.

What's your storage challenge?

Whether you're looking for grid stabilization, peak shifting, energy arbitrage, or renewable integration, email us at info@eose.com or call us at **1 732 225 8400** to find out how Eos can help.



Eos. Positively ingenious.

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