## 500 kWh envision aesc energy storage



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Shanghai-based Envision Energy unveiled its newest large-scale energy storage system (ESS), which has an energy density of 541 kWh/m<sup>2</sup>, making it currently the highest in the industry.

The launch comes after its fellow Chinese battery manufacturer CATL introduced its 6.25 MWh storage system in April, and other firms released 6 MWh+ systems in 20-foot containers.

Now, Envision Energy has set a new standard by launching its advanced offering at the third Electrical Energy Storage Alliance (EESA) Energy Storage Exhibition held in Shanghai.

Their latest system, equipped with 700 Ah lithium iron phosphate batteries from AESC (in which Envision has a major stake), delivers more than 8 MWh, exceeding prior achievements.

"We made a huge jump from 350 Ah battery cells used in our previous generation products to 700 Ah and we did this to lower the cost on the system level," a company representative told ESS News.

The newest generation product boasts an energy density exceeding 440 Wh/l, a roundtrip efficiency of 96 percent, and a lifespan of nearly 16,000 charge-discharge cycles.

This liquid-cooled system operates within a 1500 V to 2000 V voltage range and offers configurable storage durations ranging from two to eight hours. The entire container weighs approximately 55 tons.

A company representative mentioned that in 2023, Envision set a new standard in energy density with its 20-foot container, 5 MWh battery energy storage system.

The latest capacity breakthrough was made possible by the use of large-capacity cells, system integration, compact design, and further optimization within the container.

For reference, CATL, another major player in the battery industry, recently introduced a new energy storage system featuring improved energy density, efficiency, and zero degradation in both power and capacity.

The firm's newly launched TENER system delivers 6.25 MW capacity within a 20-foot equivalent unit (TEU) container, increasing energy density by 30 percent per unit area and reducing the total station footprint by 20 percent compared to the earlier 5 MWh containerized system. For instance, a 200 MWh TENER power station would require 4,465 square meters of space.

CATL says that TENER cells have achieved an energy density of 430 Wh/L, marking a significant advancement for lithium iron phosphate (LFP) batteries in energy storage applications. The new system also



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promises zero degradation in its first five years, potentially changing how we store renewable energy.

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