StorEn Technologies, Inc. Evaluates Vanadium Flow Battery Technology

Challenge

StorEn sought a third party to test and evaluate the operational performance of their VFB technology.

Solution

NYSP2I collaborated with Unique Technical Services (UTS) to test and evaluate the operational performance and comparative greenhouse gas (GHG) emissions of StorEn's new VFB technology as compared to commercially available electrical energy storage. Testing and evaluation was performed at Stony Brook University's Advanced Energy Center on the above-ground StorEn prototype VFB. Testing focused on maximum power output, energy capacity, efficiency, ramp rate and response time.

Results

- The battery met the rated nominal energy storage capacity specification of 15kWh
- Average cell round trip efficiency across five tests was 76.50%, meeting the stated specification of > 75%
- Ramp rate evaluation resulted in measured ramp rates of 1.479kW/sec, 1.492kW/sec, and 0.711kW/sec at 0%, 50%, and 100% State of Charge (SOC), respectively
- Response time evaluation resulted in a response time of 0.08 seconds, and the output power settled at value of 3.052kW

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Third party testing and evaluation of StorEn’s patented VFB technology provided promising results, advancing StorEn towards commercialization.

Testimonial

“The NYSP2I third party assessment was very valuable to StorEn. From an environmental standpoint, it was important to quantify the reduction in GHG emissions obtained with our technology, and how our batteries can help address climate change by reducing greenhouse gas emissions. This also represents a key value proposition for StorEn’s batteries. Additionally, it was crucial for us to stress test our prototype in order to assess the level of performance that we have reached thus far. The testing also provided important indications of how we can enhance our final design as we move towards volume manufacturing and commercialization. Over the course of the past year, we thoroughly enjoyed working with and getting to know the NYS2PI team. We look forward working with NYS2PI in the future.”

Carlo Brovero
CEO
StorEn Technologies, Inc.

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