From: Denise Sheehan
To: Herb
Cc: William Acker
Subject: NY-BEST COMMENTS ON NYSRC PRR 151
Date: Thursday, April 27, 2023 4:48:21 PM
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NY-BEST COMMENTS ON NYSRC PRR 151

Dear Herb:

The New York Battery and Energy Storage Technology Consortium (NY-BEST) submits these comments in response to New York State Reliability Council's PRR 151: Establish minimum interconnection standards for Large Inverter Based Resources (IBR) Generating Facilities based on IEEE Standard 2800-2022.

NY-BEST is a not-for-profit industry trade association with a mission to grow the energy storage industry in New York. We act as a voice of the energy storage industry for more than 180 member organizations on matters related to advanced batteries and energy storage technologies. Our membership includes global corporations, start-ups, project developers, leading research institutions and universities, and numerous companies involved in the electricity and transportation sectors.

The NYISO Interconnection Queue as of 1/5/23 has greater than 50,000 MWs of Large Facility (>20 MW) Inverter Based Resources. NYSRC does not presently have specific IBR interconnection criteria in its Reliability Rules. PRR 151 is proposed to be applicable to all NYISO interconnection studies involving IBRs. Our comments are focused on energy storage resources and particularly on battery energy storage.

As you are aware, batteries degrade over time and battery systems require additional batteries to maintain the original facility output. The three different approaches to augmenting a battery system are to either install a large initial overbuild and target an end-of-life capacity that equals what was originally studied, augment the battery over time and install additional capacity at some predetermined periodicity, or do nothing and allow the battery to degrade. Additionally, there are two different approaches to battery system design. Some manufacturers design their products to allow for additional battery modules to be installed behind the originally installed inverter. Other manufacturers have developed integrated battery and inverter modules ("Integrated Modules"), meaning that augmentation would lead to an increase in the total number of inverters installed at a facility to maintain the same facility output.

For facilities that have decided on or considering manufacturers that utilize Integrated Modules, it is important to consider how PRR 151 will impact decision making. The National Renewable Energy Laboratory's ("NREL") Annual Technology Baseline projects that battery system costs will continue to decline on a $/kWh basis over the next three decades. For energy storage facility owners, installing less expensive batteries in the future as required is a much more attractive alternative to a larger initial capital investment. However, without additional clarification, PRR 151 could potentially have a disproportionate impact on facilities that utilize Integrate Modules. For facilities that use Integrated

Modules, it is essential that they do not trigger a restudy and/or reverification every time they add new Integrate Modules. It is also important for facility owners to understand how pre-CY24 projects will be handled at the time they need to augment the battery system.

For facilities that add new inverters that are incremental to the originally installed inverters that completed all required modeling and verification, the additional inverters would only improve a facility's capability of responding to events on the system. Although the batteries will have lost some energy, the inverters will maintain their original capacity. The batteries will still be able to discharge at their originally designed rate but only for less time. Therefore, NYSRC should consider that facilities using Integrate Modules not have to remodel and reverify every time the facility augments that battery system. Otherwise, if the rules are too onerous, facilities utilizing Integrated Modules may face significant difficulties in complying with the requirements. This could ultimately result in delays and increased costs for facility owners, which could have a negative impact on the adoption of renewable energy in the state. Therefore, we urge the NYSRC to carefully consider the concerns of those considering Integrated Modules, and ensure that energy storage facilities can continue to operate efficiently without being subject to unnecessary restudies or reverifications.

In addition to the above, NY-BEST suggests NYSRC do more to evaluate commercial readiness for compliance with the rule and adjust the requirements and/or timing of the requirements to ensure that requisite inverters are commercially available. We also urge NYSRC to consider additional industry outreach to ensure that the requirements of the rule are fully understood and feasible prior to implementation. We are happy to work with you to assist with industry outreach. Please contact us if you have any questions or need additional information.

Thank you for your consideration.

Respectfully submitted,

Dr. William Acker
Executive Director
NY-BEST

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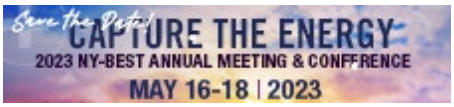
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