ISCRFP25-1 – 2025 Bulk Energy Storage Program

COMMENTS OF THE NEW YORK INDEPENDENT SYSTEM OPERATOR, INC. ON NYSERDA's DRAFT VERSION OF THE STATE'S FIRST BULK ENERGY STORAGE SOLICITATION (ISCRFP25-1)

The New York Independent System Operator, Inc. ("NYISO") values the efforts put forth by New York State Energy Research and Development Authority ("NYSERDA") and Staff of the New York State Department of Public Service ("DPS Staff") to develop the Bulk Energy Storage Program Implementation Plan ("Implementation Plan"), which was recently approved by the Public Service Commission ("Commission" or "PSC").[1] As NYSERDA moves forward to establish a competitive solicitation to procure a range of eligible bulk energy storage technologies, the NYISO strongly encourages that NYSERDA require, or place high value on, grid forming ("GFM") capability, which can provide essential functions such as synthetic inertia, frequency control, black start capability, and other support where needed for electric system reliability. GFM functionality provides significant reliability benefits to the electric system at a minimal incremental cost when developing new bulk storage projects.

Pursuant to NYSERDA's Introduction to the Draft ISCRFP25-1 ("Draft RFP"), Comment Submission Instructions, and Questions for Review, the NYISO respectfully submits these limited comments focused on the non-price evaluation criteria electric system value.

I. COMMENTS

The Implementation Plan and Draft RFP both require NYSERDA to

> evaluate the various non-price benefits that bulk energy storage projects can provide to the electrical grid. These may include evidence of the potential to

[1] *See* https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7bF00F4A96-0000-CC25-8B35-AB070F5506AF%7d.

> support peaker plant displacement and the capability to reduce curtailment and otherwise support renewables integration.[2]

The NYISO strongly supports the evaluation of electric system value when considering a bulk energy storage project proposal. In order for grid-connected energy storage projects to support peaker plant displacement and to reduce curtailment of renewables, energy storage resources must be capable of providing some of the attributes necessary to support system reliability.[3] As the NYISO has previously commented to NYSERDA and the PSC, while the electric generation fleet must collectively maintain a balance of the attributes listed below, all attributes do not have to be provided by a single technology type.[4]

1. **Zero-Emission/Carbon Free** (*i.e.*, the qualification criteria for the Zero-Emissions by 2040 Target);
2. **Dependable Fuel Sources** that allow these resources to be brought online when required and to operate based on system needs;
3. **Non-Energy Limited** and capable of providing energy for multiple hours and days regardless of weather, storage, or fuel constraints;
4. **Dispatchable** to follow instructions to increase or decrease output on a minute-to-minute basis;
5. **Quick-Start** to come online within 15 minutes;
6. **Flexibility** to be dispatched through a wide operating range with a low minimum output;
7. **Fast Ramping** to increase or reduce energy injections based on changes to net load which may be driven by changes to load or intermittent generation output;
8. **Multiple Starts** so resources can be brought online or switched off multiple times through the day as required based on changes to the generation profile and load;
9. **Inertial Response** and frequency control to maintain power system stability and arrest frequency decline post-fault;
10. **Dynamic Reactive Control** to support grid voltage; and
11. **High Short Circuit Current** contribution to ensure appropriate fault detection and clearance.

---

[2] *See* Implementation Plan at p. 14.

[3] *See* 2023-2042 System & Resource Outlook ("The Outlook"), A Report of the New York Independent System Operator, July 23, 2024, at 8, available at https://www.nyiso.com/documents/20142/46037414/2023-2042-System-Resource-Outlook.pdf/8fb9d37a-dfac-a1a8-8b3f-63fbf4ef6167.

[4] *See* CRP at pp. 52 and 75-79. *See also*, NYISO's August 16, 2023, Comments in Case 15-E-0302, at pp. 7-11.

Energy storage resources that can provide as many attributes on this list as possible contribute more to maintaining electric system reliability. GFM functionality is a cost-effective way to increase the number of attributes that energy storage resources can provide to support electric system reliability. Requiring, or assigning a high value to, GFM functionality will steer NYSERDA towards selecting energy storage projects that support inertial response, frequency control, and dynamic reactive control, in addition to the other attributes that energy storage resources can provide without GFM functionality. The North American Electric Reliability Corporation ("NERC") and other Regional Transmission Organizations are already defining specifications making GFM capabilities mandatory for new bulk storage projects to capitalize on these performance attributes.[5]

---

[5] *See* NERC White Paper: Grid Forming Functional Specifications for BPS-Connected Battery Energy Storage Systems, available at https://www.nerc.com/comm/RSTC_Reliability_Guidelines/White_Paper_GFM_Functional_Specification.pdf. *See also* Midcontinent Independent System Operator, Inc. ("MISO"), MISO Grid-Forming Battery Energy Storage Capabilities, Performance, and Simulation Test Requirements Proposal, available at https://cdn.misoenergy.org/20240903%20IPWG%20Item%2004a%20DRAFT%20GFM%20BESS%20Performance%20Requirements%20Whitepaper%20CLEAN%20(PAC-2024-2)645393.pdf, and Electric Reliability Council of Texas, Inc. ("ERCOT"), ERCOT Advanced Grid Support Inverter-based Energy Storage Assessment and Adoption Discussion, available at https://www.ercot.com/files/docs/2024/07/09/2024_07_ERCOT_IBRWG_ERCOT%20Advanced%20Grid%20Support%20Inverter-based%20ESRs%20Assessment%20and%20Adoption%20Discussion_v1_.pdf.

II. CONCLUSION

The NYISO respectfully requests that NYSERDA consider these comments as it prepares to issue the first storage resource RFP by the end of June. As discussed herein, the NYISO respectfully encourages NYSERDA to require or heavily weigh the inclusion of GFM functionality when considering the electric system value of proposed energy storage projects.

Respectfully submitted,

/s/ *James H. Sweeney*

James H. Sweeney, Senior Attorney
New York Independent System Operator, Inc.
10 Krey Boulevard
Rensselaer, NY 12144
Tel: (518) 356-6000
JSweeney@nyiso.com

May 29, 2025