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VIA EMAIL

TO: Mr. Paul Hibbard and Mr. Todd Schatzki
Analysis Group
111 Huntington Avenue, 14th Floor
Boston MA 02199

Mr. Zachary Smith
New York Independent System Operator, Inc.
10 Krey Blvd.
Rensselaer NY 12144

RE: Demand Curve Reset Final Report

Dear colleagues,

The New York Battery and Energy Storage Technology Consortium (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.[1]

NY-BEST thanks the Analysis Group (AG) and the NYISO for their diligent efforts in the 2025-2029 Demand Curve Reset (DCR) process and for your consideration of our previous comments. NY-

[1] NY-BEST comments represent the interests of the organization as a whole and not the views of any single member. Our members have diverse interests and the organization's views are intended to be reflective of the energy storage industry collectively.

BEST provides the following recommendations in response to the Final Report presented by AG[2] as well as the Final Report presented by NYISO staff.[3]

1. Current DCR modeling must be updated to more realistically incorporate risk into the cost of financing.

In New York State, 2-hour batteries currently face significant market risk, the chief driver of which is uncertainty regarding capacity revenue expectations. Notably, this has resulted in costlier and more difficult financing, and little to no development of 2-hour batteries in the State. The DCR modeling process does not currently account for the risk of volatile and declining capacity revenue over the life of the project, specifically due to:

a. Declining battery costs. Lithium-ion battery costs have declined significantly over the last decade, and are widely projected to continue to decline through 2050.[4] Indeed, NYISO's own modeling for the New York State Coordinated Grid Planning Process incorporates the projection that battery storage costs will decline by more than 50% over the next 10 years.[5] Because the NYISO sets capacity prices based on the cost of new entry during a single snapshot in time, capacity prices are very likely to decline over future four-year DCR cycles, driven by declining battery prices. As a result, any battery built today, under more expensive conditions, faces the significant risk that it will never be able to recover sufficient capacity revenue to be profitably built. This risk drives up financing costs that are not included in the DCR modeling.

b. Volatile Capacity Accreditation Factor (CAF). The value of a 2-hour battery's CAF is currently highly uncertain. Most modeling indicates that CAFs are likely to decline as renewable and energy storage penetration increases, including analysis provided by the external Market Monitoring Unit, Potomac Economics, in response to the NYISO's Draft Recommendations.[6] However, the NYISO recently presented informational CAFs for Capability Year (CY) 25-26 that show a 20% increase in 2-hour battery CAF for the NYCA

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[2] Analysis Group, Inc., "Independent Consultant Study to Establish New York ICAP Demand Curve Parameters for the 2025/2026 through 2028/2029 Capability Years – Final Report (Updated Version)," October 2, 2024. Accessed online: https://www.nyiso.com/documents/20142/47366127/Analysis-Group-2025-2029-DCR-Final-Report-Updated.pdf/08c7f632-c0f9-d821-cc9d-a9cfe18178a1

[3] New York Independent System Operator, "Proposed NYISO Installed Capacity Demand Curves for the 2025-2026 Capability Year and Annual Update Methodology and Inputs for the 2026-2027, 2027-2028, 2028-2029 Capability Years," October 2024. Accessed online: https://www.nyiso.com/documents/20142/47366127/NYISO-Staff-DCR-Final-Report-Updated.pdf/513a05d5-800e-e022-f248-9406d65f6395

[4] W. Cole and A. Karmakar, National Renewable Energy Laboratory, "Cost Projections for Utility-Scale Battery Storage: 2023 Update," June 2023. Accessed online: https://www.nrel.gov/docs/fy23osti/85332.pdf

[5] NYISO Staff, Energy Policy Planning Advisory Council (EPPAC) Presentation, "CGPP Scenario 3 Results: High Transmission Impact," August 5, 2024. Slide 59. Accessed online: https://dps.ny.gov/system/files/documents/2024/08/20-e-0197-8-5-2024-eppac-meeting-materials.pdf

[6] MMU Comments on NYISO Draft DCR Recommendations. Accessed online: https://www.nyiso.com/documents/20142/46553116/MMU-Comments-on-NYISO-DCR-Draft-Recommendations.pdf/3cdc6102-1ed1-7761-960a-c2e8c3fbb592

and a 10% increase for Zone J.[7] This year to year volatility is extreme, and particularly acute when compared to the CAFs for 6- and 8-hour batteries, which each moved by less than 3.5% in any Zone. According to the NYISO's October 7 ICAPWG presentation, the increase in value is primarily a result of the peak load window shifting to later in the evening. As load and supply assumptions result in Loss of Load Expectation risk shifting to different or multiple peak load windows in future years, short-duration resources are particularly susceptible to large swings in the CAF, as compared to longer-duration batteries, which remain valuable over a wider range of peak load window possibilities. This illustrates the volatility inherent in the CAF modeling process, especially as it applies to short-duration resources. Uncertainty in CAF values results in higher risk, and higher risk drives up financing costs, if the system remains financeable at all. Neither Analysis Group nor the NYISO have taken this risk into account in the DCR modeling.

NY-BEST urges AG and NYISO Staff to take into consideration the significant risk of volatile capacity revenue over the life of the proxy unit, specifically by increasing the risk factor in the DCR modeling that translates into the cost of capital for the project.

2. Modeling in future DCR cycles must reflect the full life of the project to ensure sufficient capacity revenue to meet energy targets.

Capacity prices are intended to encourage investments in resources that will ensure the grid can meet peak demand. Given the mandates of New York State's Climate Act to achieve 70% renewable energy by 2030 and a 100% zero-emissions grid by 2040, much of that capacity must come from energy storage resources. However, the current DCR process does not succeed in providing sufficient capacity revenue to build energy storage resources in support of the State's goals.

This is largely due to the fact that DCR modeling is built to reflect a snapshot in time, rather than incorporating forecasts of economic conditions that will impact revenues over the life of the project. By assuming conditions are constant, the DCR modeling severely underestimates the cost of bringing a new energy storage resource online.

Notably, the State will compensate energy storage resources for this underestimation through incentive programs such as NYSERDA's Bulk Storage Roadmap program, which provides an Index Storage Credit (ISC) to hedge market risk and provide enough revenue certainty to incent development. However, many energy storage systems will not have access to the ISC program, such as those procured via utility solicitations or retail systems that get paid capacity through the VDER value stack. Furthermore, the ISC is only in place for three annual solicitations and is expected to be a bridge to an effective NYISO market.

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[7] P. Jain, NYISO Installed Capacity Working Group Meeting (ICAPWG), "2025-2026 Capability Year Informational Capacity Accreditation Factors," October 7, 2024. Accessed online: https://www.nyiso.com/documents/20142/47364758/2025-2026%20Informational%20CAFs_ICAPWG_10.07.2024_Final.pdf/86047150-27ff-b7e5-7f90-8dde1868658d

To ensure all energy storage resources are appropriately incentivized to meet State targets, and to cultivate markets that properly value the services energy storage resources provide to the grid, future iterations of the DCR process must more accurately reflect real-world conditions for energy storage development. NY-BEST thus urges AG and NYISO Staff to incorporate forward-looking projections into future iterations of the DCR modeling process, so as to capture changing economic conditions over the life of the project and develop a more realistic cost of construction for the selected proxy unit. By integrating, for example, a 15-year CAF forecast into the analysis, it is likely that accounting for the high risk of declining capacity prices for a 2-hour battery over the life of the project would result in a longer-duration battery being the least expensive proxy unit in the long term.

Conclusion

NY-BEST appreciates the work by AG and the NYISO to update the Demand Curve and applauds your historic selection of a battery resource as the proxy unit for the first time. However, as discussed above, we urge you to update the modeling assumptions to ensure the DCR process accurately reflects market conditions for energy storage and ensures capacity prices are sufficient to drive the investment needed to meet energy transition targets.

We stand ready to assist with any questions you may have on these comments. Thank you for the opportunity to share our input and feedback.

Sincerely,

Dr. William Acker
Executive Director, NY-BEST