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VIA ELECTRONIC FILING

TO: Hon. Michelle L. Phillips
Secretary to the Commission
New York State Public Service Commission
3 Empire State Plaza, 19th Floor
Albany, New York 12223-1350

RE: PSC Matter 14-01299 - PSEG Long Island Utility 2.0 Long Range Plan - 2024 Annual Update

Dear Secretary Phillips,

The New York Battery and Energy Storage Technology Consortium ("NY-BEST") is pleased to submit comments for consideration in the above referenced case in relation to the Utility 2.0 Long Range Plan - 2024 Annual Update filed by PSEG Long Island ("PSEG-LI") on July 1, 2024.

We greatly appreciate the Commission's consideration of our comments and recommendations. If you have any questions about these comments or need additional information, please contact us at 518-694-8474 or by email at info@ny-best.org. Thank you.

Respectfully submitted,

A handwritten signature in black ink that reads "William P. Acker".

Dr. William Acker
Executive Director, NY-BEST

INTRODUCTION

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 and our members have been actively engaged in the State's Reforming the Energy Vision (REV) initiative, development and implementation of the State's 3 GW and 6 GW Energy Storage Roadmaps and the Climate Action Council's implementation of the State's Climate Leadership and Community Protection Act (CLCPA)². NY-BEST is committed to helping meet New York State's goals to:

- reduce greenhouse gas emissions by 40 percent by 2030 and achieve net zero greenhouse gas emissions economy-wide by 2050;
- deploy 6 GW of energy storage on the electric grid by 2030;
- deploy 10 GW of solar by 2030 and 9 GW of off-shore wind by 2035;
- achieve 70 percent renewable energy by 2030 and zero emission electricity by 2040; and
- direct 40% of the overall benefits of clean energy investments to Disadvantaged Communities.

Energy storage is a key enabling technology to achieve an equitable clean energy transition and we urge PSEG-LI and the Long Island Power Authority ("LIPA") to accelerate deployment of these technologies to ensure the State achieves these targets and mandates.

COMMENTS ON THE UTILITY 2.0 PLAN - 2024 UPDATE

NY-BEST appreciates PSEG-LI's efforts to develop the Utility 2.0 Long Range Plan - 2024 Update and for its stated commitment to achieve the State's renewable energy and greenhouse gas reduction goals. However, NY-BEST is deeply concerned that PSEG-LI has not demonstrated recognition of energy storage as a key technology in meeting these goals. Further, it has yet to commit to clear plans to meet its share of the State target – which it identifies as 750 MW of energy storage by 2030. Specifically, our comments address the following:

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.

² New York State Climate Leadership and Community Protection Act, Chapter 106 of the Laws of 2019.
<https://www.nysenate.gov/legislation/bills/2019/s6599>.

- I. **Implementing the 6 GW Roadmap.**³ PSEG-LI / LIPA must finalize contracting and cost recovery mechanisms to enable full participation in the NYSERDA Roadmap Bulk and Retail programs.
- II. **Supporting retail storage.** PSEG-LI has declined to develop programs to support retail battery energy storage based on a flawed cost benefit analysis.
- III. **Supporting bulk storage.** The procurement for utility-scale energy storage continues to be severely delayed, and PSEG-LI again declines to pursue any additional utility-scale battery storage within the next five years.
- IV. **Supporting storage as transmission.** PSEG-LI has not embraced nor pursued opportunities to leverage energy storage as an alternative to traditional transmission.
- V. **Reforming rate design.** Rate design reform to support energy storage, including time-differentiated rates for energy storage, has not moved forward despite commitment to do so.

These concerns are discussed in greater detail below. Given the urgency of meeting the State's climate, energy, and equity goals, and the need to ensure a coherent statewide approach to achieving those goals, NY-BEST requests PSEG-LI reconsider its treatment of energy storage in its Utility 2.0 Plan and accelerate its support of energy storage in line with State mandates.

I. **Implementing the 6 GW Roadmap.**

PSEG-LI's participation in the State's programs under the 6 GW Roadmap remains unclear. According to the report, under current conditions PSEG-LI will only achieve 223 MW by 2030. This falls severely short of the utility's identified share of the State's 2030 energy storage goal: namely 750 MW of energy storage on Long Island by 2030, based on a 12.5% load-share ratio. (Notably, the 750 MW target is likely a significant underestimate of the actual Zone K 2030 energy storage need. The 6 GW Roadmap analysis estimates the need for 1,551 MW of storage on Long Island by 2030, given the need to meet Locational Capacity Requirements, replace retiring fossil plants, and balance offshore wind generation.⁴)

PSEG-LI states, "achieving the load-share ratio of 750 MW of Energy Storage on Long Island by the end of 2030 is greatly dependent on the level of energy storage NYSERDA procures and what is ultimately contracted to PSEG Long Island. Thus, PSEG Long Island is committed to contributing to the overall 2030 statewide energy storage CLCPA goal, but the achievement of this goal is heavily dependent on the progress of the state."

NY-BEST agrees that the NYSERDA Roadmap programs will be essential to ensure the State remains on track to meet New York's ambitious energy storage targets. However, it is clear

³ New York State Department of Public Service (DPS) and the New York State Energy Research and Development Authority (NYSERDA). "New York's 6 GW Energy Storage Roadmap: Policy Options for Continued Growth in Energy Storage (Case 18-E-0130)," March 2024. Accessed online: <https://www.nyserdera.ny.gov/-/media/Project/Nyserda/Files/Programs/Energy-Storage/2024-06-6GW-Energy-Storage-Order.pdf>

⁴ 6 GW Roadmap, p 73-74.

that PSEG-LI / LIPA's decision to participate in and fund energy storage programs is within the utility's control. For this reason, NY-BEST urges PSEG-LI / LIPA to finalize contracting and cost recovery mechanisms to enable full participation in the NYSERDA Roadmap Bulk and Retail programs in support of achieving, at a minimum, the 750 MW load-share target.

II. **Supporting retail storage.**

NY-BEST strongly disagrees with the statement that PSEG-LI "has experienced moderate success with retail sized systems (14 systems) despite the absence of a retail incentive program." While these 14 systems have contributed 11.3MW of energy storage capacity, this falls severely short of the progress Long Island should be making. Without a retail incentive program, PSEG-LI will continue to lag behind other NYS utilities in energy storage deployment, and will not be able to achieve the 750 MW by 2030 load-share target.

PSEG-LI's decision to decline to develop a retail incentive program is based on a flawed cost benefit analysis. The report states in Table A-4 on page 229 that the intent of the Societal Cost Test (SCT) is to answer the question, "Is the State of New York better off as a whole?" The benefits of energy storage to the State of New York have been extensively studied and documented, including but not limited to the analysis done for the NYSERDA/DPS 6 GW Energy Storage Roadmap and as referenced in DPS's review and recommendations to previous PSEG-LI Utility 2.0 Plans. According to the Roadmap, "A target of 6 GW of storage by 2030 is projected to reduce the projected future electric system costs by approximately \$2 billion, in addition to public health benefits resulting from reduced exposure to harmful pollutants from fossil fuel resources that would otherwise operate during peak demand periods." Although regional analysis was not reported, by multiplying the \$2 billion in statewide savings by PSEG-LI's load share of 12.5%, we can estimate that energy storage in Long Island would result in at least \$250M in future electric system cost savings.

This estimate is conservative, as indicated by the Roadmap's conclusion that 2030 energy storage levels in Zone K should be double the load-share ratio (1,551 MW instead of 750 MW), reflecting increased benefits offered by energy storage on Long Island. We can reasonably expect Long Island to experience higher net electric system savings compared to the rest of the State, given high electricity prices in Zone K, significant transmission- and distribution-level congestion, and high projected renewable penetration from solar and offshore wind. Indeed, Strategen Consulting's "Long Island Peaker Replacement Study," conducted in 2020 for NY-BEST, estimated that over the next decade, deploying energy storage to replace fossil-fueled peaker plants could save LIPA customers as much as \$393M.⁵

In contrast, the extremely narrow cost-benefit analysis performed for PSEG-LI's Utility 2.0 Long-Range Plan to calculate the SCT does not adequately capture the true societal benefits of energy storage, and should not be the basis by which to justify investment in a Retail program without significant revisions. Indeed, even PSEG-LI recognizes the shortcomings of

⁵ Strategen Consulting, prepared for NY-BEST. "Long Island Fossil Peaker Replacement Study," October 2020. Accessed online: https://cdn.ymaws.com/ny-best.org/resource/resmgr/reports/ny-best_lipa_peaker_replacem.pdf

its own analysis when it comes to the Residential Energy Storage System program, noting on page 176 that “Even though the re-forecasted benefit-to-cost ratios for the Residential Energy Storage System Incentive Program are still below 1.0 (SCT = 0.67, UCT = 0.86, RIM = 0.47), PSEG Long Island believes that energy storage can be cost-effective for its customers and society,” citing battery storage peak shaving capacity, peaker displacement, and reduction of greenhouse gas and NOx emissions, particularly in low-income communities. NY-BEST urges PSEG-LI to apply the same logic to its Retail program.

For example, the SCT analysis for the Retail program includes a negative monetary value for net avoided CO2 benefits. While this is intended to account for roundtrip efficiency losses, this ignores the ability of energy storage to charge when the marginal emissions of the grid are lowest and discharge when they are highest, thereby displacing the use of dirty peaker plants, as recognized by PSEG-LI earlier in the report. This has significant implications for air quality and public health, particularly in Disadvantaged Communities – the benefits of which are excluded from the cost-benefit analysis.

Notably, the Utility Cost Test (UCT) and Ratepayer Impact Measure (RIM) analyses conducted for the Retail program, which address the questions, “How will utility costs be affected?” and “How will utility rates be affected?” respectively, both demonstrated that the benefits of a Retail incentive program outweigh the costs (UCT = 3.42, RIM = 1.22). Thus, PSEG-LI fails to justify the statement on page 192 that a Retail program is “not economically feasible.” By their own analysis, declining to adopt a Retail incentive program is leaving both utility and ratepayer benefits on the table.

Further, PSEG-LI’s analysis estimates an approximate program cost of \$85M. This is based on a \$150/kWh incentive rate to fund 188 MW of 3-hour systems. PSEG-LI did not conduct any analysis of alternative target deployment levels or incentive levels, which could allow the utility to at the very least deploy a smaller program with lower incentive levels in the near-term. Particularly given the potential to lower both utility and ratepayer costs according to the UCT and RIM analyses, and the ability of Retail systems to provide critical distribution-level benefits as compared to Bulk systems, NY-BEST urges PSEG-LI to reevaluate this opportunity, and to fully participate in cost-recovery mechanisms to expand the NYSERDA Roadmap Retail incentive program to PSEG-LI territory.

NY-BEST members believe that the NYSERDA Retail Block Incentives have been extremely effective at catalyzing the energy storage market in the State. While we are not opposed to exploring the alternative pilot programs proposed on page 193, we are concerned about the additional time and analysis required to develop such a program given the short runway to meet the 2030 target, as well as the complications associated with establishing a distinct program that is inconsistent with the rest of the State. Additionally of note, while ongoing performance payments could be workable, the program would need to be closely aligned with VDER to avoid presenting contradictory dispatch signals. In contrast, PSEG-LI’s full

participation in the NYSEDA Roadmap Retail incentive program would be much more straightforward and likely more cost-effective in the long run.

Finally, while the Non-Wires Alternative (NWA) analysis demonstrated potential for Retail energy storage to contribute to a beneficial solution, the utility of the analysis is limited as it is extremely locationally-specific. According to page 189 of the report, “Given that the Miller Place substation is pursuing a T&D solution, it is very unlikely that a battery storage system would be installed at this location. Thus, LIPA and PSEG Long Island should consider undergoing a NWA for a different favorable location and re-forecasting the BCA in the future...” NWA programs are most effective when the utility identifies a location in need of system upgrades and solicits solutions on a technology-neutral basis. NY-BEST therefore urges PSEG-LI to identify additional locational opportunities as soon as possible.

III. **Supporting bulk storage.**

The procurement for utility-scale energy storage continues to be severely delayed, and PSEG-LI again declines to pursue any additional utility-scale battery storage within the next five years. PSEG-LI’s original 2021 RFP aimed to obtain 175 MW of storage by 2025; the procurement resulted in 179MW, now anticipated to be in service by 2028.

To justify the delay, PSEG-LI has cited challenges including supply chain complications, local moratoria, and increased import taxes. While NY-BEST recognizes these challenges, to meet the urgency of the climate crisis and the mandates of the State Climate Act, PSEG-LI must make rapid progress on its existing projects, and identify opportunities to expedite the portions of project development that are within the utility’s control.

Further, NY-BEST urges PSEG-LI to expeditiously execute a contract with NYSEDA to fully participate in the NYSEDA Roadmap Bulk Incentive Index Storage Credit (ISC) program. This will enable deployment of additional utility-scale systems in Long Island in support of the 750 MW load-share target.

While we anticipate the majority of future bulk procurements to be achieved via the NYSEDA ISC program, we urge PSEG-LI to also procure additional storage directly. Given the significant challenge of achieving at least 750 MW of energy storage on Long Island by 2030, an “all hands on deck” approach is needed to provide developers with multiple offtake opportunities.

Finally, a major challenge in meeting Long Island storage goals are the need for System Deliverability Upgrades, which are currently paid for by developers. To receive Capacity Resource Interconnection Service (CRIS) rights to participate in the NYISO capacity market, developers must accept their cost allocation for system upgrades. Not only are the upgrades enormously expensive, they also take 3-5 years to complete, threatening any 2030 goal. To

help address this, NY-BEST urges LIPA and PSEG-LI to pursue more transfers of existing CRIS rights, such as those described in their 2022 RFI.⁶

IV. **Supporting storage as transmission.**

PSEG-LI has not embraced nor pursued opportunities to leverage energy storage as an alternative to traditional transmission. Grid-scale energy storage is a cost-effective alternative to traditional infrastructure investments, capable of being deployed to optimally meet the needs of the grid and enhance the utilization of existing infrastructure. This includes contributing to:

- Greater renewable energy utilization, including to reduce curtailments and increase renewable power delivery to PSEG-LI customers;
- Contingency support to increase transmission transfer capacity (both thermal and voltage) in a cost-effective manner;
- Rapid project deployments to deliver benefits more quickly;
- System expandability to interconnect renewable generation and value of optionality, given the modular nature of grid-scale energy storage compared to conventional T&D solutions;
- Improved system flexibility to manage intermittent resources;
- Increased firmness of renewable generation projects;
- Deferred and/or avoided T&D expansion, and reduced risk of constructing new T&D infrastructure that is ultimately underutilized; and
- Improved load pocket reliability, particularly in Long Island, which has over a dozen on-island load pockets.

NY-BEST urges PSEG-LI to include a greater analysis of the opportunities presented by using energy storage as a transmission asset for both system reliability and reduced costs to the utility and to ratepayers.

V. **Reforming the tariff and rate design.**

Rate design reform to support energy storage in Long Island is critical to ensuring long-term market success, beyond upfront incentives. NY-BEST recommends that LIPA / PSEG-LI pursue the following initiatives:

- *Define energy storage in the tariff.* While energy storage is mentioned in several tariff sections, it is never clearly defined. Further, the current tariff does not explicitly include energy storage as an eligible technology for Remote Crediting, which is not in line with how LIPA is operating. NY-BEST encourages LIPA and PSEG-LI to review the tariff to ensure energy storage is clearly defined and included.
- *Implement an explicit 15-year Buy-Back Rate Exemption, in line with other NYS Joint Utilities.* Zone K is currently the only utility territory without an exemption, resulting in significantly increased costs for energy storage projects.

⁶ Long Island Power Authority (LIPA). "Request for Information (RFI): Interconnection Rights and Re-use Opportunities for Long Island Clean Energy Projects," December 2022. Accessed online: <https://www.lipower.org/wp-content/uploads/2023/01/LIPA-RFI-for-CRIS-Rights-and-POI-Re-use-and-Cover-letter-Dec-2022-12-27.pdf>

- *Implement Time-of-Use supply costs.* While PSEG-LI originally proposed a phased rate modernization plan in their 2018 Utility 2.0 Plan, it was never implemented for large commercial customers. NY-BEST urges PSEG-LI to expand their time-differentiated rates to include the Mandatory Large Demand Metered Service Rate Classes 284, 285, M284 and M285, and establish off-peak rates as 60% of the non-time differentiated rates. This will be critical to ensure that energy storage systems are appropriately incentivized to charge during off-peak hours and are rewarded for discharging during peak hours. In the long-term, LIPA should move to LBMP hourly supply pricing, which is ultimately required by DPS.
- *Launch a Statewide Solar for All (SSFA) program to enable storage in Zone K to provide utility bill savings to low-income New Yorkers.* While the DPS ordered the Joint Utilities to implement SSFA in their service territories, PSEG-LI must voluntarily participate. NY-BEST urges PSEG-LI to update their tariff to include an SSFA program in Zone K to unlock significant savings for low-income customers and enable a more efficient credit allocation process for energy storage developers.
- *Implement VDER reform for the PSEG-LI service territory.* NY-BEST strongly encourages LIPA/PSEG-LI to convene a Working Group to advance critical reforms to VDER market rules in Long Island. These could include:
 - *Improve LSRV and DRV in Zone K.* LIPA should re-evaluate LSRV and DRV incentive levels as well as geographic eligibility for LSRV. Currently, LIPA's LSRV-to-DRV ratio is among the lowest in the State. LIPA could consider adjustments to how they calculate LSRV and DRV to more accurately reflect the value of Retail energy storage on Long Island.
 - *Optimize the DRV call window, which is currently longer than the peak load period.* Reducing the window from five hours to four hours would enhance project economics and align with the length of other utility call windows. LIPA could also consider expanding DRV capability to include June and September shoulder months, particularly as climate change is anticipated to drive up temperatures in Spring and Fall.
 - *Use the NYISO market peak to determine ICAP Alt 3 compensation under VDER.* While the rest of the State's utilities use the NYISO market peak to determine capacity payments, LIPA uses the Zone K peak hour, resulting in misalignment in the market. LIPA could consider modifying this to be in line with the Joint Utilities.

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