



March 20, 2023

VIA ELECTRONIC MAIL

Hon. Michelle L. Phillips  
Secretary  
New York State Public Service Commission  
3 Empire State Plaza  
Albany, New York 12223-1350  
secretary@dps.ny.gov

Re: Case 18-E-0130

Dear Secretary Phillips,

The New York Solar Energy Industries Association (NYSEIA) appreciates the opportunity to provide comments in response to the New York 6 GW Storage Roadmap. Energy storage is critical to New York's decarbonization effort, and will need to be deployed at all levels of the electric system, including the bulk, retail, and residential levels, in order to dynamically balance intermittent renewables and provide systemic, community and individual resilience benefits. Energy storage can also be deployed strategically to defer expensive transmission and distribution upgrades, to increase hosting capacity by time-shifting renewable exports, and to replace fossil fuel peaker plants with non-emitting technology. Overall, NYSEIA supports the roadmap and appreciates the thoughtful approach that the proposal takes to the bulk, retail and residential market segments. We also appreciate that the roadmap seeks to focus investment in low-income and environmental justice communities in order to comply with the Climate Act, and more importantly, so these communities receive an equitable share of the benefits of these investments. The program cost is modest, and the environmental, resilience and economic benefits are significant.

NYSEIA respectfully submits the following comments and recommendations for consideration.

Thank you,

Noah Ginsburg  
Executive Director  
New York Solar Energy Industries Association

1. **NYSEIA encourages the Public Service Commission to authorize and fund this statewide energy storage program without delay.**
2. **NYSEIA supports the Index Storage Credit (ISC) for the Bulk energy storage program.** The ISC creates revenue certainty for energy storage system developers while appropriately sharing risk and upside revenue potential with the State and ratepayers. The wide range of cost estimates for the Bulk program is an honest reflection of the supply chain and cost uncertainty for energy storage.
3. **NYSEIA supports the proposed descending block incentive program design for the retail and residential market segments.** If implemented well, this program design provides property owners and solar/storage developers with the predictability they need to budget for their clean energy projects and to operate their businesses. We appreciate that the Energy Storage Roadmap acknowledges the importance of creating large, predictable blocks to create market stability and avoid a boom-bust cycle. These capacity-based incentives should be additional to price signals that allow system owners to generate revenue via grid services or to maximize utility bill savings via time-of-day rate participation. While the Bulk program includes a cost range, it is notable that the Retail and Residential program include fixed cost estimates, despite being impacted by the same supply chain and cost uncertainty as large-scale projects. We encourage the Public Service Commission to closely monitor progress toward the State's energy storage deployment goals and to consider increased funding allocation for the descending block programs if needed. Finally, while we see value in both capacity-based and performance-based incentives, we believe they serve distinct functions, and to catalyze the market there should be no grid services program participation requirement for capacity-based incentive eligibility.
4. **NYSEIA encourages an accelerated timeline for the residential and retail program implementation.** The Roadmap proposes that the New York State Energy Research and Development Authority (NYSERDA) launch its program in 2024. However, NYSERDA has decades of experience administering descending block incentive programs, including for energy storage, and could launch a program in mid-2023 to jumpstart the market so New York can make early progress toward the State's storage deployment goals.
5. **NYSEIA recommends prioritizing the Retail (below 5 megawatt) segment with additional capacity allocation due to the unique direct and system-wide benefits distributed storage can provide to New Yorkers, including low to moderate-income (LMI) households and large energy consumers.** The Retail storage program can site energy storage capacity close to load, avoiding expensive transmission upgrades while: 1) lowering costs and providing resilient power for New York's base of commercial and industrial electricity customers via onsite/behind-the-meter storage projects; and 2) providing direct bill savings LMI households and provide cost-savings and resilient power for community facilities in Disadvantaged Communities and affordable housing.

- a. Onsite storage for commercial and industrial customers:** New York’s commercial and industrial businesses are large employers and large energy consumers, contributing to New York’s economic might and utility rate base. NYSEIA recommends that NYSERDA design the Retail program to ensure that a significant portion of the incentives (e.g. 25%) support onsite storage projects for existing energy consumers. Onsite energy storage systems can directly lower costs for this segment of ratepayers via peak shaving applications or via Value of Distributed Energy Resources (VDER) compensation. Importantly, these systems can also provide resilient backup power to host facilities.
  - b. Community storage for LMI communities:** many of the retail projects will be compensated under the VDER tariff and will often be structured as Community Distributed Generation projects. These projects can provide direct utility bill savings to renters and low-income households who otherwise face barriers to accessing the benefits of clean energy; an important direct LMI benefit. The Retail program can also support resilience hubs in Disadvantaged Communities, providing emergency backup power to LMI communities that are most vulnerable in the event of blackouts or natural disasters. NYSERDA could consider replicating its successful NY-Sun programs that encourage solar developers to serve LMI customers for energy storage, such as the Inclusive Community Solar Adder, in order to increase the amount of direct bill savings that accrue to low-income New Yorkers from projects participating in the Retail storage program.
- 6. Residential capacity allocation should be increased at least two-fold to meet consumer demand, encourage aggregation, maximize the use of existing grid infrastructure, and provide resilience benefits to more New Yorkers.** The Storage Roadmap proposes allocating funding for NYSERDA incentives to support 200 megawatts of residential storage capacity. This allocation falls short of industry forecasts for New York’s residential storage market. NYSEIA recommends that the residential capacity allocation be increased to at least 400 megawatts.

  - a. Higher residential energy storage attachment rates for solar customers are achievable and likely.** Based on NYSEIA’s forecast of residential solar deployment, 200 MW corresponds to a ~13% ESS attachment rate from 2024-2030 and no storage retrofits to existing PV systems. However, supply chain improvements, technology improvements and the rapid implementation of time-of-day rates in Long Island and other utility territories around the state will create significant demand for ESS retrofits to existing PV systems and will likely increase ESS attachment rates for new systems well beyond 13%. Residential ESS attachment rates have increased steadily in recent years, reaching 10% nationwide in 2021 and a staggering 93% in Hawaii during the same year<sup>1</sup>.

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<sup>1</sup> Tracking the Sun, 2022 Edition. Lawrence Berkeley National Lab. [https://emp.lbl.gov/sites/default/files/3\\_tracking\\_the\\_sun\\_2022\\_summary\\_brief.pdf](https://emp.lbl.gov/sites/default/files/3_tracking_the_sun_2022_summary_brief.pdf). September 2022.

- b. A more ambitious residential ESS goal will attract increased investment into New York from clean energy companies, leveraging private and federal resources while creating more jobs and accelerating the State's decarbonization efforts.** Regional and national solar companies are increasingly aggregating residential energy storage projects so they can provide homeowners with resiliency while providing system-wide grid services and/or functioning as a virtual power plant to reduce reliance on fossil-fuel peaker plants. This business model lowers the cost of storage for homeowners while providing critical grid services that lower costs for non-participating ratepayers. However, this model requires a certain scale to be successful, and these larger companies will prioritize investment in markets with more ambitious residential storage goals. Connecticut's energy storage program includes a 290 MW residential target by 2030<sup>2</sup> despite the state having a significantly smaller population; Connecticut's residential solar goal includes 3.4X more capacity on a per capita basis. NYSEIA recommends that New York set a more ambitious goal for residential storage so New Yorkers will benefit from regional and national aggregators investing in our State.
- c. Residential storage can be implemented quickly and without costly grid upgrades.** Residential-scale energy storage projects with effective price signals minimize the need for grid upgrades, allowing rapid deployment and more efficient utilization of existing grid infrastructure while allowing for a greater renewable generation penetration ratio closer to the load. We anticipate that interconnection will be a key barrier to rapid storage deployment for the Bulk and (in some cases) Retail programs. This barrier will not exist for the Residential program. Aggregations of small, distributed energy storage projects in the form of virtual power plants are envisioned to provide localized grid-scale benefits with lower interconnection costs. Aggregating small projects that provide value streams to individual customers and the grid can also allow New York to leverage private capital to mitigate the need for expensive local-transmission infrastructure.
- d. Residential energy storage provides resiliency benefits that no other segment can.** New York should prioritize the residential segment because it results in storage capacity deployed closest to load, minimizes interconnection upgrade costs, and provides direct resiliency benefits to New Yorkers in the form of emergency backup power. A more ambitious target and capacity allocation will allow more New Yorkers to access clean, resilient backup power.

***NYSEIA recommends allocating additional capacity to the residential segment and proactively seeking to encourage higher energy storage attachment rates for existing and future residential solar electric systems.***

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<sup>2</sup> Connecticut Energy Storage Program Authorization. Connecticut Public Utilities Regulatory Authority. [https://www.dpuc.state.ct.us/2nddockcurr.nsf/8e6fc37a54110e3e852576190052b64d/6991ef77ba07bae185258752007994f7/\\$FILE/171203RE03-072821.pdf](https://www.dpuc.state.ct.us/2nddockcurr.nsf/8e6fc37a54110e3e852576190052b64d/6991ef77ba07bae185258752007994f7/$FILE/171203RE03-072821.pdf). July 28, 2021.

- 7. Grid service programs and other price signals are needed for homeowners and system owners to encourage residential energy storage adoption.** Capacity-based incentives are important to jumpstart the market, however, NYSEIA encourages Staff to also focus on developing price signals and grid services opportunities that encourage storage adoption and provide system owners with a meaningful return-on-investment. For a residential customer on a flat electricity rate, there is no return-on-investment in energy storage; they are simply paying a premium for emergency backup power. This paradigm will work for a small number of early adopters, but price signals are needed to foster a mature and vibrant distributed storage market. The Long Island Power Authority's opt-out time-of-day rate, [which is being developed in partnership with the solar industry](#) to ensure that it benefits existing and future solar customers, is a model that could be replicated in other utility territories across the State.
- 8. Project maturity requirement changes should be considered to allow projects with longer permitting timelines to qualify for incentives before they are fully allocated.** NYSEIA recommends that NYSERDA provide an option for developers with projects with interconnection approval and pending municipal permits to pay a non-refundable deposit to secure a NYSERDA incentive allocation. Projects that take advantage of this option should be required to demonstrate continued progress towards municipal permit approval or forfeit their allocation. This modification will allow more projects sited in municipalities with challenging permitting processes to come to fruition.
- 9. Permitting and interconnection reforms are needed to achieve New York's energy storage deployment goals.** NYSERDA incentives are critical to catalyze the market for energy storage in the near-term. However, improvements to municipal permitting processes, code standardization and interconnection will support long-term progress, allowing New York to achieve its energy storage deployment goals at a significantly lower cost to ratepayers. We encourage NYSERDA and the Department of Public Service to continue working with stakeholders on permitting and interconnection reform and seek to be a strong partner in these efforts.

## Questions for Stakeholder Comments

1. For programs supporting bulk and off-site retail projects, how should incentive programs and procurements be best designed towards ensuring that at least 35% of proposed program funding is utilized to benefit disadvantaged communities and drive peaker plant emissions reductions, beyond a program focus on Zone J as proposed in Section 7.2?

We encourage NYSERDA to prioritize Bulk projects sited in load zones where harmful emissions from fossil fuel peaker plants can be offset most effectively. For the Retail program, we encourage NYSERDA to replicate its successful NY-Sun LMI solar programs for energy storage. NYSERDA could establish added incentives for standalone electric energy storage projects that participate in New York's Community Distributed Generation (CDG) program and provide direct utility bill savings to LMI customers and Disadvantaged Communities, similar to the Inclusive Community Solar Adder (ICSA).

2. For programs supporting on-site retail and residential projects, how could programs be optimally designed so as to ensure that at least 35% of the funding and associated benefits of these projects are directed to projects sited in DACs?

We encourage NYSERDA to replicate its successful NY-Sun LMI solar programs for energy storage. NYSERDA could establish incentive adders for storage projects owned/hosted by multifamily affordable housing, community facilities, and LMI homeowners. We also recommend that NYSERDA provide technical assistance and outreach/engagement support to Disadvantaged Communities to promote energy storage for pollution reduction and community resilience.