December 18, 2024

New Jersey Board of Public Utilities
44 South Clinton Ave.
Trenton, NJ 08625

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RE: Docket No. QO22080540 – New Jersey Energy Storage Incentive Program

Dear NJBPU Staff,

TigerGenCo, LLC ("TigerGenCo") is an independent power producer with development and operational power generation project interests in New Jersey and adjacent states. TigerGenCo is the owner and operator of Red Oak Power ("ROP"), a 776 MW combined cycle power generation facility in Sayreville, NJ that participates in PJM markets and the Bayonne Energy Center in Bayonne, NJ that operates in NYISO markets. We appreciate the opportunity to comment on the Straw Proposal for the New Jersey Energy Storage Incentive Program ("Straw").

TigerGenCo fully supports the efforts by NJBPU staff to gather feedback and formalize rules for this important program. Advancing energy storage project in a way that aligns with the goals outlined by Staff is challenging and we appreciate the organized approach laid out in the Straw and the transparency shared on findings from Staff consultants and advisors since the prior public discussions of the program. Based on our extensive experience with New Jersey development projects and operating assets, we submit the following comments on the Straw.

Business Model Considerations and Incentive Structure

As one of the largest Independent Power Producers operating in the State of New Jersey, TigerGenCo supports the Straw's intent to promote private investment in energy storage, and for private operators, not ratepayers, to bear the risk of project execution and operational performance. TigerGenCo's interests are predominantly oriented around Grid Supply Resources, so its comments will be focused there.

Up-Front Incentive

TigerGenCo was supportive of the 2022 Straw approach whereby the Grid Supply Fixed Incentive was paid out on a $/kWh-yr basis for several years with a tie to project performance as measured by PJM EFORd. This approach maximizes the benefit of the incentive to support project financing, particularly due to the instability in the broader PJM Capacity market, and due to uncertainty in Capacity Market revenues due to PJM's Marginal ELCC accreditation approach in setting capacity payments for energy storage resources.

Staff has proposed to change this approach to providing a single up-front incentive payment. While this is workable, TigerGenCo has identified some challenges based on recent experience with completing project financing with similarly situated projects. Due to the incentives in the Federal Inflation Reduction Act, the lowest cost Grid Supply Energy Storage projects are likely to include financing based on tax equity partnerships or hybrid tax equity partnership structures. These financing structures will require the project company that owns the project to have credit-worthy sources of revenues to cover operating expense and debt service payments through a period of 5-7 years aligned with the IRS ITC recapture period and/or the expected time until the partnership flip is expected to occur. Project debt

financing will have similar requirements. Any incentive payment up-front will likely have to be at least partially reserved by the project company and distributed over this lengthy period, resulting in lower realized returns than may be perceived with an up-front payment. So, while it is understood that administering incentive payments over multiple years may require more NJBPU resources, the likely financing structures mean that this up-front cash may not be the most cost-effective means for driving down project financing costs.

As mentioned above, one of the biggest risks a PJM energy storage project faces are declining capacity market revenues as energy storage project penetration on the grid increases. It will be extremely difficult for a project to value stack by hedging or otherwise securing credit-worthy contracts for PJM capacity that align with the 5-7 year period described above. The SIP incentive payments can help bridge this gap if they are paid out annually in a fixed amount.

Additionally, TigerGenCo has found that tax equity and financing parties in the space are willing to underwrite performance and operational risk, provided the project sponsor is following prudent industry practices in the design and construction of its project. As a result, NJBPU may be able to better align the eventual program's performance to its goals with an ongoing assessment of project reliability performance using PJM EFORd as a measure. The threat of claw-backs and other approaches to retroactively recapturing incentive payments are likely to raise hurdles for project financing, that will raise perceptions of risk and thus financing costs, as compared to a well understood payment methodology tied to project performance.

Project Maturity Requirements and Participation Fees

TigerGenCo reiterates its comments from the 2022 Straw on the importance of ensuring project maturity and requiring significant participation fees to reserve program incentives. Staff need look no further than PJM's queue reform process that placed extreme importance on similar issues to help drive down speculative development activity.

To this end we fully support all of the criteria Staff outlines for Project Maturity. Staff should pay particular attention to any bidder that outlines an "execution plan for all Major Permits" to ensure thorough plans are prepared and projects with limited support are unlikely to be selected. TigerGenCo recommends that bidders proceeding with the execution plan approach provide a letter of acknowledgement of the project's pending application from the local AHJ where the project will be sited.

TigerGenCo supports Staff's recommendation of a $1,000/MW refundable bid fee. TigerGenCo has not seen pre-development security of the amount suggested in other markets. For example, post-COD operational security for multi-year contracts approaches this level in California Resource Adequacy markets, but pre-development security is generally 30-50% of the post-COD amount.

Staff Request for Comments

Section XI of the Straw asks for specific feedback on several questions. TigerGenCo's responses are noted below.

1. **Should a performance incentive based on net avoided emissions be proposed only if PJM or another entity produces a day-ahead, marginal emissions signal?**

   No. Even if PJM or another entity were to produce a day-ahead marginal emissions signal, TigerGenCo advises against implementing a performance incentive based on net avoided emissions. The Staff's consultant has already performed extensive analysis estimating that 1,500 MW of energy storage resources supported by the NJ SIP would avoid approximately 2 million

metric tons of CO_2 over the 20-year period from 2025 to 2044, averaging about 100,000 metric tons per year. A higher-end estimate suggests up to 3.6 million metric tons could be avoided over 20 years. Given this substantial GHG reduction potential already quantified, the program design should be predicated on these findings rather than implementing a complex GHG Performance Incentive.

Furthermore, focusing on the GHG emissions of individual charge/discharge cycles overlooks the broader impact of energy storage in facilitating the deployment of more solar and wind energy, which inherently displaces fossil fuel generation. Even as gigawatts of natural gas are displaced, the marginal unit's GHG emissions may appear similar, making it challenging to attribute GHG reductions directly to specific energy storage operations. A narrow focus on single-cycle emissions fails to capture the systemic benefits of energy storage in transforming the energy grid.

Moreover, the PJM energy market is already highly efficient in dispatching resources to meet demand while minimizing costs and emissions. Introducing a GHG Performance Incentive would distort market signals, leading to market inefficiencies. The program design should remain agnostic regarding when a BESS charges or discharges, allowing the market to optimize operations without additional constraints that would be counterproductive.

2. **In the absence of a day-ahead emissions signal, should the SIP institute another form of performance incentive for Grid Supply projects?**

   Yes, but the performance incentive should not be tied to GHG reductions. Instead, as mentioned in comments above TigerGenCo is supportive of payments tied to project performance using availability and reliability metrics, such as EFORd that ensure energy storage systems contribute effectively to grid stability. Staff's consultant has shown the inherent value of furthering storage penetration on the grid in terms of expected GHG abatement in future years.

3. **What other changes or alternatives would you propose to the GHG Performance Incentive?**

   TigerGenCo reiterates its position from the 2022 Straw. As a long-term asset owner, we are concerned that setting specific performance criteria on a changing grid could have unforeseen implications as the grid evolves to include more clean resources. For example, as the grid cleans up it may be nearly impossible to operate an energy storage resource in the future and abate 5 kg's of CO2 per kWh annually. Any incentive considered must take into account what is practically possible given an evolving mix of resources operating on the grid

4. **How can the Board mitigate the risk of Grid Supply projects not operating/performing after receiving upfront incentives?**

   TigerGenCo outlines in its comments above the value inherent in distributing incentive payments over a period of several years, instead of up-front. Payment based on performance, based on reasonably achievable standards of reliability, and sufficient curing opportunities, are market for contracts of this nature.

   a. **Are the reporting requirements proposed herein sufficient?**

      Yes, the proposed reporting requirements are sufficient. By requiring developers to demonstrate project completion, interconnection, and compliance with initial eligibility criteria, the Board ensures that only fully operational projects receive incentives.

   b. **Should there be a claw-back clause to recover fixed incentive payments from energy storage systems that cease operating shortly after coming online?**

Any attempt to set up claw-back mechanisms is likely to present significant issues when being evaluated by project financing parties. TigerGenCo is not aware of provisions of this nature in other markets. New concepts and ideas are difficult for financing parties to evaluate, and will doubtless increase project financing execution risk and costs.

c. **What should be the metric of success for a specific project (e.g., discharging power during peak demand periods) for Grid Supply energy storage systems? In other words, what metrics should the Board consider when evaluating operation?**

We recommend that the primary metric of success for Grid Supply energy storage projects should be based on operational availability, mirroring the approach adopted by NYSERDA's ISC program. Under NYSERDA's ISC mechanism, projects receive incentives based on their installed energy storage capacity being operational and available for dispatch, without imposing specific operational or performance requirements tied to discharge times or patterns.

By focusing on availability, the Board ensures that energy storage systems are ready to respond to market signals and grid needs, allowing the PJM market to dictate optimal charging and discharging periods. This approach avoids imposing restrictive operational mandates that could interfere with efficient market participation or create unnecessary administrative burdens.

Key metrics should include:

- **Operational Availability:** Verification that the energy storage system is fully commissioned, interconnected, and consistently available for dispatch. This ensures that the system is ready to provide services to the grid whenever needed.
- **Compliance with Regulatory Standards:** Adherence to all safety, environmental, and interconnection requirements as stipulated by federal, state, and local regulations. This includes meeting any initial project milestones and reporting obligations.
- **Market Participation Capability:** Demonstrated ability to participate in PJM's energy, capacity, and ancillary services markets. By being market-ready, the storage system can contribute to grid reliability and efficiency while responding to economic signals.

By adopting these metrics, the Board can promote the deployment of energy storage projects that are fully integrated into the market without tying incentives to specific performance outcomes or operational behaviors. Focusing on operational availability reduces financial and regulatory risks, making it easier for developers to secure financing and for projects to reach commercial operation. It also leverages existing market mechanisms to optimize the operation of energy storage systems, ensuring that they deliver maximum value to the grid and ratepayers.

5. **Should Grid Supply energy storage projects that replace or demonstrably reduce the run-time of fossil-based peaker plants in overburdened communities be evaluated solely on price or receive additional weight or a preference in competitive solicitations? If additional weight or preference is warranted, please specify how.**

We believe that Grid Supply energy storage projects should be evaluated primarily on price and overall effectiveness, without additional weighting or preference based on their proximity to overburdened communities. Our rationale is as follows:

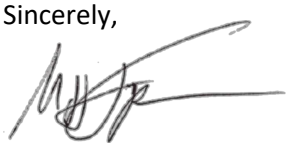
- **Peaker Plant Operations Are Not Solely Localized:** Peaker plants typically operate to meet regional or zonal peak demand rather than to relieve congestion in specific load pockets. We are unaware of any peaker plants that run merely to alleviate local congestion. Therefore, reducing their run-time, and the associated emissions, can be effectively achieved by energy storage systems located elsewhere on the grid, not necessarily within or adjacent to overburdened communities.
- **Benefits Are Location-Agnostic:** The emissions reductions resulting from decreased peaker plant operations improve air quality for overburdened communities even if the mitigating energy storage is situated miles away.
- **Cost Efficiency Maximizes Impact:** Building energy storage systems in densely populated urban areas is often more expensive due to higher land acquisition costs, construction complexities, and regulatory hurdles. If the same displacement of peaker plant operations can be achieved by installing a BESS miles away at a significantly lower cost, it allows for more efficient use of capital. By focusing on cost-effective deployment, the limited funds available can support more projects, resulting in a larger aggregate reduction in emissions. Overburdened communities would thus benefit more from the strategic placement of energy storage systems that optimize cost and impact, rather than from projects that are more expensive simply because of their location.

Given these considerations, we recommend that Grid Supply energy storage projects be evaluated on a competitive basis focusing on price and project viability. Introducing additional weighting or preferences based on geographic location could inadvertently lead to higher costs and reduced overall capacity deployment. This would ultimately diminish the potential benefits to overburdened communities by limiting the number of projects that can be supported within the program's budget.

Conclusion

We appreciate having the opportunity to provide comments on the Straw. Through our development work we have seen firsthand the challenges energy storage projects face in reaching commercial viability and appreciate the work Staff has undertaken to put forward this program that is aimed at closing that gap.

Sincerely,



Matt Tripoli, PE
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