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September 19, 2023

Sherri L. Golden
Secretary of the Board
44 South Clinton Avenue, 1st Floor
P.O. Box 350
Trenton, New Jersey 08625-0350

**RE: Docket No. QO22080540, In the Matter of New Jersey Energy Storage Incentive Program**

Secretary Golden,

On behalf of Convergent Energy and Power ("Convergent", "we"), we would like to thank the Board of Public Utilities (“the Board”, “BPU”, “Staff”) for the opportunity to comment on the Storage Incentive Program (SIP) Request for Information (RFI). Convergent is a committed and active participant in this process, both as an independent contributor and as a member of local and national policy organizations.

Convergent Energy and Power is a developer and lifetime owner-operator of energy storage and solar assets across North America, with over a decade of storage experience. We provide a variety of solutions, including behind- and front-of-the-meter storage and solar plus storage resources, non-wires alternatives, community solar plus storage, and other unique projects. We are a technology-agnostic developer that crafts systems to suit client and community needs and budget, while delivering safe, efficient results.

Below you will find direct answers to RFI questions, and an Executive Summary of key points and recommendations found throughout our comments.

## Executive Summary

- SIP guidelines should explicitly define and differentiate SIP treatment of different segments of storage projects; specifically, Transmission Grid Supply, Distribution Grid Supply, Distributed Behind-the-Meter Non-Residential, Distributed Residential.
- The allocation of incentive dollars should decline more gradually and be more evenly distributed across program years.
- Greater emphasis and allocation of dollars to the Distributed storage segment is needed to minimize risk and optimize return on allocated SIP incentives by:
    - Minimizing exposure to PJM interconnection delays and alleviating siting concerns
    - Leveraging private industry and reinforcing the NJ economy
    - Reinforcing reliability of the NJ distribution systems
- Many different performance-based incentives methods are available, and the BPU should consider options other than peak demand reduction in order to maximize return on the investment of SIP incentives
- Performance incentives should be voluntary
- SIP incentives should not be allocated to utility owned storage resources

## RFI Responses

1.1 Cooperation and aligned efforts across utilities, industry, and state organizations will be essential to spur investments at an efficient, effective level in grid development. However, utility participation and ownership of projects under the proposed program risks skewing market signals and should not be permitted. It is not logically clear why utilities would be considered for inclusion under the competitive SIP program, as it centers upon development for an end-use customer and/or market participation—which would spur valid questions regarding cost sharing and the distribution utility's role under deregulation.

If utilities are allowed to be incentivized under SIP, they would presumably be incented to "compete" for prime siting and perhaps perpetuate information asymmetry. Imperfect information has historically hindered the private sector's ability to strategically site projects to meet specific needs and optimize the state's investment in programs for ratepayer benefit. Too, incentivizing utility projects under the proposed structure deviates from conventional compensation of utility projects—such as rate cases in which greater transparency into total project costs, funding sources, application of project, and identified need are afforded to crucial stakeholders such as ratepayer advocates and regulators.

The private sector leverages its own risk and dedicated storage industry expertise, therefore optimizing investments and alleviating ratepayer burden. Projects developed by utilities rely heavily on ratebasing and are often compensated based upon capital expenditure and not optimized performance. Conversely, under a well-developed competitive program, privately developed projects would rely only in part upon publicly funded incentives and would be held to stringent expectations for development and performance to recoup investment costs. It should be noted that success of all storage is contingent upon timely and complete provision of good-faith information and resources from all parties, including utilities and state entities.

Non-wires alternatives (NWA) programs are great opportunities for utilities to get more involved in partnership with solutions provided or operated by the private sector. For instance, Connecticut's developing NWA program limits utility participation to avoid market manipulation, while fostering competition and creativity amongst private sector solutions. NWAs can be explored in dedicated processes or in broader distribution investment discussions, where utility involvement and investment benefits the system. It should be noted that NWAs are one of many possible storage services and dedicated applications and is independent of SIP's focus upon serving a host customer or participating as a market player (utility involvement in the latter would severely contradict deregulation decisions made by New Jersey in 1999).

1.2 Distributed resource participation in the performance-based incentive should be made voluntary to align with the program's encouragement of developers to optimize their assets to maintain commercial viability. Projects should be compensated based off proven, measured performance as indicated by the asset's inverter. Voluntary performance programs such as Massachusetts' ConnectedSolutions have demonstrated high engagement and low rates of opt-out; it must be noted that appropriate program design is crucial to ensure desired participant activity—voluntary participation must be complimented by clear program rules, compelling compensation rates, and to the extent possible, regulatory certainty.

1.3 Grid supply resource participation in the performance-based incentive should be made voluntary to align with the program's encouragement of developers to optimize their assets to maintain commercial viability. Projects should be compensated based off proven, measured performance as indicated by the asset's inverter.

2.1 The program should be broken out into explicit applications and project types to simplify administration and developer participation—Transmission Grid Supply, Distribution Grid Supply, Distributed Behind-the-Meter Non-Residential, Distributed Residential. Segmentation proposed in the joint SEIA comments provide an excellent initial model to iterate upon. As is the case with the active Administratively Determined Incentive (ADI) solar program, defining project types allows the Board to monitor which segments receive the most incentive uptake and asset deployment success; this insight can be used to inform later incentive value adjustment and capacity allocation, including "roll-over" of unallocated funds. Explicit definition of project type will also necessitate the clarification of incentive options, how projects are "counted" relative to Program Year (PY) capacity limits, and other administrative details which will solidify the state and industry's understanding and expectations of the program.

Various factors suggest that greater emphasis should be placed on distributed storage procurement: PJM interconnection delays, private capital investment resulting from corporate sustainability trends, siting complications associated with larger projects, and strong benefits to the distribution system (reliability, resilience, added hosting capacity, peak shaving, etc.). The Distributed segment should not be relegated to a minor fraction of Grid Supply as was initially proposed, as this risks vesting too much confidence in a smaller number of larger projects. Allocating a greater capacity commitment to the Distributed segment will result in a firming of local systems, especially when pathways to participation are availed to distributed photovoltaic (PV) project hosts (discussed in greater detail in 5.1 response).

The SIP should provide a more even distribution of incentive dollars across Program Years, and incentive value should decrease more gradually. The Straw's incentive levels rapidly decline and PY capacity allocations are severely limited in early years, due to an assumed linear decline in the cost of energy storage development. Unfortunately, this assumption is not guaranteed and has been countered in recent years by geopolitical pressures, supply chain issues, and other complications. The proposed structure introduces high risk of a "false start" in early years, due to the small amount of incentivized capacity available. To artificially constrain development in early years could encourage preemptive or speculative behavior and subsequent project default, with cascading effects of incentive repeal and reassignment, block resizing, and market confusion. "Backloading" the program in a manner that schedules capacity to be awarded—not completed—in the later years of this decade means it is unlikely that 2 GW of installed capacity will be operable by 2030. Based off the Staff's estimation of storage presently existing in the state, it won't be until approximately 2025 that the state reaches its 2021 goal—and this assumes the inclusion of an existing 420 MW pumped hydropower asset. Condensing development in these final years compounds stress upon state, utility, industry, and workforce organizations to deploy and enable assets; conversely, early and significant introduction of storage development processes allows all entities to "cut their teeth" refine expertise specific to New Jersey—allowing preventative hurdles to be discovered and resolved early on.

Early and significant promulgation of storage enables the state to realize cost savings elsewhere in its planned investments to modernize and "green" the grid. As articulated by the New York State Energy Research and Development Authority (NYSERDA) in its May 2022 Capture the Energy conference presentation, "timing of large-scale renewables interconnection, transmission upgrades, load growth,

and fossil plant retirements all require storage to be in place *before* these changes occur …. Without storage, each [process gets] more expensive and less efficient, potentially overpaying for solutions to issues that will be solved when storage comes online". New York's latest Storage Roadmap therefore proposes ambitious deployment of incentive dollars earlier in the program to instigate development, avoid risk of project default, and allow greater runway for development prior to its storage target.

2.2 First-come, first-served should remain the application processing approach, with appropriate and mandatory demonstrations of project maturity.

2.3 The Board should ensure that all utilities provide clear guidelines for the interconnection processes by size, project type, and location on the grid. The manner in which utilities study storage assets must be made clear to ensure informed market participation, which could be provided through a pre-application verification/evaluation (PAVE) process for storage. Projects located on the distribution grid, both front-of- and behind-the-meter, should not be subjected to the PJM interconnection process. Utilities should provide the maximum allowable generation at each voltage level and allow developers to propose the feeder associated with a project as derived from hosting capacity resources. Clear guidance should be provided to participants as to what application changes or updates would be considered material modifications that would necessitate reconsideration, further study, or change in queue position/incentive approval.

3.3 Convergent requests greater clarity on the BPU's perceived definition of an aggregator and assignment process. Third-party storage developer-operators should be permitted to be the direct recipient of incentive funds, so long as there is written endorsement by the project host/end-use customer in the submitted application to the SIP program administrator.

3.4 Greater clarity into the intent of this question is necessary to accurately respond-- both behind-the-meter and front-of-the-meter assets can provide grid services. While not explicitly specified in the question, it could be assumed it pertains to the treatment of Distributed Front-of-the-Meter (FTM) storage, which is developed explicitly to provide grid services often independently of an affiliated "host customer". Distributed FTM should be granted the option to indicate at time of SIP application submission whether it wishes to opt into the Distributed or Grid compensation tracks. Convergent defers to the BPU for greater detail as to how these assets would be recorded for the sake of monitoring PY capacity uptake, and if it envisions this freedom of choice for both the upfront and performance incentives or if an asset would be required to commit to one "type" (Distributed or Grid Supply) across both incentives.

3.6 There are multiple ways to determine performance-based incentives to achieve the Board's goal to "encourage the operation of storage assets in a manner that maximizes environmental benefits and helps the electric grid during times of operational stress". (Orig. SIP at 22) The Board properly recognized that operating distributed storage provides different benefits at different times based upon method of storage operation. The question requiring greater BPU clarity to stakeholders is "what is the desired product being procured?", which will inform the range of possible mechanisms to document performance. It is also unclear if the BPU envisions the response to this question as an additional performance incentive, or an alternative to the Straw's proposal.

A possible performance mechanism could center upon energy cost relief for all customers, accomplished by establishing a threshold price in the PJM Day-Ahead (DA) market that indicates a need to operate SIP resources. Storage can also be used to curb extreme grid stress, as determined using PJM operational

parameters as a discharge trigger. California's Emergency Load Reduction Program (ELRP) similarly incentivizes storage activity during times of high peak to avoid load shed. Storage can also be optimized to contribute capacity during peaks to provide both cost savings and environmental benefits attributed to avoided peaker use. This concept is being explored within Triennium 2 and its Peak Demand Reduction goal. Though the Triennium peak/demand response program construct is still under development, it should be noted that maximum return on SIP investments can be accomplished by defining a performance incentive separate and apart from a peak program. For example, a SIP resource could be paid for performance during the pre-defined performance incentive windows and still be used to participate in future utility programs implemented under the Triennium, maximizing return on investment of the storage resource.

Based upon the wording of questions 3.6-3.8, it seems the Peak Demand Reduction program may be alluding to the Massachusetts Clean Peak Standard (CPS), though CPS is not a literal "peak demand reduction" initiative. For instance, a standalone battery participating in Massachusetts' Clean Peak Standard (CPS) does not reduce demand but is encouraged to dispatch to alleviate reliance upon fossil peaker plant capacity, therefore "cleaning the peak". Demand fueling the peak is not conserved, but rather storage participants are incented to contribute clean capacity to meet need. Question 3.7 is framed under the assumption that the Peak Demand Reduction phrase alludes to CPS.

3.7 Other states have programs that can be used to address peaks. CPS is a robust policy tool in Massachusetts, but it is not without its flaws. Tying compensation to a credit-based program introduces the risk of inflation, especially if there is no control of eligible, credit-generating technologies relative to the annual amount credits mandated to be procured by utilities (which are meant to reflect a percentage of peak load and increase modestly over time). If an alternative compliance payment is too low or is expected to decrease sharply over time, there is a similar depressive effect in developer outlook and predicted revenue streams. The program model stands to be effective, but compensation from participation must be provided as steadily as possible; year-over-year procurement increases must promote a robust market and credit value.

3.9 The Board should push for standardization where possible of the performance-based incentive to ease administrative burden, encourage developer and end-use customer (including those in OBCs) participation, and ensure storage is able to benefit regions across the state. There is very little variation in compensation rates across utilities in analogous programs in Connecticut and Massachusetts, reflecting the recognition of the technology's value in differing service territories and system conditions.

3.10 Participants should be permitted to opt-in to allow for operational flexibility and availability to host customer needs. Compensation under the performance incentive should be rooted in proven discharge as recorded by the asset's inverter. Storage owners should not be subjected to utility control of their assets.

3.11 The scope of this program should be focused upon commercially viable battery energy storage, which constitutes a majority of energy storage projects today. Absent BPU clarity as to the scope of SIP inclusion of thermal storage— which can include a wide array of technologies and operating profiles— we advise pursuing alternate pathways for encouraging thermal development to avoid skewing market signals.

3.13 Long duration technologies should be promoted under another policy vehicle in the near future, as applying a universal incentive to both conventional and longer durations often come at an expense to

both. Multiple states have had success in encouraging development through grant programs in which innovative technologies can be demonstrated or piloted.

In establishing project type segmentation and increasing early PY capacity allocations as discussed in 2.1, the BPU could avoid setting arbitrary caps within the program that may further complicate participation and administration.

3.14 Stacking with federal funds should be allowed and encouraged to alleviate development costs.

3.16 The Board must define the product being procured to ensure there is no double compensation. Storage resources are versatile and capable of providing a wide range of benefits, which can be procured as separate, stackable products with defined obligations. Storage's ability to optimize operation to provide distinct products is well documented in parallel markets. Encouraging value-stacking ensures that assets are deployed often and to the greatest benefit to ratepayers and the grid, especially when commercial activity is informed by strong and clear market signals. The Board should clearly articulate how it classifies the procured service—namely under the performance incentive—to inform further stakeholder discussion of delineation of storage products that can be offered by a single asset without conflict. Convergent endorses the Board's Straw recommendation that storage assets can and should seek avenues where value can be demonstrated, including via wholesale market participation. As indicated on page 11 of the Straw, "customer savings and grid revenue may be driven by elements such as: wholesale market revenues; energy arbitrage in time of use differentiated markets; participation in wholesale ancillary services markets; retail bill reductions created by active management, such as management of demand charges, standby charges, and distribution costs".

4.1 Convergent supports the adoption of both a separate block and adder for projects serving Overburdened Communities (OBCs). In addition to individual low and medium income (LMI) households, the BPU should consider how projects servicing multi-family and community developments can also be recognized for their benefit to OBCs. New Jersey's guidance should align with the federal framework to ensure developers are permitted to leverage incentives under both jurisdictions. Further engagement with stakeholders can inform how OBC considerations manifest and evolve within the SIP.

5.1 Improving access to the energy storage value stack can be accomplished by encouraging participation by existing solar hosts. Staff has indicated that this program will be aimed at standalone storage, but a gap remains in a crucial, impactful segment. Distributed solar at or under five megawatts is addressed in the state's Administratively Determined Incentive program, but there is no acknowledgement or opportunity for assets of this size to be paired and optimized with storage. Though the Competitive Solar Incentive was presented as the forum for solar-plus-storage hybrids, assets of this size are at a disadvantage when competing in a "race-to-the-bottom" auction as their economies of scale pale to those available to what is often considered "utility-scale" solar. Providing value through elective participation in the SIP performance incentive or via a mechanism under the ADI program would allow PV system owners and the state of New Jersey to "firm up" the distribution grid, avoid solar energy curtailment, and derive additional benefits from distributed generation investments.

5.4 Zero-export energy storage assets should receive expedited study process due to its relative simplicity and similarity to conventional load, as is the case in Central Maine Power's territory. These assets should be eligible for the full value of available incentives.

5.6 New Jersey is developing energy efficiency programs that may include battery storage under the Triennium. For administrative simplicity and timelines, it may make sense to keep the processes separate while maintaining optionality for the technology to participate in one or both. Convergent is engaged in the Triennium and is looking forward to exploring the C&I programs expected in the next Triennium.

5.7 Energy storage systems should be metered and measured with their revenue-grade inverter, as has been successfully proven in many states. Though advanced metering infrastructure (AMI) can be an innovative tool, it should not be seen as a prerequisite to storage nor the most accurate demonstration of asset performance.

## Conclusion

Thank you again to you and your colleagues for your continued engagement with a broad range of stakeholders throughout this and adjacent proceedings. We look forward to being involved in future discussions regarding the program, and I encourage you to contact me should I be of assistance in clarifying the aforementioned. And thank you, as always, for your patience and commitment as we navigate these exciting themes together!

Most respectfully,

Emma Marshall-Torres
Regulatory Affairs Manager
Convergent Energy + Power
7 Times Square, Suite 3504
New York, New York 10036