BEFORE THE
BOARD OF PUBLIC UTILITIES

IN THE MATTER OF ADVANCING VIRTUAL POWER PLANT (VPP) PROGRAM IN THE STATE OF NEW JERSEY

IN THE MATTER OF THE GARDEN STATE ENERGY STORAGE PROGRAM—PHASE 2 DISTRIBUTED STORAGE

IN THE MATTER OF NEW JERSEY'S DISTRIBUTED ENERGY RESOURCE PARTICIPATION IN REGIONAL WHOLESALE ELECTRICITY MARKETS

IN THE MATTER OF DEVELOPING GRID FLEXIBILITY SERVICES FOR AGGREGATED DER PARTICIPATION IN NEW JERSEY'S MODERNIZED ELECTRIC GRID

IN THE MATTER OF DEVELOPING INTEGRATED DISTRIBUTED ENERGY RESOURCE PLANS TO MODERNIZE NEW JERSEY'S ELECTRIC GRID

Base Power Company's Comments in Response to Request for Information

Base Power Company ("Base Power" or "Base") respectfully submits these comments in response to the Board of Public Utilities' ("BPU" or "the Board") Request for Information regarding the advancement of a virtual power plant ("VPP") program in the state of New Jersey and phase 2 of the Garden State Energy Storage Program ("GSESP").

Base Power is an integrated power company that sells retail electricity rate plans to customers alongside distributed battery storage systems. The latter are used to manage the costs of the former, while providing residual backup power services. When our systems reduce demand during the peak times of the year, they not only reduce our customers' capacity costs, they also reduce the capacity needs of the entire zone within PJM, providing substantial spillover benefits to other customers. Our primary interest in this proceeding is to ensure that the most urgent system need, the PJM shortfall in capacity, can be addressed by a VPP program that is quickly deployed and not needlessly over-engineered, while in a future phase designing a successor program that provides access to a more substantial value stack that encompasses services beyond reductions to capacity needs. While Base admires the Board's attention to the many details that might be subsumed within a state-of-the-art VPP program, Base cautions that the precision of its design should be balanced against the immediate needs of the state and region for additional capacity.

Although Base Power has not entered the New Jersey market, we evaluate new restructured markets to enter after our successful launches in Texas and Illinois with a view toward several important policy elements: whether Base as a third-party electric supplier can monetize the capacity and energy value of its battery, whether any surplus capacity of our batteries can be monetized beyond the cost reductions associated with minimizing our own retail customers' supply costs, and whether state public policy includes other material support for the adoption of distributed energy resources ("DERs") including residential battery storage. The BPU's RFI on advancing a VPP and implementation of GSESP for distributed storage presents us with an opportunity to share our learnings from participation in other states and make a recommendation for implementation of these programs in New Jersey. **Once DERs have (a) interval data from AMI, (b) the ability to dispatch power back onto the grid, and (c) a compensation framework for that injection, standalone storage becomes a viable residential resource for a VPP program.**

I. Executive Summary

Base supports a VPP program under the GSESP that debuts with a targeted approach toward reducing capacity needs for New Jersey, which reduces the costs of capacity not only for adopting customers but for all customers in the zone, since the PJM capacity market is a uniform clearing price market where demand reductions affect the cost of supply paid for by all customers. Base regards the following three coordinated reforms as foundational for this first, early VPP program:

1. AMI as the measurement foundation. New Jersey has taken significant steps toward statewide AMI deployment. If activated properly and used for retail-customer billing and for load-serving entities' ("LSEs") settlements in the PJM marketplace, this AMI infrastructure provides the interval-level data necessary to measure residential injection, verify dispatch, and administer any robust VPP compensation mechanism. If the AMI investment is not used in this way, it will become a partially stranded asset as it concerns operationalizing a VPP program. Most other utilities in PJM use AMI in accordance with interval-level settlements, and so should New Jersey's utilities. The Board should recognize this use of AMI as the prerequisite infrastructure for residential DER participation in both retail and wholesale markets.
2. Exports should be allowed for all DERs under net-metering arrangements. Standalone residential storage systems are routinely sized to exceed household load, leaving meaningful dispatchable capacity available for grid injection. Extending net metering eligibility to standalone storage, with dispatch verified through AMI interval data, provides an opportunity for recognizing the economic value of these surplus resources. To be clear, this is not a request to extend the status quo economic proposition of net metering. On the contrary, a VPP's economic payments for exports to distributed battery

storage and other DERs should fundamentally be predicated on marginal-cost-based market value of their production, not the all-in retail rate for electricity service. But unlocking net-metering arrangements for exports remain a fundamental precondition of allowing VPPs to provide demand-oriented capacity to the grid.

3. Negative Peak Load Contribution ("PLC") recognition as the capacity market mechanism. Each retail customer has a PLC that establishes their obligations to buy capacity under PJM's FERC-approved tariff. How those PLCs are established, however, is largely a matter of state policy, with the advent of AMI allowing granular PLCs to be determined, and an allocation of costs for overall zonal capacity demand that credits the value of exports. New Jersey's EDCs should revise their PLC methodologies to explicitly permit negative values for net metered customers during coincident peak hours and network service peak hours, consistent with the framework already operative in Commonwealth Edison's (ComEd) transmission zone. This would allow LSEs to recognize the full capacity and wholesale transmission value of residential storage injection and pass those savings to all ratepayers.

II. Virtual Power Plant Program

A. Interval Meter Data from AMI

New Jersey has already laid the groundwork for a successful VPP program by mandating the statewide deployment of Advanced Metering Infrastructure (AMI). Consistent with the 2019 Energy Master Plan, the Board has approved AMI programs for each of the state's electric distribution companies. AMI provides the data infrastructure necessary to support New Jersey's broader energy objectives. It enables two-way communication between utilities and customers and supports the integration of distributed energy resources.

B. Export capabilities

Before addressing how standalone storage should be compensated for capacity delivered to the grid, it is worth establishing why that export or injection capability is a primary focus in the first place. A residential storage system is not constrained to match the load profile of the home it serves. A customer whose household consumes 5 kW during a peak-demand event may be served by a storage resource with 20 kW of usable capacity. Once that home's load is fully served and net consumption is brought to zero, the remaining 15 kW represent dispatchable capacity that can be directed back onto the grid. This is controllable, reliable, and schedulable injection from a resource that can be dispatched precisely when the grid needs it most. Allowing net-metering arrangements for exports is an essential precondition of allowing DERs to provide solutions to New Jersey and PJM's capacity shortfall. The Board has already considered this by

acknowledging export capabilities in Docket QO21010085 through allowance of dynamic export control[1].

PJM faces a documented and deteriorating capacity position driven by a convergence of forces: accelerating electrification, the proliferation of high-demand data centers driving material load growth, the rapid retirement of thermal generators, and the slow entry of replacement generation due to siting, permitting, and supply chain constraints. The 2027/2028 Base Residual Auction (BRA), the first in which the entire PJM footprint fell short of its reliability requirement, produced capacity that came up 6,517 MW short of the reserve margin needed to meet the RTO reliability standard.[2]

A well-functioning VPP program should oblige the electric public utility offering the program, or the market participants subscribing customers, to report data for the purposes of making a Peak Shaving Adjustment or other adjustment to the base load forecast consistent with PJM's load forecasting practices.[3] While many demand response resources are configured on the supply side of the PJM market, the VPP program in this way can reflect *reductions* in demand that directly flow through to PJM's capacity auction on the demand side.

Importantly, reductions to the demand forecast can occur even within the three-year forward period of the typical cadence of PJM's capacity auctions, affecting the near-term incremental auctions. A successful program in New Jersey, alongside other states, over the next two years, can thus reduce or eliminate the capacity shortfall that resulted from PJM's latest capacity auction, underscoring the urgency of near-term VPP programs that are stood up and operationalized this year.

C. Negative Peak Load Contribution Credits in the Settlement of PJM Market Costs

Interconnection arrangements consistent with net-metering are, as discussed above, essential to facilitating exports onto the grid of surplus production from DERs during times of capacity needs. Under New Jersey's existing net metering tariff, a customer who delivers energy to the grid receives a retail-rate credit against their consumption. To be clear, this is not what Base is proposing for exports. Instead, allowing residential battery owners to receive credit for the energy they inject based on prevailing wholesale market value derived from PJM's auctions

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[1] BPU Adopted New Rule: N.J.A.C. 14:8-5.13, Subchapter 5. Interconnection of Class I Renewable Energy Systems, Comment 7. https://nj.gov/bpu/pdf/rules/R.2026%20d.010%20(58%20N.J.R.%2072(a)).pdf?utm_campaign=NJ-IX-Ruling-Jan-2026&utm_source=IREC-press-release

[2] 2027/2028 Base Residual Action Reserve Target Shortfall Report, Feb. 9, 2026. https://www.pjm.com/-/media/DotCom/markets-ops/rpm/rpm-auction-info/2027-2028/2027-2028-bra-reserve-target-shortfall-report.pdf

[3] PJM Manual 19 ("Load Forecasting").

creates a direct financial incentive for peak-period discharge that aligns customer behavior with grid need, without any cross-subsidy from other customers.

Here, rather than economic compensation through a net-metering tariff, Base proposes that New Jersey utilities follow in the footsteps of another PJM utility that has already adopted a more market-based solution to compensate exports. Specifically, New Jersey utilities should file tariffs that allocate the costs of capacity (as well as transmission, which is also a demand-based charge) in recognition of negative values for Peak Load Contributions (PLC) and Network Service Peak Load (NSPLC) in the calculation of Load Serving Entities' (LSE) capacity and wholesale transmission obligations. Under the current framework applicable to New Jersey's Electric Distribution Companies ("EDCs"), a customer's PLC/NSPLC is calculated as a strictly non-negative value. A customer who is injecting during one of PJM's five coincident peak events or an EDC's peak transmission zone load hours, reduces the EDC's observed load at that moment, but that reduction has a floor of zero. The customer's PLC/NSPLC cannot go below zero, and therefore the injection provides no incremental reduction to the LSE's capacity and wholesale transmission obligation beyond eliminating the customer's own load contribution. This floor means that a storage resource capable of injecting meaningfully during a 5CP/NSPL event receives no capacity market recognition for that contribution beyond zeroing out the individual customer's own PLC/NSPLC.

An alternative model is to create a type of "private capacity market" on the demand side, pursuant to state policy, for demand reductions[4]. To point to a specific utility within PJM's footprint, ComEd Attachment M-2 to the PJM Open Access Tariff ("OATT") explicitly provides that load attributable to net metering projects "may reflect both consumption and generation in the capacity peak load contribution, and therefore can result in a positive or negative value for any such individual customer's calculation."[5] This provision allows a customer's interval-measured injection during a coincident peak to be recognized as a negative PLC or NSPLC, which flows through to a reduction in the LSE's aggregate capacity obligation.

To be clear, for Base, this change allows our business model to monetize without any other ratepayer contribution, the demand-based prices that are on file with FERC for capacity and transmission. This technical change would minimize the need for substantial revenue to emerge from New Jersey's VPP program, although, to be clear, any VPP program should fairly compensate for spillover benefits that redound to other customers as a result of adding or, in this

[4] "Base Power is adapting its distributed battery storage program for PJM," Latitude Media (Apr. 14, 2026). https://www.latitudemedia.com/news/base-power-is-adapting-its-distributed-battery-storage-program-for-pjm/

[5] Attachment M-2 (ComEd) Determination of Capacity Peak Load Contributions, Network Service Peak Load Contributions, Daily Peak Load Obligation, Daily Network Service Peak Load Obligation, and Hourly Load Obligations. https://agreements.pjm.com/eTariff/transformedTariffs/oatt/Sections/18111.html

case, reducing capacity needs on the system, in a symmetrical way to the valuation of GSESP's Phase I for utility-scale storage resources.

The Board should direct New Jersey's EDCs to revise their respective PLC/NSPLC determination methodologies to incorporate equivalent language, explicitly providing that net metered customers' 5CP contributions be measured using interval data without restriction, floor, or cap. The practical effect is that a residential storage customer injecting during a PJM peak hour or EDC zonal peak hour would generate a negative PLC/NSPLC that the LSE can apply against its portfolio-wide capacity obligation. This reduces the total capacity costs allocated across all of the LSE's customers, including those who do not own a DER.

III. Alignment with GSESP Phase 2 and the Case for Program Stacking

The VPP proposed in the preceding sections is directly aligned with the goals the Board has already articulated for Phase 2 of the Garden State Energy Storage Program (GSESP), and the Board should design both with explicit coordination in mind.

Phase 2 of the GSESP is designed to address the distributed segment of the storage market, specifically behind-the-meter resources located on the distribution system. Phase 2 incentives are expected to include both a fixed upfront component and a performance-based payment for allowing storage resources to support the grid during peak demand events. The structure reflects the same policy underlying the VPP framework we propose here: that residential storage resources have measurable grid value, that their participation in peak-period dispatch should be incentivized, and that compensation should reflect actual performance rather than solely installation.

GSESP Phase 2 addresses the supply side of the residential storage equation, reducing the upfront cost barrier to customer adoption through direct incentives. The VPP framework addresses the demand side, ensuring that once a residential storage system is installed, it has a durable, market-based revenue stream through net metering compensation and negative PLC/NSPLC recognition that makes the economics of participation sustainable over the long term beyond the incentive period. The Board should therefore consider whether Phase 2 of the GSESP can be designed to incorporate the VPP framework directly, structuring the performance incentive component of Phase 2 around verified peak-period injection events that are already being measured and compensated through the net metering and PLC framework.

In the event the Board determines that GSESP Phase 2 and the VPP should be administered separately, the Board should explicitly confirm that participation in both is permitted and that benefits may be stacked. A residential storage customer who receives a GSESP Phase 2 fixed incentive should not be precluded from also receiving net metering credits

for injection or from having their interval-measured PLC/NSPLC data used to generate negative PLC/NSPLC credits for their LSE.

IV. Conclusion

The establishment of clear participation pathways for DERs will lead to greater adoption of these critical resources and allow for their contribution to the grid. The proposal set forth here provides that clear pathway and gives the right market signal to eligible participants. Base appreciates the opportunity for engagement and looks forward to continuing productive conversation on this issue.

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