



April 22, 2024

Electronically filed

Sherri L. Golden
Secretary of the Board
44 South Clinton Ave., 1st Floor
PO Box 350
Trenton, NJ 08625-0350

Re: Docket No. EO24020116—New Jersey Board of Public Utilities, I/M/O New Jersey’s Distributed Energy Resource Participation in Regional Wholesale Electricity Markets—Comments of Solar United Neighbors

Dear Secretary Golden:

Solar United Neighbors (“SUN”) respectfully submits these comments for filing in the above referenced proceeding pursuant to the New Jersey Board of Public Utilities (“Board”) Request for Information (“RFI”) in the above referenced proceeding, issued March 7, 2024.

I. SOLAR UNITED NEIGHBORS

SUN is a nonprofit organization formed in 2007 that works to promote an equitable energy system through the wide scale adoption of rooftop solar and other clean distributed energy resources (“DERs”). SUN has more than 75,000 supporters in New Jersey who include residential and commercial ratepayers of the state’s electric distribution companies (“EDCs”) as well as solar, battery storage, and other DER providers.

SUN provides educational and consumer resources to assist customers considering investments in rooftop solar and other DERs. SUN’s advocacy is rooted in the premise that solar, battery storage and other supporting DER technologies will create thousands of good-paying local

jobs, keep energy dollars local, strengthen communities, provide human health and environmental benefits, and help drive down the costs of electricity for all ratepayers.

II. DERs ARE A CRUCIAL RESOURCE TO MEET GRID NEEDS AND REDUCE RATEPAYER COSTS

The U.S. Department of Energy’s *Pathways to Commercial Liftoff: Virtual Power Plants* (“Liftoff Report”) estimates that between projected generator retirements and growing electricity demand, the U.S. utility system must meet up to 200 GW of peak demand by 2030 with new resources, and nearly double that to achieve 100% clean electricity by 2030.¹ The Liftoff Report highlights the potential for aggregated customer-sited DERs, often referred to as a virtual power plant (“VPP”), to help meet these peak demand needs and save ratepayers billions of dollars annually.² Other studies confirm this potential, including the Brattle Group’s recent report that VPPs could save California ratepayers alone \$550 million annually by 2035.³

In the PJM territory the dynamic between generator retirement and peak demand growth has resulted in the potential for near-term resource adequacy shortfalls. PJM projects approximately 40 GW of existing generation capacity in the territory will retire by 2030⁴ while peak demand will increase by over 20 GW for both the summer and winter periods over the same time period.⁵ The risk to reliability becomes particularly pronounced in the winter as electrification

¹ U.S. Dept. of Energy, *Pathways to Commercial Liftoff: Virtual Power Plants* (Sept. 2023) available at https://liftoff.energy.gov/wp-content/uploads/2023/09/20230911-Pathways-to-Commercial-Liftoff-Virtual-Power-Plants_update.pdf (“Liftoff Report”).

² *Liftoff Report* at 3.

³ Hledik, R. et al., Brattle Group, *California’s Virtual Power Potential: How Five Consumer Technologies Could Improve the State’s Energy Affordability* (Apr. 2024) available at <https://www.brattle.com/wp-content/uploads/2024/04/Californias-Virtual-Power-Potential-How-Five-Consumer-Technologies-Could-Improve-the-States-Energy-Affordability.pdf>.

⁴ PJM, *Energy Transition in PJM: Resource Retirements, Replacements & Risks* (Feb. 24, 2023) available at <https://www.pjm.com/-/media/library/reports-notice/special-reports/2023/energy-transition-in-pjm-resource-retirements-replacements-and-risks.ashx>.

⁵ PJM, *PJM 2024 Load Forecast Report* (Feb. 1, 2024) available at <https://www.pjm.com/-/media/library/reports-notice/load-forecast/2024-load-report.ashx>.

for heating creates a substantially wider peak demand period and shifts the load loss risk profiles from summer to winter, with approximately 60% of the load-loss risk in winter concentrated during the last four hours of the day.⁶

The coordinated operation of DER aggregations through VPP programs administered by the EDCs would provide a flexible load management resource to reduce peak demand (and provide other grid services) during peak periods at key times throughout the year. DER aggregations participating in wholesale markets may be able to provide some of these benefits; however, the complexities and timing for when these resources will be allowed to participate, limitations in the wholesale market structure's ability to provide distribution level benefits, differences between PJM needs and distribution system needs, and other related issues highlight the need to enable VPP programs at the distribution level.

The wholesale market structure is not able to account for distribution level value and therefore a significant amount of DER grid service value cannot be realized if DER aggregation participation is limited to the PJM wholesale market. Moreover, DER aggregations will not be eligible to participate in the PJM market until—at the earliest—2026 for energy and ancillary services markets, and later for capacity market participation.⁷ Once PJM is open to DER aggregations, the regulatory and market complexities of participation—as evidenced by the extensive process PJM is undergoing to implement FERC Order 2222 and the number of topics and substantive issues the Board identified for stakeholder input—will remain a significant barrier. This dynamic demonstrates the importance of establishing programs that allow DER aggregations

⁶ PJM, *Energy Transition in PJM: Emerging Characteristics of a Decarbonizing Grid* (May 17, 2022) available at <https://www.pjm.com/-/media/library/reports-notice/special-reports/2022/20220517-energy-transition-in-pjm-emerging-characteristics-of-a-decarbonizing-grid-white-paper-final.ashx>.

⁷ See FERC Order No. 2222 Explainer: Facilitating Participation in Electricity Markets by Distributed Energy Resources available at <https://www.ferc.gov/ferc-order-no-2222-explainer-facilitating-participation-electricity-markets-distributed-energy>.

to provide distribution system services to benefit New Jersey ratepayers.

The Energy Storage Incentive Program Straw Proposal (“Straw Proposal”) to establish energy storage programs—including for distributed storage resources to provide distribution system services through the EDC-administered programs—was issued by the Board in September 2022.⁸ The Straw Proposal provides a starting point for establishing a VPP program for customer-sited solar and energy storage for implementation by the EDCs. The Board has received extensive comment on the proposal and SUN urges the Board to continue stakeholder engagement and work towards developing a VPP program framework to establish core grid service opportunities along with standards for key program elements. Certain aspects of VPP programs are necessarily specific to individual EDCs; however, it is crucial that major policy issues and technical standards be established and applied to each EDC on a statewide basis. This will ensure core program requirements are applied consistently across the state, will avoid adjudicating such issues on a case-by-case or utility-by-utility basis, and at the same time provide flexibility to adapt the program over time to meet changing distribution system needs.

Other states across the country have developed or are in the process of developing VPP programs for implementation by their respective EDCs. These programs are increasingly important load management resources for utilities to help reduce peak demand and provide other grid services to improve grid reliability and lower costs for ratepayers. For example, the ConnectedSolutions program in Massachusetts is a peak demand reduction program that targets the summer peak season and compensates customers for discharging their battery storage device to reduce customer load and export additional stored power to the grid during peak demand events called by the

⁸ Docket No. QO22080540, I/M/O the New Jersey Energy Storage Incentive Program, *Notice* (Sept. 29, 2022) available at https://nj.gov/bpu/pdf/publicnotice/Notice_StakeholderMeetings_NewJerseyEnergyStorageProgram.pdf.

EDCs.⁹ The program provides net-benefits to participating customers and non-participating ratepayers and is an increasingly important tool for managing peak load and reducing ratepayer costs.¹⁰ Other states have similar programs targeting similar services and there are multiple resources available to the Board, the EDCs, customers, and DER industry participants to assist in the development of VPP programs in New Jersey.

The Straw Proposal is an important starting point for developing a VPP program framework for implementation by the EDCs to unlock the enormous potential for energy storage to help meet grid needs and provide ratepayer benefits. SUN commends the Board and Staff for its work and encourages the Board to continue to seek stakeholder input as it moves forward on the next iteration of the Straw Proposal.

III. CONCLUSION

SUN appreciates the opportunity to submit these comments and looks forward to working with the Board and stakeholders to develop durable VPP programs to unlock the grid service benefits of energy storage and other DERs in New Jersey.

⁹ Mass Save, Battery Storage, <https://www.masssave.com/residential/rebates-and-incentives/battery-storage-and-evs/batteries>.

¹⁰ See, e.g., Clean Energy Group, *ConnectedSolutions: A New Funding Mechanism to make Battery Storage Accessible to All* at 34 (summarizing daily dispatch incentive costs, demand reductions, and benefit projections from the ConnectedSolutions program offering and projecting substantial net benefits to ratepayers); see also Mass. Dept. Pub. Util., Docket Nos. 20-33 through 20-36, Order filed July 28, 2020 (approving program administrators daily dispatch programs for residential batteries (ConnectedSolutions) and finding the program provides net benefits); Mass. Dept. Pub. Util. Docket No. 21-120 through 21-129, Order filed January 21, 2022 (approving program administrators 2022-2024 energy efficiency plans, including the daily dispatch (ConnectedSolutions) program, confirming the program continues to provide net ratepayer benefits).

Respectfully submitted,

/s/ Glen Brand

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