

January 17, 2020

SUBMITTED VIA EMAIL

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Aida Camacho-Welch, Secretary of the Board
Board of Public Utilities
44 South Clinton Avenue, 9th Floor
Post Office Box 350
Trenton, New Jersey 08625-0350

Re: Energy Efficiency and Peak Demand Program Administration Straw Proposal

Dear Secretary Camacho-Welch:

The U.S. Energy Storage Association (“ESA”) respectfully submits these comments to the Board of Public Utilities (“BPU”) on the Energy Efficiency and Peak Demand Program Administration Straw Proposal (“Program Straw”) released on December 20, 2019.

ESA is the national trade association dedicated to energy storage, working toward a more resilient, efficient, sustainable and affordable electricity grid – as is uniquely enabled by energy storage. With more than 190 members, ESA represents a diverse group of companies, including independent power producers, electric utilities, energy service companies, financiers, insurers, law firms, installers, manufacturers, component suppliers, and integrators involved in deploying energy storage systems around the globe. Further, our members work with all types of energy storage technologies and chemistries, including lithium-ion, advanced lead-acid, flow batteries, zinc-air, compressed air, and pumped hydro among others.

ESA was encouraged to see the Program Straw focused on greater management and reduction of peak demand loads as a key tool for achieving the State’s energy transition affordably and efficiently. Since storage can charge off-peak when system demand and electricity costs are lower, and then deliver that electricity during peak periods of demand to relieve grid stress, energy storage can play an important role in peak demand reduction. Energy storage can save money for not only the individual consumer that installs storage, but all ratepayers in the State by reducing the amount of spare capacity needed to meet system peak demands, while better utilizing generation resources available during off-peak periods. While the Energy Storage Study produced by Rutgers University did not quantify the statewide economic benefits of storage deployment, Massachusetts’ 2016 state-commissioned energy study of widespread energy storage deployment found benefits to its ratepayers of \$2.3 billion over 10 years, most of which comes from reducing system and local peak demands. Given that New Jersey has a

system peak 40% greater than Massachusetts, a similar order of magnitude in benefits to ratepayers is reasonably expected.¹

Despite its ability to support highly dispatchable peak demand reduction, programs that can drive the deployment of energy storage are not included in the Program Straw. Energy storage programs to reduce peak demand are supported by the New Jersey Clean Energy Act of 2018, which includes an energy storage target of 600 megawatts (“MW”) by 2021 and 2,000 MW by 2030.² In our comments below, ESA provides recommendations on ways to incorporate energy storage cost effectively into the suite of energy efficiency and peak demand reduction programs under consideration at the BPU.

i. Define energy storage as an eligible resource for system efficiency and peak demand programs

ESA respectfully suggests that as a first step the Program Straw should explicitly define energy storage as an eligible resource for participation in any of the programs discussed in the proposal. Applying a technology-neutral approach to these programs and enabling customers to deploy the types of technologies that best fit their needs results in the deployment of the most cost-effective resources for addressing the program objectives, and also empowers customers.

ii. More prescriptive frameworks for utility programs are needed

The Program Straw calls on utilities to develop Peak Demand Reduction Programs, Non-Wires Alternatives and Non-Pipes Solutions but does not provide guidance in how to shape those programs. The Program Straw asserts that “since utility territories vary greatly in size, geography, demographics, and other key factors, it is critical that utilities have the ability to develop and file for peak demand reduction programs specific to their service territories.”³ ESA agrees with this assertion, but believes the BPU can provide guiding principles and frameworks for program design that will streamline the proposal process. There have been several successful peak demand reduction programs and non-wires alternatives programs in Massachusetts and New York that have slight differences in terms of tariff language and prices, but the overall program design and structure applies to all utilities.

ESA believes that the Program Straw would benefit from providing more guidance from the BPU on the development of the program design, specifically borrowing from other successful programs across the country in order to ensure program success. By doing so, the BPU will set a clear signal to the industry that effective programs are being designed at the State to justify investing in moving their businesses there, and the consistency in program design across utility territories will lower the barrier to entry for a larger number of companies.

¹ Rutgers University Energy Storage Analysis, May 23, 2019, available at: <https://www.bpu.state.nj.us/bpu/pdf/commercial/New%20Jersey%20ESA%20Final%20Report%2005-23-2019.pdf>

Massachusetts Department of Energy Resources, State of Charge report, September 2016, available at: <https://www.mass.gov/files/documents/2016/09/oy/state-of-charge-report.pdf>.

² Clean Energy Act (A3723), Signed by Governor Murphy in May 2018, available at: https://legiscan.com/NJ/text/A3723/id/1808963/New_Jersey-2018-A3723-Chaptered.html.

³ New Jersey Board of Public Utilities, Energy Efficiency and Peak Demand Program Administration Straw Proposal, Draft for Public Comment, December 20, 2019, pg. 24, available at: <https://www.njcleanenergy.com/files/file/Final%20Program%20Straw%20Proposal.pdf>

iii. Lean on existing peak demand reduction programs in Massachusetts, Vermont, and New Hampshire

ESA respectfully suggests that the BPU call on utilities to develop programs that provide customers with an opportunity to reduce their peak demand and receive compensation for it. There are several programs currently available to customers or under consideration in New Hampshire, Massachusetts, Vermont, Rhode Island, New York, and Maryland. These programs largely leverage a customer's private capital investment in deploying resources on their premises and provide them compensation aligned with the savings to the entire system and all ratepayers. These programs are not incentive programs, where grants or rebates are provided to customers deploying assets. Rather, these programs are compensating customers for savings provided to the system.

One such program is the "Bring Your Own Device" program currently available for Green Mountain Power customers in Vermont, and Eversource, Unitil and Liberty customers in New Hampshire.⁴ Under such a program, customers are able to provide peak demand reduction benefits and other grid services to the utility and are compensated for the value they provide through an on-bill credit. The savings provided by customer-sited storage comes over time through the reduction of capacity obligation that the utility has in the wholesale market; through the deferment of traditional distribution investment that would have otherwise been needed; and at times also through the avoidance of transmission charges from bringing energy to those customers during periods of peak demand. The customers receive compensation for those services in several ways, including on-bill payments.

The BPU could also consider a successful program currently offered by Eversource and National Grid in Massachusetts. A "Targeted Dispatch" program⁵ and Daily Dispatch programs recognize that shifting energy supply from periods of low demand on the system to periods of high demand to the system provides net benefits to customers by increasing overall grid efficiency and reducing the costs of delivering power at peak demand times. "Daily Dispatch" programs compensate storage resources based on performance during peak period dispatches upwards of \$200/kW-yr. Importantly, the program is available to customers for a five-year contract, which provides certainty of incoming revenue streams that is critical for project financing. The savings potential for this program includes reduced capacity obligation for the utility at the wholesale market, distribution deferral benefits, and transmission avoidance.

iv. BYOD and Daily/Targeted Dispatch programs are cost-effective

The Daily Dispatch/Target Dispatch programs and the Bring Your Own Device programs are scalable and sustainable because they enable customers to provide real system and distribution level savings and

⁴ Green Mountain Power BOYD program, available at: <https://greenmountainpower.com/bring-your-own-device/>; New Hampshire PUC Order approving settlement agreement for Liberty BOYD program, available at: https://www.puc.nh.gov/Regulatory/Docketbk/2017/17-189/LETTERS-MEMOS-TARIFFS/17-189_2018-11-19_ENGI_SETTLEMENT.PDF; NH PUC Order 26,323 approving parties settlement agreement for 2020 update to the State's Energy Efficiency Plans, available at: https://www.puc.nh.gov/Regulatory/Docketbk/2017/17-136/ORDERS/17-136_2019-12-31_ORDER_26323.PDF

⁵ Targeted Dispatch programs are dispatched for 3-8 events per summer for three hours each with compensation of \$100/kW-yr, subject to performance. Daily Dispatch programs are dispatched for 30-60 events per summer for three hours each with compensation of \$200/kw-yr, subject to performance. More info can be found in the Mass Save Report, *Active Demand Reduction: Demonstration & Initiative Update*, March 20, 2019. Page 25, available at: http://ma-eeac.org/wordpress/wp-content/uploads/March-Demand-Presentations_EEAC_3-8-19_Final_corrected.pdf.

receive compensation aligned with those savings. Because of their pay-for-performance design, these programs are built to protect ratepayer costs by ensuring resources are paid for value they are providing to the grid. As we highlighted in our comments above, shifting electricity supply from times of low demand to times of peak demand can reduce the overall capacity contribution of a utility to the wholesale market, which then translates into lower capacity costs for all ratepayers. Similarly, distribution deferral benefits that can be achieved by foregoing the need for additional investment in areas potentially impacted by demand growth, and providing savings for ratepayers impacted by that investment. Finally, avoidance of transmission charges by providing electricity closer to load at times of peak demand can translate into savings for ratepayers. Initial analysis of these programs suggests overall savings to customers in the range of up to \$3.40 for every dollar spent.⁶

v. Non-wires Alternatives pilot design should borrow from New York and Maryland

ESA supports the Program Straw's recommendation that utilities pilot non-wires alternatives ("NWA") and non-pipes alternatives.⁷ Similar to our comments regarding peak demand reduction programs, ESA suggests that there are several templates for non-wires alternatives frameworks that the BPU may lean on to help shape the utility NWA proposals. For example, New York has had a successful NWA program in place since 2015. The New York's Public Service Commission ("NY PSC") worked with the state's utilities to develop suitability criteria for considering non-wires alternatives to identify what types of traditional investments would be subject to NWA consideration, including (1) the timing of utility's need and project development timeline, (2) costs of the investment, and (3) types of system need and storage application. The NY PSC and stakeholders continue to enhance the cost-benefit analysis framework used to evaluate the cost-effectiveness of NWA projects.

Additionally, Maryland's Public Service Commission ("MD PSC") has launched an energy storage pilot that could serve as a guide for the BPU and New Jersey's utilities as they consider an NWA pilot. The MD PSC's Public Conference 44 Energy Storage Working Group has also been refining the Benefit-Cost Analysis framework for energy storage distribution deferral projects to include values beyond the simple present value of the investment being deferred.⁸


⁶ Clean Energy Group, "Energy Storage: The New Efficiency. How states can use energy efficiency funds to support battery storage and flatten costly demand peaks," April 2019. Pages 8-9, available at: <https://www.cleanegroup.org/wp-content/uploads/energy-storage-the-new-efficiency.pdf>.

⁷ BPU Energy Efficiency and Peak Demand Program Administration Straw Proposal, pg. 22.

⁸ Maryland Public Service Commission Order No. 89240, Order Establishing an Energy Storage Pilot Program (Case No. 9619), available at: https://webapp.psc.state.md.us/newIntranet/Casenum/NewIndex3_VOpenFile.cfm?FilePath=//Coldfusion/Casenum/9600-9699/9619/\1.pdf; PC 44 Storage Working Group BCA proposal, available at: https://webapp.psc.state.md.us/newIntranet/Casenum/NewIndex3_VOpenFile.cfm?FilePath=//Coldfusion/Casenum/9600-9699/9619/\2.pdf.

ESA sincerely appreciates the opportunity to provide these comments on the Energy Efficiency and Peak Demand Program Administration Straw Proposal. We look forward to working with the BPU and stakeholders to develop robust, sustainable and scalable programs that drive energy storage deployments to support Governor Murphy's energy and environmental vision.

Respectfully submitted on this 17th day of January 2020.



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