

August 26, 2024

SUBMITTED VIA EMAIL

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Samantha Meserve
Thomas Ferguson
Department of Energy Resources
100 Cambridge Street, 9th Floor
Boston, MA 02114

2024 CPS EMERGENCY RULEMAKING COMMENTS

Dear Ms. Meserve and Mr. Ferguson,

Jupiter Power LLC (Jupiter) submits these comments on the Department of Energy Resources' (Department) Emergency Regulations that modify the 225 CMR 21.00 Clean Peak Energy Standard (CPS).

Jupiter is a developer and owner/operator of standalone, utility-scale battery energy storage projects in the U.S. Led by an experienced management team, we have ten battery storage projects totaling over 1 GWh in construction or commercial operation and over 75 projects totaling 12,000 MW in development, including nearly 1,000 MW of battery storage projects in development in Massachusetts.

We are concurrently submitting joint comments with the storage developers Flatiron, New Leaf, BlueWave, and Eolian. Those comments support the Minimum Standard modifications in the Emergency Regulations, but also recognize that there remain additional issues with the CPS that are standing in the way of building storage at scale in Massachusetts. As currently designed, the program does not provide sufficient value nor the revenue certainty necessary to drive the thousands of megawatts of storage that will be necessary for the state to meet its climate goals. The storage companies jointly recommend additional action, including two modifications in addition to the Minimum Standard revision: 1) increasing and stabilizing the ACP level, and 2) conducting a procurement for long-term contracts as soon as possible.

Jupiter incorporates those joint comments by reference here and adds two additional CPS program revisions that we believe are necessary to capture the full value of storage in Massachusetts: 1) a geographic load pocket set-aside for any CPS procurement; and 2) modifications to the Seasonal Peak Windows in order to capture new peak hours that have emerged in ISO NE in recent years.

We look forward to continued conversations with DOER and engaging further on the next iteration of the CPS Program.

Respectfully Submitted,

Samantha Williams
Senior Director of Strategic Projects and Market Development
Jupiter Power LLC

Introduction

Energy storage is a critical and cost-effective strategy to achieve the Commonwealth’s climate goals. The recent DOER *Charging Forward* report framed battery storage as a “Swiss army knife,” providing a wide range of grid services to support the transition to clean energy while ensuring reliable, affordable energy for consumers. But while substantial progress has been made in recent years to develop programs to enable storage deployment and reduce barriers—including the CPS— according to the DOER report these efforts have not been sufficient to achieve deployment at the scale needed to support decarbonization. Put simply, storage facilities are encountering barriers to securing project financing under the current CPS Program. With the right improvements, however, the CPS Program could become a powerful tool to incent significant storage deployment in Massachusetts.

Recommendations

1. In the recommended CPS procurement, add a set-aside for strategic locations where storage is most needed

One major issue is that battery storage can provide more value to Massachusetts than is reflected in the CPS. As currently constructed, the program values the *time of day* when battery energy storage can benefit the grid and reduce emissions. However, it lacks a mechanism to value the benefits of projects in *specific locations*, particularly those in transmission-constrained high-density urban areas.

Adding storage to key load pockets in Massachusetts has significant potential to support grid reliability and resilience, particularly to address transmission constraints and fuel security issues in extreme winter weather. For example, ISO-NE’s 2050 Transmission Study identified the Boston area as unable to support increasing load due to low assumed wind generation under peak load conditions, with additional generation within the Boston load pocket identified as a remedy.¹ Further, ISONE’s 2018 Fuel Security Analysis found that “the possibility that power plants won’t have or be able to get the fuel they need to run, particularly in winter—is the foremost challenge to a reliable power grid in New England.”² Jupiter’s recent winter reliability modeling confirms that adding storage to load pockets in Massachusetts has significant potential to support grid reliability and resilience, particularly in extreme winter weather (*Jupiter has previously shared this modeling with DOER, with further details available upon request*).

Storage in strategically-located load pockets would also facilitate the interconnection and integration of offshore wind—a key strategy in the Commonwealth’s renewable energy deployment and ultimately its success in achieving a clean power system. It would also deliver important benefits to ratepayers, to address the resiliency, reliability, and cost concerns involved with not addressing peak demand.

¹ ISO New England, 2050 Transmission Study, February 12, 2024, [2024_02_14_pac_2050_transmission_study_final.pdf\(iso-ne.com\)](https://www.iso-ne.com/studies/2050-transmission-study-final.pdf)

² ISO New England, Operational Fuel-Security Analysis, March 28, 2018, [a2_operational_fuel_security_presentation_march_2018_rev1.pdf\(iso-ne.com\)](https://www.iso-ne.com/studies/operational-fuel-security-presentation-march-2018-rev1.pdf)

There are additional dimensions by which storage in specific locations could provide value to communities. For example, DOER proposed a grant program in its *Charging Forward* report that would support clean energy infrastructure located in or near communities overburdened by pollution and/or adjacent to retiring fossil fuel infrastructure or brownfields. Battery storage located in these areas can bring significant value (such as tax investments and clean capacity), but often has the added burden of more expensive urban parcels and/or significant land remediation costs.

As currently constructed, the CPS lacks a mechanism to reflect the multi-layered benefits of storage in specific areas of the state—in particular, densely populated load pockets. That factor, coupled with land prices that are dramatically more expensive in Eastern Massachusetts, will ultimately drive most battery development to Western Massachusetts where storage is needed but may be less pressing to address imminent grid concerns and to facilitate the interconnection of offshore wind.

To better capture the locational value of battery storage, Jupiter recommends that DOER include in any forthcoming procurement a minimum % of CPECs (a “set-aside”) procured from projects in dense urban load pockets in Eastern Massachusetts, where battery storage can provide high value to the grid and consumers, but would otherwise be challenged by economic factors. We recommend that DOER focus, at least in the near-term, on the two policy considerations described above as the most pressing use cases for storage: 1) storage in transmission-constrained urban load pockets; and 2) bringing clean energy infrastructure to communities overburdened by pollution and/or adjacent to fossil infrastructure or brownfields.

There are many possible ways to define a geographic set-aside. We look forward to working with DOER on its policy goals for a CPS procurement and determining the areas of Massachusetts where storage would provide the most value.

2. Modify the Seasonal Peak Windows to reflect emerging peak hours

Finally, Jupiter recommends that DOER revisit the Seasonal Peak Windows outlined in the CPS regulations to ensure that they continue to align with Massachusetts’ policy goals for the program.

A review of recent NEMA load data (2020-2023) reveals that ISO NE now has an emerging Winter-Spring morning peak, as well as expanded peak hours on either side of the Summer discharge window, that are not currently accounted for in the CPS Seasonal Peak Windows³. Jupiter estimates that, under the current CPS windows, in 2020-2023 the program potentially missed out on critical peak reduction opportunities (e.g., the top four peak price hours) more than one-third of the time. Not only does this deprive Massachusetts of meeting its CPS policy goals, but it also reduces the ability of storage operators to capture optimal revenue potential, making projects more difficult to finance.

This mismatch in the hours during which battery storage operators can generate CPECs, versus the actual peak hours on the power grid, is likely to become more pronounced in the coming

³ The SEMA and WCMA zones also follow a very similar pattern.

years with load growth from electrification. Further, this dynamic undermines the policy goals of the CPS—not providing policy incentives for storage operators to discharge during actual system peaks, and thereby missing critical opportunities to displace more expensive fossil peaker plants, reduce emissions and cut energy costs for ratepayers.

To address this mismatch, Jupiter recommends that DOER consider expanding the Seasonal Peak Windows by which storage operators would be eligible to qualify for CPECs, to give the industry more flexibility to capture both CPECs and their optimal energy market revenue potential. We also recommend that any expansion in these hours would simply be to provide generators with *optionality* to address system peaks and align their energy market revenue potential with actual peak load periods; the current 4-hour per day maximum for earning CPECs should remain, to protect against upsetting the supply/demand dynamics of the CPS program.

Thank you again for the opportunity to provide these comments. Jupiter looks forward to participating in further discussions as DOER continues its 2024 CPS program review.