Via Electronic Filing

November 18, 2022

Samantha Meserve, Director, Renewable and Alternative Energy Division
Massachusetts Department of Energy Resources
100 Cambridge St., Suite 1020
Boston, MA 02114

Re: FirstLight Comments on Distribution Circuit Multiplier Fall 2022 Draft Guideline

Dear Director Meserve,

FirstLight Power Inc (FirstLight) appreciates the opportunity to provide comments to the Massachusetts Department of Energy Resources' ("DOER") regarding its Draft Guideline for the Clean Peak Energy Standard ("CPES") Distribution Circuit Multiplier ("DCM") issued on October 31, 2022.

About FirstLight

FirstLight is a leading clean power producer and energy storage company with operating and development assets in New England, Pennsylvania, New Jersey, and New York. Our operating portfolio includes nearly 1.4GW of pumped-hydro storage, battery storage, hydroelectric generation, and solar generation—the largest clean energy generation portfolio operating in New England today. Our mission and vision is to accelerate the decarbonization of the electric grid by owning, operating, and integrating large-scale renewable energy and storage assets to meet the region's growing clean energy needs and to deliver an electric system that is clean, reliable, affordable, and equitable.

FirstLight's hydropower facilities in New England produce over 690,000 MWh of emissions-free generation, reducing the region's carbon footprint by more than 780,000 tons annually. In addition to our conventional and run-of-river hydro facilities, we also own and operate the 1168 MW Northfield Mountain pumped hydro storage station and 29 MW Rocky River pumped hydro storage station, respectively the largest and third largest energy storage facilities in New England, 2 MW of solar PV, and 1.5 MW of behind-the-meter battery storage in Massachusetts. Our facilities represent over a billion dollars of private investment in the region, employ 130 people, and support our communities in Massachusetts with more than $15 million in local property taxes every year.

Introduction

The structure presented through the CPES and the specifically the DCM has the potential to provide needed market signals to ensure energy storage projects developed in the Commonwealth are deployed in areas which bring the greatest benefit to the grid and its users. The Draft DCM Guideline presents a significant departure from the prior proposal developed by the DOER, and if implemented will impede Massachusetts' ability to reach its stated Energy Storage Target of deploying 1,000 MWh by December 31, 2025.

Moreover, the proposed changes may drastically reduce the $2.3B of possible system benefits offered by energy storage identified in the Massachusetts' State of Charge[1] report, including:

- Reducing the price paid for electricity and lowering peak demand by approximately 10%;
- Deferring transmission and distribution investments necessary to support increased retail load;
- Reducing the cost to integrate renewable generation and deferring capital investments in new capacity;
- Increasing the grid's overall flexibility, reliability, and resiliency;
- Reducing GHG emissions by more than 1 MMT CO2e over 10 years; and
- $250M in additional regional systems benefits to other New England states due to lower wholesale market prices across ISO-NE.

BESS Capacity Under Development

As of February 15, 2022, the Massachusetts Electric Distribution Companies ("EDCs") indicated that 320 MWh of energy storage had been deployed in Massachusetts and that an additional 885 MWh of storage remained in the be met under the Target.

Current interconnection queue data indicate the capacity of energy storage deployed to be 254 MWs; 7.7 MW of capacity authorized to interconnection at the Distribution level[2] and an additional 246 MW of energy storage projects having received a Witness Test and provided an I.3.9 to ISO-NE[3].

The majority of capacity under consideration remains under study; and will be directly impacted by the structure the DCM takes; this includes a majority of projects that are front of the meter, which bring added resiliency and reliability to the grid. The current opportunity presented by the CPES, when combined with changes proposed through the October 2022 Draft DCM Guidelines may be insufficient to spur the level of deployment Massachusetts seeks to realize via the Energy Storage Target.

Distribution Circuit Multiplier Overview

The DCM is recognized by the industry as an essential component of CPES Standard, as it has the potential to provide a strong market signal to ensure energy storage projects are developed in locations with high saturation of renewable generation, or otherwise represent areas where storage installation would improve distribution system performance. Such adaptation would enable time shifting of renewable resources to meet peak periods, and would also defer the need for distribution system upgrades.

However, the proposed changes in the October 2022 Draft DCM Guideline would produce diluted locational signals and result in a significantly lower level of development at these critical grid locations and reduce the program's overall system benefits. We believe the identified components of the Draft DCM Guideline should be altered as listed below:

- The method used to identify DCM eligible circuits is proposed to rely on data sources that assess conditions over the past three years. Instead, DCM eligible circuits should be identified based on current and forecasted system dynamics.

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1 Massachusetts Energy Storage Initiative Study State of Charge Report September, 2016

[2] Utility Interconnection Report Aggregated Raw Data September 2022; The above numbers include all projects identified as Battery Energy Storage or "Other"; and removes any projects marked as cancelled or withdrawn.

[3] ISO-NE Queue Report, 20221116

- Understating capacity eligible for the DCM Multiplier limits the opportunity to build projects of scale; disincentivizing developers to deploy the most cost-effective solutions. Instead, we would recommend right-sizing these limits to be specific to the circuits which the projects would support.
- The prohibition of projects that trigger capacity upgrades on existing circuits will likely counteract the stated goal of deferring transmission and distribution level investments. Specifically, even where an upgrade may be required to reliably interconnect a new storage facility, such projects may avoid more expensive upgrades that would be required absent the new storage facility. This prohibition should be removed.

The CPES has thus far had limited success in increasing deployment of storage as specified in the Energy Storage Target. The DCM is an opportunity to incentivize developers to not only build incremental clean resources that contribute to the state's climate goals, but to ensure these new projects are located on parts of the system that need it most.

FirstLight strongly encourages DOER to re-evaluate the potential outcomes of the current DCM Proposal, and to consider that its existing proposal may inadvertently delay or prevent Massachusetts from reaching the Energy Storage Target. FirstLight supports the prior proposals submitted by the New England Clean Energy Council and New Leaf Energy in response to the Winter 2022 Straw Proposal and the recommendations provided therein.

Below, we provide more granular comments on certain aspects of the Draft Guideline, focusing on changes from the previous Straw Proposal issued in February 2022.

Recommendations

Circuit Identification

The February 2022 Straw Proposal identified two categories to target via the DCM: a) renewable energy or solar saturated circuits and b) circuits exhibiting increased peak demand. The October 2022 Draft Guideline, however, removes saturated circuits from eligibility, a major break from both the Straw Proposal and goals outlined in the State of Charge report. The DOER did not provide any detail regarding the rationale for the change, and this change could result in significantly lower deployment levels. Under the CPES program, existing solar projects may add energy storage, but it is unlikely to be economic or introduce unacceptable levels of uncertainty on an operational project to do so. Stand-alone energy storage, if installed at locations with significant renewable resource saturation, can be used to absorb solar production when useful, provide voltage support when useful to support distribution system reliability and then discharge that clean energy when the grid needs it most as established under the State of Charge analyses. This flexibility can unlock additional capacity or otherwise enhance reliability on the distribution circuit and was a worthy inclusion in previous iterations of the DCM proposal.

Some circuits may face constraints during seasonal critical peak hours, which could increase the difficulty in implementing a multiplier focused on renewable energy saturation. Assessing the hours when energy could be better utilized on such circuits should be feasible, however, and could enable energy storage resources to provide a higher level of benefit even if operated during alternative hours. FirstLight encourages DOER to review whether these circuits could receive a more nuanced treatment, rather than excluding them from eligibility entirely.

One example of such alignment of critical peak hours, export, and benefits is the Commercial System Relief Program in New York State. The program targets both renewable energy and storage deployment based on specific circuits and substations during a variety of hours, as identified as beneficial by New York's EDCs.

Energy Storage Interconnection Review Group ("ESIRG") discussions and recent study results also indicate the EDCs intend to impose operational schedules on energy storage resources through their interconnection agreements.

The schedules proposed thus far by the EDCs prohibit charging and discharging during specified hours, significantly limiting energy storage's flexibility and future ability to participate in ISO-NE wholesale markets. The proposed narrowing of the DCM applicability, combined with the operational schedules which limit or prevent realization of other market-based revenue streams, will prevent many projects currently in queue from moving forward, detracting from current the Energy Storage Target progress and future development efforts.

As indicated by NECEC, the DCM is the ideal vehicle for providing compensation to energy storage for providing grid benefits on peak loaded and renewable saturated circuits until the utilities have more granular insight into the operations of the systems and can implement more sophisticated storage operations. FirstLight strongly recommends DOER to include renewable saturated circuits as eligible circuits for the DCM. We also suggest that any project subject to operational restrictions should be eligible for a DCM.

Capacity of Eligible Projects

The DCM Guideline proposes to limit eligible capacity available on a DCM circuit to 1 megawatt (MW) without distinction or specific analyses for individual circuits or circumstances. This approach limits both (i) the ability of developers to deploy larger, cost-effective projects; and (ii)the likelihood of achieving the benefits outlined in the State of Charge report. Imposing some limits on deployment on circuits may be beneficial, but a one-size fits all approach of 1 MW discourages development and does not acknowledge that some locations could greatly benefit from larger projects, both due to system needs as well as improved economies of scale.

FirstLight recommends reviewing the evaluation structure established under the Locational System Relief Value program in New York State and assessing how the utilities identified areas where, and at what capacities, renewable resources are best deployed. This program, however, will not provide a perfect approach however as it was targeted to the deployment of renewable energy resources to alleviate existing circuit and substation constraints, instead of energy storage, which is a much more flexible technology and could bring great benefits through its deployment.

System Upgrades

The October 2022 Draft DCM Guideline propose also proposes to prohibit projects which "trigger a capacity upgrade on their selected circuit" from receiving a DCM. This guidance lacks clarity in what would be included under a "capacity upgrade," but also falls short in the intents established under the State of Charge report. Many circuits throughout Massachusetts require capacity upgrades to meet current and future load demands or reliability. Moreover, most renewable energy projects deployed to date have triggered both line and substation upgrades which both enhance the technology deployed on the Massachusetts' grid through upgrades to three phase, or increased carrying capacity, or additional reliability mechanisms at both projects and substations. Interconnection upgrades provide a net benefit to the grid, rather than a detraction.

FirstLight strongly recommends removing this prohibition. To retain the prohibition, or even establish a higher level of specificity of what upgrades could trigger the prohibition, would significantly diminish or eliminate developers' interest in advancing projects currently under development.

Conclusion

FirstLight appreciates the opportunity to provide comment to the DOER, and we look forward to continuing to work with the team at DOER and its stakeholders to establish DCM Guidelines that provide maximum benefit to the Commonwealth of Massachusetts. FirstLight recommends DOER convene a stakeholder process with storage industry members and the EDCs to develop solutions to the underlying concerns that resulted in the changes introduced in the October 2022 draft prior to finalizing a guideline that would significantly limit the benefits realized from the program.

If there are follow on questions, please feel free to reach out to us at your convenience.