



To: Thomas Ferguson, energy storage programs manager, Massachusetts Department of Energy Resources

From: Todd Olinsky-Paul, senior project director, Clean Energy Group (CEG)

Re: CEG comments on "Charging Forward: Energy Storage Toward a Net Zero Commonwealth" report

Date: September 1, 2023

Clean Energy Group (CEG) appreciates this opportunity to comment on DOER's upcoming report, "Charging Forward: Energy Storage Toward a Net Zero Commonwealth." Clean Energy Group, a national nonprofit organization, works at the forefront of clean energy innovation to enable a just energy transition to address the urgency of the climate crisis. CEG fills a critical resource gap by advancing new energy initiatives and serving as a trusted source of technical expertise and independent analysis in support of communities, nonprofit advocates, and government leaders working on the frontlines of climate change and the clean energy transition. CEG collaborates with partners across the private, public, and nonprofit sectors to accelerate the equitable deployment of clean energy technologies and the development of inclusive clean energy programs, policies, and finance tools.

Although the original State of Charge was a watershed report, there are a number of areas we feel should be revised and/or expanded in the new report. Herein we list, and discuss in brief, those areas.

1. **Correct misleading analysis of the market for C/I customer storage for demand charge management.** The 2016 State of Charge report badly underestimated the opportunity for economic use of BTM energy storage for commercial demand charge management in the Commonwealth. This occurred because the report used a relatively low National Grid demand rate for its statewide BTM cost-effectiveness analysis, concluding that most BTM C/I energy storage would not be economic in Massachusetts. However, there is an extremely wide range of demand charge rates in Massachusetts, ranging from a low of \$3.92/kW in National Grid territories up to a high of \$41.25/kW in Eversource territories. By lumping all these areas together under a low National Grid rate, the study produced a misleading conclusion. In reality, there are tens of thousands of commercial customers in Eversource territory paying demand charges as high as any in the nation, and many of these customers could profitably install energy storage to reduce their utility demand charges. The upcoming report should correct this error by presenting a revised analysis of distributed energy storage project economics and economic opportunities in Massachusetts. For more information, see the attached filing,



"Comments of Clean Energy Group on MA DOER Energy Storage Target Docket--2017," which CEG submitted to DOER in 2017.

2. **Introduce equity recommendations for state energy storage policy and programs.**

Despite years of advocacy by CEG and other groups, and repeated demands from the EEAC, the Massachusetts Program Administrators (with the exception of Cape Light Compact) have consistently failed to provide any equity or low-income provisions in the ConnectedSolutions program. In fact there is a lack of equity provisions in the Commonwealth's energy storage programs in general. Not only does this failure violate Massachusetts' longstanding commitment to equitable clean energy policy, it risks reinforcing a very harmful status quo, in which wealthy early-adopters reap the benefits of emerging clean energy technologies, while historically underserved communities, who need these benefits most, are left behind. This trajectory, which we have watched in the recent history of solar PV, will now be replayed in the history of energy storage unless the Commonwealth moves immediately to introduce common-sense equity provisions into programs such as SMART, ConnectedSolutions and the Clean Peak Standard. For a list of equity provisions recommended by CEG, see the attached "Equity Provisions in Energy Storage Programs" policy memo.

3. **Address energy storage needs, including LDES needs, in the context of electrification of buildings and transportation; including what will be needed to build out energy storage and offshore wind.** Like other Northeastern states, the Commonwealth of Massachusetts has set ambitious clean energy goals, and is working toward electrification of the building and transportation sectors. Studies have shown that winter electric demand peaks will continue to grow as electrification (especially of the building sector) continues, until the region flips from summer peaking to winter peaking. As fossil fuel generation is retired, and winter peak demand continues to grow, it will become increasingly challenging to supply sufficient electricity capacity in the winter, when solar PV output is reduced. For these reasons, the rapid deployment of offshore wind, accompanied by large amounts of energy storage capacity, will be key to managing winter peak demand without resorting to a resurgence of fossil fuel generation. The amount of offshore wind and associated energy storage, and the timeline for its deployment, should be included in any new assessment of energy storage needs in Massachusetts.

4. **Address EVs and EV charging systems as a source of electricity storage.** As electrification of the transportation sector advances, EVs and EV charging stations will present a growing potential source of electrical storage in Massachusetts. The new energy storage report should more comprehensively address how to optimize this resource, including allowing customers to enroll EVs and charging stations into programs such as ConnectedSolutions.



5. **Address building electrification and controllable loads in combination with BTM solar and storage.** As building electrification proceeds in Massachusetts, more controllable devices, such as thermostats/HVAC, water heaters, etc. will become available for use as controllable load. The new report should address regulatory and programmatic changes needed to allow these devices to be aggregated into virtual power plants, along with distributed solar PV, storage, and other distributed resources, to provide grid services through programs such as ConnectedSolutions.
6. **Update energy storage economics in Massachusetts based on changes in pricing and in national incentives such as the ITC.** Since State of Charge was published in 2016, the cost of battery storage has fallen significantly, while new national incentives such as the federal energy storage investment tax credit (ITC) have emerged. This should significantly improve the economics for energy storage systems in Massachusetts. The analysis presented in State of Charge should be updated to reflect these changes.
7. **Update assessment of market opportunities in Massachusetts in light of newer FERC orders and ISO market rules.** Since the publication of State of Charge in 2016, new FERC orders and ISO market rule changes have opened new wholesale energy markets to distributed resources in general, and to energy storage in particular. While all these changes may not be fully implemented as yet, this represents an important change to the regional markets, and the new energy storage report should reflect the improved outlook for energy storage business cases in Massachusetts.
8. **Update and address barriers to energy storage deployment in Massachusetts, including those presented by siting and permitting challenges and interconnection barriers.** A number of high profile reports and dockets have recently highlighted the significant barriers to energy storage deployment represented by siting and permitting requirements and interconnection delays and costs. An updated energy storage report should provide information on these barriers and make recommendations to the state on how they may be overcome.
9. **Assess existing state energy storage policy, regulation and incentive programs with regard to progress to date, and make recommendations on program expansion and revisions needed to reach Commonwealth policy targets including the energy storage procurement target, emissions reduction target, and renewable portfolio targets.** Since the publication of State of Charge in 2016, Massachusetts has adopted a number of breakthrough programs and policies, including the energy storage procurement target, the ConnectedSolutions program, and the Clean Peak Standard. However, while these programs have been successful to some degree, progress in the state needs to accelerate significantly if the Commonwealth is to meet its various clean energy goals. The new energy storage report should track the Commonwealth's progress and recommend program expansions needed to meet clean energy targets.



Clean Energy Group respectfully submits these comments and recommendations in the hope that they will be of value. We will be happy to discuss further or provide additional resources at DOER's convenience.

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