SUBMITTED ELECTRONICALLY

January 31, 2024

Massachusetts Department of Energy Resources
Attn: Tom Ferguson, Energy Storage Programs Manager
100 Cambridge St., 9th Floor
Boston, MA 02114
thomas.ferguson@mass.gov

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

Dear Mr. Ferguson:

Clean Energy Group (CEG) appreciates this opportunity to comment on the Massachusetts Department of Energy Resources (DOER) report, "Charging Forward: Energy Storage Toward a Net Zero Commonwealth," dated December 31, 2023. 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.

In addition to our comments below, CEG also endorses the comments separately submitted on behalf of the Massachusetts Clean Peak Coalition (MACPC), of which CEG is a member.

DOER has requested public comment on three proposed funding programs, which are based on the findings of the Charging Forward study and report:

1) Standalone Bulk Storage
2) Resiliency
3) MDES/LDES Technology Commercialization

Clean Energy Group addresses each of these three topic areas individually, below.

1. **Standalone Bulk Storage**

Clean Energy Group applauds the proposal to incentivize new standalone bulk storage that will participate in the Clean Peak Standard program. CEG especially supports proposed additional incentives and carve-outs for equity-focused projects (those sited at or near fossil-based peaker plants or brownfields and those that can demonstrate benefits to LMI or EJ communities). CEG further recommends the following:

a. Experience from other states shows that both incentive adders and carve-outs are needed to effectively promote equity energy storage deployment. This is because carve-outs alone do nothing to help developers overcome the added costs and barriers associated with siting storage in EJ communities and providing services (such as resilience or local emissions reductions) to those communities, while incentive adders alone do not reserve capacity for equity-focused projects and thus present a risk that the incentive program may be fully subscribed by non-equity focused projects that are cheaper and faster to develop. CEG therefore urges DOER to employ both incentive adders and capacity block carve-outs when designing the standalone bulk storage incentive program.

b. As MACPC pointed out in their comments, replacing idle or retired power plants (Charging Forward report page 15) does not provide optimal community benefits, since these plants are not operating. The goal of the Standalone Bulk Storage Program should be to replace operating fossil fuel plants or displace fossil fuel generation that would otherwise contribute both GHG and local emissions.

2. Resiliency

Clean Energy Group applauds the proposal to develop a grant program to support behind-the-meter (BTM) resilience projects, which would provide both cost support and technical assistance. In the past, Massachusetts' grant-supported resilience projects have suffered from the lack of technical assistance, so this is an important feature of any such program. CEG also supports the proposed additional incentives and carve-outs for projects benefiting low- and middle-income (LMI) and environmental justice (EJ) communities. We further recommend the following:

a. As noted above, both incentive adders and carve-outs are needed to effectively support equity-focused projects.

b. When designing equity program elements, it would be a good idea to enlist the participation of Massachusetts community-based organizations working in the areas of environmental and energy justice. These organizations will be better attuned to the needs of LMI and EJ communities and may be able to help DOER design more effective and equitable incentives and project requirements.

c. DOER correctly notes that LMI and EJ communities may need additional support to identify sites for resilient energy storage projects. Community development grants for site assessments and pre-development technical assistance could be helpful to these communities. CEG recommends that DOER solicit input from EJ-focused community-based organizations to help guide development of these program elements. CEG may also be able to assist some projects through its Technical Assistance Fund, a grant program that supports qualifying equity-focused energy storage resilience projects with pre-development economic and technical feasibility analysis. CEG would be happy to meet with DOER to discuss possible collaboration.

d. In addition to grant funding and technical assistance, CEG recommends that equity-focused resilience projects be given access to low- or no-cost financing, such as the Massachusetts HEAT loan program. If HEAT loans cannot be offered, DOER should

consider other options to provide affordable and accessible financing to these projects. For example, the newly created Massachusetts Community Climate Bank could possibly assist with low- or no-cost loans for resilient energy storage projects at multifamily affordable housing facilities.

e. Project ownership can be very important for some LMI and EJ communities and should certainly be supported. However, other ownership options, such as third-party leased systems or PPAs, may also be helpful in some situations where community ownership is not possible or desirable. With appropriate contracts in place, these alternate ownership models can still provide resilience and other benefits to their LMI and EJ host communities. CEG therefore encourages DOER to consider how a variety of project ownership models could be supported through the proposed grant program, while guaranteeing resilience and other benefits to the host communities.

3. MDES/LDES Technology Commercialization

Clean Energy Group applauds the proposal to provide medium-duration energy storage (MDES) and long-duration energy storage (LDES) commercialization grants. CEG and its sister organization, Clean Energy States Alliance (CESA), believe that longer duration energy storage technologies will need to be developed if energy storage is to deliver on the promise of renewable generation beyond short-duration services such as frequency regulation and capacity. Getting fossil fuels out of baseload electricity generation will require significant advances in LDES technologies. For this reason, CEG and CESA are both participating in the new National Consortium for the Advancement of Long Duration Energy Storage Technologies, led by Sandia National Laboratories. In connection with DOER's proposed MDES/LDES Technology Commercialization Grants, we recommend the following:

a. As with the resiliency and bulk storage programs above, a MDES/LDES Technology Commercialization Grant program should include an equity component. DOER's proposal notes that "Projects that can demonstrate resiliency… repurposing of idle or abandoned fossil-based energy generation or brownfields, or that could serve as resilient infrastructure for LMI or EJ communities are strongly encouraged." This is a good start, but "strongly encouraging" a desired application does not help to lower barriers that may prevent developers from realizing such goals. It would be more effective if the proposed MDES/LDES Technology Commercialization Grant program included added incentives for projects that provide resiliency and/or other benefits to LMI or EJ communities, as well as technical assistance to the host communities in planning for, evaluating and siting projects. We also note that the above-referenced National Consortium includes an equity-focused team, which DOER should participate in.

b. Sandia National Laboratories is interested in collaborating with states in supporting non-lithium/long duration energy storage demonstration projects and is working with CESA to develop such partnerships. Therefore, CEG strongly suggests that DOER collaborate with CESA and Sandia National Laboratories when developing the proposed MDES/LDES Technology Commercialization Grants program. Sandia may be able to provide additional technical support for qualifying projects, and DOE Office of Electricity, which

funds Sandia's program, may also be interested in providing project support. This should be discussed early in the development process for the proposed MDES/LDES Technology Commercialization Grants program, so that any offers of collaborative support could be included in the program from the outset.

Energy Storage Siting Initiative

In addition to the above comments, CEG urges DOER to move forward with the proposed Energy Storage Siting initiative, which is not part of the upcoming straw proposal. Siting needs and barriers are extremely important to address, as these can frustrate even the best-designed incentive and grant programs. In particular, CEG has published a report on interconnection barriers, which have delayed and derailed energy storage development across the country and have become a notorious barrier in Massachusetts. CEG would be happy to work with DOER on addressing and resolving siting issues.

CEG also encourages DOER to explore the proposed community consent-based siting approach.

Program review

DOER proposes to review current Massachusetts programs including the Clean Peak Energy Standard, the SMART Storage Adder and ConnectedSolutions. CEG supports this proposal and makes the following recommendations:

a. All programs should be reviewed for equity participation, and changes should be made if current equity provisions are not resulting in the desired level of participation by LMI and EJ communities. In particular, the ConnectedSolutions program, which is housed within the Massachusetts Energy Efficiency Plan, has lacked equity provisions from the start. CEG has repeatedly and consistently advocated for income-eligible incentive adders and other equity provisions in the ConnectedSolutions program. The recently approved Cape & Vineyard Electrification Offering from Cape Light Compact demonstrates that cost-effective equity battery programs are possible in Massachusetts and should serve as a model for a statewide equity offering within ConnectedSolutions. DOER should lead on this issue within the EEAC.

b. In addition to equity access, it is important to review the size and scope of existing battery storage programs in the context of the Commonwealth's energy storage and clean energy goals. In other words, these programs may be effective, but are they operating at a scale that will substantially help Massachusetts meet its goals? Again, ConnectedSolutions in particular needs a much larger budget and better marketing in order to realize its potential.

CEG also wishes to note that it will soon be publishing a report assessing the equity provisions and equity participation in the above-mentioned Massachusetts battery storage programs. We would be happy to meet with DOER to further discuss this important issue.

Additional recommendations

In addition to the above, CEG would like to remind DOER that in September 2023 CEG submitted written recommendations for the Charging Forward study and report (a CEG representative was also interviewed by E3 as part of the stakeholder process). In CEG's written comments we recommended that the study and report address the following areas:

1. Correct misleading analysis published in the 2016 State of Charge report, regarding the Massachusetts market for C/I customer storage for demand charge management.
2. Introduce equity recommendations for Massachusetts energy storage policy and programs including the SMART, ConnectedSolutions and Clean Peak Standard programs.
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 to meet increased winter peaking (reliability) requirements.
4. Address EVs and EV charging systems as a source of electricity storage, 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, including regulatory and programmatic changes needed to allow these devices to be aggregated into virtual power plants 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, which should significantly improve the economics for energy storage systems in Massachusetts.
7. Update assessment of market opportunities in Massachusetts in light of newer FERC orders and ISO market rules, which have opened wholesale energy markets to distributed resources and to energy storage in particular. This should result in an 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, 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.

Clean Energy Group appreciates that E3 and DOER have addressed at least some of the above nine recommendations in the Charging Forward study and report. We respectfully re-submit these recommendations in hopes that they will be useful in finalizing DOER's proposal (see attached documents).

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.

Sincerely,

Todd Olinsky-Paul
Senior Project Director
Clean Energy Group