



SUBMITTED ELECTRONICALLY

January 30, 2024

Massachusetts Department of Energy Resources  
Attn: Tom Ferguson, Energy Storage Programs Manager  
100 Cambridge St., 9<sup>th</sup> Floor  
Boston, MA 02114  
[thomas.ferguson@mass.gov](mailto:thomas.ferguson@mass.gov)

RE: Comments of the Massachusetts Clean Peak Coalition on Massachusetts  
DOER's Report, "Charging Forward: Energy Storage in a Net Zero Commonwealth"

Dear Mr. Ferguson:

Please accept these comments on behalf of the [Massachusetts Clean Peak Coalition](#) (MACPC) regarding the Massachusetts Department of Energy's report, "Charging Forward: Energy Storage in a Net Zero Commonwealth," dated December 31, 2023. The MACPC includes the Berkshire Environmental Action Team, Slingshot, Clean Energy Group, and the Massachusetts Climate Action Network. MACPC's mission is to facilitate the transition to clean peak energy by partnering with impacted communities and community-based organizations through technical assistance, capacity building, and information sharing. Our goal is the retirement of all polluting peaker power plants in Massachusetts and replacement with 100 percent renewable energy technologies through an inclusive and equitable process that centers and advances the priorities of impacted communities.

The MACPC has reviewed the recommendations listed in the "Charging Forward" report within the context of our mission to phase out fossil peakers in Massachusetts, with a particular focus on the concerns of low-income communities and communities of color. It is well documented that these communities are the most highly impacted by peakers – power plants that have a capacity factor of less than 20 percent and that typically ramp up and down in response to peaks in grid demand. The technology (combustion turbines), the operation (quick ramps up and down), and the fuels (often distillate fuel oil (DFO) and other liquids in gas-constrained Massachusetts) all contribute to dramatically increased local emissions of PM2.5 and nitrogen oxides (NOx), a contributor to secondary PM2.5.

MACPC's comments will focus on the extent to which this draft overlooked the importance of these localized emissions despite the clear messaging within the [Massachusetts Clean Energy and Climate Plan for 2050](#) (CECP), which is referenced many times within this draft

and is presumed to be a source of guidance for this draft. Of note, Chapter 2 of the CECP is “Centering Environmental Justice” – this is the very first section following the introduction. The placement of this section signals its importance within the plan. Within the Executive Summary, it is stated:

*Pollution created by the combustion of fossil fuels impacts all Massachusetts residents, but some communities bear a heavier burden than others. Communities of color and low-income neighborhoods face disproportionately higher exposure than other areas to health and climate risks because of decades of decisions about siting highways, power plants, and other sources of pollution....*

*The Commonwealth will ensure that EJ neighborhoods and low-and moderate-income residents are not left behind in the energy transition, which will require prioritizing investments in clean energy in EJ neighborhoods. EEA will work with stakeholders and the Environmental Justice Council<sup>2</sup> to identify climate investments it will dedicate to EJ neighborhoods or income targeted programs. EEA will continue to use best practices for community engagement, particularly when implementing programs that could affect EJ neighborhoods. The Department of Environmental Protection (MassDEP) will continue and enhance its air monitoring and community-based air sensor deployment efforts in EJ areas to determine existing air quality and opportunities to reduce pollution in these areas.<sup>1</sup>*

In addition to the CECP, NO<sub>x</sub> is included in the definition of greenhouse gases in Commonwealth law.<sup>2</sup> And yet it appears that the only emissions that are considered and prioritized for study and recommendations in this report are carbon emissions. It is our position that localized pollutants warrant the same consideration, and that recommendations within this report should reflect this. Much attention is paid, especially in the related E3 study<sup>3</sup>, to “electric ratepayer benefits” with very little reference to the societal benefits (especially those related to health) that accrue in communities across the Commonwealth when peakers are shut down and replaced by non-combustion alternatives such as short- and medium-duration energy storage.

Our comments regarding the “Charging Forward” report are as follows.

## **Key Findings**

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<sup>1</sup>Massachusetts Clean Energy and Climate Plan for 2050, p. xiv, available at: <https://www.mass.gov/doc/2050-clean-energy-and-climate-plan/download> (accessed January 30, 2024).

<sup>2</sup>Commonwealth of Massachusetts General Laws Chapter 21N, available at: <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleII/Chapter21N/Section1> (accessed January 30, 2024).

<sup>3</sup> Energy+Environmental Economics (E3), Charging Forward: Energy Storage in a Net Zero Commonwealth, December 2023, available at <https://www.mass.gov/doc/charging-forward-energy-storage-in-a-net-zero-commonwealth/download> (accessed January 30, 2024).

**Figure ES-1, page 4.** *“Energy Storage Provides Multiple Potential Benefits on Path from Electricity Generation to Customers.”*

On this graphic, within the Generation and Transmission benefits section, improved localized air quality with corresponding community health benefits (resulting from peaker replacement) is not listed as a benefit. Later in the report (page 15), these benefits are acknowledged (“Finally, for some sites, energy storage could provide an opportunity to benefit communities traditionally most burdened by fossil-fuel resources by reducing local air pollution through replacing idle or retired power plants or being an alternative to building a new fossil-fuel resource.”) Given the emphasis on centering environmental justice communities in the CEPC, this benefit should be featured prominently on this Figure, in the report, and in ongoing messaging for which this figure will likely be utilized.

**Key Findings, Number 2, page 5.**

*“...(E)nergy storage that charges from the grid will be supplied by grid energy and will have the emissions profile of the marginal generator.”* And in paragraph 2, *“...(E)nergy storage systems charging from the marginal generator have negligible emissions benefits.”*

Referring back to our comments on page 1 of this letter regarding localized pollutants and NOx within the definition of greenhouse gases, these statements ignore the markedly higher emissions associated with meeting peak demand.

Further, while it is true that storage will increasingly be able to charge from a cleaner grid off-peak, displacing emitting peak generation is not tied to renewable penetration because of the dramatic emissions difference between peakers and baseload. Replacing a megawatt of peaker capacity with batteries and charging the battery off-peak, both today and in the future, has a much greater positive localized impact than replacing a megawatt of stereotypical gas combined cycle baseload generation, both today and in the future. In other words, the negative impact of small round trip efficiency losses from storage (as the case is stated in the E3 study *Charging Forward: Energy Storage in a Net Zero Commonwealth*) is dwarfed by the much larger emissions impacts of the fossil peakers they are displacing. This is a primary reason why the MA Clean Peak Energy Standard was established.

**Recommended Policy & Program Designs**

**Section I, A. Standalone Bulk Storage Programs, page 15.**

*“Finally, for some sites, energy storage could provide an opportunity to benefit communities traditionally most burdened by fossil-fuel resources by reducing local air pollution through replacing idle or retired power plants or being an alternative to building a new fossil-fuel resource.”*

It is not clear why “idle or retired” is a qualifier for the power plants to be replaced. If they are idle or retired, they are already no longer contributing to local air pollution.

Within the Program Elements, there is a recommended requirement that a project have an executed interconnection service agreement. The MACPC recommends that there be a placeholder for this in the process, given the current difficulties with the ISO-NE interconnection queue. There must be a way for developers to incorporate some guarantee for this incentive in their value stack prior to executing an interconnection agreement. Without this, financial challenges will persist.

Within this same section, we strongly encourage and support the development of additional incentives regarding the last two bullet points (“*for projects sited at or near peaker plants*” and “*for distribution-connected projects that can demonstrate benefits to LMI and EJ communities*”). We suggest that within a peaker replacement incentive (assumed to be on the transmission side), there could be bonus adders for replacement of peakers that most highly impact low-income communities and communities of color.

The MACPC encourages the development of additional incentives for the replacement of peakers that have been or are likely to be designated as Reliability Must Run (RMR) units by ISO-NE. RMR units indicate a high need for locationally specific grid services and resiliency. These units would otherwise have retired as uneconomic. Compensation paid to RMR-designated unit operators is often shrouded in confidentiality at the time of negotiation and results in unnecessarily high costs that are then passed on to ratepayers. An incentive program designed to short-circuit this inefficient process would result in both decreased emissions and decreased ratepayer cost.

Another peaker characteristic to consider incentivizing for batteries is black start. Fossil peakers that have the ability to restart the grid from complete shutdown are difficult to remove from operation without a technological equivalent in its place, but battery storage can also provide that service.

#### **Section 1, D. Energy Storage Siting, page 17.**

While program bullets were not listed in this section, we suggest that in addition to a consent-based approach, robust language should be added regarding the need for the development of Community Benefits Agreements for bulk storage that replaces fossil plants but remains sited within communities, due to proximity to existing interconnection infrastructure. Some developers have already adopted this concept as part of their community engagement planning, but Community Benefit Agreements were not mentioned in this report or in the related E3 Study. This is a critical missing element.

The MACPC also strongly supports a review of the Clean Peak Energy Standard, and we emphasize the need for predictability and surety of benefits to bulk storage developers, with a special focus on projects that displace fossil peaker plants that burden low-income communities and communities of color in Massachusetts.

Please do not hesitate to reach out with any questions. You may reach out to Shelley Robbins, Project Director, Clean Energy Group at [shelley@cleanegroup.org](mailto:shelley@cleanegroup.org).

Respectfully submitted,

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