

BY ELECTRONIC DELIVERY ONLY

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Department of Energy Resources
100 Cambridge Street, 9th Floor
Boston, MA 02114
green.communities@mass.gov
cc: cbrown@seadvantage.com

**Re: Model Bylaws for Municipalities to Help Guide Zoning and
Permitting for Solar and Battery Energy Storage System Facilities**
Comments submitted by Conservation Law Foundation

Dear Senior Policy Analyst Cal Brown and DOER Staff:

I. Introduction

Conservation Law Foundation (“CLF”)¹ appreciates the opportunity to comment on the Department of Energy Resources’ (“DOER”) Model Bylaws to help guide municipalities zoning and permitting of solar and battery energy storage system (“BESS”) facilities in alignment with *An Act promoting a clean energy grid, advancing equity and protecting taxpayers* (“2024 Climate Act”)² and regulations governing the permitting process for Small Clean Energy Infrastructure Projects.³ Under proposed regulation 225 CMR 29.00, “Local Governments may adopt additional standards, provided such standards are reasonably necessary to protect the public health, safety, or welfare and do not conflict with the standards specified in 225 CMR 29.00 or any associated Department Guideline.”

¹ CLF is a nonprofit, member-supported public interest advocacy group that acts to solve the environmental challenges that threaten people, natural resources, and communities across New England. CLF works to ensure that laws and policies are developed, implemented, and enforced to protect and restore New England’s natural resources, economy, and environment, to safeguard the health of our communities, and implement a just and equitable transition to Massachusetts’ clean energy future.

² St. 2024, c. 239.

³ See 225 CMR 29.00: Small Clean Energy Infrastructure Facility Siting and Permitting, <https://www.mass.gov/doc/225-cmr-2900-small-clean-energy-infrastructure-facility-siting-and-permitting-draft-regulation/download>.

As the Commonwealth continues to take significant steps toward achieving its climate goals, effective policy frameworks are critical to guide the development of clean energy infrastructure. Renewable energy is essential to meeting the Commonwealth’s climate goals and targets of achieving net-zero greenhouse gas emissions by 2050, as required by the Global Warming Solutions Act (“GWSA”)⁴ and An Act to Create A Next-Generation Roadmap for Massachusetts Climate Policy (“Roadmap Law”).⁵ CLF recommends the following regarding the Model Bylaw provisions concerning noise from BESS and solar facilities.

II. CLF Recommendations

A. Model Zoning Bylaw: Allowing Use of Battery Energy Storage Systems

The Model Zoning Bylaw: Allowing Use of Battery Energy Storage Systems (“BESS Zoning Bylaw”) aims to “assist cities and towns in establishing reasonable standards to facilitate the development of Battery Energy Storage Systems.”⁶ CLF recommends that DOER and its team consider: (1) updating the MA’s noise policy to allow for more flexibility in the advancement of BESS systems; and (2) incorporating adjustments that may be made to the site suitability criteria as determined throughout the 2024 Climate Act implementation process.

1. Update MA’s Noise Policy to allow for more flexibility

The BESS Draft Zoning Bylaw states that “BESS Installations must comply with all state noise regulations (310 CMR 7.10) and local noise bylaws or ordinance.” The Commonwealth should utilize this opportunity to assess and update the noise regulation at 310 CMR 7.10 and the Massachusetts Department of Environmental Protection’s (“MassDEP”) Noise Policy, which was established in 1990.⁷ Massachusetts Noise Policy considers any noise source that (1) “[i]ncreases the broadband sound level by more than 10 dBA above the ambient, or (2) [p]roduces a “pure tone” condition – when any octave band center frequency sound pressure level exceeds the two adjacent center frequency sound pressure level by 3 decimals or more,” to be in violation of its Policy.⁸

Massachusetts should update its Noise Policy to account for recent science on noise impacts. “Noise, or unwanted sound, is one of the most common environmental exposures in the

⁴ St. 2008, c. 298.

⁵ St. 2021, c. 8.

⁶ *Model Zoning Bylaw: Allowing Use of Battery Energy Storage Systems*, DEPARTMENT OF ENERGY RESOURCES MASSACHUSETTS EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS (Oct. 6, 2025), <https://www.mass.gov/doc/doer-draft-battery-energy-storage-systems-bess-model-bylaw/download>.

⁷ MASSACHUSETTS EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS, *Division of Air Quality Control Policy: Noise Policy* (Feb. 1, 1990), <https://www.mass.gov/doc/massdep-noise-policy/download>.

⁸ *Id.*

United States.”⁹ While Massachusetts takes a moderate approach by allowing a 10 dBA increase above ambient noise levels, the Commonwealth should allow for more flexibility. The EPA “recommends a second exposure limit of 70 dBA to prevent hearing loss.”¹⁰ As stated by other scholars, “[d]irect regulation that sets maximum emission level for noise sources is the only intervention that guarantees population-level exposure reductions.”¹¹ While Massachusetts’ Noise Policy aims to protect the health and well-being of citizens, Massachusetts should allow for more flexibility as more BESS facilities get permitted in the Commonwealth. This is especially important in light of federal inaction on climate mitigation.

a. Apply a tiered threshold based on location and/or maximum noise levels

While Massachusetts’ Noise Policy considers violations to be more than 10 dBA above the “ambient,” Massachusetts should add more variability depending on the BESS is sited in an urban, suburban, or rural area. Massachusetts can consider rating adjustments (+5 dBA, +10 dBA, +12 dBA) based on where the BESS facility will be located. Other cities and states are updating their policies on BESS to allow for more variability depending on the equipment and time of day. For example, under Section 24-227 applying to Circulation Devices, NYC does not allow a sound level more than 42 dBA for circulation devices or 45 dBA for new installations based on a cumulative sound from all devices.¹² Under Section 24-218, NYC prohibits sound from a device 7 dBA above ambient noise from 10:00 pm to 7:00 am, prohibits sound 10 dBA or more above ambient noise from 7:00 am to 10:00 pm, and prohibits impulsive sounds (bangs) that are 15 dBA or more above ambient levels.¹³

Ultimately, different areas experience different ambient noise levels. DOER and local authorities should have the flexibility to tailor noise thresholds to the local context, whether distinguishing between urban, suburban, and rural areas, or between industrial, commercial, and residential zones. This approach ensures that noise limits are both protective of public health and adaptable to the needs of various communities. This can include establishing an allowable increase range in dBA levels or setting maximum levels for each region.

⁹ Monica S. Hammer et al., *Environmental Noise Pollution in the United States: Developing an Effective Public Health Response*, NATIONAL LIBRARY OF MEDICINE (Dec. 2013), <https://pmc.ncbi.nlm.nih.gov/articles/PMC3915267> (citing García A. Boston, MA: Wentworth Institute of Technology Press; 2001. Environmental Urban Noise).

¹⁰ *Id.*; (citing U.S. EPA (U.S. Environmental Protection Agency). Justification of Appropriation Estimates for Committee on Appropriations, Fiscal Year 1982: Section N, Noise. 1992, <http://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=P100AR9T.txt>).

¹¹ *Id.*

¹² *Battery Energy Storage Systems (BESS/ESS) and NYC Noise Code*, NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF ENVIRONMENTAL COMPLIANCE (Jan. 13, 2025), <https://www.nyc.gov/assets/dep/downloads/pdf/air/noise/battery-energy-storage-system-memo-noise-code.pdf>.

¹³ *Id.*

While CLF is not proposing a singular approach at this time, DOER and its consultants should consider evaluating various state and city proposals and support a notice and comment period for Massachusetts to update its Noise Policy.

b. Apply a tiered threshold based on time of day

Massachusetts should apply a tiered threshold for ambient noise based on time of day. During the day, ambient noise will be higher than it is at night. The current Noise Policy does not account for that differentiation. Maine provides a good example of this practice: for development in a protected location that is not predominantly commercial, transportation, or industrial, Maine limits sound level to 60 dBA during the day and 50 dBA at night. For development in a protected location that is predominantly commercial, transportation, or industrial, Maine limits sound level to 70dBA during the day and 60 dBA at night.¹⁴ Massachusetts should similarly set different limits for the day and night based on the then-occurring ambient noise.

c. Encourage quiet equipment design

Massachusetts should encourage BESS developers to install quiet equipment whenever practicable. BESS systems themselves do not emit much noise, but auxiliary systems such as cooling systems or transformers do release noise.¹⁵ Developers can utilize several mechanisms to reduce noise impacts, such as reorienting equipment to reduce noise, installing noise sound walls, reducing battery fan speeds, adding silencers on battery fans, and installing foam lining.¹⁶

d. Require mitigation if violations occur

Massachusetts should also require mitigation if a facility repeatedly exceeds its noise allowances; penalties should only be issued in the event of severe situations or failure to comply with mitigation requirements. As mentioned above, developers and project applicants can utilize several mechanisms to reduce noise impacts.

e. Require Periodic Review

DOER, local municipalities, and other relevant agencies should establish a process for periodic review of the Noise Policy. This review would allow the Commonwealth to incorporate new scientific research, advances in technology (such as quieter BESS equipment), and

¹⁴ 06-096 CMR Ch. 375, § 10(A) (In Maine, the state adds 5 dBA to the observed levels of any tonal sounds resulting from routine operation of a development.).

¹⁵ *Battery Energy Storage System (BESS) Noise Challenges and Solutions*, NOISE MONITORING SERVICES (March 14, 2024), <https://www.noisemonitoringservices.com/battery-energy-storage-system-bess-noise-challenges-and-solutions/>.

¹⁶ *Id.*

community feedback. Regular updates would ensure that a flexible and variable Noise Policy continues to protect public health and well-being while supporting the responsible development of clean energy infrastructure.

2. The Model Bylaw should reflect adjustments if site suitability criteria change

In its Comment Letter to the Executive Office of Energy and Environmental Affairs’ (“EEA”) on Draft Guidance on Site Suitability for Clean Energy Infrastructure (“Site Suitability Guidance”),¹⁷ CLF made several recommendations which should be reflected in the Solar Energy Model Bylaw. For example, CLF argued that EEA should account for both climate impacts to the facility and the facility’s climate impacts to the surrounding area; EEA should account for MassEnviroScores from all census blocks contained within a certain radius of the project; EEA’s site suitability scoring should be adjusted to incentivize siting in unburdened areas by removing points (*i.e.* adding a negative score category) for MassEnviroScreen Scores below 10 and increasing points for scores that would trigger a “Cumulative Impact Analysis; EEA should clarify that benefits are different from mitigation to not skew scores; and that EEA should also consider establishing certain criteria to identify high quality job creation. Overall, applicants should disclose the values and calculations used in any self-calculated elements of their site suitability score in a manner that is easily accessible to community members.

In the “Notes on Environmental Protections” section, the BESS Model Bylaw states:

Projects with a Total Site Suitability Score above 15 for any Criteria-Specific Suitability (see table in Section VIII.C.ii. of Site Suitability Guidance) is an eight or above (a six or above in Unfairly Burdened Areas) may be subject to Compensatory Environmental Mitigation Fees. Projects with a Total Site Suitability Score of 5 or below may not be required to pay a Compensatory Environmental Mitigation Fee, but a fee may be included in a CBA if so negotiated in good faith.

*Municipalities may require Compensatory Environmental Mitigation Fees pursuant to 225 CMR 29.07: Application of Site Suitability Guidance, and DOER’s Guideline on Minimization and Mitigation Measures for projects with a Site Suitability Score greater than 5.*¹⁸

¹⁷ See *Site Suitability Assessments for Clean Energy Infrastructure, Draft Guidance*, EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS (Sept. 2025), <https://www.mass.gov/doc/draft-guidance-on-site-suitability-assessments-for-clean-energy-infrastructure/download> [hereinafter *Guidance*].

¹⁸ BESS Model Bylaw, *supra* note 6, at 18.

With new scoring criteria, EEA may adjust what mitigation measures and/or fees above or below a score of 5 are required. This score should be reflected in the final BESS Model Bylaw.

B. Model Zoning Bylaw: Allowing Use of Solar Photovoltaic Installations

The Model Zoning Bylaw: Allowing Use of Solar Photovoltaic Installations (“Solar Energy Model Zoning Bylaw”) aims to “promote the development and installation of new Solar Photovoltaic Installations by providing standards for the placement, design, construction, operation, monitoring, modification and removal of such installation.”¹⁹ CLF recommends that DOER and its team consider: (1) updating the MA’s noise policy to allow for more flexibility; and (2) considering adjustments that may be made to the site suitability criteria as determined throughout the 2024 Climate Act implementation process.

1. Update MA’s Noise Policy to allow for more flexibility

The Solar Energy Model Zoning Bylaw also references MassDEP’s Noise Policy.²⁰ As mentioned above in the section regarding the BESS Model Bylaw, Massachusetts’ noise policy should be amended to allow for more variability.

2. The Model Bylaw should reflect adjustments if site suitability criteria change

As stated above, CLF made several recommendations in the Site Suitability Comment Letter to the EEA²¹ which should be reflected in the Solar Energy Model Bylaw. The Solar Energy Model Bylaw states that “Municipalities may require Compensatory Environmental Mitigation Fees pursuant to 225 CMR 29.07: Application of Site Suitability Guidance, and DOER’s Guideline on Minimization and Mitigation Measures for projects with a Site Suitability Score greater than 5.”²² However, with new scoring criteria, the EEA may adjust what mitigation measures and/or fees above or below a score of 5 are required. This score should be reflected in the final Solar Energy Model Bylaw.

III. Conclusion

With careful adjustments to DOER’s BESS Model Bylaw and the Solar Energy Model Bylaw, Massachusetts will continue to lead the way in addressing the climate crisis while

¹⁹ *Model Zoning Bylaw: Allowing Use of Solar Photovoltaic Installations*, DEPARTMENT OF ENERGY RESOURCES MASSACHUSETTS EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS (Oct. 6, 2025), <https://www.mass.gov/doc/doer-draft-solar-model-bylaw/download> (hereinafter Solar Energy Model Bylaw).

²⁰ *Id.*

²¹ *See Comments submitted by Conservation Law Foundation*, MASSACHUSETTS EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS (Oct. 31, 2025).

²² Solar Energy Model Bylaw, *supra* note 19, at 16.

ensuring that the benefits of this transition are felt across all communities. CLF urges the DOER to take action to make these changes to help protect Massachusetts residents and communities. Thank you for your continued work and efforts towards balancing the urgency of meeting Massachusetts' climate targets with the need for community protection.

Respectfully Submitted,

A handwritten signature in dark ink, appearing to read 'Anxhela Mile', with a stylized, cursive script.

Anxhela Mile
Staff Attorney
Conservation Law Foundation
62 Summer Street, Boston, MA 02109
Phone: (617) 850-1736
Email: amile@clf.org