COMMONWEALTH OF MASSACHUSETTS
ENERGY FACILITIES SITING BOARD

Petition of Hillman Energy Center, LLC Pursuant to G.L. c. 40A, § 3 for Individual and Comprehensive Exemptions from the Zoning Bylaw of the Town of Tewksbury, Massachusetts	)	EFSB 25-08

TENTATIVE DECISION

On the Decision:
Tim Reilly
Nathaniel Strosberg

Donna C. Sharkey
Presiding Officer
June 19, 2026

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ABBREVIATIONS

2024 Climate Act	An Act Promoting a Clean Energy Grid, Advancing Equity and Protecting Ratepayers, St. 2024, c. 239
AC	Alternating Current
ACEC	Areas of Critical Environmental Concerns
AEGL	Acute Exposure Guideline Level
AHJ	Authority Having Jurisdiction
AISC	American Institute of Steel Construction
ANSI	American National Standards Institute
AUL	Activity and Use Limitation
Berkshire Power	Berkshire Power Development, Inc., D.P.U. 96-104 (1997)
BESS	Battery Energy Storage System
bgs	below ground surface
BOD	Fire Protection Basis of Design
BOH	Tewksbury Board of Health
BMPs	best management practices
BMS	battery management systems
Braintree	Planning Board of Braintree v. Department of Public Utilities, 420 Mass. 22 (1995)
BVW	bordering vegetated wetland
Certificate	a certificate of environmental impact and public interest as defined in G.L. c. 164, § 69G, and referred to in Section 118 of the 2024 Climate Act
CFD	Computational Fluid Dynamics
CFM	cubic feet per minute
CFR	Code of Federal Regulations
CMP	Construction Management Plan
CMR	Code of Massachusetts Regulations
CO	carbon monoxide
COD	Commercial Operations Date
Company	Hillman Energy Center, LLC

CPS	Massachusetts Clean Peak Standard
CRA	community risk assessment
Cranberry Point	Cranberry Point Energy Storage, LLC, D.P.U. 22-59 (2023)
dBA	A-weighted decibels
Department	Massachusetts Department of Public Utilities
DC	Direct Current
DOER	Massachusetts Department of Energy Resources
D/S	DiPalma/Sheehan, Intervenor
EEA	Massachusetts Executive Office of Energy and Environmental Affairs
EFSB	Massachusetts Energy Facilities Siting Board (Siting Board)
EJ	Environmental Justice
EMF	Electromagnetic Field
EPA	U.S. Environmental Protection Agency
ERP	emergency response plan
ESHGW	Estimated Seasonally High Groundwater (elevation)
Exelon West Medway	Exelon West Medway LLC and Exelon West Medway II, LLC, EFSB 15-01/D.P.U. 15-25 (2016)
Exh.	Exhibit
FACP	fire alarm control panel
FEMA	Federal Emergency Management Agency
GHG	Greenhouse Gas
GIAs	generation interconnection agreements
GIS	Geographic Information System
G.L. c.	Massachusetts General Laws chapter
GWSA	Global Warming Solutions Act, St. 2008, c. 2988
HCA	Host Community Agreement
HDD	Horizontal Directional Drilling
Hillman	Hillman Energy Center, LLC, Petitioner
HF	Hydrogen Fluoride
HMA	hazard mitigation analysis

Hopkinton LNG	Hopkinton LNG, D.P.U. 17-114 (2018)
I1	Tewksbury I1 Zoning District
I2	Tewksbury I2 Zoning District
ICES	International Committee on Electromagnetic Safety
ICNIRP	International Commission on Non-Ionizing Radiation Protection
ICP	Incident Command Post
IDLH	Immediately Dangerous to Life or Health
ILSF	Isolated Land Subject to Flooding
IFC	International Fire Code
Interconnection Substation	Point of Interconnection for the Project at the National Grid Tewksbury # 22 Substation
ISO-NE	Independent System Operator-New England
IVW	Isolated Vegetated Wetland
K Street Substation	NSTAR Electric Company d/b/a Eversource Energy, D.P.U. 17-147 (2019)
kV	kilovolt
LEL	lower explosive limit
LFL	lower flammability limit
LFP	lithium iron phosphate
LSCSF	Land Subject to Coastal Storm Flowage
LSP	Licensed Site Professional
Martorano	Martorano v. Department of Public Utilities, 401 Mass. 257 (1987)
MassCEC	Massachusetts Clean Energy Center
MassDEP	Massachusetts Department of Environmental Protection
MassDEP BESS Guidance	MassDEP's August 2025 “Guidance on Public Health, Safety and Environmental Impacts of Electric Battery Storage and Electric Vehicle Chargers”
MassGIS	Massachusetts Geographic Information System
MBTA	Massachusetts Bay Transportation Authority
MCP	Massachusetts Contingency Plan
Medway Grid	Medway Grid, LLC, D.P.U. 22-18/22-19 (2023)
MEPA	Massachusetts Environmental Policy Act

mG	milligauss
Mid Cape Reliability Project	NSTAR Electric Company d/b/a Eversource Energy, EFSB 19-06/D.P.U. 19-142/19-143 (2022)
MS4	Massachusetts Small Municipal Separate Storm Sewer System
MVA	megavolt-amperes
MW	megawatt
MWh	megawatt-hour
National Grid	New England Power Company d/b/a National Grid, Limited Participant
NEP Cabot Taps	New England Power Company d/b/a National Grid, D.P.U. 14-128/14-129 (2015)
NERC CIP	North American Electric Reliability Corporation Critical Infrastructure Protection
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NIST CSF	National Institute of Standards and Technology Cybersecurity Framework
NMC	nickel manganese cobalt
NPDES	National Pollutant Discharge Elimination System
NRG Canal	NRG Canal 3 Development LLC, EFSB 15-06/D.P.U. 15-180 (2017)
NTNC	Non-Transient, Non-Community
NY Central Railroad	New York Central Railroad v. Department of Public Utilities, 347 Mass. 586 (1964)
ORW	Outstanding Resource Waters
OSHA	U.S. Occupational Safety and Health Administration
PAC	ISO-NE Planning Advisory Committee
Park City Wind	Park City Wind, LLC, EFSB 20-01/D.P.U. 20-56/20-57 (2023)
PEA	Permit Enforcement Agency
Petition	Hillman's zoning petition pursuant to G.L. c. 40A, § 3
PPE	Personal Protective Equipment
Project	125 MW/500 MWh BESS and related electrical infrastructure,Project Substation, and Transmission

	Interconnection, proposed at 73-75 Hillman Street, Tewksbury, Massachusetts
Project Site	73 and 75 Hillman Street, and Transmission Interconnection route
Project Substation	Substation equipment, a graveled yard area, control house, and surrounding security fencing at 73-75 Hillman Street, Tewksbury, Massachusetts
Roadmap Act	An Act Creating a Next-Generation Roadmap for Massachusetts Climate Policy, St. 2021, c. 8
RF	Radio Frequency
ROC	Remote Operations Center
ROW	Right of Way
RTN	Release Tracking Number
Save the Bay	Save the Bay v. Department of Public Utilities, 366 Mass. 667 (1975)
SF_6	sulfur hexafluoride
SHGW	Seasonally High Groundwater
Siting Board	Massachusetts Energy Facilities Siting Board (EFSB)
SMCL	Secondary Maximum Contaminant Level
SME	Subject Matter Expert
SouthCoast Wind	SouthCoast Wind Energy LLC, EFSB 22-04/D.P.U. 22-67/22-68 (2024)
SPCC	Spill Prevention Control and Countermeasure Plan
SPL	Sound Power Level
Sudbury	Boston Edison Company v. Town of Sudbury, 356 Mass. 406 (1969)
Sudbury-Hudson	NSTAR Electric Company d/b/a Eversource Energy, EFSB 17-02/D.P.U. 17-82/17-83 (2019)
SWPPP	Stormwater Pollution Prevention Plan
Tewksbury	Town of Tewksbury
TFD	Tewksbury Fire Department
TMP	Traffic Management Plan
Town	Town of Tewksbury, Massachusetts, Intervener

Town of Truro	Town of Truro v. Department of Public Utilities, 365 Mass. 407 (1974)
TP	Test Pit
Transmission Interconnection	Proposed 1220 foot-long new transmission line interconnecting the BESS to the National Grid Tewksbury # 22 Substation
Trimount ESS	Trimount ESS LLC., EFSB 25-05/D.P.U. 24-152 (2026)
TSS	Total Suspended Solids
UL	Underwriters Laboratories
Vineyard Wind	Vineyard Wind, LLC, D.P.U. 21-08 (2021)
VOCs	volatile organic compounds
Westfield	NSTAR Electric Company d/b/a Eversource Energy, D.P.U. 18-21 (2019)
Woburn Substation	NSTAR Electric Company d/b/a Eversource Energy, D.P.U. 15-85 (2016)
WPA	Wellhead Protection Area
WRP	Wetland Replication Plan
Zoning Bylaw	Town of Tewksbury Zoning Bylaw

SUMMARY OF THE TENTATIVE DECISION

Hillman Energy Center, LLC ("Company") has proposed a 125 MW/500 MWh battery energy storage facility on approximately 4.3 acres of previously developed industrial land at 73-75 Hillman Street in Tewksbury, Massachusetts, together with a new substation and a 1,200-foot mostly underground transmission line connection to National Grid's existing Tewksbury 22 Substation (the "Project"). The Project would charge from the grid at periods when there is excess supply of electricity and then deliver that energy back onto the grid during times of peak demand or electric system need, enhancing the reliability and resilience of the regional electric system. Pursuant to G.L. c. 40A, § 3, the Company requests that the Energy Facilities Siting Board ("Siting Board") grant: (1) individual exemptions from the Town of Tewksbury Zoning Bylaw ("Zoning Bylaw"); and (2) a comprehensive exemption from all the provisions of the Zoning Bylaw to allow for the construction and operation of the Project.

The Tentative Decision finds that the Project would advance the Commonwealth's clean energy and emissions reduction objectives by helping to meet mandated energy storage targets, enhancing grid reliability, reducing system energy costs, and facilitating renewable energy integration. The Town and the Company executed a Host Community Agreement ("HCA"), which includes significant financial and program benefits to the Town and its residents, fire safety provisions and support, and financial support for third-party experts to advise the Town.

The Company, the Town of Tewksbury, the Tewksbury Board of Health, neighboring abutters and other local residents and elected officials have been active participants in this proceeding. Issues examined in this proceeding include: public safety and environmental impacts such as the effects of, and emergency response to, a battery incident; stormwater and groundwater protections; and consideration of alternative sites and noise. The record shows that the Project will meet or exceed regulatory, design, and safety requirements, including structural design and fire protection codes, and that the Project will be subject to comprehensive pre-construction review and compliance. The stormwater management system will comply with MassDEP standards and employ project-specific best management practices ("BMPs"). The Company will implement noise mitigation measures to ensure consistency with the MassDEP Noise Policy. The Tentative Decision includes numerous conditions requiring the Company to meet these and other requirements, some of which are also included in the HCA.

The Siting Board reviewed the Company's Petition and has determined: (1) Hillman is a public service corporation; (2) the proposed use is reasonably necessary for the public convenience and welfare; and (3) zoning exemptions are required for purposes of G.L. c. 40A, § 3. The Tentative Decision finds that the Project as proposed is necessary and will provide public benefits and meets applicable requirements for a zoning exemption. An extensive evaluation of public safety and Project impacts in the proceeding support this finding. The Siting Board has imposed conditions in this Decision to ensure public safety and minimize impacts of the Project.

The Tentative Decision finds that the existing Zoning Bylaw would prevent construction of the Project and requires both individual and comprehensive zoning exemptions. Even with the requested zoning exemptions, the Company will need to continue its efforts to secure all necessary state and local permits in to build the Project.

Pursuant to G.L. c. 40A, § 3, the Energy Facilities Siting Board ("Siting Board") hereby [approves], subject to the conditions set forth below, the petition of Hillman Energy Center, LLC seeking individual and comprehensive exemptions from the Town of Tewksbury Zoning Bylaw.

I. INTRODUCTION

A. Description of the Proposed Project

Hillman Energy Center, LLC (the "Company" or "Hillman") proposes to construct a 125 megawatt ("MW")/500 megawatt hour ("MWh") battery energy storage system ("BESS") and related infrastructure, including a new electric substation ("Project Substation"), on approximately 4.3 acres of previously developed industrial land located at 73-75 Hillman Street, Tewksbury, Massachusetts, as well as an approximately 1,200 foot new 115 kV underground and overhead electric transmission line ("Transmission Interconnection") interconnecting with National Grid's existing Tewksbury # 22 Substation ("Interconnection Substation") (Exh. HEC-1, at 1). Both the land located at 73-75 Hillman Street, and the land owned by National Grid and the MBTA that would provide easements for the proposed Transmission Line[1] are collectively referred to herein as "the Project Site" (Exh. HEC-1, at 1). The BESS and related infrastructure, the Project Substation, and the Transmission Interconnection comprise the Project. Figure 1, below, provides an aerial view of the proposed Project Site.

The Company describes the Project as "fully dispatchable," capable of providing an energy source directly to the regional transmission system during peak load and storing electricity during off-peak periods, as well as providing grid services such as frequency and voltage support, and "black start" capability to help restart the grid after an outage (Exh. HEC-1, at 43).

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[1] The Transmission Interconnection would cross three parcels of land; two are owned by New England Power Company d/b/a National Grid ("National Grid"), and the third is owned by the Massachusetts Bay Transportation Authority ("MBTA") (Exh. HEC-1, at 1). The Company would obtain easements from National Grid and the MBTA for use of their properties for the Transmission Interconnection (Exhs. HEC-1, at 3, 5-7 (Figures 2-2, 2-3 and 2-4); RR-EFSB-8 (Figure RR-EFSB-8-1); Tr. 1, at 37).

Figure 1: Aerial Project Map.

Source: RR-EFSB-21(1) at 56.

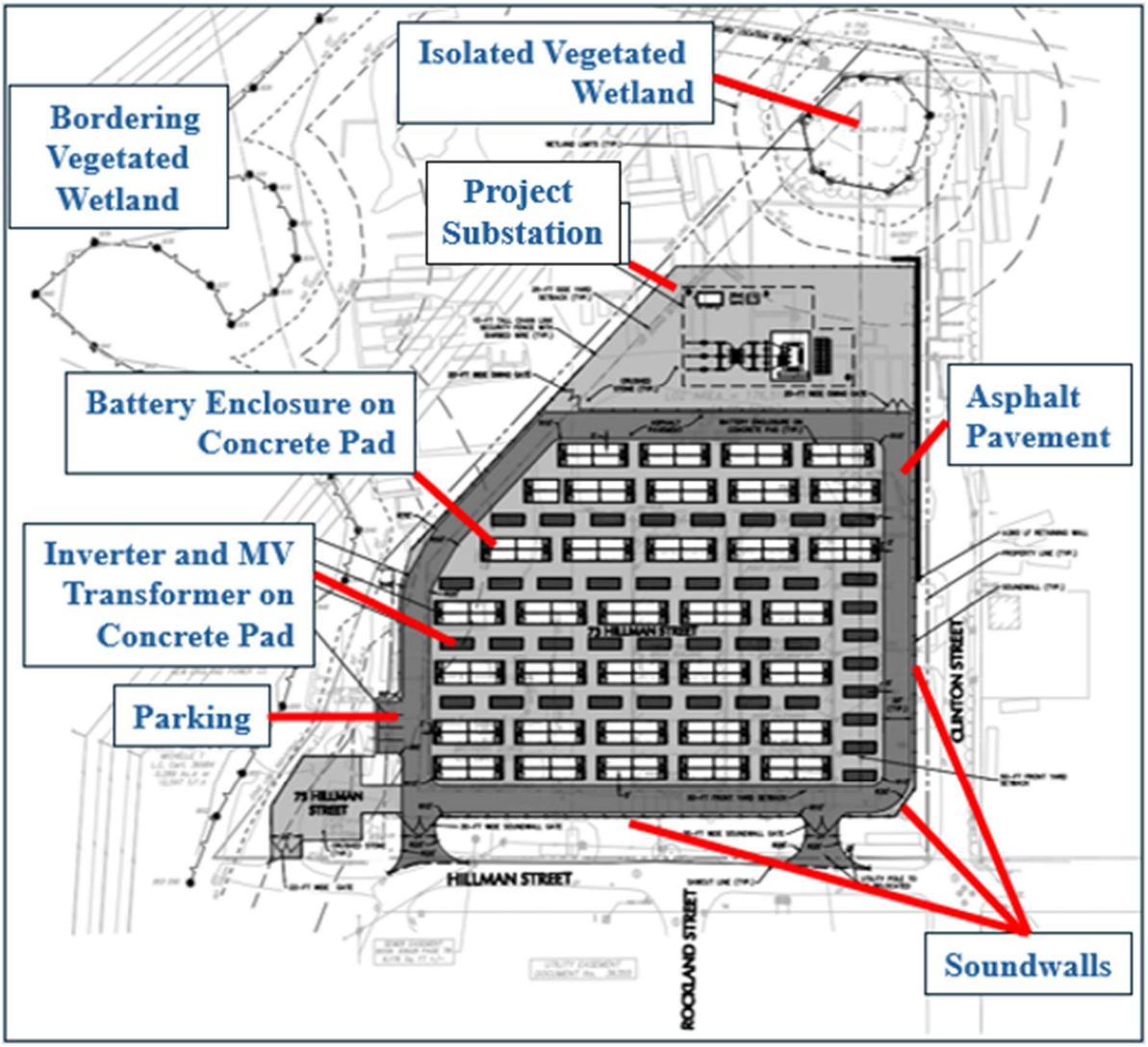
1. Battery Energy Storage System

The Project would consist of 134 stand-alone Hithium LX5015 battery enclosures and 40 inverters (Exh. EFSB-G-18). The proposed battery enclosures consist of a containerized

modular system[2], which houses integrated lithium iron phosphate ("LFP") batteries, a bi-directional inverter, a thermal management system, and a battery management system ("BMS") with intelligent software controls (Exh. HEC-1, at 8). Each BESS enclosure is 19.88 feet (length) by 8.00 feet (width) by 9.50 feet (height) and would be shipped to the site pre-assembled (Exh-. HEC-1, at 8; EFSB-G. 18). The batteries enclosures would be on concrete pads surrounded by crushed stone spaced in compliance with the manufacturer's installation requirements (Exh. HEC-1, at 8; (Exh. HEC-1, Att. A (S1) at Sheet CS101); and would require a 10 foot tall chain-link fence to secure the facility (Exh. HEC-1). Figure 2 provides the Project Site Plan showing location and details for the BESS facility.

[2] Each BESS enclosure consists of 48 modules, each of which contains 104 battery cells per module, totaling 4,992 cells in a BESS enclosure (Exh. HEC 1, Attachment I at 6, HEC-1, Attachment J at 12, Tr. 4, at 436). Each battery cell measures approximately 7 inches by 8 inches by 3inches (Exh. HEC-1, Att. I at 6).

Figure 2: Project Site Plan.



Source: Exh. HEC-1 Att. A (S1) at Sheet CS101.

The Company anticipates the Project life to be approximately 25 years (Exhs. EFSB-S-55; EFSB-S-56). Although the Company does not necessarily expect any Project batteries to reach end-of-life (i.e., 60 percent state of maximum charge capacity) during the Project's operating life (Exh. EFSB-S-55), it stated that battery degradation over time would require augmentation through installation of additional batteries to maintain the Project's performance capacity (Tr. 1, at 87-88). Accordingly, the Company designed the proposed 134 enclosures with sufficient space to accommodate augmentation as degradation occurs (Tr. 1, at 88). The

Company would leave approximately 20 to 25 percent of the total enclosure space (of the existing 134 enclosures) unoccupied and would fill that space over the Project's life (Tr. 1, at 88-89).

2. Project Substation

The Project would include a new Project Substation that would collect and route the power output from the BESS units and step it up to the transmission voltage of 115 kV, which allows the power supplied by the Project to feed onto the New England power grid at the Interconnection Substation (Exh. HEC-1, at 8). When the Project's BESS units are charging, the Project Substation would receive power from the Interconnection Substation[3], step it down to store the power (Exh. HEC-1, at 8).

The Project Substation would include the substation equipment, a graveled yard area, control house, and surrounding security fencing (Exh. HEC-1, at 8). Project Substation equipment would include a main power transformer, switchgear, circuit breakers, disconnect switches, and low and high buses, and will be up to 65 feet high at its tallest points, which are lightning protection masts (Exh. HEC-1, at 8-9).

3. Transmission Interconnection

Electricity would be transported between the Project Substation and the National Grid Interconnection Substation via its proposed approximately 1,200-foot-long 115 kV transmission line, which the Company would own, crossing from the Project Substation to land owned and/or controlled by National Grid (Exh. HEC-1, at 10) and the MBTA (Exh. HEC-1, at 1). The

[3] According to the Company, the Project would transact in the ISO-NE energy, capacity, and ancillary services markets (Exh. EFSB-G-2). The Company stated that the Project would abide by the currently effective ISO-NE Transmission, Markets and Services Tariff ("Tariff"), including Section III – Market Rule 1 of the Tariff, which governs the pricing, scheduling, offering, bidding, settlement, and other procedures related to the purchase and sale of electricity in ISO-NE's markets (Exh. EFSB-G-2). The Company noted that the Project's revenue streams associated with availability and discharge would be expected to involve sales of energy, capacity, or ancillary services in the wholesale electricity market, as well as Clean Peak Energy Certificates (Exh. EFSB-G-2).

Transmission Interconnection would consist of three 115 kV solid dielectric cables, with approximately 1,025 feet of the line placed in an underground conduit, transitioning to 175 feet on three new overhead structures crossing over an existing MBTA railroad corridor (Exh. HEC-1, at 10).

B. Procedural History

On April 1, 2025, Hillman filed a petition requesting individual and comprehensive zoning exemptions from the Zoning Bylaw of the Town of Tewksbury (Exh. HEC-1). On September 9, 2025, the Siting Board issued a Notice of Adjudication and Public Comment Hearing (the "Notice"), setting a public comment hearing date of October 9, 2025, at the Tewksbury Memorial High School Auditorium. In the hearing notice, the Siting Board invited oral comments, written comments and established October 24, 2025, as the date for filing petitions to intervene and for limited participation.

As directed by the Presiding Officer, the Company published the Notice in the Lowell Sun and the Tewksbury Town Crier and provided copies for posting with the Town Clerk and the Public Library along with copies of the Petition and attachments for public review. In addition, the Company mailed a copy of the Notice with specified maps and visual renderings to all property owners and all U.S. Mail addresses, including residential condominium units : (1) within one-half mile of the property lines of the two parcels containing components of the Project; (2) within 300 feet of the edge of the right of way for the Transmission Interconnection line; and (3) to abutters, or abutters to abutters, within 300 feet of the Property Line for each component of the Project, or are within 300 feet of the edge of the right of way for the proposed Transmission Interconnection line, including properties across any public or private street opposite Project components or the Transmission Interconnection line.

The Presiding Officer also required the Company to send the Notice to the Tewksbury Town Manager, Select Board, Planning Board, Zoning Boards of Appeal, Department of Public Work, Conservation Commission, and to the planning board of every city or town that abuts Tewksbury. Finally, the Presiding Officer directed the Company to distribute the Notice to all municipal office buildings, public libraries, senior centers, and places of worship within one mile

of the Project components. Hillman provided a certificate that the Company provided the Notice in accordance with the Siting Board requirements. See Kaplan affidavit of October 8, 2025.

The Siting Board conducted a hybrid public comment hearing on October 9, 2025, and received numerous oral comments at the hearing. In addition, the Siting Board has received an extensive array of written comments from the public which are posted in the electronic file room for this docket.[4] As early as April 2025, residents of Tewksbury began submitting written comments to the Siting Board regarding: the proximity of the site to residential neighborhoods and sensitive receptors; safety concerns related to the battery technology of the proposed Project; the potential environmental impacts of the proposed Project on water and wetlands; noise impacts associated with Project operations; the Host Community Agreement ("HCA") between the Town of Tewksbury and the Company; concerns surrounding health, safety and environmental impacts of a potential fire, explosion, or other emergency incident at the Project, including the emission of air pollutants, pollution of groundwater, wetlands, and local wells, access for emergency vehicles, and evacuation plans for area residents; Project impacts on neighboring property values; and Company communications with residents regarding the Project. These issues are addressed in this Decision in sections related to the environmental, health and safety impacts of the proposed Project.

The Siting Board received two timely petitions to intervene, filed by the Town of Tewksbury ("Town") and Maureen DiPalma/Dennis Sheehan, as one intervenor ("DiPalma/Sheehan"). In addition, the Siting Board received seven petitions for limited participant ("LP") status including from National Grid who would provide Hillman with an interconnection to the regional grid; from Representative David Allen Robertson, the State Representative for the 19th Middlesex District which includes Tewksbury; and five Tewksbury residents. The Presiding Officer granted all petitions for intervention and limited participant status on November 14, 2025. On December 19, 2025, the Presiding Officer granted an amended late-filed petition to intervene filed on November 25, 2025, by the Tewksbury Board of Health ("BOH").

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[4] The Siting Board has received approximately 600 comments on the Project.

On December 4, 2025, the Company submitted a supplemental filing reflecting changes to the Project design initially proposed.[5] The supplemental filing reflected a change to a new LFP battery manufacturer, Hithium. In its cover letter, Hillman stated the change was made to enable the Company to submit additional safety information about the selected batteries without seeking confidential treatment which other manufacturers required for comparable materials (Exh. EFSB-1, at 1). The proposed Project design changes[6] also incorporated a revised stormwater system design and a new gravel parking pad (Exh. EFSB-1, at 1). Additional stormwater design revisions were presented in a report filed by the Company on February 6, 2026 (Exhs. EFSB-1; HEC-1, Att. B(S2).

In light of the change in battery manufacturer, Hillman updated related information on expected battery specifications including a Sound Level Assessment Report (Exh. HEC-1, Att. C(S1) and an updated assessment on Electric and Magnetic Fields (Exhs. HEC-1; EFSB-1, Att. D(S1).

In addition, the Company provided the following information related to the new battery design, in the following Supplemental Attachments to Exh. HEC-1:

- Attachment G - Battery Energy Storage System Large-Scale Fire Test prepared by a third-party expert, Atar Fire;
- Attachment H - Hillman Energy Center Emissions of Carbon Monoxide and Volatile Organic Compounds from BESS fires, prepared by third-party expert, Hazard Dynamics;
- Attachment I - Cell Test Report UL 9540A, conducted by UL Solutions;
- Attachment J - TUV Rheinland Report pertaining to rack fires;
- Attachment K - Information about the Storage Inverter prepared by M System; and
- Figures 6-4 through Figure 6-8 - Updated visuals of the Project Site and street views.

Hillman offered the testimony of seven witnesses: Tyler Rynne, lead project developer for Hillman on matters related to site selection, project development processes, and operations;

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5 The Siting Board's review of the Project reflects the updated Project design elements depicted in the supplemental filings and other updates provided in response to record requests and evidence during this proceeding, as noted.

6 The Siting Board has included as Condition 2 that the Company review any design changes to the Project and site plan as may reasonably be requested by the Town, and address material engineering and technical review concerns.

Marc Bergeron, a consultant with Epsilon Associates ("Epsilon") on site selection, water and wetlands, and stormwater as it relates to wetlands; Frank Holmes, a consultant with Langan Engineering and Environmental Services ("Langan") on the Project Site, civil engineering design, and stormwater management; Ryan Callahan, a consultant with Epsilon Associates on noise; Benjamin Cotts, principal engineer with Exponent on electromagnetic fields; Dr. Kevin Marr, a consultant at Hazard Dynamics on potential toxic exposure levels of carbon monoxide ("CO") and volatile organic compounds ("VOCs") to neighboring areas in the event of a possible battery incident; and Shawn Morris, senior consultant with the Energy Safety Response Group on lithium ion battery fires and life safety.

DiPalma/Sheehan offered the testimony of six witnesses: George Melham, president of ioMosaic Corporation on battery safety risk management; David Blake and James Close, associates at ioMosaic on battery risk management; Scott Horsley, a consultant on hydrological issues and stormwater management; Milosh Puchovsky, a principal cnsultant at Milosh Puchovsky and Associates, LLC on National Fire Protection Association ("NFPA") standards related to lithium-ion batteries; and Cory Nickchen, a consultant at Noise Control Engineering on noise.

The Town offered the testimony of three witnesses during the evidentiary hearings: Michael Nicholas, an energy storage specialist and fire consultant at Hiller Companies on battery safety; Andrew Casper, a fire safety engineer at Hiller Companies on battery safety, and John Curran, town manager of the Town of Tewksbury regarding the planning and negotiation process between the Tewksbury Select Board and Hillman regarding a Host Community Agreement ("HCA").[7]

The Siting Board conducted evidentiary hearings for ten days beginning on February 10 and concluding on March 2, 2026. On March 20, 2026, consistent with the procedural schedule,

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[7] The Town submitted a copy of an unexecuted Host Community Agreement ("HCA") with the prefiled testimony of John Curran (Exh. TEWK-JCC-2). The Town submitted an executed HCA on May 20, 2026 (RR-EFSB-16(S1)). Within the Decision, please note due to the timing of the filing of the executed HCA, references within the briefs filed by the parties have relied on the draft HCA, Exh. TEWK-JCC-2.

the parties and certain limited participants filed initial briefs with reply briefs filed on April 3, 2026.[8] On February 25, 2026, DiPalma/Sheehan issued record request RR-D/S-11, for testing of groundwater levels at the Project Site (Tr. 9, at 1325-1338). On April 17, 2026, the Company provided a report including the raw data regarding the water levels recorded at the test pits for the period of March 26 through April 8, 2026. On April 24, 2026, the Town filed an affidavit from the Town Engineer related to RR-D/S-11 and the Town Engineer's observations regarding the test pit reporting. The Presiding Officer allowed additional post-brief submissions related to the Company's response to RR-D/S-11. On April 24, 2026, the Company filed a supplemental response to RR--D/S-11. On April 24, 2026, DiPalma/Sheehan filed supplemental testimony from Mr. Holmes and an accompanying brief related to RR-D/S-11 and its implications related to stormwater management design for the proposed Project. On April 27, 2026, the BOH filed supplemental brief related to the filings related to RR-D/S-11.

On May 4, 2026, Siting Board staff issued three additional record requests seeking further detail related to RR-D/S-11. Hillman responded on May 11, 2026, with additional supplemental responses provided on May 13 and May 14, 2026. Parties were given the opportunity to file additional supplemental testimony and comments related to the May 11, 2026, record responses by Hillman. DiPalma/Sheehan filed additional supplemental testimony on May 20, 2026 with further supplemental comments. Linda Martin and the BOH also filed comments on May 20. Finally, on May 26, 2026, the Company filed a brief replying to the supplemental briefs related to the RR-EFSB-21 and RR-EFSB-23 responses and supplemental testimony.

Siting Board staff prepared a Tentative Decision and distributed it on June 19, 2026 to the Service List for review and comment, and also distributed the Tentative Decision to the Siting Board. Siting Board staff allowed the parties and limited participants until June 26, 2026, to file written comments. [The Company, Town, DiPalma/Sheehan, the Board of Health and a number of the Limited Participant] all timely filed written comments. After issuing proper notice, the Siting Board conducted a hybrid Board meeting (both in-person and on Zoom) on June 30, 2026,

[8] Gerard Corbin, Limited Participant. filed a reply brief on March 30, 2026.

during which it received oral comments, deliberated, and voted on the Tentative Decision. After receiving presentations and public comments on the Tentative Decision, the Siting Board voted to [approve] the Petition, subject to conditions. The Siting Board directed staff to prepare a Final Decision, as set forth below.

C. Host Community Agreement

The Town submitted a copy of an unexecuted Host Community Agreement ("HCA") with the prefiled testimony of John Curran (Exh. TEWK-JCC-2). The Town submitted an executed HCA on May 20, 2026 (RR-EFSB-16(S1)). The Town requested that the final HCA and its specific provisions be incorporated into any approval granted by the Siting Board (Town Brief at 6-7).

The Siting Board relies on the Company's commitments in the HCA, which include payments for technical review, energy capacity study, electric and hybrid vehicles used by the municipality, public safety training, fire suppression materials, property value payments, youth sports, food bank, parks and recreation, and stormwater enhancement (RR-EFSB-16(S) at Exhibit D). For example, the HCA includes funding to support Town energy and sustainability efforts including: contribution to the Town's Municipal Electric and Hybrid Vehicles Conversion Program and contribution to the Town's fund dedicated to the purpose of providing for decarbonization of municipal facilities within the Town (RR-EFSB-16(S) at 6).

The Department of Public Utilities and the Siting Board have stated that while an HCA is part of the record in a proceeding, and aligns with the basis of some of the conditions imposed, the HCA is a private agreement between signatories, and it is not appropriate to incorporate the full HCA into a decision. See Medway Grid, D.P.U. 22-18/22-19, at 16 (2023); Exelon West Medway at 6; see also Hopkinton LNG Corporation, D.P.U. 17-114, at 6 (2018) ("Hopkinton LNG").

With regard to enforcement of the HCA, the Siting Board is not the proper forum for enforcement of the HCA's terms. See, e.g., Woburn-Wakefield at 94; Exelon West Medway at 6. The HCA is a contract negotiated outside of the aegis of the Board, separately from the proceeding. See Medway Grid at 16; Woburn-Wakefield at 94. Therefore, the Siting Board

declines to incorporate the full HCA into the Final Decision regarding the Project and also declines to assume enforcement responsibilities for the HCA.

II. REQUEST FOR ZONING EXEMPTIONS PURSUANT TO G.L. C. 40A, § 3

A. Standard of Review

On November 20, 2024, Governor Maura Healey signed legislation to accelerate progress towards the state's goals of net zero greenhouse gas ("GHG") emissions by 2050. "An Act Promoting a Clean Energy Grid, Advancing Equity and Protecting Ratepayers," St. 2024, c. 239 ("2024 Climate Act"). The 2024 Climate Act became effective February 18, 2025, and changes local zoning exemption authority in two respects: (1) it codified the definition of "public service corporation," St. 2024, c. 239, § 36; and (2) moved the authority to grant zoning exemptions to the Siting Board. St. 2024, c. 239, § 37, 91.[9]

General Laws c. 40A, § 3 states in relevant part:

> Land or structures used, or to be used by a public service corporation may be exempted in particular respects from the operation of a zoning ordinance or bylaw if, upon petition of the corporation, the [Siting Board] shall, after notice given pursuant to section eleven and public hearing in the town or city, determine the exemptions required and find that the present or proposed use of the land or structure is reasonably necessary for the convenience or welfare of the public …

G.L. c. 40A, § 3.

Thus, a petitioner seeking exemption from a local zoning ordinance under G.L. c. 40A, § 3 must meet three criteria. First, the petitioner must qualify as a public service corporation. See Trimount ESS LLC, EFSB 25-05/D.P.U. 24-152 at 11(2026) ("Trimount ESS"); Park City Wind, LLC, EFSB 20-01/D.P.U. 20-56/20-57, at 169 (2023) ("Park City Wind"); Vineyard Wind, LLC, D.P.U. 21-08, at 5 (2021) ("Vineyard Wind"); NSTAR Electric Company d/b/a Eversource Energy, D.P.U. 18-21, at 4 (2019) ("Westfield"); Save the Bay, Inc. v. Department of Public Utilities, 366 Mass. 667 (1975) ("Save the Bay"). Second, the petitioner must

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[9] The 2024 Climate Act also added Section 118, relating to BESS. The Siting Board discusses the applicability of Section 118 in Section VI. C, below.

demonstrate that its present or proposed use of the land or structure is reasonably necessary for the public convenience or welfare. Trimount ESS at 12; Park City Wind at 169; Vineyard Wind at 6; Westfield at 5-6. Finally, the petitioner must establish that it requires exemption from the zoning ordinance or bylaw. Trimount ESS at 12; Vineyard Wind at 6; Westfield at 6-7; NSTAR Electric Company d/b/a Eversource Energy, D.P.U. 17-147, at 8-9 (2019) ("K Street Substation").

The Siting Board favors the resolution of local issues on a local level whenever possible to reduce concern regarding any intrusion on home rule. The Siting Board has determined that the most effective approach is for a petitioner to consult with local officials regarding its project before seeking zoning exemptions pursuant to G.L. c. 40A, § 3. Trimount ESS at 12; Cranberry Point Energy Storage, LLC, D.P.U. 22-59, at 21 (2023) ("Cranberry Point"); Medway Grid, LLC, D.P.U. 22-18/22-19, at 18 (2023) ("Medway Grid"); Park City Wind at 170. Thus, the Siting Board encourages petitioners to consult with local officials and, in some circumstances, to apply for local zoning permits, before seeking zoning exemptions from the Siting Board under G.L. c. 40A, § 3. Trimount ESS at 12; Cranberry Point at 21; Medway Grid at 18; Park City Wind at 170.

III. PUBLIC SERVICE CORPORATION STATUS

A. Standard of Review

Previously, the Siting Board based its standard of review for public service corporation status on analysis provided by the Supreme Judicial Court. Save the Bay, 366 Mass. at 680; NSTAR Electric Company d/b/a Eversource Energy, EFSB 17-02/D.P.U. 17-82/17-83, at 194 (2019) ("Sudbury-Hudson"); Berkshire Power Development, Inc. D.P.U. 96-104, at 26-36 (1997) ("Berkshire Power"). The 2024 Climate Act codified the definition of "public service corporation" to include:

> a corporation or other entity duly qualified to conduct business in the commonwealth that owns or operates or proposes to own or operate assets or facilities to provide electricity, gas, telecommunications, cable, water or other similar services of public need or convenience to the public directly or indirectly, including, but not limited to, an entity that owns or operates or proposes to own or operate electricity generation, storage, transmission or distribution facilities, or

> natural gas facilities including pipelines, and manufacturing and storage facilities…

St. 2024, c. 239, § 36.

B. Positions of the Parties

1. Company

Hillman Energy Center, LLC is a Foreign Limited-Liability Company organized under the laws of the State of Virginia with a principal place of business in the Commonwealth of Virginia (Exh. HEC-1, at 1). Hillman Energy Center, LLC has a Date of Registration in Massachusetts (with the Secretary of the Commonwealth's Corporations Division) of March 28, 2025.[10]

Hillman asserts that the Company is an entity duly qualified to do business in the Commonwealth and proposes to own and operate a 125 MW electric storage facility (Company Brief at 10). The Company notes that, consistent with the definition contained in Section 36 of the 2024 Climate Act, the Company qualifies as a public service corporation pursuant to G.L. c. 40A, § 1A and is eligible to request a zoning exemption from the Siting Board (Company Brief at 10).

2. DiPalma/Sheehan

DiPalma/Sheehan acknowledges that the 2024 Climate Act expanded the concept of a public service corporation to include private energy storage development companies that are not public utilities and does not contest the Company's status as a public service corporation consistent with the Act (D/S Brief at 5).

No other party addressed the issue of the Company's status as a public service corporation.

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10 See MA Secretary of the Commonwealth's Corporations Division Search Results for Hillman Energy Center, LLC; Identification Number 001878684 - MA Secretary of State Hillman Energy Center file.

C. Analysis and Findings

An entity requesting a zoning exemption must establish that it is a public service corporation. The term "public service corporation" is defined by statute under the 2024 Climate Act. St. 2024, c. 239, § 36. The Siting Board takes official notice that the Company is registered in Massachusetts as a foreign limited liability company and is authorized to conduct business in the Commonwealth. 980 CMR 1.06(7). The Company proposes to construct to construct a 125 MW BESS and related infrastructure. Hillman Energy Center, LLC is a corporation duly qualified to conduct business in the Commonwealth that proposes to own and operate assets or facilities to provide electricity to the public directly or indirectly – specifically, through energy storage and discharge in the form of a BESS (Tr. 1, at 95). Therefore, the Siting Board finds that Hillman Energy Center, LLC qualifies as a public service corporation for purposes of G.L. c. 40A, § 3.

IV. PUBLIC CONVENIENCE AND WELFARE

A. Standard of Review

In determining whether the present or proposed use is reasonably necessary for the public convenience or welfare, the Siting Board must balance the interests of the general public against the local interest. Park City Wind at 174; Save the Bay, 366 Mass. at 680; Town of Truro v. Department of Public Utilities, 365 Mass. 407, 409 (1974) ("Town of Truro"). Specifically, the Siting Board is empowered and required to undertake "a broad and balanced consideration of all aspects of the general public interest and welfare and not merely [make an] examination of the local and individual interests which might be affected." New York Central Railroad v. Department of Public Utilities, 347 Mass. 586, 592 (1964) ("NY Central Railroad"); K Street Substation at 7; Hopkinton LNG, D.P.U. 17-114, at 10 (2018) ("Hopkinton LNG"). When reviewing a petition for a zoning exemption under G.L. c. 40A, § 3, the Siting Board is empowered and required to consider the public effects of the requested exemption in Massachusetts as a whole and upon the territory served by the applicant. Save the Bay, 366 Mass at 685; NY Central Railroad, 347 Mass at 592.

When making a determination as to whether a petitioner's present or proposed use is reasonably necessary for the public convenience or welfare, the Siting Board examines: (1) the

need for, or public benefits of, the present or proposed use; (2) the present or proposed use and any alternatives or alternative sites identified; and (3) the environmental impacts or any other impacts of the present or proposed use. The Siting Board also considers safety aspects of the Project. See Trimount ESS, EFSB-25-05/D.P.U. 24-152, at 57-79 (2026). The Siting Board then balances the interests of the general public against the local interest and determines whether the present or proposed use of the land or structures is reasonably necessary for the convenience or welfare of the public. Park City Wind at 175; NSTAR Electric Company d/b/a Eversource Energy, EFSB 19-06/D.P.U. 19-142/19-143, at 100-101 (2022) ("Mid Cape Reliability Project"); Sudbury-Hudson at 195.

With respect to the site chosen by a petitioner, G.L. c. 40A, § 3 does not require the petitioner to demonstrate that its preferred site is the best possible alternative, nor does the statute require the Siting Board to consider and reject every possible alternative site presented. Rather, the availability of alternative sites, the efforts necessary to secure them, and the relative advantages and disadvantages of those sites are matters of fact bearing solely upon the main issue of whether the preferred site is reasonably necessary for the convenience or welfare of the public. Martorano v. Department of Public Utilities, 401 Mass. 257, 265 (1987) ("Martorano"); NY Central Railroad, 347 Mass. at 591; K Street Substation at 7.

B. Project Need and Public Benefits

1. Company Description

The Company stated that the Project would advance the Commonwealth's energy and environmental policies, including the net zero emissions target for 2050 (Exh. HEC-1, at 39). [11] The Project would also align with the Commonwealth's energy storage mandates, including 1,000 MWh by December 31, 2025, St. 2018, c. 227, § 20, and the 5,000 MW procurement target for 2030 established under the 2024 Climate Act, St. 2024, c. 239, § 298 (Exh. HEC-1, at 40). The Company further indicated that the Project would support the four objectives of the

[11] EEA Determination Of Statewide Greenhouse Gas Emissions Limit and Sector-Specific Sublimits For 2050 (Dec. 2022) available at https://www.mass.gov/doc/determination-letter-for-the-2050-cecp/download.

Commonwealth's 2015 Energy Storage Initiative:[12] (1) attracting, supporting, and promoting storage companies in Massachusetts; (2) accelerating development of commercial storage technologies; (3) expanding markets for storage technologies, and valuing storage benefits to clean energy integration, grid reliability, system wide efficiency, and peak demand reduction; and (4) recommending and developing policies, regulations, and programs to advance these objectives (Exh. HEC-1, at 40).

According to the Company, the Project would be consistent with the Department of Energy Resources' ("DOER") and the Massachusetts Clean Energy Center's ("MassCEC") 2016 *State of Charge* report,[13] which identifies ratepayer cost benefits of energy storage associated with reduced peak demand, deferred transmission and distribution investments, reduced GHG emissions, reduced cost of renewables integration, deferred new capacity investments, and increased grid flexibility, reliability, and resiliency (Exh. HEC-1, at 40-41). The report further identifies economic and workforce benefits for the Commonwealth related to energy storage (Exh. HEC-1, at 41). Moreover, the Project would align with DOER's and MassCEC's follow-up 2023 *Charging Forward* report,[14] which re-affirms many findings in the *State of Charge* report and concludes that energy storage deployment is a critical, cost-effective strategy for advancing the Commonwealth's 2050 Clean Energy and Climate Plan (Exh. HEC-1, at 41).

In addition, the Company noted that the Project would be consistent with the Massachusetts Clean Peak Standard ("CPS") by displacing non-renewable generation, reducing peak demand and system losses, and increasing grid reliability, consistent with the Commonwealth's emissions reduction requirements under the Global Warming Solutions Act ("GWSA") (Exh. HEC-1, at 42). Hillman stated that Clean Peak resources contribute to the Commonwealth's environmental protection goals concerning air emissions, including those required by the GWSA, by displacing non-renewable generating resources while reducing peak demand and system losses and increasing grid reliability (Company Brief at 11-15). Hillman

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12 See https://www.mass.gov/info-details/esi-goals-storage-target.

13 See https://www.mass.gov/media/6441/download.

14 See https://www.masscec.com/program/2023-energy-storage-study.

represented that the Project would also contribute as a reliable energy resource that would transact in the Independent System Operator of New England ("ISO-NE") energy, capacity, and ancillary services markets (Exhs. EFSB-G-2, EFSB-N-4; Company Brief at 49)

The Company committed to providing substantial local fiscal benefits, including payments in lieu of taxes ("PILOT") exceeding $1,000,000 annually[15] for the life of the Project (Exhs. EFSB-N-2; D/S-G-10). The Company explained that these funds would support municipal initiatives, including electrification of municipal vehicles, integration of renewable energy in municipal facilities, capital improvements for recreational and senior programs, and stormwater infrastructure upgrades (Exhs. EFSB-N-2; TEWK-JCC-2, at Section 6(C, G)).[16] The Company further committed to supporting local first responders and schools and to prioritizing use of local union labor and vendors during Project construction (Exhs. EFSB-N-2). Additionally, the Company represented that the Project would support labor interests, employing between 25 and 60 personnel during construction, and that the Company intends for as many of these workers to be union laborers as possible, and to use local labor (Tr. 1, at 83; Exh. EFSB-N-2; Company Brief at 41).

2. Positions of the Parties

DiPalma/Sheehan contests the immediacy of the need for this specific project to meet the Commonwealth's energy storage goals (D/S Brief at 89, citing Exh. D/S-G-22). DiPalma/Sheehan asserts that that projects presently in the ISO NE review pipeline as of December 2025 will fulfill 120 percent of Massachusetts's clean energy goal regarding energy

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15 The executed HCA specifies a PILOT commitment of $2,000,000 annually over the 20 -year life of the anticipated Tax Agreement, subject to final negotiation of the Tax Agreement between Hillman and the Town (RR-EFSB-16(S1) at 2).

16 The HCA includes funding commitments by the Company to various municipal and community programs and services such as an electric and hybrid vehicle conversion program for replacing Town vehicles; youth sports; the local food bank; parks and recreational facilities; stormwater infrastructure; fire safety materials and equipment; senior services; and improvements to municipal facilities (RR-EFSB-16(S1) at Exhibit D).

storage (D/S Brief at 89, citing Exh. D/S-G-22). DiPalma/Sheehan asserts that there are many opportunities for better-located projects to achieve the State's goal (D/S Reply Brief at 20). DiPalma/Sheehan asserts that there is no commercial operation date set for the Project, and the State has almost five years to reach its goal of 5,000 MW of new BESS capacity (D/S Reply Brief, at 20). DiPalma/Sheehan cautions that the need for this Project must be balanced with the potential impacts to the community and with other state environmental policies (D/S Brief at 86-89).

In addition, the parties addressed various issues relating to the proposed Project's compliance with individual state permitting and environmental requirements. Those issues are addressed below

3. Analysis and Findings

The Commonwealth has adopted legislative and policy goals to increase the use of clean and renewable energy and attain net zero carbon emissions by 2050. The Project would help the state meet these goals by enabling the interconnection of offshore wind energy generation and other renewables to the electric grid by balancing renewable energy intermittency. In addition, the Project would provide electric system capacity and contribute to system resiliency by operating on a schedule that will reduce peak demand and through its participation in the ISO-NE wholesale markets. The Project would charge from the grid at periods when there is typically an excess supply of electricity and then deliver that energy back onto the grid during times of peak demand or electric system need.

The 2024 Climate Act calls for the procurement of 5,000 MW of energy storage capacity by July 31, 2030. St. 2024, c. 239, § 98. More recently, Governor Healey signed Massachusetts Executive Order 654 which calls for an additional five gigawatts of energy storage to be available online or under development by 2035. The Executive Order notes that the added storage capacity would facilitate the integration of additional electricity supply, alleviate grid constraints, and reduce peak energy demand.

On August 24, 2025, MassDEP issued a memorandum providing guidance related to BESS projects and addressing public health, safety and environmental issues for those facilities.

In that guidance, MassDEP stated: "Utility scale BESS is key to reducing costs and emissions associated with transmission system services because a BESS at that scale can be charged from low-cost renewable resources like solar and wind and can be deployed to reduce the overall peak demand of the system and the large associated costs. In other words, it can charge when costs are low and discharge when costs are high, helping to reduce electricity costs for all customers during/periods of high demand" (Exh. D/S-2, at 4).

MassDEP provided further guidance related to the emission reduction value of BESS projects.

> BESS are important for the Commonwealth to meet its decarbonization goals. The Global Warming Solutions Act, as amended by the 2021 Climate Roadmap Act ("GWSA"), requires Massachusetts to reach economy wide, Net Zero greenhouse gas emissions ("GHG") by 2050. To meet this requirement, the Massachusetts Clean Energy and Climate Plan for 2050 ("2050 CECP") identifies the role of clean, emissions-free energy generation, particularly onshore and offshore wind and solar photovoltaics resources, which together are expected to comprise about 75% of New England's electric capacity by 2050
>
> Exh. D/S-2, at 1.
>
> Without energy storage in place during periods of high electricity demand where there are limited resources generating electricity, fossil fuel plants known as "peaker" plants must come online. Peaker plants, when used, are typically large emitters of both GHG and other emissions that negatively impact local air quality. The ability for energy storage to displace peaker plants is critical for Massachusetts to meet Net Zero by 2050 and to improve public health outcomes
>
> Exh. D/S-2, at 3.

Finally, the Siting Board notes that the Town and the Company have included provisions within the executed HCA which assist in reductions in local greenhouse gas emissions such as decarbonization programs for municipal facilities and municipal vehicle conversions. See RR--EFSB-16(S).

The Siting Board has found on various occasions that successful participation of an energy resource in the ISO-NE wholesale markets indicate such a resource is needed for reliability purposes by Massachusetts customers and the New England market. See Medway Grid and Cranberry Point; see also Exelon West Medway LLC and Exelon West Medway II,

LLC, EFSB 15-01/D.P.U. 15-25, at 17 (2016) ("Exelon West Medway"); NRG Canal 3 Development LLC, EFSB 15-06/D.P.U. 15-180, at 143, 156 (2017) ("NRG Canal"). The Siting Board views the Project's suitability in providing multiple services in the wholesale market as an indication that it would play a useful role in providing diverse benefits to the respective markets and their customers. The Siting Board notes the Project's intended participation in the Clean Peak Program has the potential to provide additional energy and environmental benefits, beyond the requirements for participation in the ISO-NE wholesale markets.

In addition to its energy and environmental benefits, development of the Project would yield a variety of economic benefits to the Town of Tewksbury, its residents, and Massachusetts more broadly. These would include PILOT payments to the Town of Tewksbury, and a variety of other funding commitments and program support that Hillman would provide to the Town, community-based organizations, and individual residents, as reflected in the HCA. In addition, Company has agreed to employ commercially reasonable efforts to hire local union labor and vendors in connection with the construction of the Project.

In view of the above, the record shows that the Project serves a public need, and the public would benefit from its operation.

C. Alternative Sites Explored

1. Company Description

The Company stated that it conducted an analysis of alternative sites prior to selecting the Project Site through a review of "a whole swath" of substations and "hundreds of sites" across the state to identify top points of interconnection (Company Reply Brief at 21). The Company indicated that it chose the Interconnection Substation for a host of reasons, including its capacity, interconnection potential, congestion on the transmission grid that could be alleviated by a BESS project located at this substation, and available land positions around the substation (Tr. 2, at 304; Company Reply Brief at 21).

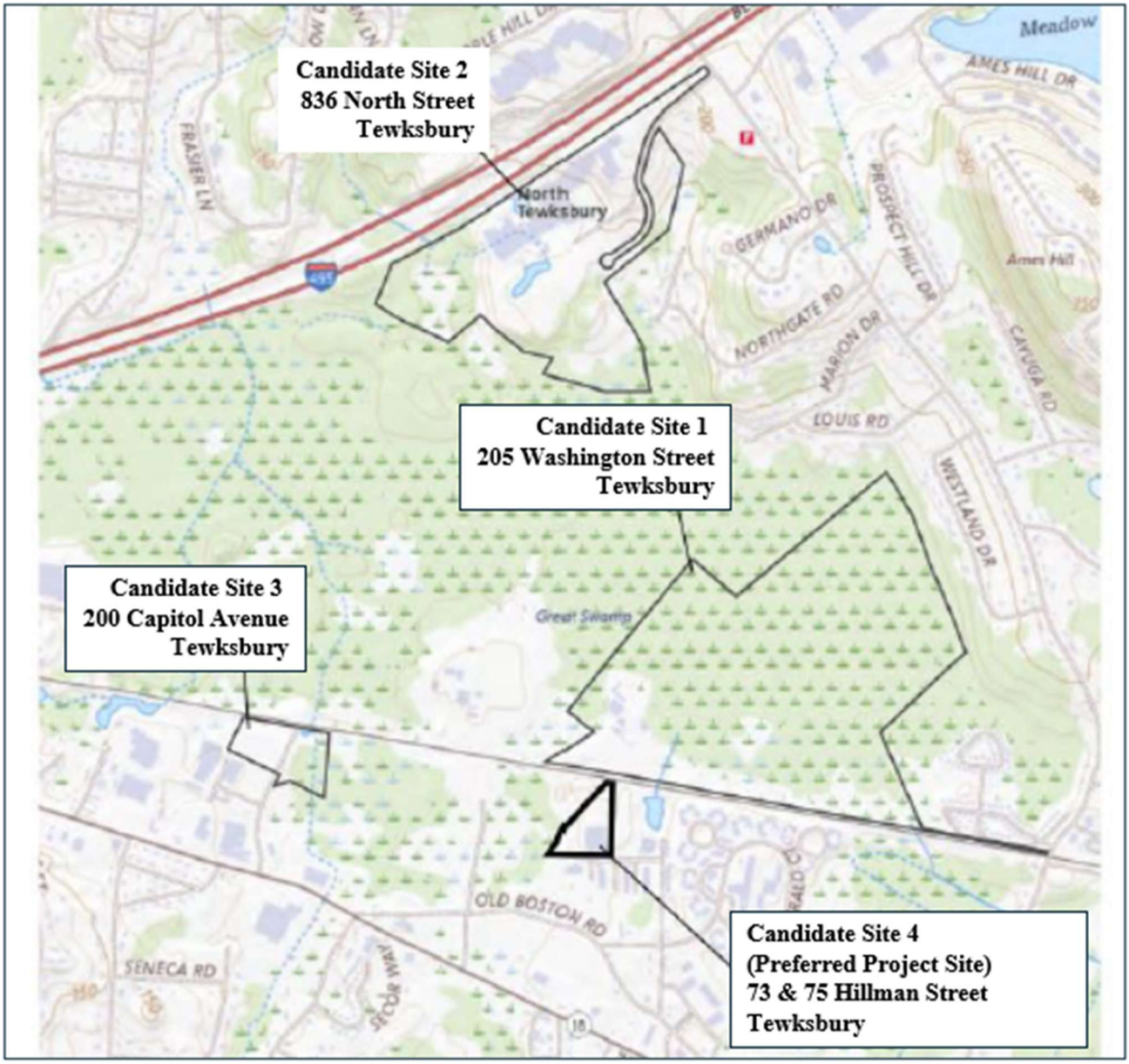
The Company used the following screening criteria when selecting candidate sites for the Project:

- Proximity to Interconnection Substation: The Company prioritized sites close to the Interconnection Substation to minimize potential impacts of the interconnection route and to minimize costs of longer electric transmission interconnection lines;
- Current land use: Parcels with existing industrial uses were favored due to the reduced environmental impact and potential for brownfield qualifications;
- Surrounding land uses: Adjacent land uses were also taken into consideration to minimize impacts on neighboring parcels;
- Size of parcel: Parcels were only considered if they were a minimum of 4 acres and had at least 3.5 acres of buildable upland area;
- Site access: Existing access from a public right of way was also a key factor of viable parcels; and
- Environmental and ecological considerations: The Company considered ability to avoid or minimize environmental impacts, including, but not limited to, rare species.

Exh. HEC-1, at 13.

The Company identified four candidate sites (shown in Figure 3), all within Tewksbury, that met the initial screening criteria, and it performed an evaluation summarized below (Exh. HEC-1, at 13).

Figure 3: Candidate Sites.



Source: Exh. HEC-1, at 14.

a. Candidate Site 1

Candidate Site 1 (205 Washington St.) is an approximately 137-acre parcel situated roughly 350 feet to the east of the Interconnection Substation (Exh. HEC-1, at 15). This site contains an existing electric substation, several existing electric transmission corridors, and various parking areas owned and operated by National Grid (Exh. HEC-1, at 15). Hillman

eliminated Candidate Site 1 due to the following reasons: (1) the extensive amount of wetland areas mapped on the site; (2) the significant wetland impacts that would be required to gain access to the remaining available uplands on the site to construct a 125 MW BESS facility; and (3) the abundance and high-density of residential development immediately adjacent to the south, east, and northeast of the site's property line (Exh. HEC-1, at 15).

b. Candidate Site 2

Candidate Site 2 (836 North Street) is a 73.7-acre parcel situated approximately 2,300 feet to the north of the Interconnection Substation (Exh. HEC-1, at 16). This candidate site is the farthest straight-line distance from the Interconnection Substation of all the candidate sites considered (Exh. HEC-1, at 16). Candidate Site 2 has access from North Street via Network Drive and contains active office and research buildings and associated parking areas (Exh. HEC-1, at 16). An existing electric transmission corridor traverses the southeast corner of Candidate Site 2 and provides a direct potential pathway to the Interconnection Substation (Exh. HEC-1, at 16). Of the 73.7-acre site, all but 16.5 acres is occupied by the existing office park and 13.5 acres of this 16.5 acres is mapped as wetland (Exh. HEC-1, at 16). The remaining available forested upland is not sufficient to construct a 125 MW BESS facility (Exh. HEC-1, at 16). Candidate Site 2 is not within a Zone II Wellhead Protection Area (Exh. D/S-SS-15). Hillman eliminated Candidate Site 2 due to the lack of available upland area to accommodate a 125 MW BESS facility (Exh. HEC-1, at 16).

c. Candidate Site 3

Candidate Site 3 (200 Capitol Avenue) is an approximately 7.78-acre parcel situated approximately 950 feet southwest of the Interconnection Substation (Exh. HEC-1, at 16). Candidate Site 3 contains an existing paved parking area with several one-story retail buildings that occupy approximately 2.9 acres of the site (Exh. HEC-1, at 16). According to Hillman, there is an additional approximately 1.2 acres of upland forested area that could be combined with the 2.9 acres area of existing developed areas to construct a 125 MW BESS facility (Exh.

HEC-1, at 16-17). Based upon available mapping, the remaining 3.68 acres of the site consists of wetlands (Exh. HEC-1, at 17).

Further, Hillman stated that there is a general prohibition on horizontal directional drilling ("HDD") beneath active rail corridors (due to the risk of ground settling), which would preclude the use of HDD in key segments along the required route (Exh. EFSB-SS-6). HDD also requires a significant area for the entry/exit pits (up to 75 feet by 100 feet in size) for installation (Exh. EFSB-SS-6). Given the existing space constraints and lack of upland area at the existing Interconnection Substation, the Company determined that the entry/exit pit would need to be within a wetland resource area and would result in over 5,000 square feet of direct impact (Exh. EFSB-SS-6). The Company stated that wetland impacts at Candidate Site 3 would include permanent structures in the wetland and a 100-foot-wide corridor from the rail crossing through wetlands (off the Project Site) (Tr. 2, at 155-156). The Company further noted there is no guarantee that the Candidate Site 3 option is feasible given existing infrastructure, wetland and hydrological conditions, and requirements from National Grid (RR-EFSB-6).

The Company eliminated Candidate Site 3 for the following reasons: (1) any potential overhead or underground electric transmission interconnection from this site directly to the Interconnection Substation would result in extensive impacts to existing wetland resource areas located off the Project Site; and (2) a potential underground electric transmission interconnection from this site to the Interconnection Substation within public roadways would be approximately 4,000 feet in length and expensive with estimated costs higher than any potential electric transmission interconnection considered for the other candidate sites evaluated (Exh. HEC-1, at 17).

d. Candidate Site 4 (Project Site)

Candidate Site 4 (the Company's preferred Project Site) at 73-75 Hillman Street is situated approximately 770 feet to the south of the Interconnection Substation (Exh. HEC-1, at 17). Candidate Site 4 is accessible from Hillman Street and is entirely developed with existing commercial/industrial buildings and an existing residence (Exh. HEC-1, at 17). Based on a review of current mapping, Candidate Site 4 has no state-listed protected species, certified vernal

pools,[17] wetlands, areas of critical environmental concern ("ACEC"), outstanding resource waters ("ORW"), FEMA floodplains, surface water supply protection areas, or protected open space areas (Exh. HEC-1, at 17). The entire Candidate Site 4 is within an area mapped as a MassDEP Zone II Wellhead Protection Area ("WPA") and a local Groundwater Protection Overlay District (Exh. HEC-1, at 17 -18, 20). The Company stated that the Project has minimal potential to impact public water supply sources and other water resources due to project safeguards including: (1) a stormwater management system that includes water quality units and an underground infiltration system; (2) secondary containment measures for the main power transformer at the Project Substation and medium voltage transformers that include built-in containment; (3) development of a Long-Term Pollution Prevention Operation and Maintenance Plan and a Construction Period Soil, Erosion, and Sediment Control Plan; and (4) additional plan development including a Spill Prevention, Control, and Countermeasure Plan ("SPCC") and an Emergency Response Plan ("ERP") (Exh. HEC-1, at 20).

Land uses immediately surrounding Candidate Site 4 include the following: an electric transmission corridor to the west; commercial warehouse and storage facilities to the south; commercial/industrial land uses to the east; and an existing railroad corridor, wetlands, and an existing electric substation to the north (Exh. HEC-1, at 18). The Company stated that the Project Site is sufficiently large to accommodate the BESS facility without direct impacts to vegetated wetlands, and the Transmission Interconnection would result in approximately 2,400 square feet of temporary impacts to vegetated wetlands that would be restored following construction (Exh. HEC-1, at 22).

The Company selected Candidate Site 4 as its proposed Project Site for the following reasons: (1) it is entirely developed and would not result in any impacts to wetlands from construction of the BESS facility and substation and has minor potential for impacts to wetlands

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[17] The Company stated that its consultant conducted a field evaluation during the vernal pool breeding season to determine whether this IVW meets the criteria for certification as a vernal pool in Massachusetts (RR-EFSB-21(S1) at 23-24). Based on this assessment, the Company asserted that the IVW does not contain vernal pool indicators, does not qualify for certification, and is not considered a viable vernal pool (RR-EFSB-21(S1) at 23-24).

along the Transmission Interconnection; (2) its location is proximate to the Interconnection Substation; (3) it is accessible from a public roadway (Hillman Street); and (4) surrounding land uses are predominantly industrial/commercial in nature (Exh. HEC-1, at 18). However, there are single family and multi-family housing developments located within 1,000 feet of the site (Exh. EFSB-G-13).

e. No Build Alternative

The Company also considered a "no-build" alternative (Exh. HEC-1, at 18). The Company stated under the no-build alternative, the Project would not be constructed, and the Commonwealth would not benefit from the Project's contributions toward Massachusetts' emission-reduction goals and energy storage targets (Exh. HEC-1, at 18). Thus, the no-build alternative was not considered to be a viable alternative (Exh. HEC-1, at 18).

2. Positions of the Parties

a. Town of Tewksbury

The Town did not comment on the proposed Project Site and site alternatives analysis.

b. Tewksbury Board of Health

According to the BOH, the Company's alternative site analysis does not meet the standard reflected in applicable precedents (BOH Reply Brief at 7). The BOH claims that the Company's inclusion of Candidate Sites 1 and 2, dominated by wetlands and lacking sufficient upland area, does not constitute the site comparison that the Siting Board requires (BOH Reply Brief at 7).

The BOH contends that Candidate Site 3 is a genuinely viable alternative (BOH Reply Brief at 7). The BOH claims that Candidate Site 3 is demonstrably superior to the Project Site: it is not located within the Zone II WPA or the Groundwater Protection District, and it has no residential structures within 1,000 feet (BOH Reply Brief at 7). According to the BOH, the proposed Project Site, by contrast, has 14 single-family homes within 1,000 feet and the Emerald Court senior housing community, which includes an assisted living facility, beginning at approximately 600-650 feet from the Project (BOH Reply Brief at 7; Exh. EFSB-SS-8). The

BOH contends that the Company offered no explanation as to why residential proximity was disqualifying at 1,560 feet (in Candidate Site 1) but acceptable at 600 feet (for Candidate Site 4) (BOH Reply Brief at 8).

The BOH contends that despite Company's stated reason for rejecting Candidate Site 3 (that the 4.000-foot-line that would connect it to the Interconnection Substation would be prohibitively expensive), the Company did not provide a cost estimate to support that characterization (BOH Reply Brief at 8). The BOH argues that the record also reflects that BESS facilities can be sited along circuit lines rather than adjacent to substations, a point it contends was raised in discovery and not refuted (BOH Reply Brief at 8). The BOH notes that when asked why the Project must be at the proposed location, rather than at any other site near the regional grid, the Company responded that the substation has available capacity and the site is proximate (BOH Reply Brief at 8). BOH asserts that the Company's logic is not a demonstration of reasonable necessity as G.L. c. 40A § 3 requires (BOH Reply Brief at 8).

c. DiPalma/Sheehan

DiPalma/Sheehan assert that the consideration of alternate sites by the Company was "perfunctory" and that the Company failed to adequately demonstrate the necessity of the chosen site (D/S Brief at 72). DiPalma/Sheehan claim that there are several issues associated with the Project siting as described below:

- There are numerous residences and commercial spaces in close proximity to the Project Site that could face unsafe levels of toxins if released in a thermal runaway or fire event at the facility (D/S Brief at 6);
- The Project Site lies in a Groundwater Protection District (a local classification) and a Zone II WPA (D/S Brief at 6); and
- The consideration of alternatives and alternative sites was inadequate (D/S Brief at 8).

DiPalma/Sheehan alleges the Company should not have offered Candidate Sites 1 and 2 as alternatives as they were not viable sites from the outset due to insufficient land for the Project, the presence of wetlands on these sites, and the longer distance (for Candidate Site 2) to connect to the substation (D/S Brief at 68-70; D/S Reply Brief at 7). DiPalma/Sheehan contends

that Candidate Site 3 is not in a Zone II groundwater protection district and there are no single-family homes within 1,000 feet of this site, whereas 14 single family homes exist within 1,000 feet of the Project Site (D/S Reply Brief at 7; D/S Brief at 71; Exh. EFSB-SS-8). DiPalma/Sheehan maintains that the benefits of locating the Project at Candidate Site 3 offset the additional costs of an 800-foot longer transmission line needed to interconnect the Project to the Interconnection Substation (D/S Reply Brief at 71).

d. Limited Participants

The limited participants ("LPs") also claimed that (1) the site alternatives evaluation was inadequate; (2) Candidate Sites 1 and 2 were not viable alternatives; (3) Candidate Site 3 is an adequate site; and (4) the Proposed Site (Candidate Site 4) is located in close proximity to residences, daycare facilities, senior housing, assisted living, and local businesses (Chesbrough Brief at 1; Corbin Brief at 15; Martin Brief at 15; and Robertson Reply Brief at 3-5).

e. Company Response

The Company maintains that it conducted a reasonable and diligent analysis of alternative sites to understand the potential alternatives to its preferred site, and the Company's selection of its preferred site was reasonable and appropriate (Company Reply Brief at 23-24). The Company maintains that it first identified a viable location to interconnect the Project – which its sees as a necessity for the successful development of any BESS project (Company Reply Brief at 21). The Company asserts that it conducted a robust and informed analysis of alternative sites prior to selecting the Project Site through a review of "a whole swath" of substations and "hundreds of sites" across the state to identify top points of interconnection (Company Reply Brief at 21). The Company indicates that it chose the Interconnection Substation for a host of reasons, including its capacity, interconnection potential, congestion on the transmission grid that could be alleviated by a BESS project located at this substation, and available land positions around the substation (Tr. 2, at 304; Company Reply Brief at 21).

The Company asserts that the four alternate sites identified were reasonable based on the foregoing factors (Company Reply Brief at 22). After consideration of these alternatives, the Company relates that it selected Candidate Site 4 (its preferred Project Site) for the following

reasons: (1) it is entirely developed and will not result in any impacts to undeveloped forested areas or wetlands; (2) its location is proximate to the Interconnection Substation; (3) it is accessible from a public roadway (Hillman Street); (4) surrounding land uses are predominantly industrial/commercial in nature; and (5) it is commercially available (Company Brief at 20).

Despite DiPalma/Sheehan and LP criticisms of Candidate Sites 1 and 2 as being intentionally proffered by the Company to fail, the Company contends that Candidate Site 1 was suitable in that it has forested upland area that is directly adjacent to Tewksbury No. 22A Substation and could potentially have been accessed by the road leading to the Substation (Dock Road) (Exh. EFSB-SS-2(1) at 1). However, the Company also notes that accessing the remainder of the upland area would involve wetlands impacts, in part leading to its rejection of Site 1 in favor of the Company's preferred site (Company Reply Brief at 22). With respect to Site 2, the Company eliminated this option due to the lack of available upland space (to avoid impacting the existing office park) but was otherwise a worthy site for consideration as part of a site alternatives analysis (Company Reply Brief at 23). The Company also dismisses DiPalma/Sheehan and LP assertions of advantages for Site 3 given the extensive wetlands impacts required for a direct connection to the Interconnection Substation from this location (Company Reply Brief, at 23, citing D/S Reply Brief at 7; Chesbrough Brief, at 1; Robertson Reply Brief at 3-5). For all these reasons, the Company asserts that its alternative site analysis was sufficient and meets the requisite legal standard (Company Reply Brief at 24).

3. Analysis and Findings

Pursuant to G.L. c. 40A, § 3 and applicable case precedent, a zoning exemption applicant is not required to demonstrate that its preferred site is the best possible alternative, nor is the applicant or the Siting Board required to consider and reject every possible alternative site. Martorano, 401 Mass. at 265. Rather, the availability of alternative sites, the efforts necessary to secure them, and the relative advantages and disadvantages of those sites are matters of fact bearing solely upon the main issue of whether the preferred site is reasonably necessary for the convenience or welfare of the public. Martarano v. Department of Public Utilities, 401 Mass. 257, 265 (1987); New York Central Railroad, 347 Mass. at 591.

Based on a review of the record, the Siting Board finds that the Company adequately described its process for site selection. The record indicates that the Company first focused on a point of interconnection with sufficient capacity to accommodate the Project. The Company described its site selection criteria and how it applied those criteria to its selection of Candidate sites. The Company provided an analysis of the positives and drawbacks for each Candidate site.

The Siting Board finds that the Company has provided sufficient information to evaluate the four alternative sites, including its preferred alternative, for purposes of Project review and development of its findings, consistent with Martorano. The Siting Board finds that the Company identified and analyzed four plausible sites. Candidate Sites 1 and 2, had wetlands and upland space limitations. Candidate Site 3, having certain advantages (i.e., no Zone II WPA and further away from residential developments), also has clear disadvantages, such as added cost of a longer transmission line, related roadway impacts, and challenges of crossing wetlands systems to the Interconnection Substation.

Candidate Site 4 (the Project Site) is proposed to be sited on an existing industrial site. Candidate Site 4 contains a small, isolated wetland at the northern end of the parcel. The record shows that the Project Site is sufficiently large to accommodate the entire BESS facility without direct impacts to vegetated wetlands, and the Transmission Interconnection is anticipated to result in approximately 2,400 square feet of temporary impacts to vegetated wetlands that would be restored following construction. While the Project Site is in a Zone II Wellhead Protection Area, the Project will develop a stormwater management plan that is required to meet all MassDEP Stormwater Standards and must be approved by the Tewksbury Planning Department prior to operations, adequate secondary containment for the transformer, and an ERP that must be approved by the Tewksbury Fire Department ("TFD") prior to operations. Construction best management practices ("BMP") reduce any potential aquifer impacts during construction.

The Board finds that the Applicant has adequately evaluated the site alternatives considered for the Project, including its preferred Site (Candidate Site 4). Further, the Board finds that the Company has established that the preferred Site, an industrially zoned property with a history of industrial and commercial uses, has clear advantages over other Candidate

Sites, adequately demonstrating that the preferred site is reasonably necessary for the convenience and welfare of the public.

D. Impacts of the Proposed Use

This section evaluates the third category of considerations for determining whether the Project is reasonably necessary for the public convenience or welfare, given the expected impacts of the Project, including impacts related to construction; traffic; land-based resources and land use; water resources and wetlands; visual effects; noise; air; solid waste and hazardous materials; and magnetic fields. These sections (Section IV.D) consider and address Project construction and normal operations. Considerations of abnormal events are addressed in the Safety section (Section IV.E).

1. Construction and Outreach

a. Company Description

i. Construction

The Company intends to obtain all permits, and coordinate with the Town and the authority having jurisdiction ("AHJ") on construction matters (Exh. HEC-1, at 10).[18] The Company will need to obtain the following construction-related permits from the Tewksbury Inspectional Services: building permit, electrical permit, mechanical permit, demolition permit; and a land disturbance/stormwater permit from the Tewksbury Planning Board (Exh. EFSB-G-10, at 2).[19]

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[18] Town AHJs: Tewksbury Conservation Commission for wetland impacts; Tewksbury Inspectional Services Department for building, electrical, mechanical, and demolition permits; Tewksbury Fire Department for Fire Safety Permit; and Tewksbury Planning Board for Land Disturbance/Stormwater Permit (Exh. HEC-1, at 11).

[19] In addition to filing with the EFSB in April 2025, the Company stated that it filed a Project Notification Form with the Massachusetts Historic Commission in March 2025, and a Notice of Intent with the Tewksbury Conservation Commission in May 2026 (Exh. EFSB-G-10, at 2; RR-EFSB-21(S1) at 1).

The Company would prepare a Construction Management Plan ("CMP") as part of its application process to the Tewksbury Building Department that includes all Company obligations provided in the HCA – i.e., Sections 9 (Construction Management Plan), 10 (Noise and Visual Mitigation), 11 (Traffic Impacts), and 12 (Fire, Health and Safety) (RR-EFSB-16(S1) at Sections 9, 10, 11, and 12). See Condition 19 which requires the Company to file its staging and laydown plans with the Board. The Company would agree upon and coordinate the CMP with the Tewksbury town manager and police and fire departments prior to construction (RR-EFSB-16(S1) at Section 9). See Condition 6 of this Tentative Decision.

The Company stated it would comply with all applicable local, state, and federal regulatory performance standards related to wetland resource areas (Exh. HEC-1, at 22). All proposed work within the 100-foot wetland buffer zone would include the use of best management practices ("BMPs") such as erosion control barriers to establish limits of work and to ensure that there would be no short- or long-term impacts to adjacent wetland resource areas (Exh. HEC-1, at 22). The Company confirms that the Project would require the development of a Stormwater Pollution Prevention Plan ("SWPPP") that identifies controls to be implemented to mitigate the potential for erosion and sedimentation from soil disturbance during construction (Exh. HEC-1, at 22). Similarly, the Massachusetts Stormwater Management Standards require the Company to develop a Construction Period Soil Erosion and Sediment Control Plan (Exh. HEC-1, at 22). In addition, the Company related it would locate all stockpiles (if necessary) outside of the 100-foot buffer zone, and refueling or storage of equipment—except for those that cannot be moved due to safety or operational requirements—would not be permitted within 100 feet of wetland resource areas (Exh. HEC-1, at 22).

The Company confirmed it would conduct Project construction in accordance with Tewksbury General Bylaw Section 8.12 and other applicable laws during the following days and hours: Monday –Friday, 7:00 a.m. to 5:00 p.m. (RR-EFSB-16(S1) at Section 10(A)). The Company further affirmed it would not conduct construction operations on legal holidays; and under no circumstances would these hours be altered without the prior written approval of the Town Manager (RR-EFSB-16(S1) at Section 10(A)). Finally, the Company declared it would ensure that its construction contractors adhere to commitments and permitted work hours

established with the Town (Exh. HEC-1, at 46). Pursuant to the HCA, the Company would decommission and remove the Project following its end of use/operations, at the Company's sole cost and expense., and provide Tewksbury with at 180 days prior written notice of the decommissioning of the Project (RR-EFSB-16(S1) at Section 14).

ii. Outreach

The Company stated that it held or participated in numerous outreach meetings in 2024 and 2025 with Town and state personnel, and open houses with the public (Exh. HEC-1, at 45, Table 9-1). The Company established Project email and phone numbers to facilitate communications with the community (Exh. HEC-1, at 46). These contact venues are listed on the project website.[20] The Company has appeared before the Tewksbury Select Board and the Board of Health to respond to questions and to educate the public about battery energy storage and the Project (Exh. EFSB-G-6). In addition, the Company stated that it has joined and spoken before local chambers of commerce and on local radio stations to respond to questions about battery storage generally and the Project specifically (Exh. EFSB-G-6). The Company introduced its battery storage fire subject matter experts ("SMEs") to the TFD to discuss the drafting of an ERP and system designs required by the Town's first responders (Exh. EFSB-G-6). The Company held an open house for Tewksbury residents and businesses on March 18, 2025 before the April 1, 2025 petition to the Siting Board was filed (Exh. HEC-1, at 44). Beginning in March 2025, Hillman met with State Representative Robertson, State Senator Barry Finegold, and the Tewksbury Select Board to present the proposed Project as part of its introduction of the proposed Project to key stakeholders in the Tewksbury community (Exh. HEC-1 at 44).

The Company stated it would develop a Construction Community Outreach Plan to keep Town officials, emergency personnel, property owners, and businesses informed of construction activities (Exh. HEC-1, at 46). The Company committed to work collaboratively with Town officials to minimize construction impacts (Exh. HEC-1, at 46).

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[20] Project website: https://hillmanenergycenter.com/.

b. Position of the Parties

i. Construction

(A) Town of Tewksbury

The Town requests that Sections 9 and 14 of the HCA, addressing the Company's CMP and Project decommissioning obligations, respectively, be expressly incorporated into the Board's Final Decision (Town Brief, at 7; Exh. TEWK-JCC-2, Section 9 and 14).

(B) Limited Participants

Ms. Chesbrough states that while the Company states it will use BMPs, the proximity of homes, daycare facilities, and businesses raises concerns about potential exposure to dust, debris, and soil migration, including onto or into buildings, vehicles, and workspaces where people conduct their daily activities (Chesbrough Reply Brief at 3). Representative Robertson suggests that a decommissioning plan should be developed prior to the approval of a Project plan and recommends that the Company should provide additional information regarding ongoing care and maintenance of local roads throughout facility operation (Robertson Reply Brief at 10).

ii. Outreach

(A) Town of Tewksbury

The Town requests that Sections 16(A-C) of the HCA, addressing the Company's community updates of the Project, be expressly incorporated into the Board's Final Decision (Town Brief at 7; and Exh. TEWK-JCC-2, Sections 16(A-C).

(B) Limited Participants

Ms. Chesbrough states that while the Company characterizes its outreach in its brief as 'robust,' the activities it cites, including meetings with elected officials, media appearances, and a presentation to the Chamber of Commerce, do not constitute robust outreach to the entire community (Chesbrough Reply Brief at 2). Further, she states that these efforts reached only a limited group of individuals and did not ensure that most residents were informed (Chesbrough Reply Brief at 2). According to Ms. Chesbrough, given the size and potential impact of the

proposed Project, the Company should have made a direct effort to reach all residents (Chesbrough Reply Brief at 2). Ms. Chesbrough further asserts that the Company's outreach failed to provide the community with the information necessary to understand or respond to the Project's real safety and operational concerns (Chesbrough Reply Brief at 2).

(C) Company

The Company maintains it had numerous meetings with Town representatives, the Town Select Board, legislators, and abutters to the Project Site (Company Reply Brief at 36). The Company maintains that the abutters were notified of the open house by mail based on a tax assessors list provided by the Town (Company Reply Brief at 36). Moreover, the Company notes that it (1) created a website to provide basic Project information and respond to frequently asked questions, and (2) provided abutters with email contacts and phone numbers of members of the development team (Company Reply Brief at 36). According to the Company, it conducted these meetings prior to the Company's April 1, 2025, filing at the Siting Board and before the Siting Board's public comment hearing, which Ms. Chesbrough claims was the first opportunity for Tewksbury residents to learn about the Project (Company Reply Brief at 36). Thus, the Company asserts Ms. Chesbrough's claim about a lack of opportunity for the public to learn about the Project is inaccurate (Company Reply Brief at 36, 37).

c. Analysis and Findings

The Company intends to secure all permits and coordinate with the Town and AHJ on construction matters. See Conditions 6 and 14 of this Decision. In addition to the Company's application to the Siting Board for an exemption to the Town's Bylaw, the Company would also need to obtain the following construction-related permits from the Tewksbury Inspectional Services Department: building permit, electrical permit, mechanical permit, and demolition permit; and a land disturbance/ stormwater permit from the Tewksbury Planning Board.

The Siting Board directs the Company to prepare and submit a CMP as part of its application process to the Tewksbury Inspectional Services Department, and to coordinate the CMP with the Tewksbury Town Manager and, as necessary, the Tewksbury police and fire

departments, providing it to the Town Manager prior to the Company conducting any construction activities. The CMP development requirements (Condition 11, Section VIII) and decommissioning (Conditions 32, 33 and 37, Section VIII) obligations described in the HCA are included as Conditions in the Siting Board's Decision (HCA Sections 9 and 14, respectively (RR-EFSB-16(S1). Consistent with the HCA Appendix A (#16), to the extent that the Company seeks to expand or modify the Project during the Term of the HCA, the Board directs the Company to notify the Board and the Town and prepare a new construction management plan for such expansion or modification, with any such expansion or modification subject to approval of the Board and appropriate Town authority (see Condition #36 in Section VIII of this Decision). In addition, the Company must provide copies of material filings and other material information submitted or received in connection with such proceedings in any filing before an agency or department of the Commonwealth in connection with the Project as may occur and provide public reports to the Town of Tewksbury at meetings of the Town Select Board, describing its progress in obtaining necessary permits and the status of construction of the Project. See Conditions 25 and 27. Updates must also be published on the Company's website regarding potential changes in plans for the Project. See Condition 2

After construction is completed, the Board directs the Company to provide an as-built plan to the Local Government(s) and State PEAs. Original as-built plans for the final plan shall be printed on mylar and stamped by a Professional Land Surveyor. The as-built plans shall also include a certification stamped by a Professional Engineer indicating the Project was constructed in accordance with the approved plans. An electronic file of the as-built plan sheets and AutoCAD files of the as-built plan for the Project shall be submitted concurrently with the hard copies. Elevations on the as-built plans shall reference the municipal GIS data (Condition #40, Section VIII).

Consistent with Sections 3 and 6(B) of the HCA, the Board directs the Company to pay for all applicable and required local permits and payment of all permitting and inspection fees in effect at the time of the application for each, including third-party inspections and reviews, if required by applicable Permits (Condition #41, Section VIII).

The Siting Board directs the Company to develop a Construction Period Soil, Erosion, and Sediment Control Plan as required under the Massachusetts Stormwater Management Standards, incorporating BMPs into this plan to control erosion and dust particulates. The Siting Board finds that the HCA contains reasonable and appropriate financial and schedule requirements for a future decommissioning plan; therefore, a decommissioning plan at this time is not necessary, but required prior to cessation of Project operations in accordance with Section 14 of the HCA and the Conditions 32 and 33 of this Tentative Decision in Section VIII.

Except for well-drained, stable gravel, the Board directs the Company to apply six (6) inches of topsoil to areas stripped of topsoil during contouring or other site preparation. Wherever practicable, the Company shall re-use on-site topsoil from excavated areas to establish a vegetative cover that blends disturbed areas into the surrounding landscape once the Project is complete. Topsoil shall not be imported unless the Company provides information to the relevant Town of Tewksbury department regarding a demonstrated engineering need, with particular attention paid to preventing importing of invasive species. The Board further directs the Company to make provisions to stabilize any top-soil banks or berms (Condition #42).

Within 60 days of commercial operation, the Board directs the Company to submit to Town of Tewksbury a plan for the operation and maintenance of the Project. The plan shall include measures for maintaining safe access to the Project, stormwater management control, and general procedures for operational maintenance. Maintenance shall also include, but not be limited to, painting structures, structural repairs, and preserving the integrity of security measures. The Company shall maintain the Project so that it remains in good condition (Condition #43).

The record shows the Company has established multiple channels for community outreach regarding the Project and has met many times with Town officials and the public. The Company has introduced its battery storage fire SMEs to the TFD to discuss the drafting of an Emergency Response Plan and system designs required by the Town's first responders.

The Project would develop a Construction Community Outreach Plan ("Community Outreach Plan") to keep Town officials, emergency personnel, property owners, and businesses informed of construction activities. The Siting Board directs the Company to work

collaboratively with Town officials to minimize construction impacts. The Board further directs the Company to adhere to commitments and permitted work hours established with the Town and further described in Section VIII, Condition 23 of this Decision. Further, Project community update obligations described in the HCA (Section 16) are included as Conditions in the Board's Decision. Specifically, the Board requires that the Community Outreach Plan provide for timely public dissemination of information regarding construction schedule, work hours, etc. See Condition 26 of this Decision. Further, the Board directs the Company to keep Tewksbury apprised of progress in constructing the Project and shall identify and describe, as promptly as practicable, any significant construction issue which might be expected to affect the Town, and provide at least one day advance notice of any need to conduct construction activities, as feasible, after the standard construction day set forth in accordance with HCA Section 10 (Noise and Visual Mitigation) and included as a Condition in Section VIII of this Decision.

Despite concerns by several Limited Participants regarding the Company's outreach actions, the record demonstrates that the Company has conducted numerous meetings with Town representatives, the Town Select Board, legislators, and abutters to the Project Site. The abutters were notified of the open house by mail. Additionally, the Company has: (1) created a website to provide basic Project information and respond to frequently asked questions; and (2) provided abutters with email contacts and phone numbers of members of the development team. These meetings were conducted prior to the Company's April 1, 2025, filing at the Siting Board and well in advance of the Siting Board public comment hearing, providing a reasonable opportunity for the Town and the Public to learn about the Project.

2. Wetlands and Water Resources[21]

The Project would require the following wetlands and stormwater-related permits from the Town of Tewksbury: (1) Massachusetts Wetlands Protection Act Order of Conditions and Tewksbury Wetland Bylaw Order of Conditions from the Tewksbury Conservation Commission;

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[21] This section addresses construction impacts and normal operations. The Parties raise questions regarding impact of emergency events on wetlands and water resources, which are also addressed in this section.

and (2) a Land Disturbance/Stormwater Permit from the Tewksbury Planning Board (Exh. EFSB-G-10, at 2). With respect to water resources, the requested zoning exemption would exempt the Project from Section 5.6 of the Tewksbury Zoning Bylaw which creates a Groundwater Protection District intended to "preserve and protect existing and potential sources of drinking water supplies" (RR-EFSB-2(1) at 45). In this section, the Siting Board addresses construction and operations impacts of the Project on (1) wetland resource areas located on or near the Project Site; (2) the Company's Stormwater Management System; and (3) the Zone II Wellhead Protection Area.

a. Wetland Impacts

The Company identified wetland resource areas located on or near the Project Site as including: (1) bordering vegetated wetlands ("BVW"); (2) isolated vegetated wetlands ("IVW");[22] (3) 100 -foot buffer zone; (4) 50-foot no build zone; and (5) 25-foot no disturb zone, with the latter two zones defined by local bylaw as wetland resource areas (Exh. HEC-1, at 21). The Company stated that the Project was sited and designed to avoid the IVW/ILSF on the parcels of land that would contain the BESS facility and the Project Substation (Exh. HEC-1, at 22). The Company noted that the construction of the Transmission Interconnection would result in temporary impact to approximately 2,400 square feet of BVW (Exh. HEC-1, at 22). The Tewksbury Conservation Commission will review the Notice of Intent, which the Company filed on May 7, 2026, under both the Wetlands Protection Act and the Town Bylaw, and would issue a permit in the form of an Order of Conditions (RR-EFSB-21(S1) at 1; Exh. HEC-1, at 21).[23]

The Company stated the Project would require the development of a SWPPP, which identifies controls and construction BMPs to mitigate the potential for erosion and sediment entering wetlands and water resources during construction (Exh. EFSB-W-11, at 1).

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[22] IVW also qualifies as isolated land subject to flooding ("ILSF") under the Wetlands Protection Act (Exh. HEC-1, at 21).

[23] The Company hired Epsilon Inc. ("Epsilon") as its wetlands Consultant (Exh. HEC-1, at 2).

Additionally, the Massachusetts Stormwater Management Standards require the development of a Construction Period Soil Erosion and Sediment Control Plan (Exh. EFSB-W-11, at 1). The Company stated in its NOI filing that it would submit the SWPPP before land disturbance begins (RR-EFSB-21(1), at 254). The Company further stated that it developed the Soil Erosion and Sediment Control Plan in accordance with the Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas for this project (Exhs. HEC-1, Att. B(S2) at 7; HEC-1, Att. A(S1) at Sheets CE101 and CS501). The Company stated that the Construction Period Soil Erosion and Sediment Control Plan and SWPPP would require that it incorporates BMPs specified in guidelines developed by MassDEP, the Town of Tewksbury, and the U.S. Environmental Protection Agency ("EPA"), ensuring compliance with the requirements of the Massachusetts Wetlands Protection Act and its associated regulations, the Town of Tewksbury Wetland Bylaw, and the National Pollutant Discharge Elimination System ("NPDES") General Permit for Storm Water Discharges from Construction Activities (Exh. EFSB-W-11, at 1). These measures would include the installation of temporary sediment controls, erosion prevention measures, and construction sequencing (Exh. EFSB-W-11, at 1). According to the Company, areas of exposed soil would be kept to a minimum, and a permanent vegetative cover or other stabilized surface would be established as soon as practicable after final grading (Exh. EFSB-W-11, at 1). The Company affirmed that it would prohibit discharging turbid groundwater or accumulated stormwater that is removed from excavations, trenches, foundations, or other similar points of accumulation, unless such waters are first managed by appropriate controls, including, but not limited to, sediment basins or traps, sediment socks, dewatering (frac) tanks, and other BMPs that are designed to remove sediment (Exh. EFSB-W-11, at 2). Under normal operating conditions, the Project would not generate any process-related wastewater and would not require any sanitary sewer connection (Exh. HEC-1, at 20).

b. Stormwater Management

i. Company Description

The Company hired Langan Engineering and Environmental Services ("Langan") to design its stormwater management system (Exh. HEC-1, Att B(S1) at 1).[24] The Company indicated that Langan designed the stormwater system in accordance with the MassDEP Stormwater Handbook, the Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas, the Town of Tewksbury Stormwater Bylaws, and the Massachusetts Small Municipal Separate Storm Sewer System ("MS4") General Permit (RR-EFSB-21(S1) at 106).

The proposed stormwater treatment system features include water quality units (hydrodynamic separators with inlet gates), underground infiltration systems (precast concrete leaching chambers) to promote water quality and groundwater recharge, and detention to manage peak flow (RR-EFSB-21(S1) at 98); Exhs. HEC-1 at 23; HEC-1, Att. B(S2), at 2). Other features include:

- Proprietary Separators (a.k.a. "Water Quality Units" with inlet grates): Provide at least 44 percent Total Suspended Solid ("TSS") removal and oil/water separation; achieves overall 80% MassDEP TSS removal requirement for stormwater in conjunction with subsurface recharge and subsurface detention basins (RR-EFSB-21(S1) at 99 to 100, 106).

- Subsurface Recharge Basins: Provide TSS, nitrogen, phosphorous, heavy metal, and pathogen removal while encouraging groundwater recharge and reduced risk of flooding (RR-EFSB-21(S1) at 106).

- Subsurface Detention Basins: Non-infiltrating subsurface stormwater management components that ensure compliance with MassDEP's standards for peak rate attenuation of the flow of stormwater runoff (RR-EFSB-23(S1) at 2). The three Subsurface Detention Basins have been sized for peak rate attenuation for up to a 100-year storm event (RR-EFSB-23(S1) at 2).

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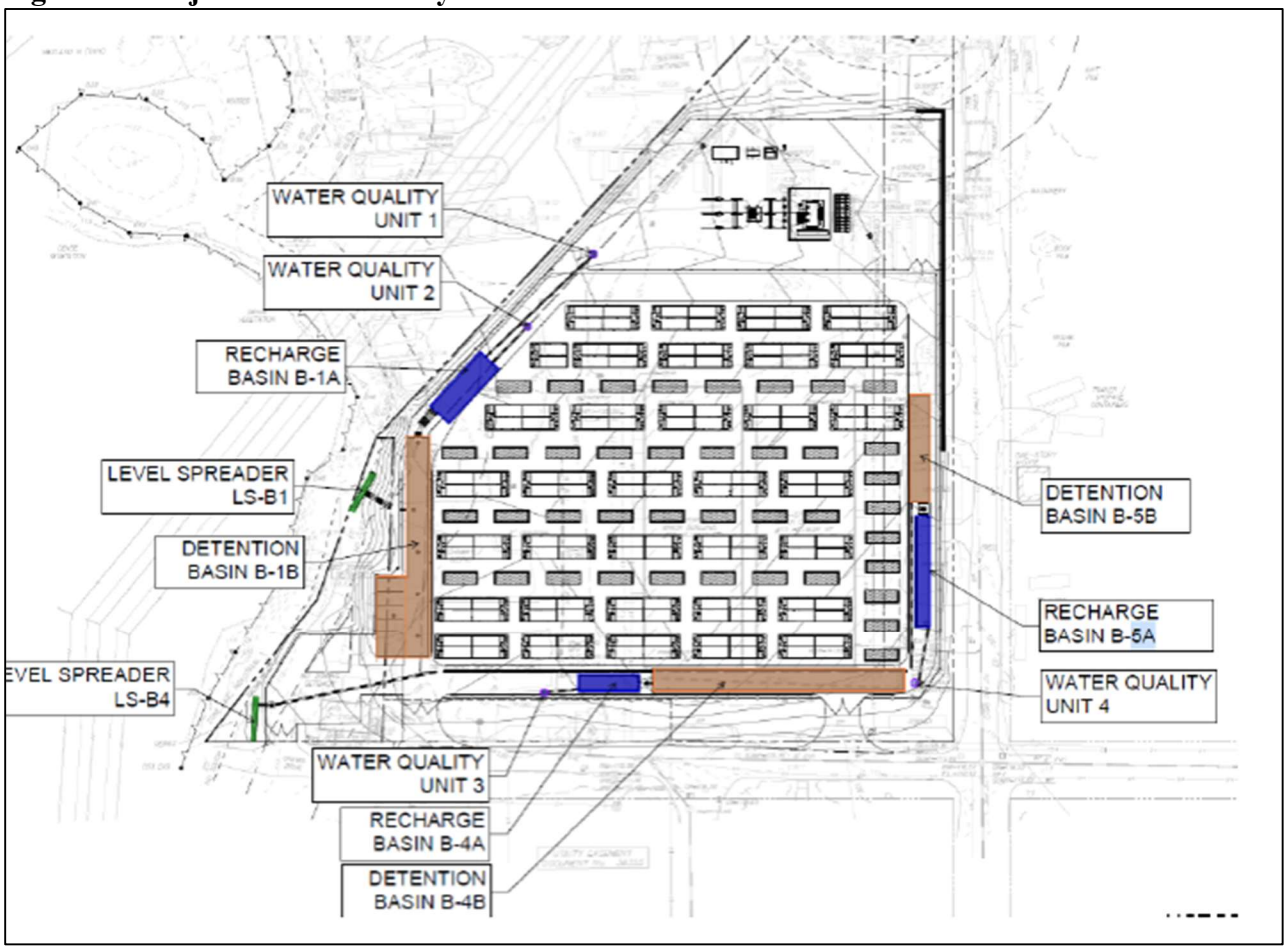
[24] During the proceeding, the stormwater system design evolved, and the Company filed four versions of that design: (1) with the initial filing in April 2025 (Exh. HEC-1, Att. B), (2) redesign in December 2025 (Exh. HEC-1, Att. B(S1)), (3) February 2026 (Exh. HEC-1, Att. B(S2)), and (4) May 2026 (filed as part of the Notice of Intent with the Tewksbury Conservation Commission) (RR-EFSB-21(S1)).

These stormwater management features are identified in Figure 4, below. The Company stated that most of the Project Site would drain to subsurface recharge and detention systems before discharging at a controlled rate towards the BVW (RR-EFSB-21(S1) at 93). According to the Company, the existing hydrology of the Project Site would be maintained to the maximum extent possible while complying with a requirement from the Town that prohibits a direct connection to the municipal stormwater system in Hillman Street (RR-EFSB-21(S1) at 93). The Company noted that the Project has been designed so that post-construction peak flow rates do not exceed pre-construction peak flow rates, in accordance with MassDEP Stormwater Standard 2 (RR-EFSB-21(1) at 105).

Figure 4. Project Stormwater System.



Source: RR-EFSB-23(S1) at 4.

The Company noted that the discharge pipes from the recharge basins in the stormwater system have sufficient capacity to convey a 100-year storm even if there is no infiltration into the ground (Tr. 9, at 1312-1313). Pursuant to the Massachusetts Stormwater Handbook, a groundwater mounding analysis[25] is only required if infiltration is needed to attenuate peak rates

[25] A stormwater mounding analysis is a study used to determine the impact of water infiltrating from a stormwater system (like a retention pond or infiltration basin) on the local groundwater table. It determines whether the infiltrating water will create a "mound" high enough to cause flooding, waterlogging, or reduced system performance (https://www.usgs.gov/centers/new-jersey-water-science-center/science/groundwater-mounding ; accessed May 7, 2026).

(Exh. D/S-W-1). Moreover, the Company noted that a groundwater mounding analysis is required only when the vertical distance separating the bottom of a subsurface recharge basin (and underlying six inch stone base) and the seasonal high groundwater ("SHGW") is less than four feet and the recharge system is proposed to attenuate the peak discharge from a 10-year or higher 24-hour storm event (Att B(S2) at 5). Given the proposed stormwater system design, the Company asserts a mounding analysis is not necessary to comply with the MassDEP Stormwater Standard (Exh. HEC-2, Att B(S2) at 5).

The Company noted that the vertical separation to SHGW from the proposed bottom of subsurface recharge basin measured from the bottom of six-inch crushed stone layer underlying the recharge basins, has been designed to be two feet or greater, per the Massachusetts Stormwater Manual (RR-EFSB-21(S1) at 108).[26] The Company recounted that test pits ("TP") and groundwater monitoring were completed to determine estimated SHGW ("ESHGW") elevations at or near the locations of the proposed subsurface infiltration systems (RR-DS-11, at 1).[27] Test pits were completed on March 23-24, 2026 with eight test pits completed - two test pits per subsurface infiltration system (TP-01 through TP-08) (RR-DS-11, at 1).

The Company acknowledged that the proposed stormwater system does not incorporate vegetated stormwater management as a possible stormwater treatment system pursuant to Section 5.6 of the Town of Tewksbury Zoning Bylaw, such as the use of constructed wetlands, detention ponds, water quality swales, sand filters, organic filters, or similar means of removing nitrogen and other contaminants from stormwater (RR-EFSB-2(1) at 48). However, the Company asserted that the proposed stormwater management plan complies with all MassDEP Stormwater Management Standards and technical guidance (Exh. HEC-1, Att. B(S2) at 2, 7).

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[26] Section 5.6 of the Town Bylaw states that, "Any infiltration basins or trenches shall be constructed with a minimum separation of 3 feet between the bottom of the structure and maximum groundwater elevation. The Planning Board may allow for a reduction of this separation based upon the submittal of sufficient information so long as it would not exceed the requirements of the Department of Environmental Protection's Stormwater Management Policy in effect at the time of the application" (RR-EFSB-2(1) at 49).

[27] The Company filed a Report of the test pit results ("TPR") (RR-D/S-11).

The Company claimed that the proposed Stormwater Management System has several benefits relative to the current stormwater system at the site, which it contends offers very little to no treatment for stormwater (Tr. 9, at 1299-1300). Currently, stormwater is collected in catch basins and discharged directly into the Town's drainage system, without any water-quality treatment, mitigation of peak rates, or groundwater recharge at all (Tr. 9, at 1299-1300). In contrast, the Company contends that the Project's stormwater system design complies with both state and Tewksbury requirements with respect to the water-quality treatment and removal of pollutants like TSS, phosphorus, and other nutrients (Tr. 9, at 1299-1300). The Company noted that groundwater recharge would be provided on site and the amount of impervious area would be reduced from 47 percent to 36 percent of the Project Site (Exh. HEC-1, Att B(S2) at 1; Tr. 9, at 1299-1300). The Company also noted that the stormwater water quality units may be pumped out if contaminants enter the system (e.g., from an emergency event) (Tr. 9, at 1352).

ii. DiPalma/Sheehan Description

DiPalma/Sheehan and their retained stormwater expert, Scott Horsley, argued that a BESS facility could be located on the Project Site safely, if:

1. The vegetated system of stormwater management is used as suggested in the sample zoning by-law on the MassDEP website and as required in Section 5.6 of the Town's .Zoning Bylaw

2. Full containment of rain and fire water is provided.

3. Three feet of separation is preserved between the bottom of the 6" of stone under the Recharge Basins and the SHGW.

(Exh. SD-SW(S3) at 11-12).

DiPalma/Sheehan highlighted that state regulations prohibit making more than 15 percent of a Zone II site impervious surface "unless a system for artificial recharge of precipitation is provided that will not result in the degradation of groundwater quality" (D/S Brief at 39, citing 310 CMR 22.21 (2)(b)7)). DiPalma/Sheehan notes that the Company's proposal would contain 36 percent impervious surface, more than double the allowed percentage (Exh. HEC-1 Att. B(S1) at 1; D/S Brief at 39). DiPalma/Sheehan argued that the Company's proposal does not call for an artificial recharge of precipitation that would satisfy the above state standard (D/S Brief at 39).

According to DiPalma/Sheehan, both the current and proposed uses are over the 15 percent allowance and thus the protective state and local regulations should apply (D/S Brief at 39).

DiPalma/Sheehan contested the Company's test pit procedures, noting that two of the three Retention Basins would be located some distance from the test pits, despite MassDEP Stormwater Handbook requirements that the test pits are dug at the location of the infiltration basins (DiPalma/Sheehan Comments (May 20, 2026) at 6). Further, DiPalma/Sheehan stated that the Company has not reviewed multi-year groundwater level data in the area to determine highest groundwater levels (Exh. SD-SW(S3) at 2). DiPalma/Sheehan contended that ESHGW levels at the Project Site can be expected to be as much as two feet higher than reported by the Company (Exh. SD-SW(S3) at 2).

In addition, the DiPalma/Sheehan maintains that the Company has not provided a groundwater mounding analysis for the revised stormwater design to evaluate impacts on the wetlands (Exh. SD-SW(S3) at 2 - 3). DiPalma/Sheehan conducted a groundwater mounding analysis based on the stormwater redesign, showing that the groundwater mounding would inundate the proposed recharge systems and would alter water levels within the BVW, which the MassDEP stormwater standard does not allow (Exh. SD-SW(S3) at3).

DiPalma/Sheehan observes that the Retention Basins barely meet the MassDEP-required two-foot vertical separation from SHGW (DiPalma/Sheehan Comments, May 20, 2026, at 6). DiPalma/Sheehan also maintains that the proposed stormwater design does not comply with the town of Tewksbury Groundwater Protection District Overlay Bylaw with respect to the required three foot vertical separation between the ESHGW level and the bottom of the recharge system and would cause water quality impacts to wetlands and the underlying groundwater supply system (Exh. SD-SW(S3) at 3).

DiPalma/Sheehan argue that the best approach to reduce the danger of infiltration of toxins into the groundwater (and in this case to the adjacent wetlands) would be to provide for a full containment system with the ability to capture all rainwater and firefighting water on the Project Site in the event of a thermal runaway or fire (DiPalma/Sheehan Comments (May 20, 2026) at 8; D/S Brief at 47).

Regarding the groundwater well serving Tewksbury Hospital, DiPalma/Sheehan argues the record includes no documentation regarding decommissioning this water supply well or adding the hospital to the municipal system (D/S Reply Brief at 11).

c. Zone II Wellhead Protection Area

According to the Company, the entire Project Site is located within an area mapped as a Zone II Wellhead Protection Area[28] by MassDEP (Exh. HEC-1, at 3). The Company maintained that the Project has minimal potential to impact public water supply sources and other water resources due to Project safeguards including: (1) a stormwater management system that includes water quality units and an underground infiltration system; (2) secondary containment measures for the main power transformer at the Project Substation and medium voltage transformers, which include built-in containment[29]; (3) development of a Long-Term Pollution Prevention Operation and Maintenance Plan and a Construction Period Soil, Erosion, and Sediment Control Plan; and (4) additional plan development including a Spill Prevention, Control, and Countermeasure Plan ("SPCC") and an ERP (Exh. HEC-1, at 20).

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[28] A Zone II WPA is defined at 310 CMR 22.02 as "that area of an aquifer which contributes water to a well under the most severe pumping and recharge conditions that can be realistically anticipated (180 days of pumping at safe yield, with no recharge from precipitation)" (Exh. EFSB-W-3(1) at 4). The Company asserted that this definition represents an intentionally protective worst-case scenario, achieved by layering multiple conservative assumptions, including: (1) maximum pumping, zero recharge despite approximately 45 inches of annual precipitation that continuously replenishes aquifers; and (2) Zone II boundaries being much larger than actual capture zones[AG1.1] under normal operating conditions (Exh. EFSB-W-3(1) at 4). The Company explained that a Zone II WPA is a two-dimensional regulatory overlay, not a predictive transport model, and does not consider factors such as depth to groundwater, permeability, contaminant type, or true hydraulic gradient (Exh. EFSB-W-3(1) at 4). The MassDEP Guidance for the development of renewable energy systems expressly applies only to Zone I, Zone A and Zone II areas that are owned by public water suppliers, which is not the case with the Zone II WPA co-located with the Project.

[29] See Condition 20 which requires 110 percent oil containment measures for all transformers.

The Company related that groundwater at the Project Site flows toward the northwest, based on topography, nearby waterbodies and surveyed groundwater elevations from three onsite groundwater monitoring wells (Exh. EFSB-W-3(1) at 5). The Company noted that groundwater flow directions are not expected to be materially altered by the Project, and groundwater would continue to flow northwestward toward adjacent wetland/surface-water receptors and the broader Great Swamp wetland complex (Exh. EFSB-W-3(1) at 5). Because the Great Swamp (north of the site) functions as a regional groundwater discharge zone, the Company reported that shallow groundwater migrating from the Project Site would likely discharge to local wetlands relatively close to the site rather than traveling long distances through the aquifer (Exh. EFSB-W-3(1) at 5). According to the Company, this context is relevant for evaluating potential migration pathways to downgradient receptors (including wells), as local discharge features can act as intercepting receptors and limit the extent of groundwater migration (Exh. EFSB-W-3(1) at 5).

The Company stated that Tewksbury derives its municipal potable supply from Merrimack River surface-water sources; however, groundwater protection requirements applicable to Zone II areas remain relevant regardless of the municipal supply source (Exh. EFSB-W-3(1) at 4). The Company contended that the Zone II WPA designation affecting the Project Site appears to be associated with the Tewksbury Hospital Public Water Supply southeast of the Project Site (Exh. EFSB-W-3(1) at 4). The Company stated that Tewksbury Hospital has two groundwater supply wells, with the following reported status:

- Well #3 (East & Maple Street Well) – Active/operational, located approximately 9,700 feet (~1.8 miles) southeast of the Project Site.

- Well #1 (Old Tubular Well) – Inactive/offline, located approximately 8,500 feet (~1.6 miles) southeast of the Project Site, reported offline since December 2000 and deemed inoperable in 2022.

Exh. EFSB-W-3(1) at 4.

The Company noted that Well #3 was the sole active drinking water source for Tewksbury Hospital from 2000 through at least 2021, but persistent manganese contamination rendered the water practically undrinkable for years (Exh. EFSB-W-3(1) at 4). The Company related that, after failed attempts at filtration and flushing, the state committed in 2024 to

abandon the well in favor of a connection to the Town of Tewksbury's municipal water system and active procurement for water source transition is underway (Exh. EFSB-W-3(1) at 4).

Regarding private water supply wells, the Company reported that the nearest private domestic well is approximately 1,600 feet (~0.30 miles) to the south (hydraulically upgradient) of the Project Site (Exh. EFSB-W-3(1) at 4). The Company further noted that the nearest private domestic well reported downgradient of the Project Site is approximately 6,800 feet (~1.3 miles) northwest of the Project Site (Exh. EFSB-W-3(1) at 4).

During winter, the Company maintained that it would reduce the risk of deicing compounds entering groundwater by applying deicing materials with discretion, avoiding over application (Exh. EFSB-W-13). After the winter season, the Company affirmed that all parking areas and roads would be cleaned of sediment and debris, which would remove residual deicing materials; and runoff from paved areas would be treated and infiltrated, preventing those compounds from being carried in surface runoff to wetlands (Exh. EFSB-W-13).

According to the Company, in the event of a worst-case scenario involving a release at the Project Site (e.g., transformer oil release or thermal event), the Project's engineered controls are intended to prevent/minimize a release of substances to groundwater by containing fluids on low permeability such as concrete or asphalt surfaces and within containment structures, thereby enabling appropriate response actions (Exh EFSB-W-3(1) at 6).

Regarding mitigating or remediating contamination impacting wetlands and water resources, the Company related that specific methods chosen would depend on the magnitude of the event (RR-EFSB-17). The Town requires, at a minimum, that wetlands be restored to health standards consistent with the NFPA 855 standards – no danger to human health can be present (RR-EFSB-17). The Company noted that the resources it would need to meet this requirement are established in the HCA, Fire, Health and Safety, Section 12(G), which requires the Company to have a valid contract with a licensed environmental services company, including such company in its ERP, for immediate dispatch to the Project in the event of an active fire and, further, shall maintain such a contract for the life of the operation of the Project (RR-EFSB-17; RR-EFSB-16(S1) at Section 12(G)).

In addition, the Company contended that a surface release would have to migrate through the unsaturated fill/loamy sand (~4–8.5 feet below ground surface "bgs") where unsaturated hydraulic conductivity inhibits subsurface contaminant transport (Exh. EFSB-W-3(1) at 7). The Company maintained that with appropriately designed secondary containment/impermeable base and rapid spill response and recovery, credible releases would be intercepted at the surface and removed before infiltration could occur (Exh. EFSB-W-3(1) at 7).

d. Position of the Parties[30]

i. Town of Tewksbury

The Town requests that Section 6(H) of the HCA, addressing the Company's annual financial contributions to the Town's Stormwater Enhancement Program, be expressly incorporated into the Board's Final Decision (Town Brief at 7; Exh. TEWK-JCC-2, HCA, Section 6(H)). Among other provisions, the HCA requires: (1) that the stormwater management

[30] The Siting Board received comments related to the test pit data submitted in response to RR-RR-11; RR-D/S11(S1); and RR-D/S-11(S2). Within this Decision, we will refer to these supplemental comment as follows: Comments by Intervenor Tewksbury Board of Health on Test Pit and Groundwater Sampling Memorandum will be referred to as BOH Comments (4/27/26); Comments by Intervenor Tewksbury Board of Health Regarding Supplemental Responses to RR-EFSB-21(S1), RR-EFSB-22, and RR-EFSB-23(S1) will be referred to as BOH Comments (5/22/26); Hillman Response to DiPalma/Sheehan and BOH Comments on Test Pits will be referred to as Company Comments (5/26/26); DiPalma Sheehan Brief on Test Pits will be referred to as DiPalma/Sheehan Comments, (4/24/2026); DiPalma/Sheehan Brief on RR-EFSB-21, 22 and 23 filed by on May 20, 2026 will be referred to as DiPalma/Sheehan Comments (5/20/26); Linda Martin, L.P. Comments on Test Pit Study will be referred to as Martin Comments (4/27/26);and Linda Martin L.P. Comments on Stormwater Design will be referred to as Martin Comments (5/20/2026).

In addition, the Siting Board received supplemental testimony related to the test pit results including: the supplemental testimony of Andrew Stack, Town Engineer on April 24, 2026 (Exh. TEWK-DS-1); the Test Pit Report filed on April 17, 2026 by the Company (Exh, RR-DS-11(TPR));the supplemental testimony of Scott Horsley related to RR-D/S-11 filed on April 24, 2026 (Exh. SD-SW(S2)); the supplemental testimony of Frank Holmes (RR-D/S-11(S2) filed by the Company on April 24 purposes as RR-D/S-11(S2); and supplemental testimony of Scott Horsley (Exh. SD-SW(S3) filed by DiPalma/Sheehan on May 20, 2026.

system fully comply with MassDEP Stormwater Standards and Town Requirements, unless exempted by the Siting Board; (2) water collected in the stormwater management detention basin, catch basins, vortex units (or similar) and/or other collection facilities shall be monitored during firefighting activities; and (3) the Project shall have a licensed environmental services company on contract to remove and properly dispose of affected runoff water within the stormwater management system for the life of the operation of the Project (Exh. TEWK-JCC-2, HCA, Section 6(G)). Also, Tewksbury's Town Engineer contends that the ground elevation of TP-08 appears to be - depicted approximately 0.27 feet lower than the actual ground elevation based on a rough interpolation of the contour lines (Exh. TEWK-DS-1, at 3). This difference of 0.27 feet would increase the Seasonal High Groundwater Elevation of that test pit from 113.73 to 114.00 feet (Town Comments (4/24/26) at 3).

ii. DiPalma/Sheehan

According to DiPalma/Sheehan, state regulations prohibit making more than 15 percent of a Zone II site impervious surface "unless a system for artificial recharge of precipitation is provided that will not result in the degradation of groundwater quality" (D/S Brief at 39, citing 310 CMR 22.21 (2)(b)7)). DiPalma/Sheehan notes that the Company's proposal would contain 36 percent impervious surface, more than double the allowed percentage (Exh. HEC-1 Att. B(S1) at 1; D/S Brief at 39). DiPalma/Sheehan argues that the Company's proposal does not call for an artificial recharge of precipitation that would satisfy the above state standard (D/S Brief at 39). According to DiPalma/Sheehan, both the current and proposed uses are over the 15 percent allowance and thus the protective state and local regulations should apply (D/S Brief at 39).

DiPalma/Sheehan reports that the MassDEP recommends a vegetated stormwater management system for developments in a Zone II wellhead recharge area, and the local Zoning Bylaw, in Section 5.6, the Groundwater Protection District, requires such a system (DiPalma/Sheehan Comments (May 20, 2026) at 6). DiPalma/Sheehan argues that due to the possible release of contaminants, the only kind of stormwater management system that will not result in the degradation of groundwater quality is a vegetated system (D/S Brief at 56).

Therefore, DiPalma/Sheehan argues that the Company must employ a vegetated infiltration approach, but it failed to do so (D/S Reply Brief at 5).

DiPalma/Sheehan contests the Company's test pit procedures, noting that two of the three Retention Basins would be located some distance from the test pits, despite MassDEP Stormwater Handbook requirements that the test pits are dug at the location of the infiltration basins (DiPalma/Sheehan Comments (May 20, 2026) at 6). Further, DiPalma/Sheehan states that the Company has not reviewed multi-year groundwater level data in the area to determine highest groundwater levels (Exh. SD-SW(S3) at 2). DiPalma/Sheehan contends that ESHGW levels at the Project Site can be expected to be as much as two feet higher than reported by the Company (Exh. SD-SW(S3) at 2).

In addition, the DiPalma/Sheehan maintains that the Company has not provided a groundwater mounding analysis for the revised stormwater design to evaluate impacts on the wetlands (Exh. SD-SW(S3) at 2 - 3). DiPalma/Sheehan conducted a groundwater mounding analysis based on the stormwater redesign, showing that the groundwater mounting would inundate the proposed recharge systems and would alter water levels within the BVW, which the MassDEP stormwater standard does not allow (Exh. SD-SW(S3) at3).

DiPalma/Sheehan observes that the Retention Basins barely meet the MassDEP-required two-foot vertical separation from SHGW (DiPalma/Sheehan Comments (May 20, 2026) at 6). DiPalma/Sheehan also maintains that the proposed stormwater design does not comply with the town of Tewksbury Groundwater Protection District Overlay Bylaw with respect to the required three foot vertical separation between the ESHGW level and the bottom of the recharge system and would cause water quality impacts to wetlands and the underlying groundwater supply system (Exh. SD-SW(S3) at 3).

Regarding containment of contaminants, according to DiPalma/Sheehan, the following documents require full containment of firefighting water and rain at a BESS facility:

- The HCA (Exh. TEWK-JCC-2, at Section 12),
- Tewksbury's Zoning By-law Section 5.6 (D/S Brief at 40),
- The MassDEP BESS Guidance (D/S Brief at 40), and
- The recent BESS zoning exemption decision in Cranberry Point at 109-110 (D/S Reply Brief at 5; Exh. SD-SW(S3) at9).

DiPalma/Sheehan argue that the best approach to reduce the danger of infiltration of toxins into the groundwater (and in this case to the adjacent wetlands) would be to provide for a full containment system with the ability to capture all rainwater and firefighting water on the Project Site in the event of a thermal runaway or fire (DiPalma/Sheehan Comments (May 20, 2026) at 8; D/S Brief at 47). DiPalma/Sheehan avers that there is no practical way to remove contaminants from the proposed underground infiltration system; once polluted stormwater enters the Recharge Basins, they begin infiltrating the subsurface and underlying groundwater immediately (D/S Brief at 43). According to DiPalma/Sheehan, the basins cannot be considered effective containment devices (D/S Brief at 43).

DiPalma/Sheehan claims that the Company's stormwater approach allows toxins to infiltrate directly into the groundwater and adjacent wetlands (D/S Brief at 53). DiPalma/Sheehan acknowledge that there would be an ERP supported by the Company's contracted licensed site professional ("LSP") (D/S Brief at 53). However, it also notes that precipitation may fall in areas on the Project Site not connected to the stormwater system, resulting in the stormwater management system receiving about 20 percent to the total on the Project Site (Tr. 9, at 1421; D/S Brief at 55). DiPalma/Sheehan and their consultant further contend that the Polyvinyl chloride ("PVC") proposed by the Company for use as a liner in the Detention Basins contains a broad range of pollutants that would leach from the liners into the wetlands and groundwater (DiPalma/Sheehan Comments (May 20, 2026) at 6; Exh. SD-SW(S3) at 4).

Regarding the groundwater well serving Tewksbury Hospital, DiPalma/Sheehan argues the record includes no documentation regarding decommissioning this water supply well or adding the hospital to the municipal system (D/S Reply Brief at 11). DiPalma/Sheehan declares that there is no feasibility study analyzing the hospital's water supply in the record (D/S Reply Brief at 11). Therefore, DiPalma/Sheehan asserts that the Tewksbury Hospital well #3 is not about to be decommissioned, and that the Zone II WPA is not going away given MassDEP's policy to protect Zone II WPAs regardless of use (Tr. 5, at 727; D/S Reply Brief at 10).

In sum, DiPalma/Sheehan claims that a BESS facility could be located on the Project Site safely, if:

4. The Vegetated System of stormwater management is used as suggested in the sample zoning by-law on the MassDEP website and as required in Section 5.6.

5. Full containment of rain and fire water is provided.

6. Three feet of separation is preserved between the bottom of the 6" of stone under the Recharge Basins and the SHGW.

(DiPalma/Sheehan Comments (May 20, 2026) at 11-12)

iii. Tewksbury Board of Health

The BOH maintains that the proposed stormwater system does not treat dissolved pollutants (Tr. 9, at 1342-1343; BOH Brief at 11). According to the BOH, dissolved contaminants would pass through the proposed stormwater system (BOH Brief at 11), infiltrating directly into the subsurface through an open-bottom design (Tr. 9, at 1394-1395) with no shutoff valve (Tr. 9, at 1351; BOH Brief at 11).

The BOH states that the Project Site lies entirely within the Town's Groundwater Protection District and the Zone II WPA associated with the Tewksbury Hospital's public water supply, a well that drew and used over 31,000,000 gallons in 2024 (Exh. D/S-T-3; Tr. 5, at 726; BOH Reply Brief at 5). Echoing the DiPalma/Sheehan evidence and arguments, the BOH notes that the 36 percent impervious surface after the Project would be more than double the regulatory threshold, and that it does not provide a vegetated stormwater system required by Section 5.6 of the Zoning Bylaw and the MassDEP's own sample bylaw language adopted by the Town (BOH Reply Brief at 5). The BOH also concurs with DiPalma/Sheehan regarding: (1) the need for full containment (BOH Reply Brief at 5-6); (2) that approximately 80 percent of rainfall and fire-related runoff would infiltrate directly into ground and not be treated for dissolved toxic compounds (Tr. 9, at 1421-1422; BOH Reply Brief at 6; BOH Comments (5/22/26) at 3); (3) that meeting applicable requirements would require reducing the number of BESS enclosures by approximately 50 percent (BOH Reply Brief at 6); and (4) using PVC in the liner of Detention Basins introduces contaminants into stormwater (BOH Comments (5/22/26) at 3). The BOH further asserts that water-quality units in the system do not remove dissolved pollutants such as hydrogen fluoride, which it asserts is highly water-soluble (Tr. 9, at 1343; BOH Reply Brief at 6).

Based on its review of the proposed stormwater system, BOH requests that the Company provide the following: (1) a final Recharge and Detention Basin configuration; (2) three foot vertical separation between the bottom of the crushed stone layer under the Recharge Basins and the ESHGW; (3) an updated groundwater mounding analysis; (4) a vegetated stormwater system per Tewksbury Zoning Bylaw; (5) water quality implications from PVC-lined detention basins; and (6) full containment of firefighting runoff and contaminated stormwater (BOH Comments (5/22/26) at 4).

iv. Limited Participants

LPs expressed concerns about the proposed siting of the Project over a Zone II aquifer and lack of containment of contaminated stormwater that may impact the aquifer, wetlands, and Merrimack River watershed (Chesbrough Brief at 7; Martin Brief at 12-13; Robertson Reply Brief at 7). The LPs raised additional concerns regarding the excessive impervious surface at the Project Site and local flooding potential (Chesbrough Brief at 8; Robertson Reply Brief at 6); inadequate groundwater protections in the HCA (Martin Brief at 13); challenges to remediate groundwater once contaminated (Martin Brief at 14); and the need to redesign the proposed stormwater system, incorporating full contaminated water containment and vegetated stormwater treatment systems (Martin Reply Brief at 7). In addition, Martin states that the final design of the stormwater system was not supplied by the Company, leaving uncertainty regarding how the proposed stormwater system would meet MassDEP requirements (Martin Comments (May 20, 2026) at 2). Ms. Martin contends MassDEP in its past orders prohibits approval of incomplete or non-compliant designs (Martin Comments (May 20, 2026) at 2-3).

Regarding the March/April 2026 SHGW test pit data, Ms. Martin maintains that the period of data collection was too short and the Company discarded the higher SHGW readings early in the data collection field effort (Martin Comments (4/27/2026) at 6).

v. Company Response

The Company stated the Project would comply with all applicable local, state, and federal regulatory performance standards related to wetland resource areas (Exh HEC-1, at 22). The Company declared that all proposed work within the 100-foot buffer zone would include the use

of BMPs such as erosion control barriers to establish limits of work and to ensure that there are no short- or long-term impacts to adjacent wetland resource areas (Exh. HEC-1, at 22; Tr. 1, at 39-40). The Company explained that the Project has been sited and designed to avoid the IVWs/ILSFs on the parcels of land that will contain the BESS facility and the Project Substation (Company Brief at 30 n. 159; Exh. HEC-1, at 22) and that construction of the Transmission Interconnection would result in only a temporary impact to approximately 2,400 square feet of BVW (Company Brief at 30 n. 159; Exh. HEC-1, at 22; Exh. EFSB-SS-2).;

Regarding stormwater management, the Company contends that it has proposed a stormwater management system, incorporating BMPs, that meets all applicable MassDEP stormwater standards, including those relating to groundwater recharge and filtration (Company Brief at 27; Company Reply Brief at 9). The Company relates that its stormwater consultant (Langan) produced a stormwater management plan, which summarizes each applicable MassDEP standard, including the specific requirements for projects in a Zone II WPA, demonstrating compliance of the proposed system design with all such standards (Company Reply Brief at 9).

The Company affirms that the 4.34-acre Project Site where the BESS facility and the Project Substation would be constructed currently contains approximately 2.05 acres of existing impervious areas (47 percent of the site) (Exh. HEC-1, Att. B(S2) at 1). The post-development site impervious area would be approximately 1.56 acres (36 percent of the site), a net decrease in impervious area of 0.49 acres (11 percent of the site) (Exh. HEC-1, Att. B(S2), at 1). Thus, the Company asserts that the Project would result in significant improvements in groundwater recharge compared to the existing site conditions (Company Brief at 28). The Company disagrees with DiPalma/Sheehan's claims about excessive impervious surface at the Project Site and its claim that the "Company's proposal does not call for an artificial recharge of precipitation that would satisfy the above State standard" (Company Reply Brief at 9). The Company reiterates that the proposed stormwater system incorporates site-appropriate BMPs, including water quality units (hydrodynamic separators with inlet grates) and underground infiltration systems (precast concrete leaching chambers), which meet each applicable MassDEP stormwater standard, including the specific requirements for projects in a Zone II WPA, and demonstrate

that the Project meets all such standards (Exhs. HEC-1, Att. B, at 2; HEC-1, Att. B(S2) at 2; Company Reply Brief at 9).

Given that the Project Site's existing stormwater management system does not use any BMPs that comply with the MassDEP stormwater management standards for water quality or groundwater recharge – coupled with the presence of large piles of landscaping materials stored outdoors and numerous trucks and heavy equipment scattered across the site – the Company finds it illogical to maintain existing site conditions and risks (Company Reply Brief at 10). The Company contends that existing conditions are significantly worse for water quality and groundwater recharge than would result from the Project and its proposed stormwater system (Company Reply Brief at 10).

Regarding the Zone II WPA area, the Company's hydrogeological analysis notes that "[k]ey potable-water receptors are not closely located downgradient in the primary [northwesterly] groundwater flow direction" (Exh. ESB-W-3(1) at 6). The Company identifies the Zone II designation stemming from the Tewksbury Hospital's groundwater supply wells, located approximately 1.6 to 1.8 miles southeast of the site, which are not in the direction of groundwater flow from the Project Site (Company Reply Brief at 10). Therefore, the Company finds implausible the argument that a release of some kind from the Project Site would affect a nearby potable groundwater well (Exh. EFSB-W-3(1) at 7). Moreover, the Company asserts that of the two groundwater supply wells associated with the hospital, are either offline, or currently being replaced (Exh. EFSB-W-3(1) at 7; Company Reply Brief at 11).

Regarding private water supply wells, the Company explains that the nearest well is approximately 1,600 feet and hydrologically upgradient from the Project Site, which is more than three times the regulatory trigger distance of 500 feet per 310 CMR 40.0313(3)(b) (Exh. EFSB-W-3(1) at 6). Further, the Company notes that the nearest private domestic well that is downgradient of the Project Site is located approximately 6,800 feet (~1.3 miles) northwest of the Project Site, more than 13 times the regulatory trigger distance (Exh. EFSB-W-3(1) at 6).

The Company contends that any potential for contamination of groundwater is further mitigated by the fact that the ERP calls for a defensive firefighting strategy without direct application of water, which limits the potential for impacts associated with firewater in the

unlikely event of a thermal incident at the Project Site (Exhs. EFSB-W-1; EFSB-S-31). Additionally, the Company notes that: "[The] chemical byproducts produced in BESS fires have low water solubility, limiting the potential for groundwater contamination (Exh. EFSB-W-3(1) at 7). Across 35 documented large-scale BESS fire incidents in the U.S. that occurred between 2012 and 2024, the Company represents that there has been no evidence of any air, soil, or water contamination at levels that would pose a public health concern or require further remediation" (Company Reply Brief at 12; Exh. EFSB-W-3(1) at 7).[31]

In addition to the ERP, the Company maintains that the Project would have minimal potential to impact public water supply sources and other water resources due to: (1) proposed stormwater management system; (2) secondary containment measures for the main power transformer at the Project Substation and medium voltage transformers that include built in containment; (3) the development of a Long-Term Pollution Prevention Operation and Maintenance Plan and a Construction Period Soil, Erosion, and Sediment Control Plan; and (4) additional plan development including and SPCC Plan (Company Brief at 29 to 30). Accordingly, the Company asserts that the risk of any contamination from the facility would be inherently low for these reasons and is appropriately managed through a stormwater management system (Company Brief at 28). Additionally, the Company maintains that the regional groundwater mapping for this area shows very low transmissivity, which is a measure of how much groundwater the subsurface can carry sideways, meaning the groundwater system has limited ability to move water laterally (RR-EFSB-19). If groundwater has limited ability to move laterally, the Company asserts that it has a limited ability to carry a dissolved contaminant plume by groundwater flow (RR-EFSB-19).

Regarding DiPalma/Sheehan's assertion that the Town's zoning bylaw requires the use of vegetated stormwater features, the Company maintains that Section 5.6 of the Town's zoning

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[31] The hydrogeological analysis cites to a Frequently Asked Questions document created via a cooperative effort between the Massachusetts Executive Office of Energy and Environmental Affairs, MassDEP, Department of Energy Resources, and the Department of Fire Services. The FAQ document is available at: https://www.mass.gov/info-details/battery-energy-storage-systems-frequently-asked-questions-on-fire-safety-and-public-health (last visited March 30, 2026).

bylaw does not prescribe any particular BMPs or vegetated systems; rather, the Company argues that it explicitly permits the use of a variety of site-appropriate BMPs (Company Reply Brief at 13). Moreover, the Company asserts that neither Section 5.6 of the Town's Zoning Bylaw, nor Chapter 19 of the Town's General Bylaws, nor the MassDEP Stormwater Handbook requires the use of a vegetated stormwater system (Company Comments (5/26/26) at 4).

The Company relates that its parent company has located numerous projects in groundwater protection areas like the Zone II area, asserting that it is not uncommon for batteries to be located in such areas because they do not produce contaminants and do not impact groundwater in normal operation, unlike the existing uses and condition of the Project Site (Company Reply Brief at 14). According to the Company, DiPalma/Sheehan argue that the Project should be in a "self-containment area"; however, the Company contends that there is no requirement for containment at either the federal or state level with respect to BESS units, although there is a containment requirement for transformers, and the Company states it meets this requirement (Company Reply Brief at 14). The Company further maintains that it would help train the TFD that the appropriate response to a thermal event is to refrain from using water (Company Comments (5/26/26) at 4). The Company offers that any releases would be addressed by an environmental service contractor retained by the Company (Company Comments (5/26/26) at 4).

The Company maintains that the SHGW data from the March-April 2026 test pit investigation showed that groundwater levels were higher in the southeastern portion of the site, and lower in the western part of the site, as compared to the initially recorded groundwater levels based on test pits completed on site in February 2025 (RR-D/S-11 (S2) at 2). At the southeastern portion of the site around BMP B-4, the Company observes that Test Pit SHGW was 1.45 feet higher than previously recorded, and at BMP B-5 groundwater was 0.60 feet higher than previously recorded (RR-D/S-11 (S2) at 2). To comply with MassDEP required offsets from groundwater, the Company acknowledges that certain modifications to the proposed stormwater system would be required, as described above in Section IV.D.2.b (RR-D/S-11(S2) at 2).

Regarding Mr. Horsley's comment that use of the Andover USGS Index Well data is required by the MassDEP Stormwater Handbook, the Company maintains that the use of USGS

index wells only are recommended in cases where actual, on-site seasonal high groundwater elevation data are absent; however, the Company points out that actual SHGW data were taken, obviating the need for the USGS index well data (Company Comments (5/26/26) at 5 to 6). Regarding groundwater mounding, the Company asserts that the Stormwater Handbook is clear that a mounding analysis is only required when recharge is proposed as a strategy to attenuate peak discharge rates from ten year or larger storms (Company Comments (5/26/26) at 6). The Company reiterates that the most current design does not rely on recharge to attenuate peak discharge rates, therefore no mounding analysis is required (Company Comments (5/26/26) at 6). Moreover, any subsequent design will not rely on recharge to attenuate peak flows (Company Comments (5/26/26) at 6).

Regarding the BOH comment that the proposed stormwater system design does not comply with Section 5.6 of the Town's Zoning Bylaw calling for a three foot vertical separation between the Recharge Basins and the ESHGW, the Company states that while the Project seeks an exemption from the local three foot separation bylaw requirement, it does meet Massachusetts Stormwater Management Standards 2, 3 and 4, including the two-foot separation standard (Company Comments (5/26/26) at 7). Regarding the Intervenor' concerns regarding the use of PVC as a detention basin liner, the Company relates that PVC is used regularly as a material in stormwater features and that the PVC liner planned for this Project would be certified not to leach flows (Company Comments (5/26/26) at 5).

The Company contends that changes to the proposed stormwater system during the permitting process are in line with what would be expected in the normal course of developing 30 percent Design Drawings into Construction Documents, and that modifications would maintain compliance with all MassDEP requirements, including recharge and peak rate attenuation (RR-D/S-11 (S2) at 2 to 3; Company Comments (5/26/26) at 2). Therefore, minor modifications required to the stormwater management system arising from the test pit results are precisely the type of refinements that occur in the ordinary course of developing 30 percent design drawings into final construction documents (Company Comments (5/26/26) at 1).

The Company concludes that it has proposed a stormwater management system that meets all applicable MassDEP water quality standards, including those relating to groundwater

recharge and filtration, providing substantial improvements in terms of protecting water quality compared to the preexisting condition of the property (Company Reply Brief at 16).

The Company presumes that the Intervenors will be active participants in the Town's conservation commission process (Company Comments (5/26/26) at 9). As a result of that process, the Company notes that the stormwater design may be further developed to address issues raised by the Conservation Commission and/or participants in that process (Company Comments (5/26/26) at 9). According to the Company, stormwater design will not be finalized until after the permitting processes are completed (Company Comments (5/26/26) at 9). The Company maintains that it has met the very specific standard under that statute, requesting the EFSB grant Hillman Energy Center individual and comprehensive zoning exemptions (Company Comments (5/26/26) at 9).

e. Analysis and Findings

The Project Site is located near two wetland resource areas. The record indicates that the Company will develop a Construction Period Soil Erosion and Sediment Control Plan and SWPPP to ensure that the Company incorporates BMPs specified in guidelines developed by the MassDEP, the Town of Tewksbury, and the United States Environmental Protection Agency ("EPA") and will ensure compliance with the requirements of the Massachusetts Wetlands Protection Act and its associated Regulations, the Town of Tewksbury Wetland Bylaw, and the National Pollutant Discharge Elimination System ("NPDES") General Permit for Storm Water Discharges from Construction Activities. These measures would include the installation of temporary sediment controls (e.g., silt fence, straw wattles, compost filter tubes, inlet protection devices), erosion prevention measures (e.g., seeding, stone, pavement), and construction sequencing.

With respect to the potential for impacts to groundwater wells, while the record demonstrates that upgradient wells such as Tewksbury Hospital and private wells would be unlikely to be affected by the Project, the definition of a Zone II area by MassDEP includes the possibility of impacts to a particular wellhead, accounting for impacts from sources that are upgradient. The Board also recognizes that the Tewksbury Groundwater Protection District

bylaw is put in place under the Safe Drinking Water Act that includes requirements for states to implement local water supply protections, which are implemented pursuant to the Massachusetts Safe Water Drinking Act and through the MassDEP Drinking Water regulations that require localities to implement groundwater protection bylaws and ordinances. These local bylaws and ordinances are important aspects of ensuring the protection of water supply quality and, hence, the public welfare.

However, the Board notes that the Tewksbury Groundwater Protection District Bylaw and the MassDEP regulation that it implements do not strictly require a cap on 15 percent impervious surface for development in Zone II areas. Another option is provided to allow a developer to develop an artificial recharge system, as follows: "a system for artificial recharge of precipitation is provided that will not result in the degradation of groundwater quality." The Company has agreed to install a stormwater system that complies with the MassDEP Stormwater Standards in 310 CMR 10.00 and is consistent with the MassDEP Stormwater Handbook recommendations for artificial recharge in Zone II areas[32]. While some parties argue for stricter measures, including a vegetated stormwater system, the Board finds that it is reasonable to conclude that compliance with the statewide standards for artificial recharge in Zone II areas is a sufficient standard to meet the intent of the Tewksbury Groundwater Protection District bylaw to protect the water supply at issue.[33] In addition to the stormwater management system, the Board further finds that the potential for any Project impacts would be minimized through the following strategies that the Company has agreed to implement: (1) the ERP; (2) secondary containment measures for the main power transformer at the Project Substation and medium voltage transformers that include built-in containment (See Condition 20 of this Decision); (3) the

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32 The decision about compliance with the MassDEP Stormwater Standards will be made by the issuing authority which reviews and approves the Company's Notice of Intent application under 310 CMR 10.00.

33 The MassDEP Guidance cited by the other parties as to additional requirements for the development of renewable energy systems expressly applies only to Zone I, Zone A and Zone II areas that are owned by public water suppliers. Therefore, its additional requirements are not applicable to this Project. In addition, neither the Tewksbury bylaw nor the MassDEP drinking water regulations require a vegetated stormwater system.

development of a Long-Term Pollution Prevention Operation and Maintenance Plan; (4) a Construction Period Soil, Erosion, and Sediment Control Plan; and (5) an SPCC Plan (See Condition 21 of this Decision).

The record indicates that there are limited temporary impacts and negligible long-term or permanent impacts. Siting Board finds that wetland impacts from construction of the proposed Project would be minimal and temporary, and construction of the Transmission Interconnection would result in the temporary impact to approximately 2,400 square feet of BVW (Exh. HEC-1, at 22), which would be restored following construction. Relative to the Project Site's current industrial condition, the Board finds that the minimal, temporary impacts to onsite and nearby wetlands by the Project, coupled with a decrease in impervious surface area and maintenance of water quality results in an improvement to the existing site condition and a reduction in area flooding potential.

The record shows that the Company designed its Stormwater Management System featuring water quality units, recharge basins, detention basins and spreaders that is consistent with the MassDEP stormwater standards, including a plan to construct its Recharge Basins consistent with the MassDEP stormwater standards. The basins will likely not comply with the Town's stricter stormwater standards in Section 5.6; however, the Siting Board is exempting Section 5.6, below.[34]

Further, the Board finds that the the proposed system design would satisfy the MassDEP Stormwater Standard requirement of a two foot minimum vertical separation requirement between the bottom of the six-inch stone layer below the Recharge Basins and the ESHGW, but not satisfying the three foot minimum separation required under the Town's Zoning Bylaw for which an exemption is sought by the Company. Since the proposed stormwater system does not require recharge (i.e., stormwater infiltration to attenuate the peak discharge from a 10-year or

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[34] Regarding the Town's request to include HCA Section 6H (financial contribution to the Town's Stormwater Enhancement Program), the Siting Board views this provision as reasonable and relevant to mitigation of Project impacts, and its demands on Town infrastructure, in general. However, as noted above, the HCA contains its own means of enforcement, and the Board does not assume enforcement responsibility for this provision.

higher 24-hour storm), the Board finds that for purposes of granting a zoning exemption, a mounding analysis is not required with the proposed system.

Further, the Siting Board finds no requirement for containment at either the federal or state level with respect to BESS units; however, there is a containment requirement for transformers, and the Board finds that the Project's secondary containment measures for the main power transformer at the Project Substation and medium voltage transformers that include built-in containment would meet this requirement.

Regarding the potential for contaminant transport in stormwater or firewater, the proposed stormwater management system is an engineered system with BMPs, effectively filtering out floatable and settling pollutants and facilitating groundwater recharge. Coupled with further filtration in the loamy soil matrix above the water table, which stores water and adsorbs dissolved contaminants, the proposed system includes elements that would be effective in maintaining water quality and aquifer recharge. Further, any fire suppression water used in a thermal runaway or fire would not be directly applied to BESS fires, substantively limiting the potential volume of fire suppression water runoff. In the event of an incident, the Board directs the Company to ensure that water collected in the stormwater management detention basin, catch basins, vortex units (or similar), and/or other collection facilities would be monitored during and immediately after firefighting activities. The Board directs the Company to have an LSP and licensed environmental services company on contract to remove and properly dispose of affected runoff water within the stormwater management system.

Regarding vegetated stormwater systems, the Board finds that neither MassDEP nor Section 5.6 of the Town's Zoning Bylaw prescribe any particular BMPs or vegetated systems and instead explicitly permits the use of a variety of site-appropriate BMPs. Therefore, while the proposed stormwater system and BMPs do not include vegetative-based stormwater management systems, the Board finds that the stormwater system, as proposed, is consistent with MassDEP stormwater treatment requirements. Under normal operating conditions, the Project would not generate any process-related wastewater and would not require any sanitary sewer connection.

The Board further finds that the 2025 and 2026 data used to determine ESHGW were appropriate, reasonable, and appear to be consistent with the MassDEP Stormwater Standards.

Despite suppositions of harm by DiPalma/Sheehan and the BOH resulting from use of non-leachable PVC as a liner for the Discharge Basins, there is no evidence in the record supporting this assertion.

The record indicates that the Company will maintain a contracted LSP and licensed environmental services company for the operational life of the BESS facility, will provide training to the Tewksbury Fire Department, and develop an ERP to ensure a robust emergency response should a pollution-release incident occur at the Project Site. Further, the Siting Board notes that the ERP calls for a defensive firefighting strategy without direct application of water, which limits the potential for impacts associated with fire suppression water in the unlikely event of a thermal incident at the Project Site. Given the lack of pollutant emissions under normal operating conditions, defensive firefighting strategy limiting water application, and contracted environmental services at the ready in the event of a pollution release event, the Siting Board finds that the impacts of operation of the Project will be minimized and mitigated.

With respect to the potential for impacts to groundwater wells, the record demonstrates that upgradient wells such as Tewksbury Hospital and private wells would not be affected by the Project. The Board further finds that the potential for Project-sourced contamination to downgradient wells would be unlikely since wetlands between the Project and downgradient wells would arrest any further contaminant transport. Therefore, the Board finds that the Project would have minimal potential to impact public water supply sources and other water resources due to these hydrogeologic reasons. The Board further finds that the potential for any Project pollution would be minimized through the following pollution management strategies: (1) the ERP; (2) proposed stormwater management system; (3) secondary containment measures for the main power transformer at the Project Substation and medium voltage transformers that include built-in containment; (4) the development of a Long-Term Pollution Prevention Operation and Maintenance Plan; (5) a Construction Period Soil, Erosion, and Sediment Control Plan; and (6) an SPCC Plan.

For all proposed work within the 100-foot Wetlands Buffer Zone, the Board directs the Company to use BMPs, such as erosion control barriers including silt fence barriers, to establish

limits of work, protect turtles, and to ensure that there are no short- or long-term impacts to adjacent wetland resource areas (Condition #46).

The Board directs the Company to submit a final Wetland Replication Plan (WRP) to restore all disturbed wetlands resource areas and to replicate permanently filled or altered wetlands resource areas for written approval by the Tewksbury Conservation Commission. The surface area or any disturbed wetlands resource areas and replications areas shall be at least 75% established with indigenous wetland plants within two growing seasons. Should the replication areas fail to meet this standard, MassDEP or the Tewksbury Conservation Commission may require additional measures necessary to achieve compliance. Areas must be replicated in accordance with applicable standards of 310 CMR 10.00 and the WRP (Condition #47).

To minimize the risk of contamination to the groundwater of this Zone II area in accordance with the intent of the local Tewksbury Groundwater Protection District bylaw, the Board directs the Company to minimize runoff and comply with the Massachusetts Stormwater Management Standards in 310 CMR 10.00 and to be consistent with the associated guidance in the Massachusetts Stormwater Handbook, including, but not limited to, the provision of artificial recharge as an alternative to the 15% impervious surface requirement in the Tewksbury Groundwater Protection District bylaw, as required by MassDEP's drinking water regulations at 310 CMR 22.21(2)(b)7. and the development of a Construction Period Soil Erosion and Sediment Control Plan. The Board further directs the Company to provide a compliance filing to the Town and Siting Board to demonstrate compliance with MassDEP Stormwater Standards within 6 months of completion of Project construction (Condition #48).

The Board directs the Company to minimize runoff and comply with the Massachusetts Stormwater Management Standards (per the Massachusetts Stormwater Handbook), including, but not limited to the development of a Construction Period Soil Erosion and Sediment Control Plan. The Board further directs the Company to provide a compliance filing to the Town and Siting Board to demonstrate MassDEP Stormwater Standards compliance within 6 months of completion of Project construction (Condition #49).

The Board directs the Company to develop a Stormwater Pollution Prevention Plan ("SWPPP") that will identify controls to be implemented to mitigate the potential for erosion and sedimentation from soil disturbance during construction (Condition #50).

The Board directs the Company to control sediment movement and stabilize exposed soils to prevent pollutants from moving offsite or entering waters or wetlands. The Board directs that land disturbance activities include demolition, construction, clearing, excavation, grading, filling, construction, and reconstruction. During construction, the Board directs the Company to hire a third-party inspector to submit monthly reports to the Town of Tewksbury. The third-party inspector shall go to the Project Site after significant storm events to confirm compliance with the Applicant's Construction Period Soil Erosion and Sediment Control Plan and/or SWPPP. A significant storm event shall be defined as more than one inch of rainfall in a 24-hour period. The minimum qualifications for the third-party inspector shall consist either of an educational degree in or related to the field at issue or three or more years of practice in the field at issue or a related field (Condition #51.

The Board directs the Company to locate all stockpiles (if necessary) outside of the 100-foot Buffer Zone and to refuel or store equipment—except for equipment that cannot be moved due to safety or operational requirements—beyond 100 feet from wetland resource areas (Condition #52).

To reduce impacts on water resources, the Board directs the Company, to the extent feasible, minimize the use of de-icing chemicals on site both during operation and construction (Condition #54).

The Siting Board directs that the Project shall not cause or contribute to a violation of the Massachusetts Surface Water Quality Standards, 314 CMR 4.00, to protect public health and enhance the quality and value of the water resources of the Commonwealth (Condition #55).

The Board directs the Company to ensure that the bottom of subsurface stormwater Recharge Basins (including the underlying six-inch crushed stone layer) are at least 2.0 feet above the Seasonal High Groundwater Elevation (SHGW) as determined in 2025 and 2026 SHGW assessments (Condition #56).

Finally, the Board directs the Company to provide Project updates at the completion of 60 percent and 90 percent Project design stages, and upon receipt of associated approvals, to the Board. See Condition 30 of this Decision.

The Siting Board finds, with implementation of these conditions in Section VIII, that the Project adequately addresses water and wetland considerations, and that impacts to wetlands and water resources would be minimized. The Siting Board notes that the Company will need to obtain the wetlands and stormwater-related permits from the Town of Tewksbury pursuant to the Massachusetts Wetlands Protection Act and the Tewksbury Wetland Bylaw – both through an Order of Conditions from the Tewksbury Conservation Commission, and a Land Disturbance/Stormwater Permit from the Tewksbury Planning Board. These reviews would also be an opportunity for Tewksbury permitting processes to consider any remaining impacts to wetlands and water resources that have not already been addressed in this decision.

3. Noise

Noise from construction-based Project activities would occur during work hours for the Project (Monday – Friday, 7:00 a.m. to 5:00 p.m.) (RR-EFSB-16(S1) at Section 10(A)). According to the executed HCA, the Company would use its best efforts to respond to complaints received by the Town about noise from construction of the Project and the Company would undertake commercially reasonable actions to address such complaints (RR-EFSB-16(S1) at Section 10(B)). In addition, the Company agreed to assign one representative to handle all complaints from the public and or the Town and would notify the Town of the name and contact information for such person (RR-EFSB-16(S1) at Section 10(B)). According to the executed HCA, the Company agreed to use commercially reasonable efforts through final design and construction of the Project to shield abutting properties from increases in noise through noise mitigating devices such as buffering walls (RR-EFSB-16(S1) at Section 10(C)).

a. Company's Sound Level Assessment

The Company retained Epsilon to complete a Sound Level Assessment Report for the proposed Project's operations phase, which included an ambient sound level measurement

program to document existing background noise conditions in the vicinity of the Project, and computer modeling to predict sound levels from the Project (Exh. HEC-1, at 28). The Company stated that it used results from the measurement program and the modeling to evaluate compliance with the MassDEP Noise Policy, which limits the increase of noise over ambient to ten A-weighted decibels ("dBA") or less, and prohibits creation of new "pure tone" conditions[35] from the proposed Project (Exh. HEC-1, at 28). As part of the background noise assessment, the Company measured existing sound levels continuously for eight days at three locations around the Project Site (Exh. HEC-1, at 28). Epsilon's ambient assessment was conducted in later winter (Exh. SD-NC-B(S1) at 2). The Company also evaluated the Town of Tewksbury noise limits (Exhs. HEC-1, at 28; HEC-1 Att. C(S1) at 12).

The Company also performed supplemental short-term sound measurements at three additional locations near the Project Site during the daytime and nighttime (Exh. HEC-1, at 28). The Company used the eight-day average sound level (using the lowest hourly L90 sound levels[36] measured during each daytime and nighttime period of the program) to establish representative daytime and nighttime background (ambient) sound levels at each location (Exh. HEC-1, at 28).

The Company stated that the modeling it performed follows international standard, International Standards Organization 96-13-2 (Tr. 2, at 206).· The Company claims that this modeling standard is widely used in the acoustics community for the purpose of calculating the sound-pressure levels that would occur surrounding an energy facility (Tr. 2, at 206). The Company stated that the conservatism added to its acoustic model gives the Company confidence that this modeling has been executed appropriately (Tr. 2, at 206).

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35 A "pure tone" condition occurs when any octave band sound pressure level exceeds both of the two adjacent octave band sound pressure levels by 3 dB or more (Exh. HEC-1, Att. C(S1) at 11).

36 L90 is the sound level exceeded 90 percent of the time during the measurement period and is essentially the same as the residual sound level, which is the sound level observed when there are no obvious nearby intermittent sound sources (Exh. HEC-1, Att. C(S1) at 9). The L90 level is used to establish the "ambient" or "background" sound level as part of the MassDEP Noise Policy (Exh. HEC-1, Att. C(S1) at 9).

According to the Company, the Town of Tewksbury Bylaws Chapter 8.12.050 defines property line noise limits for continuous sources based on the receiving property classification shown in Table 1 (Exh. HEC-1 Att C(S1) at 12). Maximum Allowable Exterior Sound Levels for the Town are provided in Table 1 (Exh. HEC-1 Att C(S1) at 12). Area I land uses are residential properties and the grounds of any school, day care, hospital, house of worship, library or cemetery. Area II land uses are all other properties (Exh. HEC-1 Att C(S1) at 12). Additionally, Chapter 8.12.050 prohibits pure tone conditions (Exh. HEC-1 Att C(S1) at 12).

Table 1. Town of Tewksbury Allowable Exterior Sound Levels

Land Use Area	Daytime Level 7:00 AM to 10:00 PM	Nighttime Level 10:00 PM to 7:00 AM
I	60 dBA	50 dBA
II	70 dBA	65 dBA

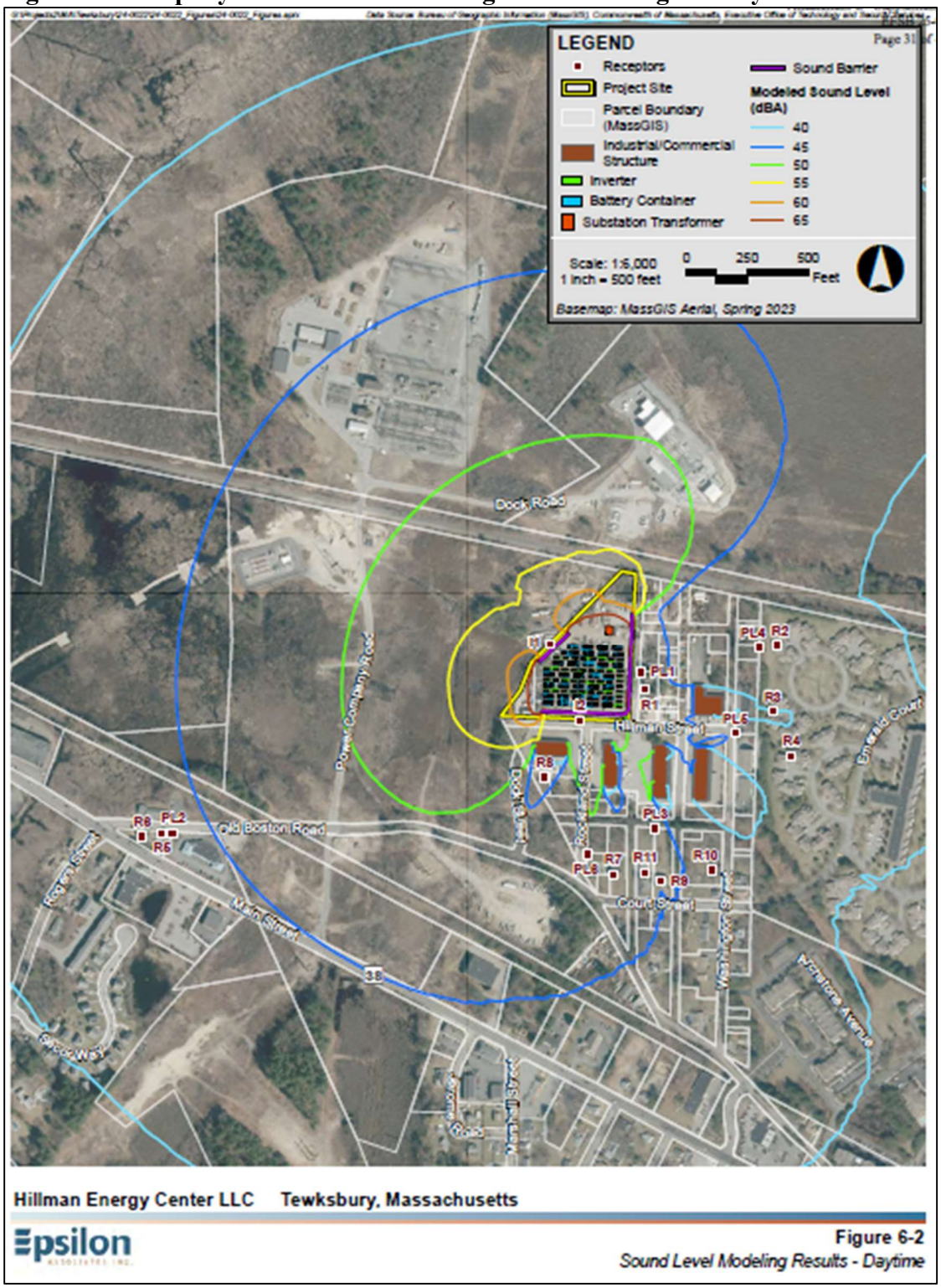
Source: Exh. HEC-1 Att. C(S1) at 9

To meet both the requirements of the MassDEP Noise Policy and the Town of Tewksbury sound limits, the Company applied sound mitigation in the acoustic model, including utilizing low noise equipment, equipment silencers, and sound barriers (Exh. HEC-1, Att. C(S1) at 4). Due to nighttime charging restrictions required by the Independent System Operator – New England ("ISO-NE") interconnection agreement, the Company claimed that fewer Project components would be operating during those time periods (Exh. HEC-1 Att. C(S1) at 4). Therefore, the Company declared that less equipment would be operational during nighttime as compared to daytime when the entire facility may be in operation, hence less noise is produced at night (Exh. HEC-1, Att. C(S1) at 4).

Based on this sound assessment, the Company found that predicted sound level increases from the Project would range from six to ten dBA above the nighttime ambient and range from four to eight dBA above the daytime ambient sound level at various residential locations (Exh. HEC-1, Att. C(S1) at 4). The Company's modeling results are found in Figures 5 and 6 for daytime and nighttime sound level modeling results, respectively (Exh. HEC-1, Att. C(S1) at 31-32). The Company narrated that the daytime modeling results (Figure 5) indicate that the 50

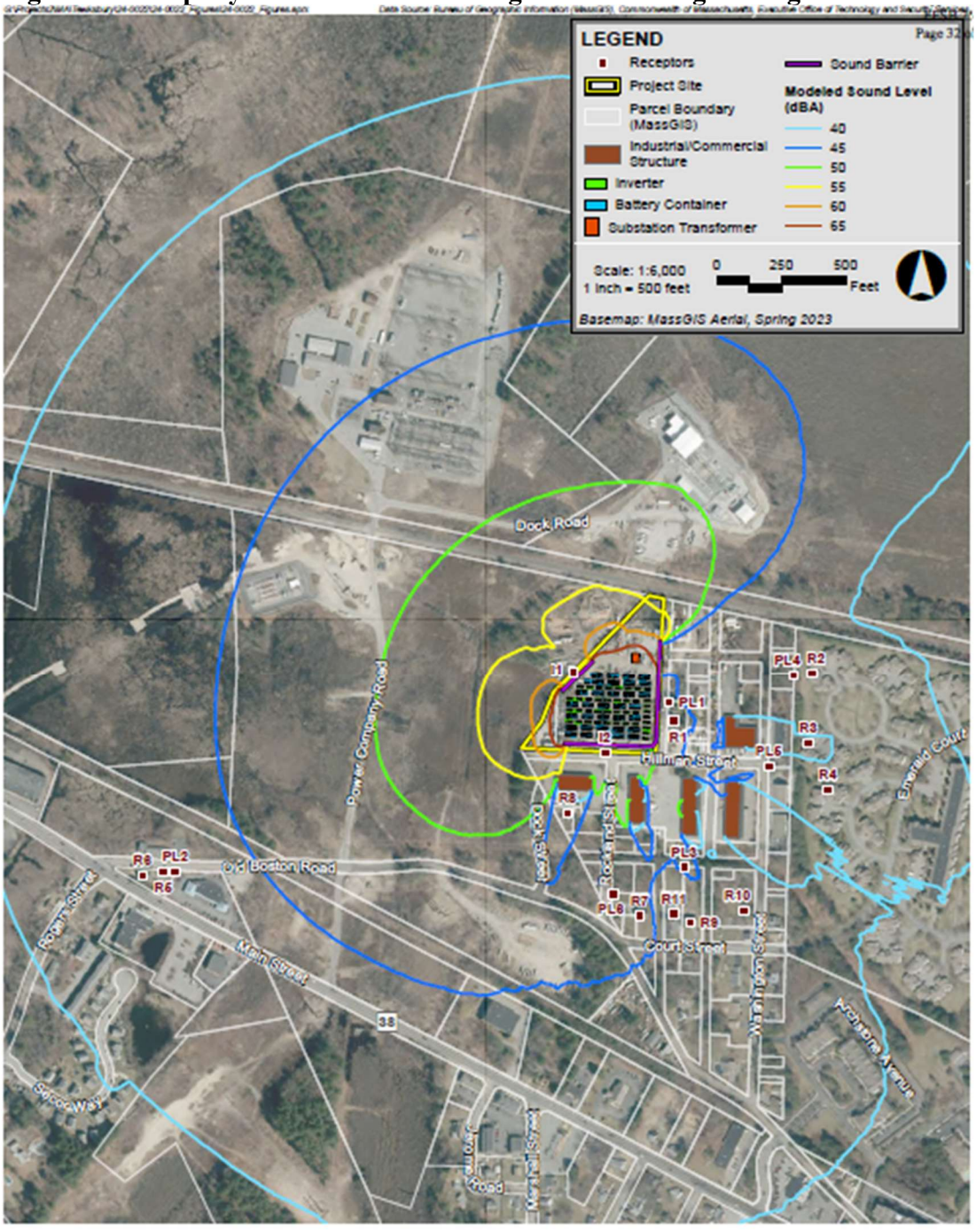
dBA sound contour does not encroach on residential property and the 65 dBA contour is completely contained within the Project Site even during daytime full operation (Exh. HEC-1, Att. C(S1) at 24). According to the Company, Figure 6 indicates that Project only sound levels are at or below the respective nighttime noise limit based on use Area for all modeled receptor locations (Exh. HEC-1, Att. C(S1) at 24). With the noise control features described below, the Company asserts that all Project-only sound levels would comply with the Town of Tewksbury Bylaws with respect to sound (Exh. HEC-1, Att. C(S1) at 24).

Figure 5: Company Sound Level Modeling Results during the Daytime



Source: Exh. HEC-1, Att. C(S1) at 31.

Figure 6. Company Sound Level Modeling Results during the Nighttime



Source: Exh. HEC-1, Att. C(S1) at 32

The Company claimed that octave-band sound pressure level modeling indicated that the proposed Project would not be anticipated to create any "pure-tone" conditions, as defined by MassDEP, when combined with existing ambient sound levels at any modeled receptor locations (Exh. HEC-1, Att. C(S1) at 24). The Company stated the Project would not create any new pure tone conditions (Exh. HEC-1, Att. C(S1) at 24).

The Company contended that Epsilon's modeling assumes that all the sound sources are operating at their worst-case (i.e., highest) sound levels, incorporating multiple levels of conservatism to ensure that the actual sound levels would not exceed the predicted levels (Exh. EFSB-NO-1; HEC-1 Att. C(S1) at 21). The Company further maintained that Epsilon's modeling methodology itself is inherently conservative, for example by comparing worst-case operating conditions (100 percent fan speed) against nighttime ambient sound levels, even though nighttime temperatures are lower and, therefore, the units are unlikely to operate at the highest levels during the night (Company Reply Brief at 17). In addition, the Company's analysis evaluated the presence of a pure tone by predicting the worst-case sound levels from the Project and adding them to the existing ambient sound levels and then determining whether any pure tone would be created or if any existing pure tones would be made worse, and the answer was no for both of those questions (Tr. 1, at 112).

With the noise mitigation measures described below, or equivalent design changes, the Company affirmed the proposed Project would meet the requirements set forth in the MassDEP Noise Policy at all residential locations (Exh. HEC-1, Att. C(S1) at 4).[37] Further, at all locations, the Company predicted Project-only sound levels would be at or below the respective Town of Tewksbury sound level limits (Exh. HEC-1, Att. C(S1) at 5).

The Company explained the predicted sound level increases from the Project are relative to low ambient sound levels derived from the quietest nighttime and daytime hours (Exh. HEC-1, Att. C(S1) at 4). The Company proposed the following noise mitigation measures for the Project:

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[37] The Siting Board is guided by the MassDEP Noise Policy and applies it to residential and sensitive receptors, and to operational as opposed to construction noise.

- Silencing Equipment: The manufacturers of the proposed battery enclosures offer noise mitigation kits to mitigate the sound produced by the units. The Project would utilize the manufacturer specified 1.5-meter noise mitigation kit on all Hithium LX5015 units to reduce the sound produced by the battery enclosures. The manufacturers for the proposed inverters offer a low acoustic system package to mitigate the sound produced by the inverters.

- Sound Attenuation Barriers: In addition to silencing the battery enclosure units and the inverters, the Project would also utilize sound walls along the east, south, and northwest of the Project Site. Under current design, a (proposed) 30-foot-tall barrier along the east of the Project, a 24-foot-tall barrier along the southern side of each parcel of the Project and a 10-foot-tall barrier along the northwest of the Project would be constructed. The barriers would be constructed of materials with adequate thickness and density to provide appropriate sound level reductions. The eastern and southern barriers would have an absorptive inner face corresponding to an absorption coefficient of at least 0.84. The proposed barrier locations are situated as close as possible to the equipment while maintaining adequate ventilation and accessibility. The mitigation contractor selected would be responsible for the design, detailing, and adequacy of the framework, supports, and attachment methods required for the proper construction of the sound attenuation barriers.

- Low Noise Substation Transformer: The Project would utilize a low noise power transformer at the Project Substation. The proposed substation would feature one 150 megavolt amperes ("MVA") transformer. The Company estimated the octave band sound power levels of the transformer using methods outlined in the Electric Power Plant Environmental Noise guide (EEI Noise Guide) assuming the transformer would have a National Electrical Manufacturers Association (NEMA) noise rating of 71 dBA.

- Operational Restrictions: The Project is limited by ISO-NE to charge at a rate of up to 100 MW at any given time. This corresponds with up to 80 percent of the facility being active during charging periods. The Company assumes that battery charging would happen during the quietest times of the night and the other 20 percent of the facility will produce no sound during this time. This would result in the operation of 108 of the Hithium LX5015 battery enclosures and 32 of the M10 inverters.

Exh. HEC-1, Att. C(S1),at 33.

Further, the Company explained that inverter noise levels may be mitigated if the loud side of the inverters are oriented away from sensitive noise receptor areas (Tr. 10, at 1445).

Following construction, the Company stated it plans to conduct a post-construction sound level assessment to confirm it operates in compliance with the applicable sound limits (Exh. EFSB-NO-5). If the sound levels exceeded applicable limits, the Company noted that additional

mitigation would be implemented to achieve compliance (Exh. EFSB-NO-5). The Company did not model sound levels at nearby commercial buildings owned by DiPalma/Sheehan and at second story elevations (Tr. 3, at 359, 362) since the Company asserts that commercial buildings are not considered within the context of the MassDEP Noise Policy (Tr. 3, at 356-357).

b. DiPalma/Sheehan Sound Level Assessment

DiPalma/Sheehan retained Noise Control Engineering ("NCE") to conduct a review of the Company's Sound Level Assessment Report (Exh. NC-SD-B(S1) at 1). As part of the peer review process, NCE stated it conducted an independent sound level assessment, performed a review of the applicable noise requirements (local and state), conducted an ambient noise sound study (August 22 to September 3, 2025) in accordance with the MassDEP requirements, and created noise propagation models using the same modeling software as Epsilon (Datakustik's Cadna-A modeling software; "Cadna-A") (Exh. NC-SD-B(S1) at 2). NCE explained that its peer review of Epsilon's modeling was broken into the following tasks:

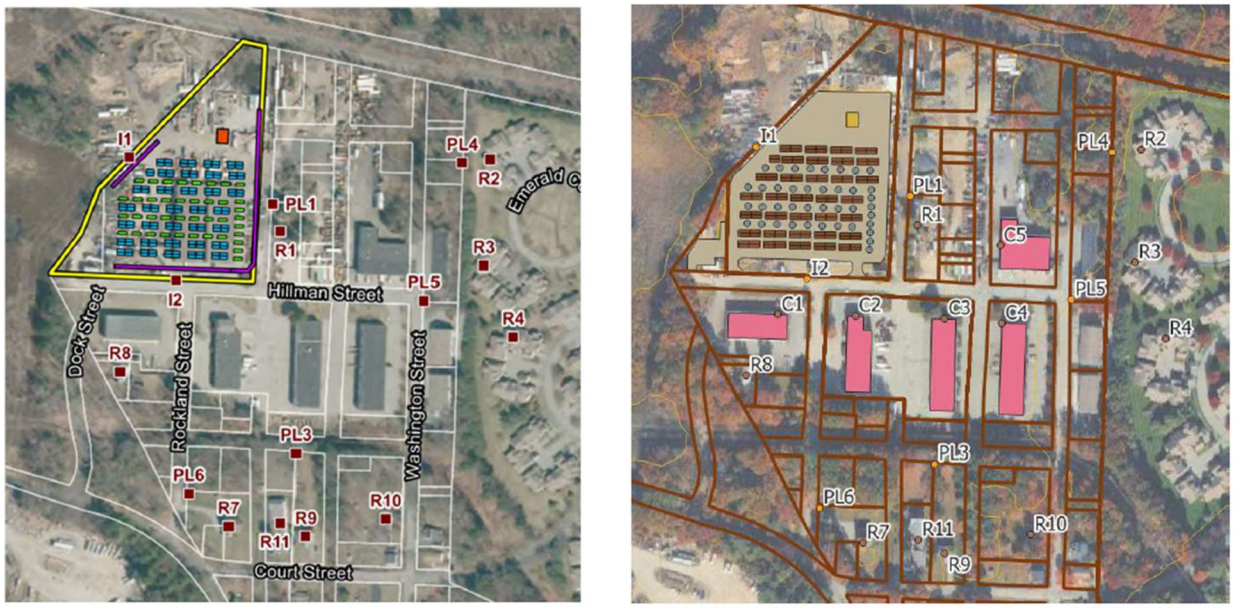
- Create a "mirror" Cadna-A model ("Mirror Model") with the intent to confirm whether the inputs (including ambient noise levels) and assumptions have output values that reflect what was provided in Epsilon's Sound Level Assessment Report,
- Modify the "mirror" Cadna-A model ("Modified Mirror Model") to include the additional receiver locations that NCE believes are sensitive receptors not included in the Epsilon studies, and
- Create a Cadna-A model in a method that NCE would typically generate a model ("NCE Model").

Exh. NC-SD-B(S1) at 4.

NCE related that its Mirror Model was developed using inputs provided by Epsilon and, where data inputs were not clear or fully documented, NCE made input assumptions (Exh. NC-SD-B(S1) at 5). Ultimately, NCE aligned its Mirror Model with the results provided in the Epsilon Report within zero to two dBA, finding that the results provided in the Epsilon Sound Level Assessment Report generally agree with the Mirror Model (Exh. NC-SD-B(S1) at 5). A comparison of Epsilon's and NCE's Mirror Model output values are identified in Table 2.

NCE modified the Cadna-A Mirror Model ("Modified Mirror Model") to include additional sensitive receptors not included in the Epsilon model, including: (1) commercial properties (on grade); and (2) second-level elevations at all the receiver locations (Exh. NC-SD-B(S1) at 6) (Figure 7). NCE explained that Epsilon considered that the commercial properties are not sensitive receptors and did not include them as part of the study, whereas NCE did include them in the Modified Mirror Model (Exh. NC-SD-B(S1) at 6).

Figure 7. Modeled Sound Receiver Locations – Epsilon Model (Left), NCE Modified Model Mirror (Right) For Residences ("R"), Property Lines ("PL"), Industrial ("I") and Commercial ("C") Sound Monitoring Locations.



Source: Exh. NC-SD-B(S1) at 6

According to NCE, NCE added a second story at all receiving residential and commercial locations in the Modified Mirror Model (Exh. NC-SD-B(S1) at 6). NCE acknowledged that some of the receptor locations (Figure 7) are theoretical where an upper story could be added at a later date, other locations such as many of the residential properties and the offices at the C2 location currently have an as-built second level (Exh. NC-SD-B(S1) at 6). For the Modified Mirror Model, NCE asserted that when these additional receptors are added to this model, the MassDEP Noise Policy limit would not be met (Exh. NC-SD-B(S1) at 6). The Modified Mirror Model's output values are identified in Table 2.

NCE stated that it also created a model in a manner more in line with how NCE would traditionally generate a model ("NCE Model") (Exh. NC-SD-B(S1) at 7). NCE provided a comparison of the main differences between NCE and Epsilon's approaches (Exh. NC-SD-B(S1) at 7):

- NCE adjusted ground absorption to account for the parking lot space next to the potential energy storage site.
- NCE did not include any uncertainty (Epsilon included two dB of uncertainty).
- NCE considered directivity for the Hithium energy storage units.
- With respect to the step-up transformer sound power levels, NCE could not find specifications that Epsilon selected, therefore, NCE considered two situations: (1) using a low noise transformer with the level provided by Epsilon, and (2) using sound levels from a standard, unmitigated transformer.
- NCE added three additional sensitive receptors: one location at three elevations (on grade, 2nd level, and 3rd level) at the Emerald Court campus with one large building which has a 3rd level.

Exh. NC-SD-B(S1) at 7.

The NCE model outputs can be found in Table 2.

Table 2. Comparison of Company (Epsilon) and DiPalma/Sheehan (NCE) Modeled Noise Levels (dBA)

Receiver		Epsilon Limits		NCE Limits		Mirror Model		Modified Mirror Model		NCE (Low Noise XFMR)		NCE (Standard XFMR)	
Location	Elevation*	Daytime	Nighttime	Daytime	Nighttime	Daytime	Nighttime	Daytime	Nighttime	Daytime	Nighttime	Daytime	Nighttime
R1	OG	48	47	43	45	47.1	46.1			44.3	44.1	45.7	45.6
R1	2	48	47	43	45			48.9	47.9	46.0	45.7	47.5	47.3
R2	OG	48	44	43	44	42.7	41.0			40.0	39.7	40.8	40.6
R2	2	48	44	43	44			43.5	42.0	40.7	40.4	41.6	41.4
R3	OG	48	44	43	44	41.4	39.4			38.4	38.3	39.6	39.6
R3	2	48	44	43	44			43.8	42.5	41.3	41.0	42.2	42.0
R4	OG	48	44	43	44	42.6	40.9			39.0	38.9	39.4	39.3
R4	2	48	44	43	44			43.6	42.1	40.3	40.1	41.3	41.2
R5	OG	50	47	46	45	44.3	42.8			40.2	39.6	41.6	41.2
R5	2	50	47	46	45			44.8	43.3	40.7	40.2	42.3	42.0
R6	OG	50	47	46	45	44.0	42.5			39.9	39.4	41.3	40.9
R6	2	50	47	46	45			44.5	43.0	40.4	39.9	42.0	41.7
R7	OG	50	47	46	45	45.9	44.6			41.3	40.9	43.6	43.4
R7	2	50	47	46	45			47.4	46.3	43.3	43.0	46.3	46.3
R8	OG	50	47	46	45	43.2	41.4			38.8	38.3	40.1	39.7
R8	2	50	47	46	45			46.3	45.1	42.4	42.0	44.3	44.1
R9	OG	50	47	46	45	45.0	43.7			40.5	40.1	42.4	42.2
R9	2	50	47	46	45			46.5	45.4	42.4	42.2	44.5	44.4
R10	OG	48	44	46	45	42.4	40.8			38.8	38.4	39.8	39.4
R10	2	48	44	46	45			45.0	43.8	41.6	41.2	43.0	42.8
R11	OG	50	47	46	45	45.2	43.9			40.7	40.4	42.5	42.3
R11	2	50	47	46	45			46.9	45.8	42.8	42.6	44.8	44.6
R12	OG	48	44	46	45			42.0	40.2	39.2	38.6	39.7	39.2
R12	2	48	44	46	45			42.8	41.1	39.8	39.3	40.5	40.0
R12	3	48	44	46	45			43.0	41.5	40.1	39.6	40.9	40.4
PL1	OG	50	47	43	45	47.1	46.0			44.3	44.1	46.0	45.9
PL2	OG	50	47	46	45	44.4	43.0			40.3	39.8	41.7	41.3
PL3	OG	48	47	46	45	46.0	44.8			41.6	41.2	43.4	43.2
PL4	OG	48	44	43	44	42.8	41.1			40.1	39.9	41.2	40.9
PL5	OG	50	44	43	44	44.1	42.7			41.9	41.6	42.5	42.3
PL6	OG	50	47	46	45	47.2	46.1			42.5	42.2	45.2	45.1
I1	OG	50	47	43	45	57.2	56.4			53.0	52.7	54.6	54.4
I2	OG	50	47	43	45	51.4	50.5			46.2	46.0	47.1	46.9
C1	OG	50	47	43	45			50.1	49.1	46.2	46.1	47.8	47.7
C2	OG	50	47	43	45			49.9	48.9	45.6	45.6	48.1	48.0
C3	OG	50	47	43	44			46.2	45.0	42.5	42.2	44.3	44.1
C4	OG	50	47	43	44			45.2	43.8	41.9	41.6	43.5	43.4
C5	OG	50	47	43	44			44.5	43.0	42.2	41.8	43.7	43.4
C1	2	50	47	43	45			53.4	52.6	49.2	49.1	51.0	50.9
C2	2	50	47	43	45			53.4	52.5	48.8	48.7	51.3	51.2
C3	2	50	47	43	44			48.3	47.2	43.9	43.6	45.4	45.3
C4	2	50	47	43	44			46.5	45.3	42.5	42.2	43.9	43.7
C5	2	50	47	43	44			45.7	44.5	43.0	42.6	44.4	44.1

Source: Exh. NC-SD-B(S1) at 8.

Note: Modeled sound levels alleged by DiPalma/Sheehan to exceed MassDEP Noise Policy limits are in red.

NCE claimed that both it and Epsilon have similar methodologies for calculating the ambient background levels (Exh. NC-SD-B(S1) at 9). NCE attributed the difference in the ambient background sound levels to the different times of data collection: Epsilon collected background sound data in early March 2025 and NCE collected the data at the end of August 2025 (Exh. NC-SD-B(S1) at 9). NCE's background (ambient) sound level values were lower

and represented a more conservative value—and, therefore, lower allowable Project sound limits under the MassDEP Noise Policy (Exh. NC-SD-B(S1) at 9).[38]

NCE maintained that the main differences between the noise models are that NCE accounted for projected sound levels at all sensitive receptor locations on grade and second story residential and commercial properties (Exh. NC-SD-B(S1) at 9). By including the second story elevations, NCE asserted that the predicted sound levels at locations R1, C1 and C2 exceeded the daytime and nighttime limits (Exh. NC-SD-B(S1) at 9). NCE maintained that there are currently residential and commercial properties that have a second level that NCE identified as sensitive receptors (Exh. NC-SD-B(S1) at 9). When using NCE's ambient background study limits against NCE's Mirror Model noise predictions, NCE claims that more exceedances were found (Exh. NC-SD-B(S1) at 9). NCE evaluated the impact between a low noise and standard step-up transformer as well (Exh. NC-SD-B(S1) at 9). Although NCE recognized that a low noise transformer would be procured, NCE asserts that in a situation where it cannot be found, the main impact would be at the commercial properties (Exh. NC-SD-B(S1) at 9).

NCE claimed that there are offices that operate during the daytime, and the predicted levels would be up to 16 dBA over ambient – well in excess of the 10 dBA MassDEP Noise Policy limit (Exh. NC-SD-B(S1) at 9). Although the R1 location is predicted to just meet the limit using the Epsilon limit and predicted levels using the Mirror Model, NCE indicated that the excess would be higher, approximately 3 dBA (13 dBA over ambient) for a daytime, second level elevation condition (Exh. NC-SD-B(S1) at 9). Further, while Epsilon found industrial locations I1 and (especially) I2 (Figure 7) to be in compliance with the MassDEP Noise Policy, if they are sensitive receptor locations (i.e., due to commercial properties near I2), the predicted levels would well exceed the noise limits, including in the middle of the afternoon when people are present doing work (Exh. NC-SD-B(S1) at 10). Finally, NCE related that because the step-up transformer and inverter (sound band/spectrum) are estimated due to a lack of manufacturer

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[38] The Company reports that NCE's ambient assessment applied ANSI standard S12 to remove insect noises (Exh. HEC-2, at 3, n. 4; Tr. 6, at 820-821) and confirms that noise filtering not only removes the sound of insects but in fact removes all high frequency sounds, including those that are properly part of the ambient background (Tr. 6, at 823).

sound data for this equipment, NCE could not say with certainty that there would not be a tonality issue when comparing it to the pure tone requirements of the MassDEP noise regulation (Exh. NC-SD-B(S1) at 10).

c. Positions of the Parties

i. Town of Tewksbury

The Town addresses its noise concerns in the HCA, Section 10: 10A (Project construction hours); 10B (Company responses to Project noise complaints); 10C (requires Company to implement commercially reasonable efforts through final design and construction of the Project to shield abutting properties from increases in noise) and Section 10D (requires Company to conduct post-construction sound monitoring protocol for the Town with the MassDEP and the Town Manager, or their designated representative) (Exh. TEWK-JCC-2, at Section 10). The Town argues that the BOH has no statutory role in enforcing noise issues associated with the Project except for noise complaints (Town Reply Brief at 8).

ii. Tewksbury Board of Health

The BOH asserts that the record does not establish that enforceable, health-protective noise limits, independently monitored and enforceable by the Board of Health, have been established as a condition of any approval (BOH Brief at 13 - 14). The BOH asserts its authority to address noise issues under nuisance prevention provisions pursuant to G.L. c 111, §§ 31 and 122 (BOH Brief at 14).

BOH argues that the Company's noise analysis did not evaluate commercial and office buildings on Hillman Street and Rockland Street adjacent to the facility as sensitive receptors, and asserts the need for a supplemental noise analysis evaluating sound pressure levels at the commercial and office buildings, with any required mitigation implemented before commercial operation (BOH Reply Brief at 2, 6, 7, 11).

iii. DiPalma/Sheehan

DiPalma/Sheehan claims that sound power levels from the forty M10 inverters (with medium-voltage transformers) and the single 150 MVA power transformer that the Company

proposes to install were estimated (i.e., not validated by an independent testing laboratory as were the BESS units) (Exh. SD-NC-B(S1) at 1; D/S Brief at 59). DiPalma/Sheehan further asserts that the M10 inverters with medium-voltage transformers are louder than the Hithium BESS enclosures (Tr. 10, at 1442; D/S Brief at 59), and the inputs into the Company's noise modeling using M10 inverter data are not known (D/S Brief at 60; D/S Reply Brief at 4). DiPalma/Sheehan maintain that for the loudest piece of equipment proposed for use at the Project Site, the 40 M10 inverters, sound power levels were estimated without reference to how this was done, and those sound power levels were kept confidential (D/S Brief at 61).

Regarding the main transformer, the DiPalma/Sheehan reports that the Company used a 42-year-old noise guide ("EEI Guide")[39] as an estimate rather than any kind of tested manufacturer data as noise modeling inputs (D/S Brief at 61-62). DiPalma/Sheehan state that the EEI Guide is no substitute for laboratory-certified sound power levels by frequency band (D/S Brief at 62). Rather, DiPalma/Sheehan recount that the Company's plan is to require that the manufacturer meet the limits of Company modeled sound power levels (D/S Brief at 63). DiPalma/Sheehan argue that the record is devoid of any confirmation that the Company's noise model is accurate, and the sound power levels for the loudest piece of equipment are not actually known (D/S Brief at 63). DiPalma/Sheehan further maintains that because neither acoustic engineering firm could share or discuss manufacturer provided data, questions and answers during testimony were stunted (Exh. SD-NC-B(S1) at 1; D/S Reply Brief at 4).

DiPalma/Sheehan argues that both the Epsilon and NCE models show concerning projected sound pressure levels at numerous locations, and even slight inaccuracies in sound power levels entered into the noise models could have negative impacts on the sensitive receptors in the area (D/S Brief at 63). DiPalma/Sheehan argue there is doubt about the accuracy of the Epsilon noise model, and the Company has not met its burden of establishing that the MassDEP Noise Policy would be met (D/S Brief at 64).

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[39] Edison Electric Institute, 2nd edition, 1984.

iv. Limited Participants

LP Martin asserts that uncertainty matters especially because the nearest receptors include family residences and fragile populations (Martin Reply Brief at 4). Ms. Martin claims the Company declined to specify the composition of a 30-foot wall built as a mitigation mechanism (Martin Reply Brief at 4). LPs Martin and Robertson argue that, given that the record contains evidence of exceedances or disputed assumptions at sensitive receptors, the Company cannot satisfy its burden with the promise that it would fix the problem later if post-construction testing reveals noncompliance, noting that unverifiable inputs, confidential assumptions, and reliance on post-construction correction are incompatible with the Company's burden of proof (Martin Reply Brief at 4-5).

v. Company Response

The Company notes that DiPalma/Sheehan avoid discussion of the Company's commitment to conduct a post-construction noise assessment to confirm that the Project operates in compliance with applicable sound limits (Company Reply Brief at 16). The Company maintains that if the Project exceeds the applicable limits, the exceedances would be addressed through the post-construction sound assessment and additional mitigation (Company Reply Brief at 16). Thus, the Company argues, DiPalma/Sheehan's concern regarding the sound modeling are purely theoretical (Company Reply Brief at 16). The Company notes that DiPalma/Sheehan's noise expert stated, regarding Epsilon's sound assessment report, "we found the methodology of the report to be reasonable and sound" (Company Reply Brief at 17).

The Company reports that NCE's ambient assessment applied ANSI standard S12 purportedly to remove insect noises (Exh. HEC-2, at 3, n. 4; Tr. 6, at 820-821) and confirms that noise filtering not only removes the sound of insects but in fact removes all high frequency sounds, including those that are properly part of the ambient background (Tr. 6, at 823). Thus, the Company argues, the NCE ambient (noise level) assessment removed all high frequency sounds and does not provide an accurate or reliable assessment of the actual ambient background (Company Reply Brief at 18). Epsilon's ambient assessment was conducted in the winter (Exh. SD-NC-B(S1) at 2), which the Company contends, is generally quieter than summer, was not

manipulated to remove high frequency sounds and, therefore, provides, a far more reliable assessment of the actual ambient background at the Project Site (Company Reply Brief at 18). In almost every case where the NCE sound assessment found an exceedance of the MassDEP Noise Policy, the Company argues that it would not have been an exceedance based on Epsilon's ambient assessment (Company Reply Brief at 18-19).

In addition, the Company asserts that the NCE report modeled receptors at commercial/industrial locations that are unlikely to be deemed "sensitive receptors" by MassDEP (Company Reply Brief at 19). The Company maintains that the MassDEP Noise Policy Interpretation states that MassDEP focuses on noise levels "at the nearest residence or other sensitive receptor" (e.g., schools, hospitals), and further states: "A new noise source that would be located … in a commercial or industrial area with no sensitive receptors may not be required to mitigate its noise impact on those areas…" (Exh. HEC-1, Att. C(S1) at 30).

While DiPalma/Sheehan raises some concerns with the modeled sound levels of the M10 inverters, the Company confirms that the required sound levels for the M10 inverters would be specified in the procurement contracts, ensuring the equipment meets the required specifications (Tr. 10, at 1447-1448). The Company further confirms that it would monitor actual sound levels and pure tones as part of the post-construction sound level assessment and any exceedances would be mitigated (Exh. EFSB-NO-3; Tr. 2, at 166).

Finally, the Company argues that sound levels from the Project would comply with the MassDEP Noise Policy during daytime hours at the property line directly south of the Project on the south side of Hillman Street if the height of the proposed southern sound wall was increased to 24 feet (RR-EFSB-20).

d. Analysis and Findings

The Company and DiPalma/Sheehan agree on certain regulatory parameters, policies and general analytical approaches for noise impacts, but there are also several critical points of disagreement. Ultimately, the Company concluded that the Project would comply with MassDEP's Noise Policy as well as the Town of Tewksbury's Bylaws, which specify various operating noise limits. DiPalma/Sheehan contends that there is considerable doubt about the accuracy of the Company's noise model, and that the Company has not met its burden of

establishing that the MassDEP Noise Policy will be met. The areas of disagreement focus on operational noise, rather than construction noise; DiPalma/Sheehan does not take issue with the Project's construction-related noise impacts.

Of note, both the Company's and DePalma/Sheehan's noise consultants relied on modeling software called "CadnaA" to predict sound pressure levels extending into the community around the proposed BESS site. This modeling software is frequently used in cases before the Siting Board, and Board has consistently found its use to be appropriate for such noise studies.

The major differences between the Company and DePalma/Sheehan regarding noise impacts of the Project include the following:

- What is the proper understanding of the MassDEP Noise Policy with regard to defining "sensitive receptors," and the proper measurement of noise impacts on them.
- Whether the assumed sound profiles for the Project's 40 or so "M-10" inverters are accurate and appropriate for use in noise modeling.

The record indicates that the primary land uses within the immediate vicinity of the Project Site (i.e., within 100 feet) are business-related with some 43 businesses identified; there are also two single family residences, with no other "sensitive receptors" identified.[40] Between 100 and 1,000 feet from the Project Site the mix of land uses expands to include 14 additional single-family residences, 470 residential units located in multi-family properties (in particular, Emerald Court), and an additional 45 businesses. Overall, the Project site is in an industrial area currently occupied by an active landscaping business and truck repair facility, with frequent truck traffic and the operation of loud, heavy machinery.

For purposes of modeling Project noise impacts, the Company identified 17 sensitive receptors (eleven residences and six residential property lines) that were closest to the Project Site (Exh. HEC-1(3), Attachment C, at 19). With all noise mitigation measures it is proposing to include, the Company determined that all 17 sensitive receptor locations would experience noise

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[40] Sensitive receptors typically include child care facilities, schools, places of worship, health care facilities, town halls, and police and fire stations. See Exh. EFSB-G-13.

impacts consistent with MassDEP's Noise Policy limit of 10 dBA or less over background sound conditions (i.e., nighttime L_{90} readings). Two industrial facilities in very close proximity to the Project Site were modeled as having increased noise of 28 and 14 dBA over ambient, however, the Company asserts MassDEP's Noise Policy is not applicable to such facilities. The Company determined that all these locations (including the industrial locations) met the Tewksbury Use Area Noise Limit of 50 dBA max (residential) or 65 dBA max (industrial).

The Siting Board is unpersuaded that DiPalma/Sheehan's proposed modifications of the Company's noise modeling would yield either more accurate results or better reflect MassDEP's Noise Policy. It appears that the single biggest reason for the divergent conclusions on MassDEP Noise Policy compliance stems from the assumptions used for background level ambient noise conditions. The quieter the assumed background sound level is, the more likely a new noise source is to create incremental noise above the 10 dBA limit.

DiPalma/Sheehan's noise consultant adjusted the background sound readings it took during summer 2025 measurements, purportedly to remove insect noises pursuant to ANSI standard S12. However, the record shows that such adjustments were not in keeping with the ANSI standard as the Project is not located in a "protected natural or quiet residential area" as defined in the ANSI standard. Further, the record shows that the sound filtering used by DiPalma/Sheehan's consultant not only removes the sound of insects but also removes all high frequency sound, which should be included in a proper measurement of background sound conditions. The Company's background sound measurements, which were taken in the winter season, did not require such audio adjustments and are therefore more reliable than DiPalma/Sheehan's. Importantly, as noted by the Company, had DiPalma/Sheehan simply used the Company's more reliable ambient sound measurement data, most of the alleged "exceedances" calculated by its sound modeling consultant would not have occurred.

With regard to the application of MassDEP's Noise Policy, DiPalma/Sheehan also seems to have made certain unfavorable assumptions that increased the likelihood of determining a noise exceedance. For example, DiPalma/Sheehan's inclusion of industrial/commercial properties as "sensitive receptors" is not supported by the actual wording of the MassDEP Noise Policy, nor the practices that have evolved over time in its use, including at the Siting Board,

which focuses on residential properties and other commonly understood sensitive receptors. Similarly, DePalma/Sheehan's choice of receptor noise modeling at 2nd or 3rd story building elevations, (rather than the 1.5-meter height above ground level used by the Company) is not specified by MassDEP in its Noise Policy and is also inconsistent with prior noise modeling studies approved by the Siting Board.

DiPalma/Sheehan also questions the noise profile of the 40 or so M-10 inverters that Hillman proposes to use as being unreliable, and another basis of the alleged noise exceedances. However, the record shows that the Company confirmed that the required sound levels for the M-10 inverters would be specified in the procurement contracts, ensuring the equipment meets the required specifications. Furthermore, the actual sound levels will be determined as part of the post-construction sound level assessment, and any exceedances fully mitigated.

The record shows that noise from construction-based Project activities would occur during work hours for the Project (Monday – Friday, 7:00 a.m. to 5:00 p.m.). According to the executed HCA, the Company would respond to complaints received by the Town about noise from construction of the Project and the Company would undertake reasonable actions to address such complaints, assigning a representative to handle complaints from the public and or the Town and would notify the Town of the name and contact information for such person. Consistent with the executed HCA, the Board directs the Company to take reasonable efforts through final design and construction of the Project to shield abutting properties from increases in noise through noise mitigating devices such as buffering walls (see Condition #9 in Section VIII of this Decision).

To ensure that noise levels for the Project are consistent with the MassDEP Noise Policy, the Siting Board directs the Company to implement the following mitigation measures as described in the record: Silencing Equipment for the proposed battery enclosures; Sound Attenuation Barriers (walls) along the east (30-foot-tall barrier), south (24-foot-tall barrier[41]), and northwest (10-foot-tall barrier) Project boundaries; Low Noise Substation Transformer at the

[41] Consistent with the Company's suggestion to increase the height of the southern sound attenuation barrier (sound wall) from 18 feet to at least 24 feet in RR-EFSB-20.

substation; and Operational Restrictions (the Project is required by ISO-NE to only charge up to 100 MW of the Project at any given time, resulting in the operation of 108 of the Hithium LX5015 battery enclosures and 32 of the M-10 inverters). The Siting Board directs the Company to specify noise levels from the M-10 inverters and substation transformer to equipment providers for purposes of procuring equipment that ensures consistency with the MassDEP Noise Policy and Town Bylaw. The Board further directs the Company to rotate the inverters so that their loud sides face in a northern or northwesterly direction to maximize noise reductions to the south and east of the Project.

The Board directs the Company to use the following strategies to limit construction noise (Condition #57):

- Use the quietest commercially available construction equipment, including generators and portable HVAC units during construction, as practicable.
- Position noise-generating construction equipment and noise-generating construction activities as far from adjacent sensitive receptors as practicable during construction.
- Ensure that all construction equipment being used is equipped with the appropriate manufacturer-specified noise reduction device(s), in proper working condition.
- The Company shall also ensure that construction equipment and vehicles are properly maintained pursuant to manufacturers' specifications and fitted with manufacturer-provided (or recommended) noise suppression devices (e.g., improved mufflers, equipment re-design, use of intake silencers, ducts, engine enclosures, and noise attenuating shields or shrouds, silencers, wraps).
- Mitigate noise from construction devices with internal combustion engines by ensuring that the engine's housing doors are kept closed, and by following the manufacturer's guidelines for engine operation. The Applicant shall further reduce noise by operating the devices at lower engine speeds during the work to the extent practicable.
- Use hydraulically or electrically powered tools (e.g., jack hammers, pavement breakers, and rock drills) for Project construction to avoid noise associated with compressed air exhaust from pneumatically powered tools, where practicable. For pneumatically powered tools, an exhaust muffler on the compressed air exhaust should be used, where practicable.
- Use temporary/ portable noise barriers in the vicinity of residents and sensitive receptors during construction (especially on the easterly and southerly facing directions at the Project Site), as practicable.
- Institute a noise mitigation training program for all field-worker supervisory personnel including subcontractor supervisors. Supervisory personnel shall field-train all field workers on best practices to minimize construction noise.

The Board further directs the Company to comply with the Town of Tewksbury noise bylaw (Chapter 8.12) as well as MassDEP's noise regulations at 310 CMR 7.10 and Noise Policy during the Project's operational life (Condition #58).

Consistent with Section 10(B) of the HCA, the Board directs the Company to use its best efforts to respond to complaints received by the Town about noise from construction and/or operation of the Project and the Company shall undertake all commercially reasonable actions to address such complaints. The Board further directs the Company to assign one representative to handle all complaints from the public and or the Town and shall notify the Town of the name and contact information for such person (Condition #61).

The Board directs the Company to implement the following to limit noise during the Project's operational phase (Condition #62):

- Noise mitigation measures identified in the Company's noise evaluation and mitigation plan
- Increase the height of the southern sound attenuation barrier (sound wall) from 18 feet to at least 24 feet.
- Specify noise levels from the M10 inverters and substation transformer to equipment providers for purposes of procuring this equipment to comply with the MassDEP Noise Policy and Town Bylaw.
- Rotate the inverters so that their loudest sides face in a northern or northwesterly direction to maximize noise reductions to the south and east of the Project.

The Board directs the Company to submit a noise evaluation and mitigation plan to the Board in consultation with Town of Tewksbury and MassDEP no later than thirty (30) days before construction commencement. At a minimum, the Board directs the Company to include in its evaluation and mitigation plan the following: (i) Company-generated data demonstrating current and continued compliance with applicable MassDEP Noise Policy; (ii) Company noise-testing protocols to be employed during construction; (iii) remedies and response actions for noise violations or complaints; (iv) inspections and measurements, conducted by relevant municipal authorities, as necessary, to ensure compliance; and (v) mitigation measures (Condition #59).

Consistent with Section 10(D) of the HCA, the Board directs the Company to develop a post-construction sound monitoring protocol for the Town with the MassDEP and the Town

Manager, or his/her designated representative, and submit the protocol to the Town and the Board no later than 30 days prior to the commercial operation (Condition #60). The Board directs the Company to perform post construction sound monitoring within 30 days of the Project being fully operational, including (but not limited to) along the eastern and southern property lines across Hillman and Clinton streets - minimally, at the property line of (1) 123 Clinton Street, (2) the nearest commercial building across Hillman Street from the proposed Project; and (3) other noise monitoring locations identified by the Tewksbury Town Manager or his/her stated designate. The Board directs the Company to promptly forward the results of testing directly to the Town Manager and the Siting Board. The Town Manager, or his/her designated representative, may witness the post construction operational sound level measurements. If the results of the sound monitoring exceed 10 dB(A) over ambient sound pressure levels or exceed pure tone requirements, the Board directs the Company to remedy the situation by bringing sound levels and pure tones into compliance with the MassDEP Noise Policy within 30 days of non-compliance measurements and notify the Siting Board of the noncompliance and activities undertaken to achieve compliance. The Board further directs the Company to provide a post-remedial report demonstrating compliance with the MassDEP Noise Policy at sound-monitoring locations and identifying the noise attenuation strategies and equipment employed to reach compliance. This Post-Remedial Noise Report shall be submitted to the Town Manager and the Siting Board within 60 days of notification of non-compliance with the MassDEP Noise Policy.

4. Land Use

a. Description

The Project's BESS and Substation would be located within the Town's I2 zone, and would occupy 4.3 acres across 73 Hillman Street (4.05 acres) and 75 Hillman Street (0.29 acres), corresponding to adjoining tax parcels 35-6 and 35-7 (Exh. HEC-1, at 2). The Company explained that most of 73 Hillman Street is already developed with commercial and industrial buildings, equipment storage areas, and engineered stormwater management features associated with an existing landscaping business and truck repair shop (Exh. HEC-1, at 2). An IVW also

occupies 0.25 acres of this area (Exh. HEC-1, at 2). The Company noted that 75 Hillman Street is fully developed (Exhs. HEC-1, at 17; HEC-1, Att. E at 2).

The proposed 1,200-foot Transmission Interconnection would cross three tax parcels: MBTA-owned Parcel 11-1 (Industrial 1 ("I1") zoning, existing railroad corridor); National Grid–owned Parcel 35-5 (I1 zoning, Substation 22 Interconnection Substation, and wetlands); and National Grid–owned Parcel 49-34 (Park zoning, Substation 22A, and wetlands) (Exh. HEC-1, at 3). The Company reported that the Project Site lies within a Zone II WPA; however, no part of the Project Site is designated ORW and the Project Site does not contain mapped floodplains, estimated habitat for state-listed rare species, certified vernal pools, ACECs, surface water supply protection areas, or protected open space (Exh. HEC-1, at 3). The Project Site is also not located within an area of Estimated Habitats of Rare Wildlife or area of Priority Habitats of Rare Species (Exh. HEC-1, at 30). The Company reported that adjacent land uses include electric transmission corridors and related infrastructure, extensive wetland areas to the north and west, and commercial and industrial development to the east and south (Exh. HEC-1, at 3).

The Company stated that the Project Site includes one precontact area that the Project would not impact (Exh. HEC-1, Att. E at 3). The Project Site also lies within one-quarter mile of a discontinuous portion of the Tewksbury Centre Historic District, an historic archaeological site, and another precontact area, but the Project would not impact these resources (Exh. HEC-1, Att. E at 3). The Company noted that the Project Site and Transmission Interconnection route have low sensitivity for cultural resources (Exh. HEC-1, at 30, 43).

The Company noted that the Project Site lies within 100 feet of two single-family residences and 43 businesses; between 100 and 1,000 feet of fourteen single-family residences, 470 multi-family residential units, and 45 businesses; and between 1,000 feet and one mile of 941 single-family residences, 1,351 multi-family residential units, and 171 businesses (Exh. EFSB-G-13).[42] The Company also noted that the Project Site lies between 1,000 feet and one

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[42] DiPalma/Sheehan reported that a residence at 123 Clinton Street is located about 80 feet from the Project Site (D/S Brief at 77, citing Exh. HEC-1, Att. H at 2).

mile of four child-care facilities; three long-term care facilities; two schools; one place of worship; two town halls; two fire stations; and one police station (Exh. EFSB-G-13).[43]

The Company stated that the Project would employ low-impact development techniques, including no tree or vegetation clearance (Tr. 9, at 1399-1400). To further enhance habitat value, the Project would include several landscape islands throughout the Site planted with native trees, shrubs, and herbaceous species (RR-EFSB-21(S1) at 28). The Company indicated that these features would provide a net increase in naturalized vegetated buffer areas, as well as long-term ecological benefits (RR-EFSB-21(S1) at 28).

b. Positions of the Parties

DiPalma/Sheehan indicated that the Project Site is situated in very close proximity to numerous residences and commercial spaces (D/S Brief at 6). DiPalma/Sheehan argues that the Project Site is too close to these structures to allow for decay of toxins to safe levels during an airborne emergency at the Project (D/S Brief at 6).

In discussing the effects of hydrogen fluoride ("HF") and site alternatives, the BOH describes the proximity of the Project to a high-density residential development – 1,000 feet and another residential facility 80 feet away (BOH Brief at 3-5, 8-10, 13; BOH Reply Brief at 8-9). The BOH also described proximity to commercial property in its discussion of noise impacts (BOH Reply Brief at 6). DiPalma/Sheehan similarly indicates that the Project is too close to residential and commercial structures in the event of an emergency and argues there are other sites that are farther away from residences (D/S Brief at 6, 8; D/S Reply Brief at 7). DiPalma/Sheehan further draws parallels to Cranberry Point and the proximity of residences to the BESS site in that project (D/S Reply Brief at 9). Limited participants also note the distances of the residences in describing alternative sites and potential evacuation at the residences due to an emergency at the Project facility (Chesbrough Brief at 1, 5; Martin Brief at 2, 8-9, 11, 15-18; Martin Reply Brief at 4, 8; Robertson Reply Brief at 5). See Section IV.E for discussion of emergency scenario impacts.

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[43] The Project Site is 1.7 miles to the east of the closest Environmental Justice community (Exh. HEC-1, n.3, at 19).

c. Analysis and Findings

The record shows that a significant part of the proposed Project Site, including BESS and Substation development area, as well as the Transmission Interconnection route, contain existing industrial uses. While the Project Site lies in some proximity to residences and other non-industrial uses (and in close proximity to one residential structure), it is most immediately adjacent to electric transmission corridors and related infrastructure, and commercial and industrial development to the east and south, making the addition of BESS and ancillary infrastructure appropriate on balance with the addition of mitigation measures discussed herein. The record also shows that except for the Zone II WPA, the Project Site is not within sensitive environmental resource areas. Specific mitigation strategies for the Project with respect to the Zone II WPA are addressed in Section IV.D.2.e and corresponding Conditions are found in Section VIII of this Decision. In addition, the record indicates that the Project Site and proposed Transmission Interconnection route have a low sensitivity for cultural resources.

5. Visual

a. Description

The Company stated that it considered the potential visual impact of the Project to abutting land uses in the vicinity of the Project Site (Exh. HEC-1, at 25)[44]. Figure 8 provides a visual rendering of the Project from an aerial perspective at the corner of Hillman Street and Clinton Street (Exh. HEC-1, at 25); and Figure 9 provides an aerial rendering of the Project from the northwest looking across the Project towards the commercial and residential neighborhoods to the south and east (Exh. DS-G-1(1), Part 2). An existing view from Hillman Street is shown in Figure 10 and Figure 11 shows a similar view post-construction (Exh. HEC-1, at 26, 27).

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[44] Section 8(A) of the HCA directs the Company to ensure that the design, construction and operation of the Project conform to and comply with Applicable Laws and Standards including plans for lighting, landscaping, building and site design(s), and signage. Section 10C of the HCA calls for the Company to "use commercially reasonable efforts through final design and construction of the Project to shield abutting properties from increases in visual impacts...through plantings, landscaping, buffering walls, berm development, and/or fencing that shall be properly maintained throughout the course of the Term of the Agreement" (RR-EFSB-16(S1)) at Sections 8(A) and 10(C)).

The Company indicated that it designed the Project to have minimal visual impact within the surrounding area since it would include extensive visual screening from both the sound barriers and proposed screening vegetation (Figure 11) (Exh. HEC-1, at 27). According to the Company, facility lighting would include nine single pole-mounted LED lamps mounted at 25 feet elevation positioned around the perimeter of the facility (HEC-1, Att. A(S1) at Sheet LL101). The Company indicated that site lighting work and materials would comply with city and other applicable government authority requirements as well as the Illuminating Engineering Society of North America Safety Standards for Light Levels (HEC-1, Att. A(S1) at Sheet LL501).

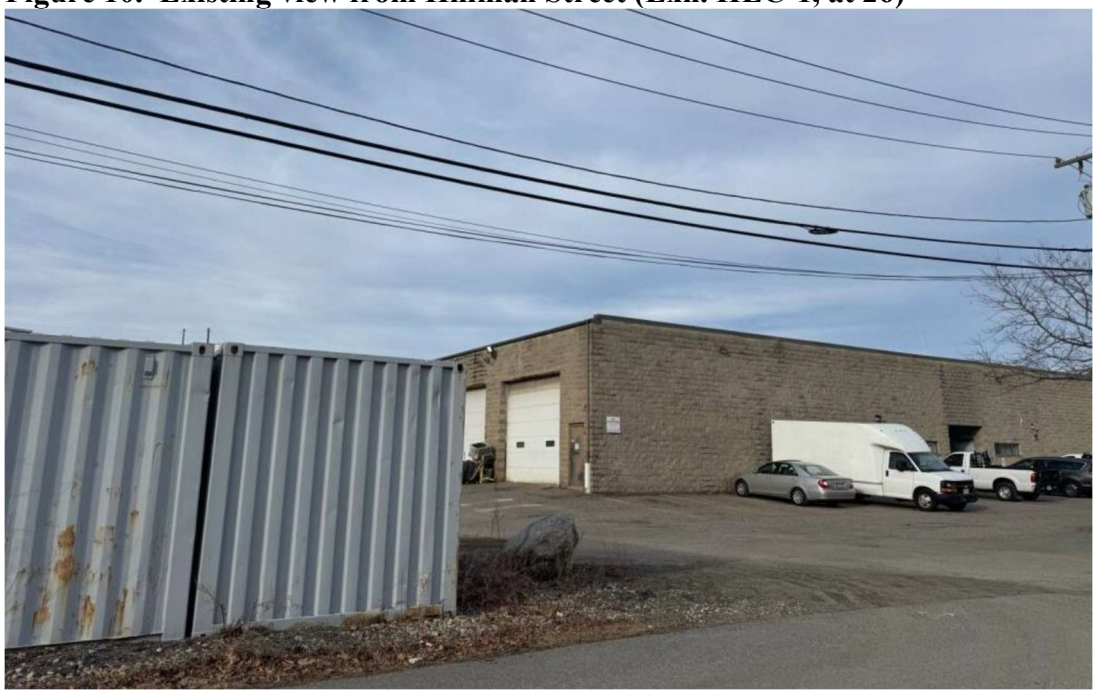
Figure 8. Proposed Project Rendering -Aerial View From the Intersection of Hillman and Clinton Streets looking northwest across the Project.

Source: Exh. HEC-1, at 25.

Figure 9. Proposed Project Rendering -Aerial View of the Project towards Emerald Court and commercial buildings.

Exh. DS-G-1(1), Part 2.

Figure 10. Existing view from Hillman Street (Exh. HEC-1, at 26)



Source: Exh. HEC-1, at 26.

Figure 11. View from Hillman Street (Exh. HEC-1, at 27)

Source: Exh. HEC-1, at 27.

b. Positions of the Parties

Mr. Corbin asks whether a 30-foot sound barrier along Clinton Street and a 24-foot sound barrier along Hillman Street would have a "visual impact" on residents in the area (Corbin Reply Brief at 2). LP Robertson had concerns with the visual impacts with the sound walls and illumination from the proposed Project on the neighborhood (Robertson Reply Brief at 10).

c. Analysis and Findings

The record shows that the Project would have minimal visual impact within the surrounding area as it would include extensive visual screening from the sound barriers and proposed vegetation and landscaping to minimize visual impacts. The Project is consistent in character to the neighboring commercial properties to the south and existing electrical infrastructure to the north and west of the Project Site and has limited visibility from the Emerald Court residential community to the east of the Project Site. Accordingly, the Board finds that the Project would have limited visual impact to the neighborhood where it would be located.

To minimize artificial lighting in the neighborhood at night, the Board directs the Company to design the exterior lighting for the Project in a manner that is limited to lighting

required for health, safety, security, emergencies, and operational purposes, and avoid off-site lighting effects, where practicable. The Board directs the Company to design the exterior lighting for the Project in a manner that is limited to lighting required for health, safety, security, emergencies, and operational purposes, and shall avoid off-site lighting effects and comply with the standards of the International Dark Sky Association, where practicable. The Board further directs that the Project shall minimize the amount of light that escapes upward. The Board includes this provision as Conditions 17 and 18 of this Decision. The Board notes that Section 8(A) of the HCA directs the Company to ensure that the design, construction and operation of the Project conform to and comply with Applicable Laws and Standards including plans for lighting, landscaping, building and site design(s), and signage; and Section 10(C) of the HCA calls for the Company to "use commercially reasonable efforts through final design and construction of the Project to shield abutting properties from increases in visual impacts...through plantings, landscaping, buffering walls, berm development, and/or fencing that shall be properly maintained throughout the course of the Term of the Agreement" (RR-EFSB-16(S1), at Sections 8(A) and 10(C)). The Board includes these provisions of the HCA as Conditions 3 and 4 in Section VIII of this Decision.

6. Traffic

a. Description

The Company anticipated that Project construction would result in only minor delays to local traffic due to delivery vehicles navigating narrow roads and occasional trips by oversized vehicles (Exh. HEC-1, at 30). The Company noted that it would transport battery enclosures – comparable in size to standard shipping containers – on flatbed trucks (Exh. EFSB-T-2). The Company committed to using Interstate 495 and state-numbered routes (e.g., Route 38) to access the Project Site for large trucks, heavy equipment, semi-trailers, and oversized loads (Exh. TEWK-JCC-2, at Section 11(E)). The Company would locate construction personnel parking either in a designated on-Site area accessed via Hillman Street or at an off-site location with shuttle service to the Project Site (Exh. HEC-1, at 31). During operation, traffic to the Project Site would consist only of periodic inspection and maintenance visits (Exh. HEC-1, at 31). The

Company indicated that traffic would be significantly less than current trips generated by the existing landscaping business and truck repair facility (Exh. HEC-1, at 31).

The Company indicated that the existing Project Site and surrounding road network already accommodate large transport loads due to the area's industrial uses (Tr. 2, at 264). The Company indicated that the local road network – particularly the roads immediately surrounding the Project – would provide sufficient width, load capacity, and connectivity to support any required number and frequency of emergency vehicle trips (Exh. EFSB-T-2; RR-EFSB-15).

The Company committed to working with the Tewksbury Chief of Police, other Town officials, and its contractors to address traffic during both construction and operation (Tr. 2, at 263-264; Exh. TEWK-JCC-2, at Section 11). See Condition 7 of this Decision. Together, these parties would develop traffic management measures and incorporate them into a CMP (Tr. 2, at 263-264; Tr. 8, at 1199; Exhs. EFSB-T-2; TEWK-JCC-2, at Section 11). The Company explained that it would coordinate with Town officials when using the small, non-state-numbered roads adjacent to the Project Site and specifically, would coordinate with the Tewksbury Chief of Police and Director of Public Works before transporting any oversized or overweight loads (Exh. TEWK-JCC-2, at 11(D); Tr. 8, at 1217). As needed, the Company would employ Town police details in accordance with the Chief of Police's requirements and would repair any construction-related damage to Hillman, Clinton, Court, and Washington Streets within six months of the Project's commercial operation date, to the satisfaction of the Tewksbury Highway Superintendent (Exhs. EFSB-T-2; TEWK-JCC-2, at Section 11(A)).

b. Positions of the Parties

The Town has requested that the provisions in Section 11 of the HCA be incorporated into the Final Decision (Town Brief at 7).

i. Limited Participants[45]

(A) Representative Robertson

Representative Robertson stated that local road surfaces do not meet best practices for surface condition, width, and sightline, even under the most forgiving civil engineering standards (Robertson Reply Brief at 10). He also noted that the Company has been unable to describe the anticipated impact of Project maintenance on local roads (Robertson Reply Brief at 10).

(B) Chesbrough

Ms. Chesbrough argues that no supporting traffic studies or data substantiate the Company's claims that traffic impacts from construction and occasional on-site maintenance visits during operation would be minimal, or that operational traffic would be significantly lower than existing traffic (Chesbrough Reply Brief at 4). She further contends that Project traffic could create safety hazards, risk roadway damage, and disrupt emergency access and business operations (Chesbrough Reply Brief at 4). Without an independent traffic assessment, Ms. Chesbrough maintains there is no way to verify that Project traffic would be minimal, safely managed, or adequately mitigated (Chesbrough Reply Brief at 4).

(C) Corbin

Mr. Corbin asserts that the HCA does not address the Project's traffic impact issues (Corbin Brief at 6). He questions how transport of 134 Hithium enclosures, 40 inverters, and other Project components during construction could be considered minimal impact given the existing area's low traffic volume (Corbin Reply Brief at 2).

c. Analysis and Findings

The Limited Participants question whether the roads surrounding the Project Site are adequate to support construction vehicles and transport of Project materials, and they note the absence of a detailed assessment of the matter. The record indicates, however, that the existing

[45] These Limited Participant positions are from Reply Briefs, and so the Company has not responded to them.

site and surrounding road network already accommodate industrial transport. In addition, the Company will collaborate with local police and other authorities to manage traffic and incorporate traffic management measures into a CMP. During Project operation, the record shows that Project Site-related traffic will be negligible and significantly lower than current levels.

Consistent with Section 11 of the HCA (and Town Brief at 7), the Siting Board directs the Company to work with Tewksbury officials, including the Tewksbury Chief of Police, to address both construction- and operations-phase traffic, and to include traffic mitigation as part of its CMP. See Conditions 7 and 8 of the Decision. Consistent with Section 11(E) of the HCA (and Town Brief at 7), during construction, the Siting Board directs the Company to use commercially reasonable efforts to ensure that large truck, heavy equipment and machinery, semi-trailer truck, and oversized load traffic to and from the Project Site only utilize State-numbered routes available for use within the Town for access, with preferred access via Interstate 495 and Route 38. See Conditions 10, 11 and 12 of the Decision. The Siting Board directs the Company to develop and provide a set of traffic management measures – to be incorporated into the CMP – no less than two weeks prior to the commencement of construction, and to publish the measures on the Company's Project website to ensure availability of traffic-related planning information for the Project area. See Conditions 13 and 24 of the Decision. The Siting Board directs the Company to coordinate with the Town at least three working days prior to receiving large equipment (e.g., batteries, transformers) and construction machinery that would inhibit local traffic when delivered to the Project Site.

7. Air

a. Description

This section addresses air quality issues during Project construction and normal Project operations. Once constructed, the Company represents that normal operations of the Project

would not produce harmful air pollutants (Exh. HEC-1, at 19).[46] The Company stated that the Project does not plan routine air, soil, or water sampling during normal operations since there are no emissions (Exh. EFSB-S-66).

To address air quality impacts from construction activities, the Company stated it would implement several BMPs related to dust control and air quality during construction of the Project (Exh. HEC-1, at 19). To minimize the potential for airborne dust from earth-disturbing activities, the Company maintains that it would require its contractors to place water trucks with misters in or near the work areas during construction activities and utilize them as appropriate when conditions require (Exh. HEC-1, at 19). In addition, the Company states that it would stockpile excavated soil on the site for a prolonged period, where necessary, and cover these piles with plastic sheeting or a similar barrier to minimize the potential for the release of dust and for soil migration from the work area (Exh. HEC-1, at 19). The Company confirms that it would install anti-tracking pads at construction entrances and conduct regular sweeping of the pavement of adjacent roadway surfaces during the construction period to minimize the potential for construction traffic to kick up dust and particulate matter (Exh. HEC-1, at 19).

To minimize air emissions from construction equipment, the Company notes that it would comply with state law (G.L. c. 90, § 16A) and MassDEP regulations (310 CMR 7.11 (1)(b)), which limit vehicle idling to no more than five minutes except for vehicles being serviced, vehicles making deliveries that need to keep their engines running, and vehicles that need to run their engines to operate accessories (Exh. HEC-1, at 19). In addition, the Company maintained that contractors who enter into an agreement with the Company would be contractually obligated to comply with the most current EPA emission standards for construction equipment at the time of construction (Exh. HEC-1, at 19).

The Company notes that the Commonwealth has found that BESS projects would provide important benefits to "achiev[ing] net zero carbon emissions in the Commonwealth by 2050" Medway Grid at 40 (Exh. HEC-1, at 19). Once operational, the Company contends that

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46 This section addresses any potential Project air quality impacts due to construction and normal Project operations. For potential impacts to air quality associated with facility incidents and emergencies, see Section IV.E of this TD.

standalone BESS facilities, like the Project, are the ideal clean facilities to achieve the objectives of the CPS because they displace non-renewable generating sources, thereby reducing air emissions, while reducing peak demand and increasing reliability (Exh. HEC-1, at 43).

b. Positions of the Parties

According to Ms. Chesbrough, the proximity of homes, daycare facilities, and businesses raises concerns about potential exposure to construction-related dust, debris, and soil migration, including onto or into buildings, vehicles, and workspaces where people conduct their daily activities, and asks if the Company plans to conduct comprehensive soil and air testing prior to and during construction, and how will any identified hazards be mitigated (Chesbrough April 26 Reply Brief at 3).

c. Analysis and Findings

The record confirms that normal operations of the Project would not produce air pollutants. In fact, the Commonwealth has found that BESS facilities, like the proposed Project, would provide important benefits to "achiev[ing] net zero carbon emissions in the Commonwealth by 2050." Medway Grid at 40. The proposed BESS Project would help achieve the objectives of the CPS because it would displace non-renewable generating sources, thereby reducing air emissions, while reducing peak demand and increasing reliability.

Air quality impacts would occur during construction, mainly from equipment emissions and aerosolized dust particles, and those impacts would be temporary. The Company commits to implementing an appropriate array of mitigation strategies to address air quality impacts from construction, and comply with state law (G.L. c. 90, § 16A) and MassDEP regulations (310 CMR 7.11 (1)(b)), which limit vehicle idling to no more than five minutes except for vehicles being serviced, vehicles making deliveries that need to keep their engines running, and vehicles that need to run their engines to operate accessories. In addition, the Company would require contractors who enter into an agreement with the Company to be contractually obligated to comply with the most current EPA emission standards for construction equipment. See Condition 16 regarding air quality requirements during construction..

8. Solid Waste and Hazardous Materials

a. Description

The Company anticipated that construction would generate solid waste in line with the Project Site's earlier use as an auto salvage junkyard, e.g., metal, scrap wood, asphalt, brick, and concrete (Exh. HEC-1, at 23-24). The Company stated that its Operations and Maintenance plan would address waste management, though the Project would not routinely generate solid or hazardous waste during operations (Exhs. HEC-1, at 24; EFSB-HW-3). While the Company anticipates that batteries would not reach end of life during operation,[47] it would manage and transport any such batteries in accordance with all local, state, and federal requirements (Exhs. HEC-1, at 24; EFSB-S-56).

To reduce solid waste during construction, the Company stated it would focus on: (1) accurate material planning and modularization; (2) vendor take-back programs for packaging and cable reel; and (3) minimizing single-use material and implementing segregation zones for metals, wood, concrete, and recyclables (Exh. EFSB-HW-4). Additional steps, according to the Company, could include reusing offcuts, compacting packaging waste, and implementing recycling streams for cardboard, plastics, and scrap metals (Exh. EFSB-HW-4). The Company also noted that it could ensure compliance and maximize diversion from landfills through key performance indicators, subcontractor requirements, and regular audits (Exh. EFSB-HW-4). See Condition 5 of this Decision.

The Company stated that the CMP would include protocols for responding to an unanticipated discovery of oil or hazardous materials (Exh. EFSB-HW-2). The Company reported that all contractors would adhere to local, state, and federal regulations regarding disclosure, disposal, and remediation (Exh. EFSB-HW-2). The Company stated that it would transport off-site all waste generated or encountered during demolition, site preparation, construction, and operation in accordance with local, state, and federal guidelines and

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47 Note that the Company stated in its initial petition, Exh. HEC-1, at 24, that the anticipated battery life is ten years but later revised this value to twenty-five years in Exh. EFSB-S-56.

regulations, and would transport non-recyclable waste to a licensed solid waste facility (Exh. HEC-1, at 23-24). The Company would test and remove any excess topsoil as required and consult with a licensed site professional to ensure proper handling of any contaminated material under G.L. c. 21E (if applicable) and U.S. Occupational Safety and Health Administration ("OSHA") requirements, coordinating with MassDEP as needed (Exh. HEC-1, at 24). The Company would use qualified third-party contractors for transport and disposal of damaged equipment (Exh. EFSB-HW-8).

The Company stated that Project transformers would include 110 percent secondary containment for transformer oil (Tr. 1, at 45). The Company would also implement an SPCC Plan consistent with Title 40, Part 112 of the Code of Federal Regulations ("CFR") and the Massachusetts Contingency Plan ("MCP") prior to construction (Exh. EFSB-S-60). The Company would address spill management in the ERP and a site-specific safety plan (Exh. EFSB-S-60). Employees would report spills to a designated coordinator, who would implement containment and response measures; the coordinator would notify the Tewksbury Public Works Department, BOH, and TFD if oil or hazardous waste enters the stormwater system(Exh. HEC-1, Att. B(S2) Part 3, at 191). For reportable releases under the MCP, the Company would notify MassDEP within required timeframes and conduct necessary response actions to achieve a Permanent or Temporary Solution (Exhs. HEC-1, at 24; EFSB-S-60). Waste management during the operation phase of the Project would be addressed in the Operations and Maintenance plan that would be developed prior to construction (Exh. EFSB-HW-3).

b. Positions of the Parties

The BOH alleges that it could not disregard that the record demonstrated toxic gas generation, untreated dissolved contaminant infiltration, and incomplete subsurface characterization (BOH Brief at 3). The BOH argues that therefore, the Project is not reasonably necessary for the welfare of the public (BOH at 6). The BOH focuses on HF, which it calls a "uniquely dangerous inhalation toxicant" and describes the health effects, time scale of toxic exposure, the distance of the Project facility to high-density residences and chemical characteristics of HF (BOD Brief at 3-4, 7-11, 16; BOH Reply Brief at 3, 8, 10). BOH notes that

HF is part of lithium-ion battery fire smoke (BOH Brief at 4, 7, 10, 12; BOH Reply Brief at 2-4, 8). Limited participants also repeated many of these arguments (Martin Brief at 2-4, 8, 11). See Section IV.E for discussion of safety incident impacts.

The BOH further argues that the proposed stormwater system does not treat dissolved pollutants (BOH Brief at 4, 11; BOH Reply Brief at 2, 5, 9). DiPalma also alleges that the stormwater management plan fails to provide a solution for water contaminated by toxins in the event of an emergency (D/S Brief at 6-7). Limited participants also repeated this argument (Martin Brief at 3-4, 12-14, 17-18). See Section IV.D.2.b for discussion on stormwater impacts, including emergency scenarios.

c. Analysis and Findings

The record shows that construction will generate solid waste consistent with prior Project Site use, while operations and maintenance will not routinely produce solid or hazardous waste. The Company will manage and dispose of all construction waste, including contaminated materials and excess soil, in accordance with applicable regulations. The Company will also address any spills under an SPCC Plan and MCP requirements. Although the Company does not anticipate battery end-of-life during operations, it will dispose of any battery waste in compliance with applicable requirements. The Siting Board directs the Company to contract with a Massachusetts-registered LSP and Massachusetts-state licensed environmental services contractor, at least 30 days prior to commencement of construction, to address hazardous materials and waste issues arising during construction and operations. See Conditions 21 and 22 of this Decision.

In the event of the release of reportable quantities or concentrations of contaminants into soil, groundwater or wetlands during Project construction or operations, the Board directs the Company and its contracted experts (i.e., LSP and environmental services contractor) to map the extent of degree of contamination in soil, groundwater and wetlands to inform targeted response and remedial actions, including soil and water quality samples (i.e., pre-contaminant exposure and post-incident contamination of soil and groundwater) for contaminant plume mapping and remedial planning purposes. The Board directs the Company to continue mapping the nature,

degree, and geographic extent of contamination through the period of response actions and remedial activities. The Board directs the Company to work with the Town and MADEP regarding contaminant mapping, response and remedial actions (Condition #53).

The Siting Board directs the Company to dispose of construction waste in accordance with all applicable requirements (see Condition #33 in Section VIII). During decommissioning, the Board directs the Company to dispose of the BESS facility components according to legal requirements and best practices, and to recycle as much as possible (Condition #38). The Siting Board directs the Company to provide 110 percent oil containment for all oil storage in Project transformers. See Condition 44 of this Decision.

The Board further directs the Company to continue to abide by local, state, and federal guidelines and regulations regarding the removal of battery units that have reached the end of their useful life on the Project Site (Condition #44).

9. Magnetic Fields

a. Description

The Company's consultant, Exponent, prepared an analysis of the magnetic fields ("MF") for the proposed Project (Exh. HEC-1, Att. D at 4). The Company stated that during operation, MF of varying frequencies from the Project would surround: (1) the direct current ("DC") battery banks; (2) the DC lines connecting the battery banks to the power inverters; (3) the alternating current ("AC") power inverters that convert between DC and AC power; (4) the Project Substation, buswork, and other associated equipment; and (5) the 115-kV Transmission Interconnection connecting the Project Substation to the existing Interconnection Substation (Exh. HEC-1, Att. D at 5). The Company conducted a literature review regarding the magnitude of magnetic field levels anticipated from the proposed 115 kV Transmission Interconnection line with a presumed load of 150 Amps of electric current flowing through the lines, estimating (based on published literature from the National Institute of Environmental Health Sciences in 2002) that the magnetic fields beneath an overhead line are 30 milligauss (mG), and at the ROW edge (where the ROW is 50 feet) is 6.5 mG (RR-EFSB-9).

According to the Company, a property of magnetic fields is that they are not blocked by conducting objects and pass through most materials; however, magnetic-field levels diminish with increasing distance from the source and the magnetic-field levels from transmission and distribution lines, generally decrease in proportion to the square of the distance from the source (HEC-1, att. D, at 8). The Company stated that most Project-related sources of 60-Hz electric fields are entirely contained inside metallic or insulated coverings inside the boundaries of the Project fence (HEC-1, att. D, at 8).

The Company stated that in general, all Project elements are hundreds of feet from the nearest residential neighborhood (Exh. HEC-1, Att. D at 5). The Company contended that DC MF levels from Project-related elements at these distances are expected to be low and within the range of background MF (Exh. HEC-1, Att. D at 5). Further, according to the Company, for all the elements inside the BESS facility, the fields that are generated decrease rapidly with distance, either with the square of the distance and in many cases decrease with the cube of the distance (Tr. 4, at 395). Once outside of the facility, the Company stated that MF levels would be insignificant (Tr. 4, at 395). Specifically, the Company stated that the strength of the DC magnetic fields from the lines connecting the battery banks to the inverters would decrease rapidly with distance to low levels within a few tens of feet or less (Exh. HEC-1, Att. D at 15). The Company stated that the Project Substation, as well as other facilities such as feeder lines, are more than 135 feet away from the nearest non-residential buildings to the east and the south of the Project and all residences are more than 250 feet away from the Project Site except one house that is located 83 feet from the nearest battery container (Exh. HEC-1, att. D, at 14). At these distances, the DC magnetic-field levels from these sources would be expected to be a small fraction of the earth's natural static geomagnetic field in the Project area (~515 mG) (Exh. HEC-1, Att. D at 15).[48]

The Company maintained that Project-related MF levels also are expected to be significantly lower than health-based exposure guidelines for the public established by the

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[48] https://www.ngdc.noaa.gov/geomag/calculators/magcalc.shtml?#igrfwmm (42°3714"N 71°14'36"W).

International Commission on Non-ionizing Radiation Protection and the International Committee on Electromagnetic Safety (Exh. HEC-1, Att. D at 5). Company further asserts that scientific and health organizations that have reviewed the research on 60-Hz and DC MF fields and health have been consistent in their overall conclusions that exposure to these fields at the levels experienced in our everyday environment do not cause or contribute to adverse health effects in adults or children. (Exh. HEC-1, Att. D(S1) at 1). At one residence, approximately 83 feet from the nearest Project-related infrastructure, the Company claimed that EMF field levels would be somewhat higher than in the residential neighborhood but, again, would be a fraction of the earth's natural static geomagnetic field in the Project area, and far below health-based exposure guidelines (Exh. HEC-1, Att. D at 5).

The Company contended that maximum MF values calculated anywhere along the Transmission Interconnection route, under any loading condition, was 59 mG (RR-EFSB-8, at 3). The Company asserts magnetic-field levels drop rapidly with distance from the centerline to 19 mG or less at the ROW edges (RR-EFSB-8, at 3). At 100 feet beyond the ROW edges, the Company maintains that magnetic-field levels drop to 3.1 mG or less (RR-EFSB-8, at 3). The Company states that these charging scenarios represent the potential full-power operating conditions of the BESS and would be limited to a few hours per day (RR-EFSB-8, at 3). During the rest of the day, when the BESS is neither charging nor discharging, the Company explains that magnetic-field levels would be far lower (RR-EFSB-8, at 3).

b. Positions of the Parties

No party provided comments on the magnetic field impact of the Project.

c. Analysis and Findings

The record shows that the Project would emit MF once operational. However, the Project facilities, including Project Substation, feeder lines, batteries, inverters, are 250 feet away from the nearest residential neighborhood. At one residence, approximately 83 feet from the nearest Project-related infrastructure, magnetic field levels would be somewhat higher than in the residential neighborhood but are still expected to be low and far below health-based exposure guidelines. These distances are great enough that the DC MF levels from the Project at the

closest residences would be within the range of background MF values encountered in most communities. These are also well below the MF exposure limits for the public recommended by ICNIRP and ICES.

The anticipated maximum magnetic-field value calculated along the Transmission Interconnection route, under any loading condition, was 59 mG.[49] Magnetic-field levels drop rapidly with distance from the centerline to 19 mG or less at ROW edges. At 100 feet beyond the ROW edges, magnetic-field levels drop to 3.1 mG or less.

E. Safety

1. Introduction

As part of its review of whether the Project is reasonably necessary for the convenience and welfare of the public, the Siting Board assesses the safety of projects it reviews through multiple lenses. The Siting Board reviews processes that: (1) prevent incidents (e.g., through testing of system components, system design and permitting, proper construction/installation and maintenance by qualified personnel); (2) ensure unusual conditions are identified and addressed (e.g., through monitoring, alarming); and (3) provide planning for emergency incidents should they happen, including cleanup in the event of an incident (e.g., ERPs, coordination with local responders, water supply, training). Finally, the Siting Board assesses facility security to ensure there is no unauthorized access to a facility. See Trimount ESS at 57.

2. Company Description

a. Safety Standards

The Company stated that the Project's BESS would strictly conform with all international, national, and state safety requirements and standards, including, but not limited to:

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[49] The Siting Board notes that the Project has an operational restriction imposed by ISO-NE to only charge up to 80 percent of the facility during charging periods (Exh. HEC-1, Att. C(S1) at 33). – so these magnetic field estimates based on a fully operational facility likely are overestimations of actual magnetic field levels.

- Massachusetts Comprehensive Fire Safety Code, 527 CMR 1.00, Massachusetts Board of Fire Prevention Regulations, Code, 12/9/2022, Chapter 52, Stationary Storage Battery Systems;
- NFPA 1, Fire Code, National Fire Protection Association;
- NFPA 855, Standard for the Installation of Stationary Energy Storage Systems, National Fire Protection Association;
- UL 9540, Safety of Energy Storage Systems and Equipment, Edition 3;
- UL 9540A, Test Method for Evaluating Thermal Runaway Fire Propagation in Battery Energy Storage Systems, Edition 4.

Source: Exh. HEC-1, at 12.

The Company emphasized that adherence to all requirements and standards would ensure the Project is constructed and operated in a manner that remains safe to the public, emergency responders, and operators (Exh. HEC-1, at 12). The Company also related that over the life of the Project, it would ensure compliance with any changes to safety codes or standards (Exh. EFSB-S-1).

In developing its hazard mitigation analysis ("HMA"), ERP, and safety training protocols, the Company explained that it would adhere to above list of requirements and standards, and to the 2024 edition of NFPA 69, UL 1973, and any applicable local requirements from an AHJ, e.g., TFD, Tewksbury Building Department, Town Engineer (Exh. EFSB-S-11, at 2; Tr. 3, at 376; Tr. 9, at 1257-1260). The Company explained that NFPA 1 and NFPA 855 define the specific fault conditions that must be analyzed in emergency planning and set expectations for emergency response documentation and equipment separation distances (Exh. EFSB-S-11, at 2). The Company noted that these provisions drive the requirement to address thermal runaway, BMS failures, loss of ventilation, and loss of detection/suppression (Exh. EFSB-S-11, at 2). The Company stressed that Project design, construction, installation, commissioning, operation, maintenance, and decommissioning would comply with the 2026 edition of NFPA 855 even though Massachusetts only requires compliance with the 2020 edition (Exh. HEC-1, at 12; Tr. 9, at 1257-1260). The Company represented that NFPA 855 is the leading industry standard for BESS safety, developed through a consensus process involving fire service and industry professionals and informed by current research and operational experience (Tr. 9, at 1258-1259). Compliance with NFPA 855 not only satisfies the Commonwealth's

requirements but also reflects adherence to the industry's most rigorous safety requirements (Tr. 9, at 1259).

The Company explained that NFPA 69 guides explosion-prevention design and corresponding procedures for gas detection, activation of exhaust ventilation, and stand-off for potential deflagration (Exh. EFSB-S-11, at 2). According to Hillman, UL 9540 and UL 1973 underpin the technical basis for fire and explosion scenarios and define the certified operating and failure envelopes of the Hithium enclosures (Exh. EFSB-S-11, at 2). The Company related that NFPA 72: National Fire Alarm and Signaling Code guides detection, notification, and monitoring requirements for fire and life-safety events, while local codes, permits, and policies govern items such as Knox box access, hydrant use, incident command system integration, communication protocols, annual review of emergency response protocols, and responder training frequency (Exhs. EFSB-S-11, at 2-3; D/S-G-21(1) at 43). Hillman stated that it would fully integrate all NFPA 72 and local requirements into the final ERP and safety training program (Exh. EFSB-S-11, at 2-3).

According to the Company, the Project would comply with mandatory reliability and security standards set by the North American Electric Reliability Corporation regarding Critical Infrastructure Protection ("NERC CIP") to prevent outages and cyber threats (RR-EFSB-16(S1) at Section 12(L)). The Company stated that its cybersecurity approach would additionally be guided by industry-recognized frameworks and standards, including the National Institute of Standards and Technology Cybersecurity Framework ("NIST CSF"), International Standards Organization 27001, and IEC 62443 (Exh. EFSB-S-5). The Company indicated that these criteria would collectively ensure the integrity, availability, and confidentiality of systems and data throughout the Project's life (Exh. EFSB-S-5).

b. Project Design

The Company proposes installing 134 standalone, non-walk-in Hithium LX5015 enclosures and 40 EPC Power M10 inverters (Exh. HEC-1, Att. C(S1) at 6; Tr. 10, at 1470). Each enclosure would contain LFP battery cells, modules, racks, and associated electrical

components (Exh. D/S-G-21(1) at 20). Hillman added that separation distances between the enclosures would exceed NFPA 855 requirements (Exh. EFSB-S-50).

According to the Company, each enclosure would include an integrated BMS that would monitor critical parameters, e.g., over-voltage, under-voltage, over-temperature, under-temperature, cell balancing fault, insulation leakage, current, and state of charge (Exh. D/S-G-21(1) at 24). During abnormal conditions, the BMS would perform corrective and protective actions to maintain a safe status, e.g., limiting or shutting down the system (RR-EFSB-7, at 2; Exh. D/S-G-21(1) at 24).

The Company explained that each enclosure would be equipped with an active exhaust ventilation system designed in accordance with NFPA 69 to remove flammable off-gases during thermal runaway and maintain concentration levels below 25 percent of the lower explosive limit ("LEL") within the enclosure (Exhs. EFSB-S-24; D/S-G-21(1) at 22). Each enclosure would include an exhaust fan, an actuated air intake damper, exhaust system controller, and two combustible gas detectors (Exhs. EFSB-S-24; D/S-G-21(1) at 22). The Company relates that if a gas detector registered a reading of ten percent LEL, the detector would signal the BMS and exhaust controller to open the intake damper and activate the fan, which would continuously dilute and expel flammable gases until concentrations return to acceptable levels (Exhs. EFSB-S-4; D/S-G-21(1) at 22). Each enclosure would also include two smoke and two heat detectors, as well as standby power for power loss events (Exhs. EFSB-S-24; D/S-G-21(1) at 26).

The Company stated that LFP has remained the dominant chemistry for batteries because it is mass-produced, compact, efficient, standardized, and supported by a mature global supply chain that enables large, repeatable utility-scale procurements on predictable timelines (Exh. EFSB-S-35). The Company stated that 60 percent state of maximum charge capacity is considered the end of life for batteries, but it does not expect this threshold to be reached during the 25-year Project life (Exhs. EFSB-S-55; EFSB-S-56).

The Company highlighted key differences between the Project's safety design and that of previous BESS facilities that experienced emergency thermal events (Exh. EFSB-S-41, at 4). The Company explained that the Project's proposed system architecture reflects safety requirements and commissioning practices that were not consistently present in earlier systems

(i.e., outdoor, factory-integrated, non-walk-in enclosures featuring NFPA 855 compliant clearances limiting radiant heat transfer and facilitating responder access) (Exh. EFSB-S-41, at 4). For instance, the Company noted that the January 2025 battery fire at the Moss Landing Vistra power plant in Monterey County, CA was an indoor, building-integrated fire, as were a May 2025 fire in a data center battery room in Hillsboro, OR, and a May 2024 fire at the Gateway Energy Storage facility in San Diego, CA (Exh. EFSB-S-41, at 3-4).

c. Battery Testing and Analyses

i. Introduction

Battery testing helps ensure safe BESS design and operation by providing empirical data on how specific battery chemistries and configurations behave under both normal and worst-case conditions, including thermal runaway and fire events (Exh EFSB-SD-4, at 1-2). Testing validates design assumptions, quantifies hazards such as heat release and flammable gas generation, and confirms the effectiveness of mitigation measures, including spacing, ventilation, and fire protection systems (Exh. EFSB-SD-4, at 1-2). Testing conducted under recognized standards, such as UL 9540A, also provides reliable information for modelling worst-case conditions and developing site-specific safety measures (Exh. EFSB-SD-4, at 1-2). Generally, test data provides a useful basis for evaluating BESS hazards when incorporated into hazard and other types of analyses that assess safeguard performance and site-specific risks (Exhs. EFSB-SD-4, at 2; HEC-1, Att. H at 3-4).

ii. UL 9540A

The Company stated that test engineers implemented three separate UL 9540A tests at the cell-, module-, and unit-levels of the Hithium enclosure, respectively (Exh. HEC-1, Att. H at 9).[50] At the cell level, the engineers externally heated a cell until failure occurred (Exh. Att. H

[50] The cell-level test was conducted by UL Quality Technical Service Co., Ltd. (Exh. HEC-1, Att. I at 3). UL Solutions implemented the corresponding gas analysis (Exh. HEC-1, Att. I at 4). All module-level tests were conducted by TUV Rheinland Co., Ltd. and TUV Rheinland's partner laboratories (Exh. HEC-1, Att. J at 5).

at 9-10). At the module level, engineers placed a heater on an initiating cell in a central location within the module until thermal runaway occurred (Exh. HEC-1, Att. H at 11). At the unit level, the test included an initiating unit with an initiating module, and a target unit (Exh. HEC-1, Att. H at 14).

During the test, the Company explained that at the cell level, the initiating cell and surrounding cells underwent thermal runaway and released a mixture of flammable gases (Exh. HEC-1, Att. H at 10), the composition of which is summarized in Table 3, below.

Table 3. Flammable Gas Mixture Composition.

Name	Formula	Experimental Volume Percent	Model Volume Percent
Carbon Monoxide	CO	14.507	14.508
Carbon Dioxide	$CO2$	23.000	23.002
Hydrogen	$H2$	45.167	45.171
Methane	$CH4$	4.868	4.868
Acetylene	$C2H2$	0.148	0.000
Ethylene	$C2H4$	1.804	1.804
Ethane	$C2H6$	0.805	0.805
Propene	$C3H6$	2.256	0.000
Propane	$C3H8$	1.379	9.842
C4 Total	$C4H10$	2.029	0.000
C5 Total	$C5H12$	0.447	0.000
C6 Total	$C6H14$	0.021	0.000
C7 Total	$C7H16$	0.004	0.000
Benzene	$C6H6$	0.018	0.000
Toluene	$C7H8$	0.001	0.000
Dimethyl Carbonate	$C3H6O3$	3.340	0.000
Ethyl Methyl Carbonate	$C4H8O3$	0.198	0.000

Source: Exh. HEC-1, Att. H at 10.

At the module level, the Company stated that thermal runaway from the initiating cell propagated to just one adjacent cell, resulting in a total of two failed cells (Exh. HEC-1, Att. H at 12). The Company also noted that test engineers did not observe sparks, flying debris, or external flaming during the test (Exh. HEC-1, Att. H at 12). At the unit level, the Company reported that thermal runaway propagated to just one adjacent cell, resulting in a total of two failed cells in the initiating module (Exh. HEC-1, Att. H at 15). In other words, thermal runaway did not propagate to other modules or the target unit (Exh. HEC-1, Att. H at 15). Overall, the

Company stated that neighboring module temperatures remained well below venting thresholds and test engineers did not observe explosion hazards (Exh. EFSB-S-24).

iii. Large-Scale Fire Test

The Company stated that a large-scale fire test involved four Hithium enclosures arranged in a field-installed configuration[51] (Exh. HEC-1, Att. G at 10). The Company reported that test engineers initiated thermal runaway in one of the four enclosures (i.e., enclosure of origin) using four heaters placed alongside four adjacent cells to maximize potential for cell-to-cell thermal runaway propagation and fire propagation (Exh. HEC-1, Att. G at 13-14). After initiation of thermal runaway, the engineers used an igniter to ignite combustible gases (Exh. HEC-1, Att. G at 13-14). The engineers left all doors to the enclosure of origin open during the test to represent worst-case fire exposure and disabled the enclosure's NFPA 69 combustible concentration reduction system (Exh. HEC-1, Att. G at 15). The engineers allowed NFPA 69 systems in the other enclosures to remain active (Exh. HEC-1, Att. G at 15).

During the test, the Company stated that gas ignition resulted in a fully developed fire and the total duration of visible flaming was about 5 hours and 53 minutes (Exh. HEC-1, Att. G at 19, 26). The Company stressed that while the fire completely consumed the enclosure of origin, the other enclosures did not undergo venting or thermal runaway of cells (Exh. HEC-1, Att. G at 20- 21). The Company reported that the fire alarm system in the enclosure of origin activated within about 57 seconds of ignition of the vent gases and that the system activated the notification appliances on the enclosure's exterior (Exh. HEC-1, Att. at G at 23). In the other enclosures, the Company reported that the fire alarm systems did not activate (Exh. HEC-1, Att. G at 23). The Company also noted that the BMS failed at various points during the test in the enclosure of origin while the BMS in the other enclosures remained operational for the test duration (Exh. HEC-1, Att. G at 24). The Company concluded that the test results satisfy the requirements of both NFPA 855 and the International Fire Code ("IFC") for large-scale fire

[51] The test was performed by Hithium, in coordination with UL Solutions (Exh. HEC-1, Att. G at 6).

testing, demonstrating that fire would not propagate from the enclosure of origin to other enclosures during the testing period (Exh. HEC-1, Att. G at 29).

iv. Hazard Dynamics Plume Analysis

The Company's consultant, Hazard Dynamics, conducted an analysis based on gas release data from the UL 9540A cell, module, and unit test results to determine potential plume-based toxicity hazards from battery failure scenarios (Exh. HEC-1, Att. H at 3, 9). According to the Company, the analysis focused on the potential release of CO and VOCs during thermal runaway failures and employed computational fluid dynamics ("CFD") models to simulate plumes (Exh. HEC-1, Att. H at 3). The Company emphasized that of the measured toxic gas species from the UL 9540A test, CO is of primary concern due to its comparatively high concentrations and toxicity (Exh. HEC-1, Att. H at 21). The analysis examined three scenarios under low and high wind conditions: (1) a non-fire scenario in which battery vent gas is released; (2) a small fire scenario; and (3) a large fire scenario (Exh. HEC-1, Att. H at 3). The Company noted that worst-case scenarios in terms of high wind speed reflected the 99th percentile wind speed for the Project Site (Exh. HEC-1, Att. H at 22). Hillman added that it measured distances for CO-based health effects from the outermost BESS enclosures (Exh. HEC-1, Att. H at 22).

Among the modeled scenarios, the Company reported that the large fire scenario with high winds generated the most extreme impacts (Exh. HEC-1, Att. H at 22). Specifically, the average CO concentrations exceeded the National Institute for Occupational Safety and Health ("NIOSH") Immediately Dangerous to Life or Health ("IDLH") concentration up to 29.9 feet from the burning enclosure, exceeded EPA Acute Exposure Guideline Level ("AEGL") 3 (i.e., potential for life-threatening health effects) up to 50.3 feet, and exceeded AEGL-2 (i.e., serious health effects) up to about 118 feet (Exh. HEC-1, Att. H at 22). The other modeled scenarios exceeded AEGL-2 (i.e., potential for serious health effects) between 7.6 feet and 33.5 feet from a burning enclosure (Exh. HEC-1, Att. H at 22). Further, the Company reported that none of the modeled scenarios showed VOC release quantities at hazardous levels at any distance from a burning enclosure (Exh. HEC-1, Att. H at 3, 22).

The results indicate that CO-based AEGL-2 conditions could impact a house 80 feet from the Project Site, but that other nearby commercial buildings would likely remain beyond the reach of toxic CO levels (Exh. HEC-1, Att. H at 3). Accordingly, the analysis recommends that the Company develop appropriate emergency response protocols in collaboration with local emergency personnel[52] (Exh. HEC-1, Att. H at 22). Generally, however, the Company indicated that potential health impacts would be localized and of short duration, adding that concentrations would decrease rapidly at and beyond the Project Site boundary (Exh. EFSB-S-59). The Company indicated that its engineering assumptions for this analysis do not constitute an exclusive scope of assumptions, and use of different assumptions or test methodology could produce materially different results (Exh. HEC-1, Att. H at 2, 25).[53]

v. Hazard Mitigation Analysis

The Company stated that the HMA evaluated Project safeguards that would mitigate potential hazards (Exh. D/S-G-20(1) at 18). The Company stated that installation and operation of any lithium-ion BESS with an aggregate capacity exceeding 20 kWh must have an HMA as part of the required construction documentation per the 2021 edition of NFPA 1 and the 2020 edition of NFPA 855 (Exh. D/S-G-20(1) at 5). The Company noted that its HMA was informed

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52 The Company emphasized that it can properly manage and mitigate any risk to the residence at 123 Clinton Street (which is the closest residence), and that such risk does not preclude Project development (Company Reply Brief at 25). The Company explained that the TFD would direct emergency response actions for the residence based on real-time observations, air monitoring data, weather conditions, and input from the ROC and SMEs, consistent with the ERP and standard emergency management practices (Company Reply Brief at 25, citing Exh. EFSB-S-26, at 2).

53 E. Paul Hayes, Vice President of Energy Infrastructure at the Hiller Company and a Town fire safety witness, testified that plume studies are problematic since not all toxins generated are emitted into the environment and small changes in prevailing conditions (e.g., weather) can impact a study's output (Exh. TEWK-PH-1, at 5). Mr. Hayes further indicated that a plume model is best used sparingly for provision of limited generic data (Exh. TEWK-PH-1, at 5). Similarly, DiPalma/Sheehan's consultant, Dr. Georges Melhem of ioMosaic, testified that dispersion models in general are not very accurate due to the sheer number of parameters incorporated into them (Tr. 5, at 555, 592).

by data from UL 9540A testing, the Project's ERP, and an NFPA 69 analysis (Exh. D/S-G-20(1) at 30-36). In accordance with NFPA 1 and NFPA 855, the Company stated that its HMA analyzed the following failure modes: (1) thermal runaway; (2) failure of an energy management system; (3) failure of a required ventilation or exhaust system; and (4) failure of a required smoke detection, fire detection, fire suppression, or gas detection system (Exh. D/S-G-20(1) at 5). The Company reported that the analysis focused on identifying and evaluating the safeguards that prevent initial threats from escalating into hazard events, as well as safeguards that mitigate critical safety system failures during a thermal runaway (Exh. D/S-G-20(1) at 18). The Company treated (1) and (2), above, as initial threats and (3) and (4) as critical safety system failures to be mitigated during a thermal runaway (Exh. D/S-G-20(1) at 22-28).

The Company indicated that its HMA demonstrated compliance with the requirements set forth in the 2020 edition of NFPA 855, allowing for AHJ approval of the HMA as documentation of Project safety (Exh. D/S-G-20(1) at 29). Table 4, below, summarizes each requirement and provides the Company's explanation for why the HMA is compliant.

Table 4. Project Compliance with the 2020 Edition of NFPA 855.

NFPA 855 Compliance Requirement	Company Explanation
Fires will be contained within unoccupied energy storage system rooms for the minimum duration of the fire resistance rating specified in NFPA 855 4.3.6.	**Not applicable.** The Hithium enclosures are intended for outdoor ground-mounted installations only and would not be installed within any rooms or structures (Exh. D/S-G-20(1) at 29).
Suitable deflagration protection is provided where required.	**Compliant.** The Hithium enclosures are equipped with an explosion prevention system designed to exhaust flammable gases before they are allowed to accumulate and create an explosive atmosphere within the enclosure (Exh. D/S-G-20(1) at 29).
Energy storage system enclosures in occupied work centers allow occupants to safely evacuate in fire conditions.	**Not applicable.** The Hithium enclosures are not intended to be installed in any occupied work centers (Exh. D/S-G-20(1) at 29).
Toxic and highly toxic gases released during normal charging, discharging, and operation will not exceed the permissible exposure limit in the area where the enclosures are contained.	**Not applicable.** LFP batteries do not release toxic gases during charging, discharging, or normal operation (Exh. D/S-G-20(1) at 30).

NFPA 855 Compliance Requirement	Company Explanation
Toxic and highly toxic gases released during fires and other fault conditions will not reach concentrations in excess of IDLH levels in the building or adjacent egress routes during the time deemed necessary to evacuate from that area.	**Compliant.** While UL 9540A does not require measurement of many toxic gases (only flammable gases), limited information on toxic gases released for the specific battery system is available. According to the Company's fire safety consultant, Energy Safety Response Group ("ESRG"), proprietary gas data measurements indicate that toxicity levels are in line with those of typical structural fires. Additionally, concentrations of any potentially toxic gases are expected to be highly diluted by natural ventilation of the open space area (Exh. D/S-G-20(1) at 30).
Flammable gases released from batteries during charging, discharging, and normal operation will not exceed 25 percent of the lower flammability limit ("LFL").	**Not applicable.** LFP batteries do not release flammable gases during charging, discharging, or normal operation (Exh. D/S-G-20(1) at 30).

Source: Exh. D/S-G-20(1) at 29-30.

vi. NFPA 69 Explosion Control Analysis

The Company reported that an NFPA 69 explosion control analysis was used to prepare its HMA (Exh. D/S-G-20(1) at 34). Hillman stated that the analysis employed a CFD model and UL 9540A data to determine whether a Hithium enclosure can successfully maintain the concentration of combustible gases to less than 25 percent of the LFL of the gas mixture (Exh. D/S-G-20(1) at 34). The analysis included four dispersion scenarios representing progressively worsening conditions, and two leakage positions (i.e., bottom-right and upper-left corner of the enclosure), each modeled with and without operation of the extraction fan (Exh. D/S-G-20(1) at 34).

The Company reported that all scenarios in which the extraction fan was operating maintained average flammable gas concentrations below 25 percent LFL (Exh. D/S-G-20(1) at 34). On the other hand, scenarios without extraction fan operation did not keep gas concentrations within acceptable limits (Exh. D/S-G-20(1) at 34). According to the Company,

the analysis demonstrated that the Hithium enclosure, with the extraction fan operating, satisfies the requirements of NFPA 69 (Exh. D/S-G-20(1) at 34).

d. Safety Plans and Training

The Company stated that the ERP and HMA would provide step-by-step guidance for first responders for the scope of battery-related emergencies, including scenario-based response procedures for explosion and deflagration, fire, thermal runaway or off-gassing, alarm-only incidents, external fire and thermal exposure, construction and commissioning incidents, and external impact events (Exhs. EFSB-S-11, at 1; D/S-G-21(1) at 12). The ERP would detail stand-off distances, defensive tactics, monitoring protocols for reignition, and the chain of communication and command (Exhs. ERSB-S-11, at 1; D/S-G-21(1) at 12).

The Company stated it would deliver first responder training prior to Project commissioning and then annually thereafter (Exh. EFSB-S-13). The Company explained that training would familiarize first responders with the full range of materials, conditions, and protocols associated with potential BESS emergencies (Exh. EFSB-S-13). The Company specified that training would cover technology-specific hazards, including thermal runaway behavior, gas generation, explosion-prevention ventilation, fire detection and alarm sequences, BMS alarm interpretation, and defensive response tactics (Exh. EFSB-S-13). The Company noted that on-site training would incorporate guided facility walkthroughs, identification of access routes and staging areas, and tabletop or live response drills simulating realistic emergency scenarios (Exh. EFSB-S-13). Additionally, the Company emphasized that training would include guidance for responding to damaging health, safety, and environmental impacts off-Site (Exh. EFSB-S-13).

The Company stated that it would provide safety training to the TFD, neighboring mutual-aid departments, and any Company personnel who may support emergency response, i.e., site operators, the remote operations center ("ROC") (which would provide 24/7 in-person monitoring of the BMS), and designated SMEs (Exh. EFSB-S-13; Tr. 2, at 242). The Company noted that additional organizations (e.g., regional emergency management agencies, law

enforcement, or EMS) could participate based on local preference or jurisdictional coordination needs (Exh. EFSB-S-13).

e. Emergency Response and Impacts

i. Monitoring and Notification

The Project would include a combination of emergency monitoring and notification mechanisms (Exhs. EFSB-S-16; D/S-G-21(1) at 34). Activation of any smoke, heat, or gas detector in an enclosure would isolate the batteries from charging or discharging, trigger the audible/visual notification device (including exterior horn/strobe and alarm bell appliances), and send an alarm signal to a fire alarm control panel ("FACP") (Exh. D/S-G-21(1) at 26). In turn, the FACP would transmit alarm signals to a Central Station (i.e., a fire alarm system monitoring company), which would relay the information to the TFD (Exh. D/S-G-21(1) at 27; Tr. 2, at 241-244). The TFD would manage the immediate response, consistent with the ERP and responder training (Tr. 2, at 243-244). The TFD would also maintain a line of communication with the ROC, which would inform the TFD about on-the-ground conditions (Tr. 2, at 245). The Company's internal operations team would also have access to the same data as the ROC (Tr. 2, at 243). The Company would also dispatch an SME to the Project, who would be onsite within two hours to provide in-person response and support to the TFD in case of emergency (Tr. 2, at 244).

The fire alarm system would include a Class A loop for site panel aggregation, and in compliance with NFPA 72, fire alarm initiation and notification devices would include backup power from the fire alarm batteries (Tr. 8, at 1095). In the event of an extended power loss, the system would provide power for up to six hours per NFPA 855 and the enclosures would transition to shut-down procedures (RR-EFSB-5). The Company could also dispatch a technician to the Project Site to determine whether other responses are required (RR-EFSB-5). According to Hillman, batteries not charging or discharging would be at low risk for thermal events and could safely sit for extended periods of time without monitoring (RR-EFSB-5). The system would also include both local and remote shut-down capabilities (Exh. D/S-G-21(1) at 23).

The Company stated that the alarm and emergency responder notification process would comply with NFPA 1225, which sets benchmarks for alarm receipt and call processing (Exh. EFSB-S-71). Further, the Company noted that the TFD and other AHJs would need to approve specific response procedures and activation matrices during the local building permit process (Exh. EFSB-S-16). The Company also indicated that the TFD would manage response times and ensure that turnout and travel time are consistent with NFPA 1710 guidance (Exh. EFSB-S-71).

ii. Emergency Response

Hillman stated that the primary TFD staging area would be located east of the facility at the intersection of Hillman and Clinton Streets (Exh. D/S-G-21(1) at 16). The Company added that first-arriving fire apparatus could access this location via two lanes of paved roadway on Hillman Street (Exh. D/S-G-21(1) at 16). This staging configuration would allow responders to position apparatus at an angle relative to the enclosures to reduce exposure to potential projectiles or debris and would provide immediate access to a fire hydrant (Exh. D/S-G-21(1) at 15-16).

The Company stated that the primary responding fire station is located 1.2 miles from the Project Site (Tr. 2, at 266) and a first responder station or incident command post ("ICP") would be situated near the main Project entrance (Exh. TEWK-JCC-2, at 36). The Company further indicated that the ICP and fire routes would be located upwind of the Project to the extent practicable (Tr. 8, at 1094; Exh. TEWK-JCC-2, at 36-37). Within the facility, the Company noted that a 20-foot-wide paved accessway would encircle the BESS enclosures and be designed to support a 75,000-pound fire engine during inclement weather conditions (Exhs. TEWK-JCC-2, at 36; D/S-G-21(1) at 14).

According to the Company, the ERP identifies two existing fire hydrants near the Project Site along Hillman Street (Exh. D/S-G-21(1) at 4). The Company represented that water carried in the onboard tanks of fire apparatus could supplement these water sources (Tr. 8, at 1113).

The Company reported that the Hithium enclosures would not include fixed internal or external fire suppression systems (Exh. EFSB-S-31). The Company stated that absent a life-safety threat, responders would implement a defensive strategy, allowing a fire to burn in a

controlled fashion until all internal fuel sources are depleted (Exhs. EFSB-S-31; EFSB-S-48; EFSB-S-81). The Company further explained that direct suppression of a BESS fire would be ineffective and could prolong an incident while introducing additional safety risks (Tr. 9, at 1255).[54] The Company emphasized that responders would only use direct water suppression under limited conditions, e.g., extinguishing small external non-enclosure fires or defensive cooling of exposures (Exh. EFSB-S-31). In those cases, firefighters could deploy standard firefighting agents available on apparatus (Exh. EFSB-S-31).

The Company indicated that Project emergencies would not require evacuation and accordingly, it has not proposed a Project-specific evacuation plan or road modifications (Exhs. EFSB-S-68; EFSB-T-2). The Company explained that this determination is based on UL 9540A test results, HMA conclusions, and prior BESS airborne incidents showing typically localized impacts (Exh. EFSB-S-68). The Company further stated that ESRG does not recommend shelter-in-place or evacuation as default actions for potential off-site air impacts from a fire (Exh. EFSB-S-68). However, if evacuation were considered, the Company indicated that the TFD incident commander would make that determination and establish evacuation distances using criteria applied to other structure or utility fires (Exh. EFSB-S-68; Tr. 2, at 265).

The Company explained that qualified personnel would use manufacturer guidance and decommissioning procedures for managing and disposing of any batteries with stranded energy once the Project Site is stabilized and safe access is established (Tr. 9, at 1254; Exhs. EFSB-S-78; EFSB-S-79). The Company noted that emergency responders would address delayed thermal runaway or re-ignition through a defensive response strategy (Exh. EFSB-S-79).

The Company distinguished BESS fire response from typical structural fire response (e.g., for residential or commercial buildings), stating that responders would have advance knowledge of the fuel type, quantity, and associated gases, and would have an established ERP (Tr. 9, at 1245–1247). The Company further stated that firefighters would not encounter life-safety risks associated with occupied structures, as the Project would be unoccupied and fires

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54 Michael Nicholas, a battery safety specialist at Hiller Companies and Town fire safety witness, stated that responders could use water for indirect cooling by applying it between enclosures to absorb heat (Tr. 8, at 1112).

would be permitted to self-extinguish (Tr. 9, at 1245-1246). Hillman indicated that the TFD would maintain appropriate tools and supplies to support fire response and that the Company would reimburse the Town annually for associated costs (Exh. TEWK-JCC-2, at Section 12(D)).

The Company explained that, pursuant to the SPCC Plan and consistent with applicable federal requirements under Title 40 CFR Part 112 and the MCP, a licensed environmental services contractor would respond promptly to monitor and, if necessary, manage and properly dispose of water within the stormwater management system if runoff is generated during a thermal incident (Company Reply Brief at 29-30, citing Exh. EFSB-S-60). The Company would properly dispose of any contaminated runoff in the stormwater management system resulting from firefighting activities (Exh. TEWK-JCC-2, at Section 12(G)).

iii. Emergency Impacts

The Company reported that in the event of a battery fire, gas release volumes would be limited (i.e., approximately 130 liters of vent gas per cell), diluted by the Hithium enclosure's NFPA 69 ventilation system, and further diluted upon release to the outdoor environment (Exh. EFSB-S-26, at 1-2). The Company stated that the cell- and unit-level UL 9540A testing showed vent gas composition dominated by hydrogen, carbon dioxide, light hydrocarbons, and CO (Exh. EFSB-S-30).

While the Company acknowledged the potential for limited HF generation during a severe battery failure or enclosure fire (Exh. EFSB-S-30), it stated that HF has never been detected at unsafe levels outside of a BESS site, even during failure incidents, and that dispersion has been limited to the enclosure (Tr. 2, at 233). The Company reported that large-scale testing and incident data show that HF, as well as CO, have been consistently non-detectable or detectable only at trace levels at 100 feet from burning enclosures, which forms the basis for ESRG's recommended 100-foot stand-off distance where responders can stage indefinitely without personal protective equipment (Exh. EFSB-S-30). The Company also noted that smoke from structural fires contains many of the same byproducts as BESS fire smoke (e.g., hydrogen cyanide, CO, and HF) (Tr. 2, at 233-234). Moreover, toxic gas species associated with a BESS fire or fault, including HF where present, would not pose a greater safety risk than a typical

structural fire (Exhs. EFSB-S-30; D/S-G-21(1) at 30). Outdoor ventilation would also highly dilute these gases, maintaining concentrations below IDLH levels in egress routes or off-site (Exh. EFSB-S-30).[55]

The Company stressed that no credible scenario exists in which: (1) a combusting Hithium enclosure would produce explosion or flash fire effects extending beyond the enclosure itself, much less beyond the Project Site boundary (Exh. EFSB-S-49); or (2) a single-unit thermal runaway would elevate ambient temperatures at the Project Site boundary to unsafe exposure levels (Exh. EFSB-S-45). The Company also stated that gas dispersion would be limited to the downwind plume immediately above the enclosure and liquid releases would remain confined to the graded pad unless a large spill exceeds containment capacity (Exh. EFSB-S-26, at 2).

f. Facility Security

The Company stated that the Project would be fully enclosed to prevent unauthorized access, with a soundwall along the south and east sides and a ten-foot high chain-link security fence along the north and west sides (Exh. D/S-G-21(1) at 17). Two 30-foot-wide double swing gates would provide access to the Project Site (Exh. D/S-G-21(1) at 17). The Company stated that security protocols would be consistent with those used at transmission substations and would include locked fencing, recording security cameras, and security lighting (Exh. EFSB-S-23). In the event of a cyberattack, the Company stated that it would isolate affected systems, conduct a root cause analysis and forensic investigation, implement predefined remediation and recovery measures, and perform a post-incident review to strengthen defenses and prevent recurrence (Exh. EFSB-S-5).

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[55] Mr. Hayes testified that no real-world BESS fires have produced toxins above an actionable level at facility property lines; HF rapidly dissipates during a BESS fire due to high temperatures and its reactivity with metals; and BESS fires do not differ substantially in presentation from residential or warehouse fires, although their overall scale is smaller due to the more limited fuel load (Exh. TEWK-PH-1, at 4, 9).

g. Safety Coordination and Benchmarks (Pre-Operation)

The Company stated that the Project would require a fire safety permit from the TFD under the Massachusetts Fire Code, 527 CMR 1.00 *et seq.* (Exh. EFSB-G-10, at 2). The Company stated that the TFD and other AHJs, with input from additional technical resources (e.g., Massachusetts Department of Fire Services) where appropriate,[56] would certify Project compliance with all permitting requirements, including the 2026 edition of NFPA 855 (Tr. 3, at 376; Tr. 9, at 1259-1263). [57]

The Company explained that the HMA and ERP are living documents that it is developing in coordination with the TFD and other AHJs, and that it would refine them to reflect final equipment selections, Project Site layout, and the agreed-upon response and notification matrix during permitting and final design (Exh. D/S-G-9). The Company further stated that it would finalize the HMA and ERP prior to construction and commissioning, consistent with the code-required review process (Exh. D/S-G-9).

Prior to hot commissioning,[58] the Company stated that Project personnel would conduct a full functional test of critical life safety systems and would then repeat the test in the presence of local fire officials (Exh. TEWK-JCC-2, at 37). The Company would not initiate hot commissioning until the Project achieves satisfactory test results (Exh. TEWK-JCC-2, at 37).

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56 The Town stated that it would retain a third-party reviewer to support Project permitting and construction (Tr. 8, at 1098-1099; RR-EFSB-14). The reviewer would coordinate with the TFD and other Town authorities and provide professional assurance that the Project complies with applicable codes and standards (Tr. 8, at 1098-1099; RR-EFSB-14).

57 Mr. Hayes testified that the Project would satisfy NFPA 855 by meeting the TFD fire safety permit criteria and NFPA 855 (2026 edition) compliance criteria (Exh. TEWK-PH-1, at 5). He also stressed that Project adherence to the HCA, which contains an exhaustive list of NFPA 855 compliance requirements, would ensure fulfillment of these criteria, which the HCA requires the Company to meet before construction begins (Exh. TEWK-PH-1, at 6).

58 Hot commissioning proceeds after cold checks are complete and verifies performance under actual operating conditions and real voltage (see: https://eepower.com/technical-articles/substation-commissioning-and-testingpart-1-scope-and-workflow).

3. DiPalma/Sheehan ioMosaic Plume Model

DiPalma/Sheehan engaged consultant ioMosaic to prepare a plume model for the Project (D/S Brief at 13). The model analyzed downwind travel of gas plumes including CO and HF (D/S Brief at 13). DiPalma/Sheehan explained that the model considered two air stability/wind speed scenarios, i.e., D5 – moderate vertical air movement and a five meter/second wind speed, which represents an average day; and F2 – little vertical air movement and a 2 meter/second wind speed, which represents a calm night (D/S Brief at 14, citing Tr. 5, at 543). According to the model, DiPalma/Sheehan stated that airborne toxins from a Project failure could extend into surrounding areas at concentrations exceeding AEGL-2, with potential for serious or irreversible health effects (D/S Brief at 13). Specifically, DiPalma/Sheehan stated that the model indicates that: (1) during D5 conditions, a fire in a single enclosure would result in an HF plume traveling about 1,000 feet downwind, while a rack fire (one-sixth of an enclosure) would result in an HF plume traveling about 570 feet downwind; and (2) during F2 conditions, a fire in a single enclosure would result in an HF plume traveling about 2,800 feet downwind, while a rack fire would result in an HF plume traveling about 1,000 feet downwind (D/S Brief at 13-14, citing Exh. SD-iMC-B at 9-17). DiPalma/Sheehan noted that the modeled CO results are similar (D/S Brief at 14).

DiPalma/Sheehan explained that fourteen single-family residences and a portion of Emerald Court's 470 multi-family units are located within 1,000 feet of the Project Site, with the nearest residences approximately 600 to 650 feet away (D/S Brief at 22, citing Exh. EFSB-SS-8; D/S Brief at 30, citing Exh. RR-EFSB-3(1), Part 1). Further, DiPalma/Sheehan reported that a residence at 123 Clinton Street is located about 80 feet from the Project Site, and that it could experience AEGL-2 conditions per the Hazard Dynamics model (D/S Brief at 77, citing Exh. HEC-1, Att. H at 3). DiPalma/Sheehan represented that they are the property's owners at 123 Clinton Street (D/S Brief at 28). DiPalma/Sheehan also indicated that it is reasonable to assume a four-hour HF exposure duration given the proposed defensive first responder approach (D/S Brief at 14, citing Exh. EFSB-S-78). They also related that, unlike their model, Hazard

Dynamics' model and UL 9540A testing do not account for HF emissions (D/S Brief at 15, citing Tr. 4, at 430, 437).

DiPalma/Sheehan cited a plume model prepared by Coffman Engineers for a proposed LFP BESS in Santa Fe County, NM which found that gas concentrations could cause adverse health effects in unprotected individuals up to 1,306 feet from the source (D/S Brief at 24–25, citing Exh. HEC-SD-S-1.17, at iii). DiPalma/Sheehan emphasized that this model evaluated a substantially smaller facility than the Project (38 enclosures compared to 134) and was commissioned by the project proponent (D/S Brief at 25). DiPalma/Sheehan further noted that the Coffman Engineers model shows a toxic gas plume extending more than 700 feet downwind under D3 conditions, which aligns with ioMosaic modeling of D5 conditions showing CO traveling similar distances (D/S Brief at 26, citing Exh. HEC-SD-S-1.17, at 20, Figure 13; Exh. SD-iMC-B at 12, Figure 8). Both models identify plumes containing HF, CO, and other toxic gases (D/S Brief at 25, citing Exh. HEC-SD-S-1.17, at 4). Based on these overlapping analyses, DiPalma/Sheehan contends that the record supports a "danger zone" surrounding BESS facilities, with toxic gas plumes from fire or severe failure events extending approximately 600 to 1,300 feet downwind under D and F atmospheric stability conditions, and potentially farther in certain scenarios (D/S Brief at 27).

4. Positions of the Parties

a. Town of Tewksbury

The Town argues that testimony presented by the Hiller Companies on its behalf demonstrates that the Project would meet the highest safety standards (Town Brief at 7-12). In particular, the Town cites the testimony of Mr. Hayes, a "nationally recognized authority" on BESS and special hazards fire protection (Town Brief at 7, citing Exh. TEWK-PH at 2). The Town stressed that Mr. Hayes has experience with more than 200 grid-scale BESS projects and has worked with most major BESS operation emergency manuals (Town Brief at 7-8, citing Exh. TEWK-PH at 2). The Town also noted that Mr. Hayes serves as Technical Committee Chair for the 2029 edition of NFPA 855 (Town Brief at 8, citing Exh. TEWK-PH at 7).

Regarding the completion timeline for the ERP and HMA, the Town indicated that local and state permitting processes often review plans that are approximately 30 percent complete[59] and it is not unusual for the ERP and HMA to remain incomplete at this stage (Town Brief at 6, citing Tr. 8, at 1140). The Town argues that the current priority is to ensure that the HCA includes provisions requiring the ERP and HMA to include appropriate content if the Project is permitted (Town Brief at 6, citing Tr. 8, at 1141, 1143). Accordingly, the Town requests that the Siting Board incorporate the final HCA into any approval issued in this proceeding (Town Brief at 6). The Town also requests that, at a minimum, the Siting Board expressly incorporate specific provisions of the final HCA into its decision as conditions, e.g., Section 6.A.i. (Public Safety Training) and Section 12 A-L (Fire, Health, and Safety) (Town Brief at 6-7). The Town further underscores the importance of incorporating all conditions set forth in the HCA Appendix (Town Brief at 7, citing Exh. TEWK-JC at 36-39). Overall, the Town contends that the HCA would ensure that the Project, if approved, minimizes environmental impacts through comprehensive construction, operation, and post-closure conditions (Town Brief at 6, citing Exh. TEWK-JC, at 8-9; Tr. 8, at 1083-1100, 1124, 1142-1143).

The Town stated that while Mr. Hayes was unavailable on the day the Siting Board heard the Town's witnesses (February 24, 2026), his colleagues, Messrs. Nicholas and Casper, adopted his testimony and assisted in preparing his prefiled direct testimony (Town Brief at 8, citing Tr. 8, at 1003-1004). The Town further stated that Messrs. Nicholas and Casper testified that they possess substantial expertise in BESS fire safety and the other matters addressed in Mr. Hayes' testimony (Town Brief at 8, citing Exhs. TEWK-MN; TEWK-AC). In addition, the Town contends that Mr. Nicholas' on-the-ground experience in Kern County, California is particularly relevant because he was directly responsible for handling BESS fire safety issues (Town Brief at 9, citing Exh. TEWK-MN; Tr. 8, at 1000-1001). The Town argues that the extensive experience of Mr. Hayes and Messrs. Nicholas and Casper bears significant weight, especially regarding BESS fire risks and state-of-the-art fire safety standards (Town Brief at 8-

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[59] The Board directs the Company to provide Project updates at the completion of 60 percent and 90 percent Project design stages, and upon receipt of associated approvals, to the Board. See Condition 30 of this Decision.

9). On this basis, the Town cited testimony from Mr. Hayes that BESS fires do not present greater atmospheric risks than traditional structure fires and that BESS fires do not materially differ from residential or warehouse fires, although they are typically smaller in scale due to the amount of material consumed (Town Brief at 8, citing Exh. TEWK-PH at 4; see also Tr. 8, at 1010).

Turning to the HCA, the Town cited Mr. Nicholas' testimony that the HCA, including its Appendix, establishes a data-backed and enforceable set of conditions designed to ensure that any Project approval meets the highest safety standards for BESS critical safety systems, emergency access, and thermal runaway mitigation, thereby protecting the community's interest and first responder safety (Town Brief at 9, citing Tr. 8, at 1004-1005).

The Town asserts that Siting Board approval does not authorize construction, as the Company must first submit a complete HMA and ERP for review and approval before filing a building permit application (Town Brief at 9, n.5, citing Tr. 8, at 1029). The Town contends that criticism by DiPalma/Sheehan and associated witnesses regarding the incomplete status of Project plans is overstated, emphasizing testimony from Hiller Companies witnesses that this stage of the application process determines only the conditions necessary for the Project to advance and satisfy NFPA 855 requirements, and that the Town, the AHJ, or the Building Department may reject the Project and require resubmittal if those conditions are not met (Town Brief at 9, citing Exh. TEWK-PH at 6; accord Tr. 8, at 1027-1029). The Town argues that claims that Siting Board approval would preclude rigorous review of project-specific fire and safety measures mischaracterize the permitting framework (Town Brief at 11).

The Town stated that the 2026 edition of NFPA 855 includes a project-level document that allows an SME and the AHJs to verify code compliance and that the AHJs may require a supplement to the TFD permit in the event of verification issues (Town Brief at 10, n.6, citing Exh. TEWK-PH at 6-10). The Town added that a third-party expert can assist AHJs in evaluating BESS safety protocols and compliance requirements for NFPA 855 (Town Brief at 11, citing Tr. 8, at 1055). The Town emphasized that the TFD would be the final gatekeeper for compliance and, in coordination with a third-party expert, could approve or deny building or construction permits based on the expert's findings, with the possibility of additional post-

authorization compliance review and written confirmation (Town Brief at 11-12, citing Tr. 8, at 1080, 1103). Overall, the Town asserts that compliance with the 2026 edition of NFPA 855 represents the industry's most advanced form of BESS hazard regulation and provides the best protection available (Town Brief at 12, citing Tr. 8, at 1064-1065). The Town stated that the HCA Appendix sets forth an exhaustive list of minimum requirements for the fire permit application process and asserts that these provisions guard against code compliance deficiencies (Town Brief at 10, citing Exh. TEWK-PH at 6-8; Exh. TEWK-JCC at 36-39; Tr. 8, at 1067). The Town suggested that the EFSB condition issuance of any TFD and Building Department permit on the Project's full compliance with NFPA 855 requirements (Town Brief at 10, citing Tr. 8, at 1034).

The Town asserts that DiPalma/Sheehan presents a series of speculative adverse scenarios that DiPalma/Sheehan alleges may occur if the Project is approved (Town Reply Brief at 13, citing D/S Brief at 12-14). The Town noted that these scenarios include risks of fire or thermal events and potential non-de minimis exposure of residents to air and other toxins, particularly CO and HF (Town Reply Brief at 13, citing D/S Brief at 12-14). The Town does not dispute that exposure to CO, HF, or other toxins at sufficiently high levels could cause serious or irreversible health effects, but contends that DiPalma/Sheehan improperly conflates the possibility of such effects with their likelihood and fails to account for the mitigating role of a fully developed ERP, HMA, and related safeguards (Town Reply Brief at 13, n.23).

The Town contends that the BOH, Chesbrough, Corbin, and Martin rely largely on DiPalma/Sheehan's testimony and similarly conflate the potential for fire and thermal event effects with their likelihood, contrary to the protections afforded by the ERP and HMA (Town Reply Brief at 13-14; see Town Brief at 5, at 10-11). The Town maintains, however, that if the evidence demonstrated a greater likelihood of such risks, the Town and other regulators would not trivialize or disregard that scenario (Town Reply Brief at 14). Finally, the Town contends that its Hiller Companies witnesses provided persuasive written and live testimony regarding hazard assessment, public safety protections, and required pre-construction benchmarks (Town Reply Brief at 14; see: Exh. TEWK-JCC at 36-39; Tr. 8, at 1037, 1083-1100; Town Brief at 9-10).

b. Tewksbury Board of Health

The BOH asserts that lithium-ion battery fires present unique safety hazards: thermal runaway can release flammable and toxic gases, including HF and CO; battery fires can be difficult to suppress; and re-ignition can occur after apparent suppression (BOH Brief at 12). Accordingly, first responders must receive specialized training before Project operation commences to safely respond (BOH Brief at 12). The BOH contends that the record does not establish that the TFD has completed such training (BOH Brief at 12). The BOH also stressed that the record contains no evidence that a conventional structure fire would produce an HF-laden plume, unlike a BESS fire (BOH Reply Brief at 4).

The BOH argues that the root cause of real-world battery incidents remains undetermined (BOH Brief at 8) and noted that the Company's submitted literature confirms that thermal runaway propagation and fire behavior remain active areas of research (BOH Brief at 12). The BOH further pointed to a BESS fire in Warwick, NY, noting that no initiating cause was identified in this proceeding (BOH Brief at 12, citing RR-D/S-10). The BOH also noted the occurrence of substantial operational failures at the Moss Landing Vistra power plant despite sophisticated engineering controls (BOH Brief at 12, citing HEC-SD-S-1.14), and the hundreds of nearby residents who sought medical attention as a result (BOH Reply Brief at 4, citing Exh. HEC-SD-FP-9, at 2-3).

The BOH asserts that the record contains no evidence that HF-specific monitoring equipment would be deployed during a Project emergency or provided to the TFD (BOH Brief at 7). The BOH noted that the model conducted by Hillman's consultant Hazard Dynamics does not account for HF (BOH Reply Brief at 3). Notwithstanding this omission, the BOH maintains that a thermal runaway event at the Project can produce HF (BOH Reply Brief at 2). The BOH also interprets the testimony of Dr. Kevin Marr of Hazard Dynamics, the Company's plume modeling expert witness, to indicate that HF would travel along the same pathway as the other modeled gas species in the Hazard Dynamics plume model if HF had been included (BOH Reply Brief at 3-4, citing Tr. 4, at 524). Broadly, the BOH argues that the record establishes that: (1) lithium-ion battery thermal runaway may generate HF (BOH Brief at 3, citing Tr. 9, at 1273-1274; BOH Reply Brief at 3, citing Tr. 5, at 538-540); (2) commonly used four- and five-gas

meters do not detect HF (BOH Brief at 3, citing Tr. 9, at 1279-1280; BOH Reply Brief at 3, citing Tr. 9, at 1279-1280); and (3) HF is reactive and difficult to detect (BOH Brief at 3, citing Tr. 9, at 1276).

The BOH asserts that gas from a BESS fire could reach nearby vulnerable populations under common wind conditions (BOH Brief at 3-4). Specifically, the BOH asserts that the DiPalma/Sheehan ioMosaic model indicates that if a Project emergency were to generate a toxic airborne plume, AEGL-2 conditions would extend approximately 1,100 feet downwind (BOH Brief at 7) and residents within this area would have approximately 67 seconds[60] to evacuate to avoid such conditions (BOH Brief at 8, citing Tr. 5, at 573-575). The BOH contends that certain sensitive receptors would be unable to evacuate within this timeframe: (1) elderly residents of Bayberry at Emerald Court; (2) infants and toddlers at a nearby daycare facility within 1,000 feet of the Project; and (3) mobility-limited residents in the approximately 470 multi-family residences within 1,000 feet of the Project (BOH Brief at 9). The BOH further asserts that all three populations would face heightened risk due to first responders' inability to detect HF with standard gas meters (BOH Brief at 9). The BOH also noted that the record contains no HF-specific evacuation protocols for Bayberry at Emerald Court or the nearby daycare facility (BOH Brief at 13). Additionally, the BOH contends that the Project's planned 30-foot sound barrier walls along the eastern perimeter would create turbulence that draws higher contaminant concentrations closer to ground level on the leeward side, toward Emerald Court (BOH Reply Brief at 4, citing RR-EFSB-11).

The BOH argues that HF cannot be treated as a mere byproduct of combustion modeling; rather, it is uniquely dangerous, highly volatile, and associated with significant health hazards (BOH Brief at 9-10). According to the BOH, peer-reviewed literature confirms that HF is among the dominant and most hazardous gas emissions generated during BESS thermal runaway (BOH Brief at 10).[61] The BOH contends that this conclusion is consistent with the record, which

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[60] This value was calculated by Dr. Georges Melhem of ioMosaic during the evidentiary hearing (Tr. 5, at 575).

[61] The BOH does not provide a citation to the record or reference for this assertion.

demonstrates that HF generation is foreseeable, plume transport is rapid, and residential receptors are located in close proximity (BOH Brief at 10). The BOH further asserts that HF presents risks beyond inhalation, including surface contact and contamination hazards (BOH Brief at 4). In addition, the BOH argues that the Hazard Dynamics plume model can cause decision-makers and the public to underestimate the immediacy of potential HF exposure (BOH Brief at 4).

The BOH noted that Dr. Georges Melhem of ioMosaic, DiPalma/Sheehan's plume modeling expert witness, questioned the HF generation parameters, gas release flow rates, and release duration assumptions used in the Hazard Dynamics model (BOH Brief at 11). Notwithstanding these concerns, the Hazard Dynamics model indicates that CO concentrations exceeding AEGL-2 conditions would extend approximately 118 feet from a burning enclosure under a large fire scenario with high winds, and that the house at 123 Clinton Street, located 80 feet from the facility, would fall within this hazard zone (BOH Brief at 8, citing RR-D/S-6(1) at 3).

The BOH indicated that the Company withheld critical UL 9540A calorimetry data and electrolyte composition data, citing proprietary concerns (BOH Brief at 11, citing Tr. 9, at 1284-1289), and argues that this information is necessary to independently verify the central assumptions of the Project's plume modeling (BOH Brief at 12). The BOH further asserts that the Project remains at approximately 30 percent design, with key safety and emergency planning documents incomplete (BOH Brief at 12). Specifically, the Company has not finalized enclosure vent configurations and has also not materially advanced the ERP and HMA or established a timeline for their completion (BOH Brief at 8, citing Tr. 9, 1295-1297; BOH Reply Brief at 2). The BOH characterizes these deficiencies as an indefinite deferral of core safety analysis (BOH Reply Brief at 4). Overall, the BOH contends that the Project's safety framework has not been fully developed, key modeling inputs have been withheld, emergency planning remains incomplete, and real-world battery incidents can have undetermined causes (BOH Brief at 9).

The BOH further contends that the Company's safety case relies primarily on compliance with industry standards, NFPA requirements, battery management system design, and general engineering controls, rather than on a Project Site-specific risk analysis tailored to

the surrounding residential context (BOH Brief at 13). The BOH argues that compliance with applicable standards does not, by itself, eliminate risk (BOH Brief at 13). The BOH also noted that NFPA characterizes its standards as minimum requirements for hazard mitigation rather than maximum regulatory measures (BOH Brief at 13). The BOH maintains that compliance with industry standards, while necessary, are not sufficient to ensure Project safety, and effective emergency coordination and planning must extend beyond adherence to engineering codes (BOH Brief at 13). Accordingly, if the Siting Board approves the Project, the BOH requests that the Siting Board impose certain conditions to be carried out prior to energization (BOH Brief at 15). The following are the conditions pertaining to Project safety:

- Independent acquisition and verification of all raw UL 9540A calorimetry and electrolyte composition data underlying combustion modeling, followed by independent re-modeling of toxic gas generation and plume dynamics, including worst-case HF and CO dispersion at residential receptor distances, by a qualified expert retained independent of the Applicant, subject to review and approval by the Board of Health.

- Finalization and submission of the emergency response plan and hazard mitigation analysis, incorporating site-specific detection and evacuation protocols for a sixty-seven second HF plume arrival scenario, directly addressing Bayberry at Emerald Court and the day care facility within 1,000 feet, developed in coordination with the Tewksbury Fire Department and the Board of Health, prior to energization. The ERP and HMA shall be prepared under the assumption that a large-scale thermal runaway event can and may occur.

- Documentation of completion by the Tewksbury Fire Department of specialized lithium-ion battery incident training covering thermal runaway risks, toxic gas hazards, and emergency response procedures, with training plan reviewed and approved by the Board of Health and the Fire Chief prior to energization.

Source: BOH Brief at 15-16.

Consistent with the Siting Board's obligation under applicable precedent to balance the interests of the general public against local interests, the BOH requests that, in reaching any decision, the Siting Board expressly consider certain findings that, according to the BOH, are supported by testimony and exhibits admitted into the record (BOH Reply Brief at 8). The following are the findings pertaining to Project safety:

- The record reflects that hydrogen fluoride may be generated during a BESS thermal runaway event at this facility, that standard first-responder monitors do not measure for

HF (Tr. 9, at 1279-1280), and that the Company's air dispersion model deliberately excluded HF from its scope (Tr. 4, at 430). The ioMosaic model, the only qualified chemical engineering analysis of HF dispersion in this record, was not contradicted by any chemical engineer or risk analyst.

- The record reflects that modeled plume transport of HF under representative D5 wind conditions reaches the Emerald Court senior housing community and nearby single-family residences within the AEGL-2 exposure zone (Exh. SD-iMC-B, Figure 16). That community includes an assisted living facility. The first-responder response protocol anticipated by the Company is defensive, allowing thermal events to run their course while attempting to relocate residents who may not be ambulatory and whose location relative to a shifting, undetectable plume cannot be determined with standard monitoring equipment (Tr. 4, at 499-500).

- The record reflects that the Hazard Mitigation Analysis and Emergency Response Plan, the core documents for evaluating and responding to the risks established above, were presented as drafts based on the 2020 NFPA standard despite the Company's commitment to the 2026 standard, are not coherent with each other, and have no finalization timeline (Tr. 7, at 930-936, 960, 989-990).

BOH Reply Brief at 8.

The BOH argues that a decision granting exemptions without addressing these findings would not reflect the "broad and balanced consideration of all aspects of the general public interest and welfare" that applicable precedents require (BOH Reply Brief at 9, citing New York Central Railroad v. Department of Public Utilities, 347 Mass. 586, 592 (1964)).

c. DiPalma/Sheehan

DiPalma/Sheehan argues that thermal runaway and fire events can affect an entire BESS enclosure because battery operations inherently generate heat as energy moves into and out of cells, and cells are densely packed within each enclosure (D/S Brief at 11). DiPalma/Sheehan maintains that LFP batteries may pose increased toxic emission risks compared to earlier chemistries, citing testimony that LFP installations can produce a higher HF emission rate per kWh than NMC systems (D/S Brief at 12, citing Exh. HEC-SD-FP-9). DiPalma/Sheehan noted that the Moss Landing battery fire, which resulted in 341 nearby residents seeking medical care, involved NMC chemistry (D/S Brief at 13, citing Exh. HEC-SD-FP-9). DiPalma/Sheehan

argues that battery emission risks are best understood through analysis of toxic plume dispersions during a BESS fire event (D/S Brief at 13).

DiPalma/Sheehan stated that the plume in the Hazard Dynamics model would remain near ground level and extend approximately 600 feet downwind before rising above nearby structures, with gas concentrations exceeding 1,000 parts per million (D/S Brief at 18-19, citing Exh. RR-D/S-6 (1) at 19). According to Dr. Marr's testimony, these gases would include HF (D/S Brief at 18, citing Tr. 4, at 524). DiPalma/Sheehan further cited testimony from Hillman's witness Chief Morris that a BESS fire or major failure could release carbon dioxide, hydrogen, hydrocarbons, CO, HF, and other acidic gases, as well as sub-micron particulates, at concentrations exceeding IDLH values (D/S Brief at 20, citing Exh. EFSB-S-34, at 1). At the same time, DiPalma/Sheehan questions Chief Morris' testimony that HF would likely dissipate rapidly due to reactions with metal enclosures and that observed toxic conditions from real-world events are generally confined within the fenced BESS site (D/S Brief at 19, citing Tr. 9, at 1272–1273; D/S Brief at 20, citing Exh. EFSB-S-34). DiPalma/Sheehan argues that the record contains no studies demonstrating that toxic emissions would be confined to the facility boundary (D/S Brief at 20). DiPalma/Sheehan also highlights a discrepancy between the Hazard Dynamics modeling scope – limited to CO and VOCs – and Chief Morris' acknowledgment that HF may be generated in a fire event (D/S Brief at 20). More broadly, DiPalma/Sheehan contends that the Hazard Dynamics model reflects a firefighting perspective but lacks sufficient chemical engineering consideration (D/S Brief at 18).

DiPalma/Sheehan cited testimony from Dr. Melhem that a BESS thermal runaway event or fire would generate HF (D/S Brief at 20-21, citing Tr. 5, at 538). In contrast to Chief Morris' testimony, DiPalma/Sheehan emphasized Dr. Melhem's view that HF would have a very short residence time within the battery enclosure, limiting its interaction with metal surfaces and allowing it to disperse beyond the enclosure (D/S Brief at 21, citing Tr. 5, at 538–539). DiPalma/Sheehan further indicated that the proposed sound barrier wall would not materially reduce dispersion distances and could instead increase hazardous conditions by drawing higher concentrations of HF and CO toward ground level (D/S Brief at 21–22, citing RR-EFSB-11(1) at 9-13).

DiPalma/Sheehan also cited Dr. Marr's testimony that, during a BESS airborne release event, firefighters may need to instruct nearby residents to shelter in place by closing doors or relocating due to off-site plume movement (D/S Brief at 16-17, citing Tr. 4, at 499-500, 510). DiPalma/Sheehan argues that such response measures would not be practical for a nearby senior population and asserts that the record does not demonstrate that first responders could effectively track a shifting toxic plume and provide real-time guidance to affected residents (D/S Brief at 17). DiPalma/Sheehan indicated that the draft HMA omits key elements identified in the 2026 edition of NFPA 855, including consideration of stakeholder goals and objectives, such as those of DiPalma/Sheehan, owners of many buildings in the Project vicinity (D/S Brief at 31-32). In fact, DiPalma/Sheehan stressed that the draft HMA does not rely on the 2026 edition of NFPA 855 but on the 2020 edition (D/S Brief at 31, citing Tr. 7, at 932). However, DiPalma/Sheehan acknowledged that the Company intends to comply with the 2026 edition (D/S Brief at 31, n.8, citing Exh. DS-S-16).

DiPalma/Sheehan argues that the Siting Board qualifies as an AHJ under NFPA guidance, which includes state government in its definition of an AHJ (D/S Brief at 34–35, citing Exh. DS-T-2). DiPalma/Sheehan also contends that the Siting Board requires more fully developed versions of the HMA and ERP to properly balance public convenience, welfare, and safety in its siting determination (D/S Brief at 35). Further, DiPalma/Sheehan cited testimony from Chief Morris indicating that the ERP would remain in draft form until after a final walkthrough and training with the TFD shortly before project commissioning (D/S Brief at 36, citing Tr. 2, at 186–187). DiPalma/Sheehan argues that this approach would limit the ability of the Siting Board and local authorities to review and provide input on the ERP and to evaluate its implications for public health and safety (D/S Brief at 36–37). DiPalma/Sheehan maintains that the ERP should have been sufficiently developed to adequately inform Siting Board analysis of project risks and emergency response measures (D/S Brief at 37).

DiPalma/Sheehan asserts that they were denied access to certain record request responses (i.e., Exhs. D/S-S-2; D/S-S-6; D/S-S-8) based on Chief Morris' claim that the information is proprietary (D/S Brief at 37). DiPalma/Sheehan noted that Chief Morris did not independently

verify this claim with the relevant laboratories and did not present a legal basis for withholding the information (D/S Brief at 37, citing Tr. 9, at 1285, 1287).

DiPalma/Sheehan argues that the Company used low-level plan design (i.e., 30 percent) to prevent all parties and the Board from having adequate information to conduct effective direct and cross examination during the adjudicatory proceeding (D/S Brief at 72). DiPalma/Sheehan stated that they had submitted numerous discovery requests, to which the Company responded that it could not provide the requested information due to the preliminary design status, sometimes qualifying its responses by noting that details could change as the design advances (D/S Brief at 72). DiPalma/Sheehan contends that certain withheld information would have substantially improved ioMosaic's modeling and further noted that some information was produced only after the close of the public hearing (D/S Brief at 73-74).

DiPalma/Sheehan rejects the Company's assertion that advancing the Project design beyond 30 percent would hinder its ability to incorporate feedback from local boards (D/S Brief at 74). DiPalma/Sheehan maintains that, in ordinary land use practice, applicants submit fully developed plans before hearings and revise them as needed in response to board input, even if that requires returning to boards that previously granted approvals (D/S Brief at 74).

DiPalma/Sheehan further argues that the Company's reliance on a 30 percent design impedes meaningful review and discovery (D/S Brief at 75). Given the Project's potential safety implications, DiPalma/Sheehan contends that the Company should have provided detailed information regarding equipment and operations to inform the record (D/S Brief at 76). DiPalma/Sheehan asserts that deferring disclosure of these details until after the Siting Board's decision is unacceptable (D/S Brief at 76).

DiPalma/Sheehan noted that, with respect to the residence at 123 Clinton Street, Hazard Dynamics concluded that a toxic plume from a BESS fire could expose the residence to CO at AEGL-2 concentrations, posing a risk of serious health effects (D/S Brief at 77, citing Exh. HEC-1, Att. H at 3). DiPalma/Sheehan further noted that the Company did not include this residence in its initial Project renderings (D/S Brief at 77-79, citing Exh. HEC-1, at 25).

DiPalma/Sheehan recommends adoption of a presumptive safety setback between BESS facilities and habitable structures (D/S Reply Brief at 13). In support, DiPalma/Sheehan cited

evidence that multiple BESS facilities in the U.S. have experienced thermal runaway events in recent years (D/S Reply Brief at 13, citing D/S Brief at 11). DiPalma/Sheehan contends that the risks associated with BESS facilities are significant and the Company's and Town's fire safety experts have not demonstrated that toxic emissions would be confined within the Project Site boundary (D/S Reply Brief at 13-14). DiPalma/Sheehan acknowledges that these experts are qualified as current or former firefighters but argues that they have limited expertise in evaluating the siting implications of BESS installations (D/S Reply Brief at 18). DiPalma/Sheehan further argues that these experts generally deferred key site suitability considerations until after land use approvals, an approach with which DiPalma/Sheehan disagrees (D/S Reply Brief at 18). In contrast, DiPalma/Sheehan cited testimony from Dr. Melhem that BESS fires differ fundamentally from conventional fires and that the proposed Project Site is not suitable for the Project (D/S Reply Brief at 18-19, citing Tr. 5, at 549–552).

In conclusion, DiPalma/Sheehan highlighted the proximity of sensitive receptors to the Project Site, including a residence located approximately 40 feet from the Site (and 85 feet from the nearest planned equipment), a portion of a senior housing community within 600 feet, and fourteen single-family homes within 1,000 feet (D/S Reply Brief at 27).

d. Limited Participants

i. Representative Robertson

Representative Robertson asserts that the record lacks critical safety information, including a mass evacuation and shelter plan (Robertson Reply Brief at 9). He further asserts that in the event of a catastrophic incident, a toxic plume could spread to nearby residences, necessitating evacuation (Robertson Reply Brief at 8). Representative Robertson maintains that Project-specific public safety planning must address the evacuation needs of individuals who cannot evacuate independently (Robertson Reply Brief at 8-9). He also asserts that the existing road network is insufficient for evacuation (Robertson Reply Brief at 8). Overall, he contends that Project benefits would not outweigh its safety risks and stressed that Project safety would depend on manufacturers' safety standards in lieu of a broader safety plan (Robertson Reply Brief at 9).

ii. Chesbrough

Ms. Chesbrough asserts that lithium-ion battery fires present significant hazards, including thermal runaway, release of toxic smoke, and fires that are difficult to control, and that such hazards place nearby homes, daycare facilities, and senior housing at substantial risk (Chesbrough Brief at 4). Ms. Chesbrough contends that a toxic plume containing HF could extend up to 2,200 feet from the source (Chesbrough Brief at 6).[62] Further, she maintains that significant limitations affect shelter-in-place and evacuation protocols for workers in nearby businesses, residents sleeping at home, parents and children at daycare facilities, and elderly and other vulnerable residents (Chesbrough Brief at 5-6). In addition, she asserts that the HMA and ERP are inadequate (Chesbrough Brief at 4).

iii. Corbin

Mr. Corbin argues that the Town has failed to assess the Project's public health and safety implications with respect to the HMA and ERP, dispersion modeling, the site plan, the 2026 edition of NFPA 855, and other relevant considerations (Corbin Brief at 13, citing Tr. 8). He contends that the Project presents multiple public health and safety concerns related to operating temperature range, location, and expert witness testimony addressing the suitability of the proposed Project location (Corbin Brief at 14-18, citing Exh. EFSB-SS-8; Tr. 1; Tr. 4; Tr. 5; Tr. 6; Tr. 8; Tr. 9; RR-EFSB-6; RR-DS-1). With respect to emergency response, he asserts that the ERP contains significant deficiencies; the evidentiary hearings failed to address emergency response protocols during the construction phase; and the operation-phase emergency response framework is lacking in several critical areas (Corbin Brief at 18).

Mr. Corbin noted disagreements between the Company's and DiPalma/Sheehan's expert witnesses on several core topics, including plume modeling and toxic emissions (Corbin Brief

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62 Ms. Chesbrough attributes this value to an ioMosaic expert but does not provide a corresponding record citation. Note that this value is provided at Exh. SD-iMC-B(S1) at 7-8.

at 23). Given this lack of agreement on significant technical issues, he argues that it is risky to locate a BESS of this size so close to a residential area (Corbin Brief at 23).

iv. Martin

Ms. Martin asserts that significant safety concerns arise from siting a BESS facility in close proximity to families with children, elderly residents, senior housing serving medically vulnerable individuals, and hazardous materials rail lines, and also within an area known for traffic congestion, which could impede evacuation efforts (Martin Brief at 2). She argues that the Project's current safety framework contains critical gaps, including toxic plume risk, incomplete hazard analysis, and an inability to ensure real-time protection of nearby vulnerable populations (Martin Reply Brief at 5, citing Exh. HEC-1). Ms. Martin further contends that the Company's treatment of HF is flawed and that HF could travel beyond the Project Site boundary during an emergency, thereby threatening surrounding populations, including individuals unable to evacuate (Martin Reply Brief at 5, citing Exhs. HEC-1; D/S Brief). She asserts that the Company has not adequately addressed the infeasibility of evacuation for nearby vulnerable populations (Martin Reply Brief at 8-9, citing Town Brief; RR-EFSB-16(S1)). In addition, she argues that compliance with NFPA 855 does not establish that a thermal event cannot occur (Martin Reply Brief at 5-6, citing RR-EFSB-12; Town Brief), and that the Project's 30 percent design status undermines the adequacy of the Company's entire proposal (Martin Reply Brief at 7, citing Exh. HEC-1; D/S Brief).

e. Company Response

The Company contends that emissions from BESS fires become highly diluted through natural outdoor ventilation and thus are not expected to reach IDLH concentrations along egress routes or off-Site (Company Reply Brief at 5-6, citing Exh. EFSB-S-30). The Company further maintained that BESS fires and traditional structure fires include similar byproducts, such as hydrogen cyanide, CO, and HF, and that BESS fires present comparable atmospheric risks (Company Reply Brief at 3-4, citing Exh. TEWK-PH-1, at 4; Tr. 2, at 233).

The Company disputed several aspects of the DiPalma/Sheehan modeling (Company Reply Brief at 2-6). The Company stressed that ioMosaic's model analyzed the Project, not existing Site conditions, and therefore, their model cannot support a finding of increased risk to neighboring properties from the Project (Company Reply Brief at 4, citing Tr. 5, at 555). The Company further contends that a fire at the existing site would pose a greater life-safety hazard than a BESS thermal event due to the larger fuel load and presence of chemicals and hazardous materials associated with the current truck repair use (Company Reply Brief at 4). The Company cited testimony from Dr. Melhem, who acknowledged that dispersion models carry substantial uncertainty due to the large number of input parameters (Company Reply Brief at 5, citing Tr. 5, at 592). The Company also noted Dr. Melhem's testimony emphasizing the importance of accurate modeling inputs (Company Reply Brief at 5, citing Tr. 5, at 592-593). The Company contends, however, that ioMosaic relied on single-cell study data, which ioMosaic linearly scaled to an entire BESS unit (Company Reply Brief at 5, citing SD-iMC-B at 3). The Company emphasized that the very research paper on which ioMosaic relied for its source information cautions against linear scaling, noting that hazards relating to batteries do not scale linearly with capacity because not all cells burn simultaneously (Company Reply Brief at 5, citing Exh. HEC-SD-S-1.26, at 6). The Company therefore argues that ioMosaic's methodology rests on flawed and unreliable inputs, which it contends explains the discrepancy between the ioMosaic model results and outcomes from real-world incidents and large-scale testing, where HF has never been detected at unsafe levels beyond BESS facilities (Company Reply Brief at 5). The Company characterizes the ioMosaic model as a theoretical exercise with little or no value for siting or emergency planning and contends it should be afforded no weight (Company Reply Brief at 6).

The Company indicated that the TFD would direct emergency response at the Project Site and contends that the TFD is best positioned to monitor and mitigate hazardous conditions (Company Reply Brief at 6, citing Tr. 5, at 581). During an emergency event, the Company explained that air monitoring would be performed to support responder safety using standard field air monitoring instruments, as described in the ERP and HMA, with Personal Protective Equipment ("PPE") levels adjusted based on observed conditions (Exh. EFSB-S-66). The Company further represented that if the TFD determined an HF detection instrument is

warranted, the Company would provide it (Company Reply Brief at 6, citing Tr. 9, at 1280–1281).

The Company stated that DiPalma/Sheehan identified shortcomings in the draft HMA and ERP, principally that the documents were not finalized under the 2026 edition of NFPA 855 (Company Reply Brief at 6, citing D/S Brief at 31). The Company responds that Massachusetts requires compliance with the 2020 edition (527 CMR 1.05, § 2.2) but that it has voluntarily committed to compliance with the 2026 edition (Company Reply Brief at 6, citing Exh. D/S-S-16). The Company reported that it is developing the HMA and ERP in coordination with the TFD and other AHJs (Company Reply Brief at 7, citing Exh. D/S-G-9). The Company indicated that through permitting and final design, it would refine these plans to reflect final equipment, Project Site layout, and response and notification protocols, and would finalize and submit all NFPA 855-required plans and specifications for approval prior to construction and commissioning, consistent with code review requirements (Company Reply Brief at 7, citing Exh. D/S-G-9). Citing Mr. Hayes' testimony, the Company noted that the HCA requires compliance with NFPA 855 and TFD permitting prior to construction and establishes detailed benchmarks for demonstrating such compliance (Company Reply Brief at 7-8, citing Exh. TEWK-PH-1, at 6, 9-15). The Company argues that any concerns raised by DiPalma/Sheehan are premature and would be addressed through NFPA 855 compliance and the HCA, and that the record conclusively demonstrates that the Project may be safely sited at the Project Site (Company Reply Brief at 8).

The Company argues that the Project's 30 percent design plans provide the Siting Board and interested parties with substantial information about the proposed facility and potential impacts, sufficient to evaluate whether a zoning exemption is appropriate (Company Reply Brief at 24). As the Project moves through development and into construction, the Company noted that finalized plans would be developed in accordance with development timelines and permitting requirements that are typical and accepted for this type of project (Company Reply Brief at 24-25). The Company also indicated that it cannot feasibly produce finalized design plans and construction drawings at this stage of the proceeding, as the precise configuration within the enclosures must be determined during procurement (Company Reply Brief at 24,

citing Tr. 9, at 1296). The Company represented that if it attempted to finalize plans, construction drawings, and other relevant documents at this stage, it would almost certainly need to update these documents prior to construction and operation (Company Reply Brief at 24).

With respect to DiPalma/Sheehan's claim that the Project should be at a higher design level, the Company contends that 30 percent design plans are common and accepted at this stage of the development process and prior decisions approving Chapter 40A zoning exemptions for BESS facilities have been based on 30 percent design (Company Reply Brief at 24, citing Medway Grid at 55, n.35). The Company further asserts that DiPalma/Sheehan cites no precedent or legal support for the claim (Company Reply Brief at 25). Accordingly, the Company contends that DiPalma/Sheehan's claim is without merit (Company Reply Brief at 25).

The Company noted that the BOH advances several claims regarding HF based on materials outside the evidentiary record, including references to unspecified "peer-reviewed literature" and "a more recent technical review" (Company Reply Brief at 28, citing BOH Brief at 4). The Company further contends that, where the BOH does rely on record evidence, it fails to cite relevant facts contained therein (Company Reply Brief at 28).

The Company stated that the record demonstrates that HF is not unique to BESS fires and may result from a range of fires in the built environment (Company Reply Brief at 28, citing Tr. 2, at 233-234; Tr. 5, at 554). The Company acknowledges that small amounts of HF may be generated during a severe battery failure, but asserts that the BOH omits evidence showing that both UL 9540A testing and real-world incidents indicate such emissions are comparable to those from typical structure fires and would be rapidly diluted by outdoor ventilation, thereby preventing IDLH conditions along egress routes or at off-site locations (Company Reply Brief at 28-29, citing Exh. EFSB S-30).

The Company further contends that the BOH incorrectly suggests that standard emergency response equipment cannot detect HF, implying that the TFD would be unable to identify HF during a thermal event (Company Reply Brief at 29, citing BOH Initial Brief at 7). The Company noted Chief Morris' testimony that gas meters can be equipped with appropriate sensors and Mr. Rynne's testimony that the Company would provide HF detection equipment if

the TFD determined such equipment were necessary (Company Reply Brief at 29, citing Tr. 9, at 1279-1281).

With respect to the plume analyses, the Company stated that the BOH asserts that, in the event of a fire, hazardous chemicals could reach nearby residents quickly (Company Reply Brief at 30, citing BOH Brief at 3). The Company explained that the BOH relies on the testimony of Dr. Melhem and the ioMosaic plume analysis to support this claim (Company Reply Brief at 30). The Company contends, however, that Dr. Melhem acknowledged limitations in such modeling, stating that "dispersion models in general are not very accurate" (Company Reply Brief at 30, citing Tr. 5, at 542). The Company further noted Dr. Melhem's statement, "when you have spent as much time as I have on dispersion analysis," you can "torture" the numbers enough to ensure that they yield the message you are looking to convey (Company Reply Brief at 30, n.125, citing Tr. 5, at 593). The Company argues that the ioMosaic analysis does not provide a basis to conclude that the Project Site is unsuitable for the Project (Company Reply Brief at 30-31). As a matter of practice, the Company maintains that the TFD would be best positioned to assess and respond to any potential risk to nearby residents and to implement appropriate mitigation measures (Company Reply Brief at 31, citing Tr. 5, at 581).

The Company also addressed the BOH's assertion that the absence of a finalized ERP warrants Siting Board denial of the Project (Company Reply Brief at 31). The Company stated that both the Town's and Company's fire safety experts testified that an ERP cannot be finalized until Project design elements – including the layout of batteries, inverters, sound walls, and related infrastructure – are complete (Company Reply Brief at 31, citing Exhs. TEWK-PH-1, at 5; D/S-G-9). The Company further contends that the BOH's claim regarding the lack of firefighter training is unfounded, as training would not occur prior to finalization of the HMA and ERP or before construction is complete (Company Reply Brief at 31). The Company further contends that these plans would be appropriately finalized during the commissioning phase prior to commercial operation (Company Reply Brief at 32). Accordingly, the Company maintains that the record demonstrates that the HMA, ERP, and first responder training would be completed in a timely and appropriate manner, and the BOH's contrary assertions disregard the substantial evidence in the record (Company Reply Brief at 32).

Finally, the Company contends that the conditions proposed by the BOH are unduly onerous, overly broad, and beyond the scope of this proceeding, including those pertaining to safety (Company Reply Brief at 33-34).

5. Analysis and Findings

There are multiple safety standards that apply to the Project, including design, building, and fire safety standards. The Company has committed to meeting or exceeding all relevant regulatory, design, and safety requirements for the Project. In addition, the Project design will comply with the relevant structural engineering codes, fire protection codes, and industry standards. The Company has also committed to complying with the 2026 edition of NFPA 855 even though Massachusetts only requires compliance with the 2020 edition. The BOH argues, however, that Project compliance with applicable standards does not, by itself, eliminate risk. The Town responds that mere possibility of an adverse event does not establish a likelihood of occurrence, particularly where multiple layers of mitigation are required. The Company further represented that NFPA 855 is the leading industry standard for BESS safety, developed through a consensus of fire service and industry professionals and informed by current research and operational experience. Compliance with NFPA 855 not only satisfies the Commonwealth's requirements but also reflects adherence to the industry's most rigorous safety requirements. The Board finds that the Company's compliance obligations and required safeguards are key to effectively addressing and mitigating Project risks. The Board directs the Company to comply with applicable industry standards, including the Massachusetts Comprehensive Fire Safety Code, 527 CMR 1.00, as well as the most recent edition of NFPA 855: Standard for the Installation of Stationary Energy Storage Systems, in the design, construction, installation, commissioning, operation, maintenance, and decommissioning of the Project (Condition #63).

The Company proposes installing 134 stand-alone, IP 55-rated Hithium LX5015 modular, non-walk-in enclosures and 40 EPC Power M10 inverters. The record shows that the enclosures would use LFP chemistry, which the Siting Board observes is consistent with recent utility-scale BESS projects, including Department-approved projects. See Trimount at 75; Medway Grid at 72; Cranberry Point at 92. In those orders, the Department and Board

recognized LFP battery composition as less prone to thermal runaway incidents than other lithium-ion chemistries. See Medway Grid at 112; Cranberry Point at 92; Trimount at 75. The record shows that LFP batteries are the energy storage industry standard due to a combination of commercial availability, product performance, and economic competitiveness. See also Trimount at 75; Cranberry Point at 100; Medway Grid at 112.

The record distinguishes the Project's safety design from existing BESS facilities that experienced thermal events. The Company notes prior BESS safety incidents, including the Moss Landing Vistra event in January 2025, that involved indoor configurations or battery room designs in which significant fire loads were concentrated under a single roof, differing categorically from the Project's proposed architecture. The record further shows that battery testing and associated analyses provide an empirical basis for evaluating BESS risks and informing the design of Project-specific mitigation measures.

The record indicates that the Project will incorporate emergency monitoring and notification systems in compliance with NFPA 1225. Specific emergency response procedures and activation matrices will be subject to review and approval by the TFD and other AHJs during the local permitting process. The TFD will establish response protocols consistent with NFPA 1710 guidance for turnout and travel times.

In the event of a battery fire, the record demonstrates that first responders will have advance knowledge of fuel types, quantities, and associated gases, as well as a finalized ERP. The TFD will ensure availability of appropriate firefighting equipment, including, if deemed necessary, an HF monitoring device provided by the Company. The record indicates that responders will employ a conservative, defensive strategy, with qualified personnel managing stranded energy in accordance with industry best practices. With respect to the residence at 123 Clinton Street, the TFD will assess and mitigate risks based on real-time conditions, including air monitoring and weather, in coordination with the ROC and SMEs, consistent with the ERP and standard emergency management practices.

The Company emphasizes that direct extinguishment of a BESS fire with water is not recommended, as it may be ineffective and prolong incidents while increasing safety risks. Nevertheless, the Project will have access to multiple water sources for additional safety. The

record also indicates that the Company will provide first responder training in accordance with the ERP prior to commissioning and annually thereafter. Additionally, the record indicates that the Company will properly manage emergency firewater runoff, if any, in line with applicable plans and requirements.[63] In an emergency incident, including a fire, the Board directs the Company to follow all federal, state, and local emergency response protocols outlining mandatory containment, remediation, testing, notification, and monitoring efforts including, but not limited to, 310 CMR 22.00 and 310 CMR 40.0000. (Condition #82).

The record shows that the Project will include security measures comparable to those at transmission substations and will prevent unauthorized access with a soundwall, chain-link security fence, and controlled access gates. The Company's cybersecurity program will align with recognized standards, including NIST CSF, International Standards Organization 27001, IEC 62443, and NERC-CIP. In the event of a cyber incident, the Company will isolate affected systems, conduct root cause and forensic analyses, implement remediation, and perform post-incident review. Consistent with Section 12(L) of the HCA, the Board directs the Company to comply with all applicable cybersecurity requirements including, but not limited to, North American Electric Reliability Corporation Critical Infrastructure Protection standards and National Institute of Standards and Technology standards. (Condition #78)

The Company shall notify the Director of the Siting Board, and the service list for the proceeding, of any incidents at the Project that (1) consist of a reportable release, and (2) require a response from the TFD. The Company shall provide such notification by email, within 24 hours of the incident (Condition #68).

Altogether, the record demonstrates that the Project's emergency preparedness measures will be subject to multiple layers of technical review, operational coordination, and ongoing training, and grounded in industry standards and local oversight. The Project will incorporate both preventative and responsive measures designed to identify, contain, and manage emergency conditions in coordination with qualified responders and SMEs, together with substation-grade security features and standards-based cybersecurity protections. Accordingly, in conjunction

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63 See Section IV.D.2.e.

with the conditions imposed, the Siting Board finds that the Project's emergency monitoring, notification, training, and response measures satisfy all applicable requirements and provide a robust framework for managing and mitigating emergency scenarios.

DiPalma/Sheehan and the other Intervenors, as well as the LPs, argue that the draft ERP and HMA are incomplete and therefore provide an inadequate basis for the Siting Board's review. The record shows, however, that both documents are intended to be refined as Project design advances and finalized in coordination with the TFD and other AHJs. The Siting Board recognizes that emergency response planning is an iterative process and that ERPs are commonly finalized closer to commissioning, when site-specific details, equipment selections, and response protocols are known. Accordingly, the Siting Board does not find the current draft status of the ERP or HMA to be a basis for rejecting the Project.

With respect to the level of Project design, DiPalma/Sheehan argues that the Company used a preliminary (approximately 30 percent) design to deny the Siting Board and other parties enough information to effectively conduct direct and cross examination. The Company counters that a 30-percent design is consistent with industry practice at this stage of project development and asserts that prior Board approvals of zoning exemptions under Chapter 40A for BESS facilities have been based on comparable design levels. The Company maintains that the submitted materials provide sufficient detail to evaluate the Project and its potential impacts, and that further refinement will occur in accordance with standard development timelines and permitting requirements. The Company also notes that DiPalma/Sheehan cites no authority requiring a more advanced design level at this stage of review. The Siting Board finds that the current level of design is consistent with the Project's stage of development and provides a sufficient basis for the Board's review and decision-making. The Siting Board directs the Company to provide Project updates at the completion of 60 percent and 90 percent Project design stages, and upon receipt of associated approvals, to the Siting Board (See also Condition #35, Section VIII of this Decision).

The Company further indicates that it will require a fire safety permit from the TFD. The record shows that compliance with NFPA 855 will be achieved through adherence to HCA provisions, fire safety permit requirements, and NFPA 855 compliance criteria. The TFD and

other AHJs, with support from a qualified third-party reviewer and, as appropriate, additional expert agencies such as the Massachusetts Department of Fire Services, will be responsible for ensuring that all applicable requirements are satisfied prior to construction and operation.

The Board directs the Company to commence Project construction only after the TFD, in coordination with an independent third-party reviewer retained by the Town, has verified that the Project complies with all applicable fire safety codes, standards, and approved plans, including, but not limited to, the 2026 edition of NFPA 855, the HMA, and ERP (Condition #91).

The Board directs that signage for the Project shall comply with ANSI Z535 and shall include the type of technology associated with the battery energy storage systems, any special hazards associated, the type of fire-suppression system installed at the Project facilities, and 24-hour emergency contact information, including phone number(s) (Condition #39, Section VIII).

Consistent with Section 6(A)(iii) of the HCA, the Board directs the Company to submit to the Tewksbury Fire Department an Emergency Response Plan ("ERP") for the Project prior to the Company's commissioning of the Project and shall incorporate Tewksbury Fire Department comments in such ERP except where incorporation of such comments is unreasonable.

The Siting Board further directs the Company to include in its final Emergency Response Plan, at a minimum, the following:

a. Procedures for safe shutdown, de-energizing, or isolation of equipment and systems under emergency conditions to reduce the risk of fire, electric shock, and personal injuries, and for safe start-up following cessation of emergency conditions;

b. Procedures for inspection and testing of associated alarms, interlocks, and controls;

c. Procedures to be followed in response to notifications from the Battery Management System, when provided, that could signify potentially dangerous conditions, including shutting down equipment, and providing agreed upon notification to Tewksbury Fire Department personnel for potentially hazardous conditions in the event of a system failure;

d. Emergency procedures to be followed in case of fire, explosion, release of liquids or vapors, damage to critical moving parts, or other potentially dangerous conditions;

e. Procedures for addressing BESS equipment damaged in a fire or other emergency event;

f. Other procedures as determined necessary by the Town to ensure the safety of occupants, neighboring properties, residents, and emergency responders;

g. Annual training for local first responders on the contents of the Emergency Response Plan, and protocols and schedules for conducting drills of the emergency procedures;

h. A communications plan that outlines the parties responsible for contacting nearby residents impacted by an emergency event;

i. Evacuation and shelter-in-place protocols for residents near the Project; and

j. The names and phone numbers of local, state, and federal agencies and officials to be contacted in the event of an emergency (Condition #70).

The Siting Board directs the Company to complete the final ERP no later than 60 days before commencement of the Project's operation and provide the final ERP to the Tewksbury Town Manager when it is complete (Condition #69).

Consistent with Section 12(H) of the HCA, the Board directs the Company not to deploy, install, or use any secondhand, reconditioned, or previously used battery systems at the Project. The Board directs the Company to ensure that all batteries and battery systems used at the Project shall be tested and certified by Underwriters Laboratories with a UL 9540 and 9540A certificate of compliance. The Board directs the Company to provide the Town prior to installation a full 9540A test report for each type of battery device located on the property. The Board directs the Company to notify the Tewksbury Fire Chief and the Board in advance if the type of battery or batteries used on Site is to be changed and to provide publicly available 9540A testing results for that battery type that are reasonably acceptable to the Tewksbury Fire Chief. The Board directs the Company or its successors in interest, and the Town, to review this provision twenty years following commercial operation date (Condition #64).

Consistent with Section 12(J) of the HCA, the Board directs the Company to remove any permanently deactivated or no-longer used battery, battery pack, or other battery-related item from the Project Site as soon as safely and reasonably possible after deactivation (Condition #65).

Altogether, in conjunction with the conditions imposed, the Siting Board finds that the pre-construction and operation review processes and compliance checkpoints will provide a

comprehensive regulatory backstop between the Project in its present form and the final Project, ensuring that the HMA, ERP, and final Project design are fully developed and verified for compliance with applicable codes, standards, permitting requirements, and customary development practices and timelines. Further, the Siting Board finds that 30-percent design plans provide sufficient detail at this stage of Project development to evaluate whether approval of a zoning exemption is warranted.

The record contains competing plume modeling analyses. Under a worst-case scenario, the Company's Hazard Dynamics model indicates that average CO concentrations may exceed Immediately Dangerous to Life or Health thresholds up to 29.9 feet from the source, exceed Acute Exposure Guideline Level 3 thresholds (i.e., potential for life-threatening health effects) up to 50.3 feet, and exceed Acute Exposure Guideline Level 2 thresholds (i.e., serious health effects) up to approximately 118 feet. In contrast, DiPalma/Sheehan's ioMosaic model projects more extensive impacts: four-hour CO and HF exposure distances ranging from approximately 570 to 2,800 feet from the source. At the upper bound, DiPalma/Sheehan asserts that 14 single-family residences and a portion of the Emerald Court complex would fall within the modeled plume. DiPalma/Sheehan and the other Intervenors further contend that the proposed sound barrier would not reduce dispersion distances and could increase toxic ground-level concentrations. In support of this position, DiPalma/Sheehan cites a separate model prepared by Coffman Engineers, which they allege yields similar dispersion distances, and argue that these overlapping results reflect a broader "danger zone" for BESS incidents.

The Company challenges the validity of the ioMosaic model, asserting that it relies on single-cell study data that were inappropriately scaled linearly to represent an entire BESS unit. The Company notes that the underlying source material cautions against such scaling, emphasizing that battery hazards do not increase linearly with capacity because not all cells fail simultaneously. On this basis, the Company contends that the ioMosaic analysis is founded on unreliable inputs and thus inconsistent with observed BESS incidents, in which HF has not been detected at unsafe levels beyond facility boundaries. The Company further argues that the ioMosaic model does not reflect conditions specific to the Project Site and therefore does not provide a reliable basis for assessing site-specific risk. The Company also asserts that existing

site conditions – particularly the presence of a truck repair facility with potentially significant fuel loads and hazardous materials – could present a greater life-safety risk than a thermal event associated with the proposed BESS.

More generally, the record includes expert testimony from the Company, the Town, and DiPalma/Sheehan that raises questions regarding the reliability and appropriate use of dispersion modeling. The Company acknowledges that the Hazard Dynamics model is sensitive to underlying assumptions and that alternative assumptions or methodologies could yield significantly different results. Mr. Hayes testified that plume modeling is inherently uncertain due to variables such as incomplete toxin release and changing environmental conditions, limiting its predictive value. Mr. Hayes further testified that plume models should be used sparingly for provision of limited generic data. Similarly, Dr. Melhem testified that dispersion models are subject to considerable variability and can be influenced by modeling choices.

Altogether, the record indicates that plume modeling outcomes can vary considerably depending on modeling assumptions, source terms, environmental conditions, and methodological choices. Accordingly, the Siting Board finds that plume modeling provides limited predictive value and should not be relied upon as a determinative measure of Project impacts.

The record reflects differing views regarding the nature of BESS fire emissions and toxic plume extent. The Company maintains that emissions from BESS fires are comparable to conventional structure fires and present similar atmospheric risks. DiPalma/Sheehan, relying on Dr. Melhem, contends that BESS fires are fundamentally different due to their causal mechanisms and resistance to suppression. While both parties agree that HF may be generated, the Company asserts that HF rapidly dissipates, whereas Dr. Melhem maintains that it can persist and travel with the plume.

DiPalma/Sheehan further argues that the record does not contain studies demonstrating confinement of toxic emissions within facility boundaries. The Company responds that real-world BESS incidents have not produced off-site toxic exposures at actionable levels, with HF not detected at unsafe thresholds beyond facility boundaries even during failure events, and dispersion generally limited to the enclosure. The Company also relies on UL 9540A testing,

which shows limited cell-level gas release that is diluted through NFPA 69-compliant enclosure ventilation and further diluted upon atmospheric release. In addition, the Company cites large-scale testing and incident data indicating HF and CO are typically non-detectable or present only at trace levels at approximately 100 feet from burning enclosures, consistent with the ESRG-recommended 100-foot responder stand-off distance.

In light of real-world precedent and testing data, the Siting Board finds that BESS fire emissions would generate localized and rapidly dissipating impacts that do not pose significant off-site health hazards under potential failure scenarios.

F. Conclusion on Public Convenience and Welfare

Based on the Company's proposed Project design, mitigation measures, and Board-imposed conditions, the Board finds that Project impacts have been minimized and are consistent with the public convenience and welfare. In addition, the Board finds that the Company's safety compliance obligations and required safeguards effectively address identified Project safety risks. The Board directs the Company to comply with applicable industry standards, including the Massachusetts Comprehensive Fire Safety Code, 527 CMR 1.00, as well as the most recent edition of NFPA 855: Standard for the Installation of Stationary Energy Storage Systems, in the design, construction, installation, commissioning, operation, maintenance, and decommissioning of the Project. Based on the review of the safety measures related to the proposed design and use of the LFPs, the cybersecurity provisions to be implemented, the conditions imposed in this Decision and commitments accepted by the Company as part of the HCA, the Board finds that the identified Project safety risks have been thoroughly evaluated and appropriately mitigated.

Based on: (1) the need for or public benefit of the use; (2) alternatives explored; and (3) the impacts of the proposed use, the Board finds the Project is necessary for the purpose alleged; the benefits of the Project to the general public exceed the local impacts; and the Project is reasonably necessary for the convenience or welfare of the public and is consistent with the public interest.

V. OTHER LEGAL ISSUES RAISED BY THE PARTIES

A. Motion for Partial Summary Judgment

On January 13, 2026, DiPalma/Sheehan filed a Motion for Partial Summary Judgment[64] ("Motion for Partial Summary Judgment"). On January 27, 2026, the Company filed an opposition to the Motion ("Company Opposition"). On February 3, 2026, DiPalma/Sheehan filed a reply to the Company's Opposition ("DiPalma/Sheehan Reply"). Also on January 27, 2026, the Tewksbury BOH filed a "Position Statement and Comments" in response to the Motion ("BOH Position Statement").[65]

In the Motion for Partial Summary Judgment, DiPalma/Sheehan asserts the Siting Board does not have the authority to grant the requested waiver of Section 5.6 of the Zoning Bylaw, titled "Groundwater Protection District" ("Section 5.6"). Section 5.6 is the Town of Tewksbury zoning provision that relates to implementation of both federal and state Safe Drinking Water Acts. The Project Site is located in a Zone II public drinking water wellhead protection area ("Zone II"). DiPalma/Sheehan asserts that the Zone II designation is to protect the public drinking water supply for Tewksbury Hospital (Motion for Partial Summary Judgment at 2, 11). On the first day of evidentiary hearings, the Presiding Officer delayed ruling on the Motion for Partial Summary Judgment, stating that the Motion reflected both legal and factual disputes and that the factual matters would be examined during the evidentiary hearings and should be addressed by the parties in their briefs in this proceeding (Tr. 1, at 13). Therefore, the Presiding

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64 While DiPalma/Sheehan titled its motion "Motion for Partial Summary Decision," the Siting Board is treating this motion as a motion for partial summary judgment.

65 The BOH stated "The BOH takes no position on whether the Energy Facilities Siting Board should grant or deny the Petition for exemption from local zoning bylaws under G.L. c. 40A, § 3" (BOH Comments at 1). The BOH asserts that its participation as an intervenor and the submission of these comments are "intended solely to identify the scope of the BOH's independent statutory responsibilities and to highlight public health and drinking-water protection considerations that should be preserved and appropriately addressed through the processes established by law" (BOH Comments at 2). The BOH comments are not directly related to the question of the Siting Board's authority to exempt Section 5.6, and are addressed elsewhere.

Officer deferred a ruling on the Motion, which this Decision now provides below, based on a full record.

1. Positions of the Parties

a. DiPalma/Sheehan[66]

DiPalma/Sheehan asserts that the Board must determine whether the stormwater plan the Company has offered meets the requirements of the statutory, regulatory and local safeguards designed to protect drinking water in Zone II (Motion for Partial Summary Judgment at 5-6).[67] DiPalma/Sheehan argue that the requirements of Section 5.6 must be preserved and its review considered in a later Siting Board proceeding – either a certificate of environmental impact and public interest ("Certificate") or in a consolidated permit filing under 2024 Climate Act provisions on or after July 1, 2026 (Motion for Partial Summary Judgment at 23-24). DiPalma/Sheehan asserts there is a conflict in statutory authority between the Siting Board's authority to waive Section 5.6 and the standards imposed by MassDEP to implement protections to meet the goals of the Safe Drinking Water Act (Motion for Partial Summary Judgment at 6-8). DiPalma/Sheehan maintains that the potential conflict between the waiver of Section 5.6 and the MassDEP protections for Zone II installations should be harmonized and that the Siting Board need not waive the provisions of Section 5.6; instead, DiPalma/Sheehan suggests that the waiver is not imperative to meet the interests of the public, unlike other zoning restrictions related to the proposed Project design (Motion for Partial Summary Judgment at 27). DiPalma/Sheehan asks the Siting Board to grant the Motion to preserve Section 5.6 for consideration of special permit

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66 In its Motion for Partial Summary Judgment, DiPalma/Sheehan makes a number of arguments as to whether the Project complies with Section 5.6 relating to the sufficiency of the stormwater management system. These are evidentiary questions and are addressed above. In this ruling, the Siting Board addresses the legal question of the Board's authority to exempt Section 5.6.

67 The applicability of the MassDEP stormwater quality management standard and the local standards as established in Section 5.6 are discussed in our review of the proposed stormwater management system design at Section IV.D.2.e.

criteria and determine whether the Company has met stormwater requirements (Motion for Partial Summary Judgment at 29).

DiPalma/Sheehan maintains that Section 5.6 implements the federal and state Safe Water Drinking Acts (Motion for Partial Summary Judgment at 9, 12). DiPalma/Sheehan argues that because the MassDEP regulations and safe drinking water program is "part of the Federal Safe Drinking Water Act and regulations," it cannot be exempted by the Siting Board (Motion for Partial Summary Judgment at 13-14). Citing to the exemption from MEPA, DiPalma/Sheehan contends that the 2024 Climate Act did not exempt energy facilities from the statutes and regulations applicable to protecting drinking water (Motion for Partial Summary Judgment at 15-16).[68]

DiPalma/Sheehan notes that Section 5.6 incorporates a standard taken directly from the MassDEP regulation [69] (relative to percentage of impervious surface), language from a model zoning bylaw on the MassDEP website[70], and prescribes a special permit process to ensure careful review of certain activities within a wellhead protection area (Motion for Partial Summary Judgment at 16, 17; DiPalma/Sheehan Reply at 5, citing Company Response at 3). DiPalma/Sheehan argues that the Town incorporated the "model" language "almost exactly" into Section 5.6, and that Section 5.6 implements a state program (Motion for Partial Summary Judgment at 18). DiPalma/Sheehan argues that the state program implements the federal program and therefore cannot be exempted by the Siting Board (Motion for Partial Summary Judgment at 18). DiPalma/Sheehan argues that there is no clear legislative intent indicating that

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68 The Siting Board notes that its authority to exempt zoning provisions comes from G.L. c. 40A, not the 2024 Climate Act, which moved that authority from the Department to the Siting Board.

69 310 CMR 10.05(o) provides that project proponents evaluate possible stormwater management measures including environmentally sensitive site design and low impact development techniques that minimize land disturbance and impervious surfaces.

70 https://www.mass.gov/regulations/310-CMR-1000-wetlands-protection-act-regulations. The document is entitled "Sample Impervious Zoning Bylaw."

G.L. c. 40A, § 3 preempts the Massachusetts Safe Water Drinking Act (DiPalma/Sheehan Reply at 7).

Next, DiPalma/Sheehan asserts that MassDEP published a recent guidance regarding BESS which confirmed that any proposal to install a BESS facility must meet all requirements of the Wetlands Protection Act, G.L. c. 131, § 40, the wetlands regulations at 310 CMR 10.00, and the Stormwater Management Standards provided in 314 CMR 10.05 (Motion for Partial Summary Judgment at 22). Again, DiPalma/Sheehan argues that the stormwater system does not comply with this MassDEP guidance, which is addressed above in the Siting Board's discussion of the stormwater management system (Motion for Partial Summary Judgment at 22-23).

DiPalma/Sheehan contends that the Company cannot use Section 118 to file for a Certificate because it cannot meet the statutory grounds for a Certificate, and will not have time to meet those requirements (DiPalma/Sheehan Reply at 11-12). In addition, DiPalma/Sheehan contests certain provisions of Section 118 itself, contending that the part of Section 118 which prohibits other agencies from taking action to delay or prevent construction or operation of a facility that has received a Certificate from the Siting Board as "impractical and illegal" (DiPalma/Sheehan Reply at 13). In addition, DiPalma/Sheehan argues that Section 118 is temporary in nature and lacks standards, processes, and regulations compared with G.L. c. 164, § 69T (DiPalma/Sheehan Reply at 15). DiPalma/Sheehan asserts that "all property owners in areas of proposed new energy facility projects should have the same protection" as "guided by actual promulgated regulations" (DiPalma/Sheehan Reply at 15).

Finally, DiPalma/Sheehan argues the provisions of Chapter 40A restrict the Siting Board's authority to grant an exemption from local zoning provisions to instances where it is "reasonably necessary for the convenience or welfare of the public" (Motion for Partial Summary Judgment, at 31-39). DiPalma/Sheehan asserts that if the Siting Board grants the requested exemption of Section 5.6, MassDEP's approach to protect public drinking water supplies would be impeded by the Board (Motion for Partial Summary Judgment at 29-31). Therefore, DiPalma/Sheehan concludes that the Siting Board cannot and should not grant the requested zoning exemptions relating to Section 5.6 since doing so would be inconsistent with

the public convenience and necessity standard set forth in Section 3 (Motion for Partial Summary Judgment at 29-31).[71]

b. Company Response

Hillman rejects DiPalma/Sheehan's challenge to the Siting Board's authority to grant an exemption from the provisions of Section 5.6 (Company Opposition at 1). The Company argues that G.L. c. 40A, § 3 expressly authorizes the Siting Board to exempt energy storage projects from any local zoning requirement when necessary for the public convenience and welfare (Company Opposition at 1). Hillman asserts that the Motion's attempt to carve out Section 5.6 from the Siting Board's broad authority would undermine the very purpose of Chapter 40A and is unsupported by any legal precedent (Company Opposition at 2).

Hillman also argues that DiPalma/Sheehan's reliance on the MassDEP regulations and federal law is misplaced because neither conflicts with nor overrides the broad statutory authority to grant zoning exemptions given to the Siting Board in Chapter 40A (Company Opposition at 1). The Company claims that DiPalma/Sheehan must demonstrate that a specific provision of federal law directly precludes the exemption of particular local zoning bylaws, and that there is no conflict with federal law here (Company Opposition at 1-2, 7). The Company asserts that in any case, the Motion for Partial Summary Judgment should be rejected since Hillman intends to comply with all applicable MassDEP water quality standards and will provide "substantial improvements in terms of protecting water quality compared to the preexisting condition of the property" (Company Opposition at 2). Hillman also argues that, consistent with the Massachusetts Rules of Civil Procedure, summary judgment is appropriate only if the materials in the record "show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law" (Company Opposition to Motion at 2-3, 11-13, citing Mass. R. Civ. P. 56).

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[71] DiPalma/Sheehan makes other arguments related to Consolidated Permits and the 2024 Climate Act (Motion for Partial Summary Judgment at 25-27). As this is a zoning exemption proceeding, and not a proceeding for a Consolidated Permit, the Siting Board does not see the need to address those arguments.

2. Analysis and Findings

a. Inapplicability of Summary Judgment

On the first day of evidentiary hearings, the Presiding Officer delayed ruling on the Motion for Partial Summary Judgment, stating that the filings related to the Motion for Partial Summary Judgment contained a mix of legal and factual disputes and that the factual matters would be examined during the evidentiary hearings and presented by the parties in their briefs in this proceeding (Tr. 1, at 13). At the time of filing and through the course of this proceeding, the facts relating to the Project's stormwater management design continued to be in dispute and therefore do not provide a compelling basis for granting summary judgment. In addition, whether the Project meets the legal standard for a zoning exemption is the subject of significant discussion in this Decision. Furthermore, the legal arguments related to the scope of the Siting Board's authority, including its authority to grant the zoning exemptions requested by Hillman, also are disputed in the comments and legal briefs filed by the parties. Therefore, the Motion for Partial Summary Judgment filed by DiPalma/Sheehan is denied.

b. Siting Board Authority to Waive Zoning Bylaw Provisions

Regarding whether G.L. c. 40A, § 3 may exempt a state law, the Massachusetts Safe Drinking Water Act, the Siting Board is not exempting a state law under G.L. c. 40A, but a local zoning bylaw, which it has explicit authority to do so. The Siting Board is asked to exempt a local zoning bylaw; the applicable state (and federal) laws that apply to this Project still apply. This is not a Certificate proceeding or Consolidated Permit proceeding (the Siting Board is not yet accepting applications under this new program), where the Siting Board asked to issue state and local permits.

As to the potential for a conflict of state statutory schemes between M.G.L. c. 40, § 3, and the drinking water protection laws, the Siting Board will grant the requested exemption of Section 5.6 to facilitate the development of BESS resources consistent with the intent of G.L. c. 40, § 3, but the Board will also require a condition for this Project that the Company comply with the requirements of the MassDEP Stormwater Standards in its regulations at 310 CMR 10.00, and to be consistent with the MassDEP Stormwater Handbook for artificial recharge in Zone II

areas. In that manner, the conditions for this Project are designed to protect the Zone II recharge area in a manner that will satisfy the goals embodied in the MassDEP's drinking water regulations at 310 CMR 22.21(2)(b)7, and the statutes on which it is based. This requirement should provide the harmonization of state environmental protection requirements and the public interest that DiPalma/Sheehan has raised as a concern. The issue of the Company's proposed stormwater design for the Project is addressed in detail in Section IV.2. [72]

The Siting Board notes that the Company has stated that its proposed Project design, including the stormwater management system, would be presented to the Planning Board and the Conservation Commission for review and approval, and in fact the Company has filed its Notice of Intent with the Tewksbury Conservation Commission (Exh. EFSB-G-10). The Company will be required to comply with local and state stormwater requirements, which are not exempted, including the MassDEP Stormwater Standards in 310 CMR 10.00, and to be consistent with the most recent version of the Massachusetts Department of Environmental Protection's Stormwater Management Handbook" (RR-EFSB-21, at 48). Therefore, the Siting Board's condition that the stormwater management system satisfy the MassDEP stormwater management regulations and associated guidance meets the intent of the protections incorporated in the local zoning bylaw despite the exemption of the zoning bylaw provisions provided in this Decision.

c. Section 118

DiPalma/Sheehan argue that if the Board exempts Section 5.6, that the Board in a future Certificate proceeding will not be able to carry out the Tewksbury Planning Board's role in reviewing a Special Permit for the stormwater system (Motion at 5-6). Section 118 of the 2024 Climate Act provides a mechanism for BESS developers to request a Certificate from the Siting

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[72] The Siting Board notes that at Section 5.6 C 3.d, the Zoning Bylaw provides "Any infiltration basins or trenches shall be constructed with a minimum separation of 3 feet between the bottom of the structure and maximum groundwater elevation. The Planning Board may allow for a reduction of this separation based upon the submittal of sufficient information so long as it would not exceed the requirements of the Department of Environmental Protection's Stormwater Management Policy in effect at the time of the application" (RR-EFSB-2(1), at 49). Therefore, the Zoning Bylaw provides flexibility related to the stormwater management design if it conforms to MassDEP requirements.

Board if the developer receives a comprehensive zoning exemption from the Siting Board within a defined window of time, prior to the implementation of the Consolidated Permit provisions of the 2024 Climate Act, which go into effect July 1, 2026.[73] The Company has not yet filed for a Certificate, and therefore the question of the Board's role in a Certificate proceeding is not yet before the Board. In addition, Section 118 is modeled after the Siting Board's existing Certificate statute, G.L. c. 164, §§ 69K1/2-69O1/2, and its implementing regulations at 980 CMR 6.00. The Siting Board has adjudicated numerous Certificate petitions and has amassed a body of precedent on certificate proceedings which will inform its review of any future Certificate filings.

B. BOH Authority

On January 27, 2026, the BOH filed a Position Statement and Comments in response to the Motion for Partial Summary Judgment decision ("BOH Position Statement"). The BOH provides a discussion of its statutory authority under G.L. c. 111 related to protection of public health (BOH Position Statement at 4-9). The BOH asserts that the Siting Board addresses the request for zoning relief under G.L. c. 40A, § 3, while the BOH's responsibilities under G.L. c. 111, §§ 122 and 143 operate under their own statutory standards and procedures (BOH Position Statement at 4-9). The BOH asserts that it has independent authority under two provisions of G.L. c. 111: Section 112, which authorizes the BOH to determine whether a "nuisance, source of filth, or cause of sickness" exists and to "order such conditions removed or abated"; and Section 143, which authorizes the BOH, following notice and public hearing, to "regulate the location of trades or employments that may be a nuisance or harmful to inhabitants or dangerous to public health" and to prohibit such activities at locations not assigned by the BOH (BOH Position Statement at 4).

The BOH stated that it does not oppose the Company's zoning exemption petition, and that it remained neutral on the merits of the Motion for Partial Summary Judgment (BOH

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[73] Whether the Company chooses to pursue local permits with the local permitting agencies or chooses to avail itself of the Certificate process with the Siting Board is not a question currently before the Board.

Position Statement at 1, 5). According to the BOH, any future exercise of BOH authority would be based on evidence, statutory criteria, and applicable procedural safeguards, including notice and public hearing where required by law (BOH Position Statement at 5). In its Brief, BOH took a different position, and asserted that the Project is "incompatible with Board-of-Health public health protection duties" (BOH Brief at 3). The BOH stated that the "BOH will be obligated to consider exercising its site assignment authority" (BOH Brief at 15).

On brief, the Town raised concerns regarding the BOH's requests to the Siting Board related to the BOH's statutory authority pursuant to G.L. c. 111. The Siting Board notes the Town posits that a reviewing court would determine that the comprehensive scheme of regulation of energy facilities by the Siting Board would likely be deemed to pre-empt the oversight by the local BOH to act with respect to a public service corporation utility-type project committed to Siting Board review (Town Reply Brief at 5-6). In support, the Town relies upon Boston Gas v. City of Newton, 425 Mass. 697, 698 (1997) ("To determine whether a local ordinance is inconsistent with a statute, this court has looked to see whether there was either an express legislative intent to forbid local activity on the same subject or whether the local regulation would somehow frustrate the purpose of the statute so as to warrant an inference that the Legislature intended to preempt the subject.") (Town Reply Brief at 5-6). The Company also maintains that the BOH claims that it has jurisdiction over the siting of the Project despite the Siting Board's decision is not based in law or fact and is not within the scope of the zoning exemption proceeding (Company Reply Brief at 28).

While on brief the BOH has taken a position against the Project, and intimated that it would take action consistent with that position, any future action of the BOH would be outside this proceeding. Furthermore, the BOH oversight authority is not an issue pending before the Siting Board in this proceeding in its review of the zoning exemptions requested by Hillman. Moreover, until the BOH determines to initiate some action related to the Project, there is no factual basis in this record to address the potential impact of that future action relative to the Project. Therefore, any determination at this time would be speculative and unsupported by facts presented in this evidentiary record. While there may be the possibility of a conflict between the Siting Board's authority under G.L. c. 40A, and the BOH's asserted authority, the courts are the

ultimate arbiter of an agency's statutory authority, and we will not presume to usurp that role. Therefore, we do not address issues related to the scope of the BOH statutory authority in this Decision.

VI. ZONING EXEMPTIONS REQUIRED

A. Standard of Review

Hillman requests individual zoning exemptions and a comprehensive zoning exemption from the Zoning Bylaw for the Project (Exh. HEC-1, at 1). In determining whether exemption from a particular provision of a zoning ordinance is "required" for purposes of G.L. c. 40A, § 3, the Siting Board makes a determination whether the exemption is necessary to allow construction or operation of the petitioner's project. Beverly-Salem at 116; Sudbury-Hudson at 196; Vineyard Wind at 139. It is a petitioner's burden to identify the zoning provisions applicable to the project and then to establish on the record that exemption from those provisions is required:

> The Company is both in a better position to identify its needs, and has the responsibility to fully plead its own case . . . The [Siting Board] fully expects that, henceforth, all public service corporations seeking exemptions under [G.L.] c. 40A, § 3 will identify fully and in a timely manner all exemptions that are necessary for the corporation to proceed with its proposed activities, so that the [Siting Board] is provided ample opportunity to investigate the need for the required exemptions.

Park City Wind at 178; Mid Cape Reliability Project at 102-103; Vineyard Wind at 139.[74]

Regarding comprehensive zoning exemptions, the Siting Board grants such requests "on a case-by-case basis where the applicant demonstrates that issuance of a comprehensive exemption could avoid substantial public harm by serving to prevent a delay in the construction and operation of the proposed use." Park City Wind at 208; Beverly-Salem at 126-127; Vineyard Wind at 109-110. In order to make a determination regarding substantial public harm, the Siting Board have articulated relevant factors, including, but not limited to, whether: (1) the proposed project contributes to a reliable energy supply for the Commonwealth; (2) the project is

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[74] The Siting Board notes that the Supreme Judicial Court has ruled that the Siting Board is not required to identify each individual zoning exemption required. Planning Bd. of Braintree v. Dep't of Pub. Utilities, 420 Mass. 22, 29 (1995).

time-sensitive; (3) the project involves multiple municipalities that could have conflicting zoning provisions that might hinder the uniform development of a large project spanning these communities; (4) the proponent of the project has actively engaged the communities and responsible officials to discuss the applicability of local zoning provisions to the project and any local concerns; and (5) the affected communities do not oppose the issuance of the comprehensive exemption. Park City Wind at 208; Mid Cape Reliability Project at 109-110; Vineyard Wind at 153.

The Siting Board continues to favor the resolution of local issues on a local level whenever possible to reduce concern regarding any intrusion on home rule. Park City Wind at 169-170; Sudbury-Hudson at 193; Vineyard Wind at 132. The Siting Board believes that the most effective approach for doing so is for applicants to consult with local officials regarding their projects before seeking zoning exemptions pursuant to G.L. c. 40A, § 3. Park City Wind at 170; Sudbury-Hudson at 193; Vineyard Wind at 132.

B. Consultation with Municipal Officials [75]

In his prefiled testimony, the Town Manager described the process of discussions and meetings between Town officials and Hillman that led to the development of the HCA (Exh. TEWK-JCC-1, at 2-6). The Town provided a copy of the draft HCA as an attachment to his testimony (Exh. TEWK-JCC-2). The Town provided a copy of the final HCA on May 21, 2026 as an updated response to RR-EFSB-16. RR-EFSB-16(S1). The Town requested that several specific provisions of the HCA be incorporated as part of the Final Decision and also requested incorporation of all of the conditions set out in the Appendix A to the HCA[76] (Exh. TEWK-JCC at 46-49; Town Brief at 6-8)[77]. The Town Manager stated that the HCA addressed a multitude of

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75 The Siting Board discusses outreach to the community in Section IV.D.1, above.

76 The final HCA was not addressed in the briefs of the parties because it was filed after briefing was complete.

77 Appendix A provision of the HCA addresses fire safety requirements and concerns identified by the Town's fire safety expert which were incorporated as specific obligations to be met by Hillman. See RR-EFSB-16(S1) at 30.

issues including legal protections of the Town by the Company, financial and insurance considerations, and health, safety and environmental protections (Exh. TEWK-JCC-1, at 7-9). However, the Town Manager did not take an explicit position regarding the comprehensive zoning exemption request (Exh. TEWK-JCC-1, at 8).

The Town asserted that the HCA sets out extensive construction, operation and post-closure conditions negotiated between the Town and Hillman that the Town believes help to assure that the Project, if approved, would minimize environmental impacts and be constructed and operated in a manner consistent with the public interest (Town Brief at 6). The Town concluded that the Siting Board should grant the Company's petition (Town Brief at 13).

For its part, the Company characterizes the HCA as a two-year effort which produced an agreement which ensured the Town's needs and interest were addressed (Company Brief at 43).

In the fully executed HCA (RR-EFSB-16(S1)), the Company has made commitments to the Town including:[78]

> Public Safety Training & Technical Rescue Equipment Funds
> For annual public safety & emergency management training for responding to, and community preparedness for, BESS and electrical systems incidents and for payment to be used for the procurement of such technical rescue tools, equipment and supplies for the Tewksbury Fire Department to provide Tewksbury responders with technical rescue tools, equipment, and supplies necessary to handle a large-scale incident
>
> Technical Review Payment
> For payments to reimbursement for actual costs incurred by the Town to retain independent consultants and counsel necessary to review and participate in the EFSB Proceeding, through and including finalization of the terms of this Agreement, briefing the case, review of and comments on the EFSB's Tentative Decision, attendance at the EFSB's final determination of the issues in the EFSB Proceeding, any third party appeals of the EFSB Proceeding, any further proceedings at the EFSB (e.g., a Petition for a Certificate of Environmental Impact and Public Need pursuant to G.L. c. 164, s. 69O) and any third party appeal thereof and any proceeding(s) regarding any PILOT or tax agreement relating to the Project.

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78 The Siting Board provides this summary of HCA provisions for information. The Siting Board incorporates into this Decision specific provisions as conditions where explicitly identified above.

Town Energy & Sustainability Programming Funding
To support Town energy and sustainability efforts including:

- Contribution to the Town's Municipal Electric and Hybrid Vehicles Conversion Program
- Contribution to the Town's fund dedicated to the purpose of providing for decarbonization of municipal facilities within the Town

Energy Capacity Study
For the reimbursement by Hillman to the Town for fifty percent (50%) of the costs incurred by the Town to retain independent consultants to perform this study to be conducted by National Grid for purposes of determining pathway to oversize the existing electric power system with expanded infrastructure to accommodate additional future uses in the Hillman Street area.

Property Value Security Fund
To establish a fund sufficient to pay the owners of residential properties containing located within six hundred and fifty feet of the Project's perimeter, for the amount of any material reduction in the value of their home that such a homeowner can reasonably demonstrate was directly attributable to the construction of the Project, such amount not to exceed twenty-five thousand dollars per property with an initial fund deposit of fifty thousand dollars ($50,000) with a total cap of $675,000 cap on total funding.

Community Support Funding
For activities to support the community including:

- One-time payment to the Town to be deposited in a dedicated fund to be used for capital expenditures on youth sports facilities;
- One-time payment to the Tewksbury Community Pantry to provide food assistance to residents of Tewksbury facing financial challenges;
- One-time payment to the Town for youth and adult recreation programs in the Town under the Parks and Recreation Department;
- One-time payment to support senior programming under the Council on Aging.

Water Quality Improvement Funding
For the purposes of enhancing the Town's drinking water and stormwater systems, the Company will make annual contributions to the Town's Stormwater Enhancement Program designed to promote programs and infrastructure enhancements that will assist in the compliance of targeted removal thresholds of stormwater contaminants;

Water Collection – Fire Suppression
For protection of groundwater supplies, the Company has committed that runoff resulting from water used in fire suppression activities will be directed into the stormwater management system for the Project site. The stormwater management

design will meet the Massachusetts Stormwater Policy recommendations, and the Project will fully comply with MassDEP Stormwater Standards. Water collected in the stormwater management detention basin, catch basins, vortex units (or similar) and/or other collection facilities will be monitored during firefighting activities.

RR-EFSB-16(S).

Other Provisions

- decommissioning and removal of the Project following the end of its useful life at the Company's sole expense, and to provide the Town with a bond or other agreeable funding mechanism to decommission and remove the Project;
- the use of commercially reasonable efforts to purchase goods and services necessary for the construction of the Project from local vendors and to use local labor;
- the use of insurance policies for injuries and damage related to the Project and a guaranty from Equinor for Hillman's obligation to make the payments required under the HCA capped at amounts that vary over the twenty-year term assumed for the Project beginning with [$4,125,000 for the first five years of operation];
- funding to decommission and remove the Project will be provided by bond sufficient to ensure the proper removal of the installation with a mechanism for calculating increased removal costs due to inflation or increased market rate cost of the equipment and services necessary to achieve the removal and site restoration but in no case less than three million dollars ($3,000,000) or more than six million dollars ($6,000,000).

RR-EFSB-16(S1).

Additionally, the Company will provide the Town with approximately $2,000,000 in annual payments in lieu of taxes (RR-EFSB-16(S1). Similarly, the HCA highlights all the safety regulations that the Company has agreed to comply with consistent with the recommendations of the Town's fire safety expert and addressed in detail in Appendix A to the HCA (RR-EFSB-16(S1))[79].

[79] The HCA provides in the requirements identified in Appendix A take precedence in the event of potential conflict with NFPA 855 or other documents (RR-EFSB-16(S1) at 33).

Regarding the Siting Board's treatment of the HCA, as noted in Medway Grid, the Department and the Siting Board include commitments made by the Company in our review and deliberations of proposed facilities. Medway Grid at 16. However, the Siting Board has stated that while an HCA is part of the record in a proceeding, and the basis of some of the conditions imposed, the HCA is a private agreement and it is not appropriate to incorporate the HCA into a decision. Medway Grid at 16; See Exelon West Medway at 6; see also Hopkinton LNG Corporation, D.P.U. 17-114, at 6 (2018) ("Hopkinton LNG"). Therefore, we decline the Town's request to incorporate the entire HCA into this Decision. We do incorporate conditions which include certain provisions of the HCA and obligations to which the Company has made to the Town in the HCA in this Decision.

The record indicates that the outreach began before the filing of the Hillman's petition with the Siting Board, consistent with the Siting Board's preference for petitioners to initiate consultation with local officials before requesting a zoning exemption pursuant to G.L. c. 40A, § 3, demonstrating a good faith effort in consulting with municipal officials.

C. Company Zoning Exemption Requests

The Company requested individual zoning exemptions as listed in Table 5 below, along with the reasons exemptions are required. [80] Hillman states that according to the Town of Tewksbury Massachusetts Zoning Map (the "Zoning Map"), the Project Site is in the I2 zoning district, and the Transmission Interconnection runs through the I1 and Park zoning districts (Exh. HEC-1 at 33). The Company asserts that in reviewing the Table of Uses (i.e., Section 5.4.3 and Appendix A of the Zoning Bylaw), BESS facilities such as the proposed Project are permitted in the I2 zoning district only with a Planning Board special permit (Exh. HEC-1 at 33-34). [81] The

[80] The Zoning Ordinance was updated after the initial Zoning Petition was filed on April 1, 2025; however, updates to zoning were contemplated in the Zoning Petition and the Company's current requests reflect the updated Zoning Ordinance (RR-EFSB-2(1)).

[81] The Town of Tewksbury amended its Zoning Bylaw after the Company had filed its Petition on April 1, 2025. At the time of the Company's initial Petition on April 1, 2025,

Company states that the Table of Uses also does not permit the Transmission Interconnection as a use in the I1 or Park zoning districts, and use variances are not permitted under the Zoning Bylaw (Exh. HEC-1 at 34). Hillman states that exemption from these provisions is required (Company Brief at 46). The Company also requests exemptions from other provisions of the Tewksbury Zoning Bylaw, as identified in Table 5.

Hillman requests exemptions, arguing that variances and special permits would cause undue delay associated with scheduling a public hearing locally and potential appeals to Land Court or Superior Court (Exh. HEC-1, at 37). Hillman states that resolution of a special permit appeal could take up to four years (Ex. HEC-1, at 34, n.6). Hillman asserts that a battery project subject to a special permit appeal process cannot secure construction finance until such appeal is finally resolved (Exh. HEC-1, at 37).

Table 5 identifies the requested individual exemptions, the type of zoning relief available for the specific provisions, and the Company's explanation of why zoning exemptions are required:

Table 5. Company requested individual exemptions and the type of zoning relief available

Zoning Section(s)	Available Zoning Relief	Company Rationale for Exemption
§5.1 - General Provision – BESS use Not Permitted	No relief available	Section 5.1 of the Zoning Bylaw provides that no building or structure shall be erected and no building or structure shall be used for any purpose except in accordance with the Zoning Bylaw. The Company's proposed use of the Project Site—an energy storage system—is not permitted in the I2 zoning district. The Table of Uses also does not permit transmission interconnection as a use in the I1 or Park zoning districts. Exh. HEC-1, at 33-34.
§5.4.2 – Prohibited Uses - BESS facilities are permitted in the I2 zoning district only with	. Special Permit	Proposed use not allowed in I2 zoning district without a special permit. Exh. HEC-1, at 33-34; RR-EFSB-2(1); Special Permit required which could be subject to appeal delay and

the Table of Uses did not list energy storage systems as a permitted use in any zoning district.

Zoning Section(s)	Available Zoning Relief	Company Rationale for Exemption
a Planning Board special permit		related financing delay. Exh. HEC-1, at 34, n.6.
§5.4.3 and Appendix A (Use Table) - Transmission Interconnection prohibited in I1 and Park zoning district	No variance or special permit relief option	The Company asserts that in reviewing the Table of Uses (i.e., Section 5.4.3 and Appendix A of the Zoning Bylaw), BESS facilities such as the proposed Project are permitted in the I2 zoning district only with a Planning Board special permit (Exh. HEC-1, at 33-34). The Company states that the Table of Uses also does not permit transmission interconnection as a use in the I1 or Park zoning districts, and use variances are not permitted under the Zoning Bylaw (Exh. HEC-1, at 34). Hillman states that exemption from these provisions is required (Company Brief at 46).
§§5.3.1 A – Lots	Special Permit	Section 5.3.1.A of the Zoning Bylaw prohibits the construction of more than one principal structure on one lot (Exh. HEC-1, at 35-36).
5.3.4 B- Supplemental regulations for Industrial Districts – Only one principal structure permitted on each lot	Special Permit	In industrial districts, special permits may be granted by the planning board under Section 5.3.4.B.1 to permit more than one principal structure, which may be conditioned (Exh. HEC-1, at 36). The Company asserts that the Project and the individual BESS units and the Project Substation could be considered structures and thus require a special permit under this provision (Exh. HEC-1, at 36).
§§5.3.1 E 1, 3, and 5 Accessory Structures - Dimensional regulations for accessory structures	Variance	Accessory structures are those that are "located on the same lot with the main building, detached or attached, and customarily incidental and subordinate to the use of the main building" (Exh. HEC-1, at 36). The Company asserts that several Project components, including, but not limited to, the Project Substation, Proposed Transmission Infrastructure, the 65-foot lightning mast, and thirty-foot sound wall, may be considered incidental or subordinate to the BESS units

Zoning Section(s)	Available Zoning Relief	Company Rationale for Exemption
		and therefore accessory structures (the "Subordinate Structures") (Company Brief at 48). If found to be accessory structures, such structures must meet the dimensional requirements of Section 5.3.1.E of the Zoning Bylaw (Exh. HEC-1, at 36, RR-EFSB-2(1)). Section 5.3.1.E limits accessory structures to 20 feet in height (Zoning Bylaw, § 5.3.1.E.1, RR-EFSB-2(1)) and requires each accessory structure to be located behind the front building line of the principal building (Zoning Bylaw, § 5.3.1.E.3; RR-EFSB-2(1)). Hillman states the Subordinate Structures will exceed the 20-foot height limit and cannot be placed directly behind a principal building due to the multi-structure design of the Project (Exh. HEC-1, at 36). Accordingly, the Company requests exemptions from these provisions of the Zoning Bylaw (Exh. HEC-1, at 37). Section 5.3.1.E.5 of the Zoning Bylaw exempts fences under 7 feet from the general setback requirements, which means that fences over 7 feet must meet the setback requirements imposed by Section 5.3.4.A. The Project will require security fences (10 feet) and sound walls that exceed the 7-foot height limitation under Section 5.3.1.E.5 of the Zoning Bylaw (Exh. HEC-1, at 37).
§5.3.4.1.A Industrial Districts – Lots - Dimensional regulations – setbacks, height and frontage	Special permits for height only up to 60'	Structures in the I2 district must have a minimum and maximum front setback of 50 feet, a minimum rear and side yard setback of 25 feet, and a maximum height of 40 feet (Exh. HEC-1, at 36). Nine battery containers will be located within the 50-foot front yard setback. A 28-foot sound wall will be located within both the 50-and 25-foot front and side yard setbacks (Exh. HEC-1, at 35-36). Section 5.3.4.A requires that lots in the I1 district, in addition to having front setbacks of 50 feet and side and rear setbacks of 25 feet and a maximum height of 40 feet (or 60 feet by

Zoning Section(s)	Available Zoning Relief	Company Rationale for Exemption
		special permit), have at least 150 feet of frontage (Exh. HEC-1, at 36). The lightning mast on the BESS/Substation Site is 65 feet tall and will exceed the Zoning Bylaw's height limitation (Exh. HEC-1, at 36; RR-EFSB-4(1)). The Transmission Interconnection, which will cross multiple property lines, will be located on lots within the I1 and Park zoning districts which do not have any frontage (Exh. HEC-1, at 35). Section 5.3.4.A requires that lots in the I1 district, in addition to having front setbacks of 50 feet and side and rear setbacks of 25 feet and a maximum height of 40 feet (or 60 feet by special permit), have at least 150 feet of frontage (Exh. HEC-1, at 35). Section 5.3.5 requires that lots have 50-foot front setbacks, 15-foot rear and side setbacks, a maximum height of 35 feet, and 150 feet of frontage (Exh. HEC-1, at 35). Several lots over which Transmission Interconnection will cross (assessor parcels 35-5, 49-34, and 11-1) appear to have insufficient frontage (Exh. HEC-1, at 35). The structures comprising the Transmission Interconnection, which must span the railroad tracks, will exceed the height limits in both the I1 and Park zoning districts by exceeding 40 feet in height (Exh. HEC-1, at 35). Finally, as the structures will necessarily cross property lines, they will occupy the front, side, and rear setbacks; therefore, to construct the Project, an exemption from the operation of the prohibition is required (Exh. HEC-1, at 35).
§5.3.5 and 5.3.4 A Other Use Districts Dimensional regulations – setbacks and height	Variance	Section 5.3.5 requires that Park zone district lots have 50-foot front setbacks, 15-foot rear and side setbacks, a maximum height of 35 feet, and 150 feet of frontage (Exh. HEC-1, at 35). The Transmission Interconnection

Zoning Section(s)	Available Zoning Relief	Company Rationale for Exemption
		would cross Parcels 35-5, 49-34, and 11-1 that all have insufficient frontage (Exh. HEC-1, at 35). The structures comprising the Transmission Interconnection, which must span the railroad tracks, will exceed the height limits in both the I1 and Park zoning districts by exceeding 40 feet in height (Exh. HEC-1, at 35. Finally, as the structures will cross property lines, they will necessarily occupy the front, side, and rear setbacks (Exh. HEC-1, at 35). Therefore, to construct the Project, Hillman requests an exemption from the operation of the prohibitions in Sections 5.3.4.A and 5.3.5 (Exh. HEC-1, at 35).
§5.4.5 - Accessory Uses and Structures	No use variance	Section 5.4.5.D of the Zoning Bylaw prohibits as accessory structures any "truck box, Conex box, or steel storage unit." Because the Project will utilize containerized Hithium units to house the battery components, Hillman has requested an exemption from this provision (Exh. HEC-1, at 34).
§5.6[82] Groundwater Protection District	No variance option Special Permit for storage and handling of toxic materials and storm water management systems	The Project Site is located in the Groundwater Protection District (Exh. HEC-1,at 34). Section 5.6 of the Zoning Bylaw imposes use restrictions and special permit requirements for uses within the Groundwater Protection overlay district (Exhs. HEC-1, at 34; EFSB-G-14(1)). Hillman also requests an exemption from the provisions of Section 5.6.3.C.3 which requires a special permit for any "system of storm water management and artificial recharge of precipitation" (Exh. HEC-1, at 34).

[82] In the Motion for Partial Summary Judgment, DiPalma/Sheehan argued that the Siting Board lacks authority to exempt the Project from Section 5.6 of the Zoning Bylaw. This argument is addressed and rejected in Section V.

Zoning Section(s)	Available Zoning Relief	Company Rationale for Exemption
		The Transmission Interconnection will also run through the Groundwater Protection district (Exh. HEC-1, at 34-35). Therefore, Hillman has requested an exemption from the provisions of Section 5.6 (Company Brief at 46).

Source: Exh. HEC-1, at 37-38.

In addition to its requests for individual exemptions, the Company has requested a comprehensive zoning exemption (Exh. HEC-1, at 43). Hillman asserts that the issuance of a blanket exemption could avoid substantial public harm by serving to prevent delay in the construction and operation of the Project (Exh. HEC-1, at 43). The Company states that without comprehensive zoning relief, there is currently no pathway for the Project to be reviewed and approved in order to enable its construction and completion (Exh. HEC-1, at 44).

D. Positions of the Parties

1. Company

a. Individual Exemptions

In its initial Petition, the Company requested exemptions related to the Project including both the Substation site and the Transmission Interconnection infrastructure (Exh. HEC-1, at 35-41). The proposed site for the BESS facility is in the I2 zoning district (Exh. HEC-1, at 33). The proposed interconnection facilities would be located in the I1 zoning district and the Park zoning district (Exh. HEC-1, at 33). The Town of Tewksbury amended its Zoning Bylaw after the Company had filed its Petition on April 1, 2025 (Tr. 1, at 49; RR-EFSB-2(1)). At the time of the Company's initial Petition on April 1, 2025, the Table of Uses did not list energy storage systems as a permitted use in any zoning district (Tr. 1, at 49; Exh. HEC-1, at 33; Exh. HEC-1; Attachment F). Hillman provided an updated copy of the May 2025 Tewksbury Zoning Bylaw reflecting amendments through November 17, 2025 (RR-EFSB-2(1)).

Hillman argues that consistent with the Siting Board precedent, the Siting Board balances the interests of the general public against the local interest and determines whether the present or proposed use of the land or structures is reasonably necessary for the convenience or welfare of

the public, relying on the Siting Board's decision in Cranberry Point at 40 (Company Brief at 49). Hillman asserts that variances and special permits are highly discretionary forms of zoning relief which can be easily challenged by appeal (Company Brief at 45). The Company argues that it is difficult/impossible to demonstrate the existence of unique conditions for grant of a variance and even if granted they are susceptible to appeal (Company Brief at 45-46). Hillman argues that an appeal of a variance or a special permit even if such zoning relief is available would imperil the ability of a project to secure construction financing (Company Brief at 45).

Hillman asserts that variances and special permits are highly discretionary forms of zoning relief which can be easily challenged by appeal (Company Brief at 45). The Company argues that it is difficult/impossible to demonstrate the existence of unique conditions for grant of a variance and even if granted they are susceptible to appeal (Company Brief at 45-46). Hillman argues that an appeal of a variance or a special permit even if such zoning relief is available would imperil the ability of a project to secure construction financing (Company Brief at 45). Therefore, Hillman requests the Siting Board grant each of the identified individual exemptions to ensure the timely completion of the Project if approved.

b. Comprehensive Exemption

With regard to the Company's request for a comprehensive exemption, Hillman argues that to avoid the legal uncertainty, potential for adverse interpretations, delay, burden and numerous individual exemptions are required, and the issuance of a blanket exemption could avoid substantial public harm by serving to prevent delay in the construction and operation of the proposed use (Company Brief at 45). Hillman argues that the Siting Board should grant a comprehensive zoning exemption to avoid substantial public harm (Company Brief at 48). The Company enumerates five factors that support a grant of a comprehensive zoning exemption (Company Brief, at 49-51).

First, Hillman asserts that the Project would contribute as a reliable energy source that will participate in the ISO-NE energy, capacity, and ancillary services markets, will qualify as a Clean Peak resource, and will help achieve the Commonwealth's goal of net-zero emissions

(Company Brief at 49). The Company asserts the grant of a comprehensive exemption will allow the timely completion of the proposed Project and realization of the public benefits that the Project will provide (Company Brief at 49-50). Second, Hillman asserts the comprehensive exemption would assist the ability of the proposed Project to file for a certificate of environmental impact and public interest under Section 118 of the Act (Company Brief, 49-50).[83] Third, the Company states that grant of a comprehensive exemption with respect to all existing and future zoning bylaws that could negatively impact the Project would avert the need to litigate any changes in local zoning bylaws and permit the Company to move forward with the Project (Company Brief at 50). Fourth, Hillman offers the HCA as demonstrating that local concerns of the Town have been addressed and benefits negotiated through that agreement, providing payments and additional protections to the Town, the community and surrounding residents (Company Brief at 50). Fifth, the Company points to the support of the Town of Tewksbury supporting the Siting Board's approval of the proposed Project (Company Brief at 50).

2. DiPalma/Sheehan

a. Individual Exemption

DiPalma/Sheehan does not object to all of the individual exemptions requested by the Company but does object to the requested waiver of Section 5.6 relating to the stormwater and drinking water protection provisions (D/S Brief at 87). DiPalma/Sheehan argues that "The Board can certainly waive those dimensional and use provisions of zoning bylaws that would prevent the BESS project (i.e., height, setbacks, allowed uses). Section 5.6 does not prevent the project but provides critical and required protective standards and procedures" (D/S Brief at 87).

DiPalma/Sheehan urges a delay of the Siting Board decision regarding the waiver of the Section 5.6 provisions of the Town's zoning bylaw until a future filing by the Company for a certificate of environmental impact and public interest (D/S Brief at 80-84). DiPalma/Sheehan

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[83] Filings for a certificate pursuant to Section 118 must be filed before July 1, 2026. See Section 118 of the 2024 Climate Act.

asserts that the Company would not be able to file for a certificate under Section 118 of the Act but must instead filed for a consolidated permit under the provisions of 2024 Climate Act provisions which become effective for BESS facilities on July 1, 2026 (D/S Brief at 80-82). DiPalma/Sheehan characterizes Section 69T as providing statutory authority for the Siting Board to stand in for the Tewksbury Planning Board on the Section 5.6 considerations (D/S Brief at 80-84). Therefore, DiPalma/Sheehan states that the Siting Board can postpone the implementation of the required safe drinking water provisions during the next phase of review, which must be a Section 69T Consolidated Permit petition (D/S Brief at 85).

b. Comprehensive Exemption

DiPalma/Sheehan argues that the main thrust of the Company's request for a comprehensive exemption is to avoid what Hillman describes as delay (D/S Reply Brief at 23). They argue that delay is the only substantial harm alleged and that the need for the Project is not immediate (D/S Reply Brief at 23). In their reply brief, DiPalma/Sheehan reiterates that the Board should not grant the Company a comprehensive zoning exemption arguing that: (1) the Project is not time sensitive; (2) the Company did not earnestly engage with the whole of the community in a good faith discussion about the proposal; (3) it has not been demonstrated that the Project is "not opposed by the affected community"; and (4) the Tewksbury community other than the Select Board opposes the proposed Project (D/S Reply Brief at 21-27).

DiPalma/Sheehan demands that the Siting Board should make clear in this Decision that, notwithstanding the virtues of battery storage and the priority this technology should be afforded, consideration of the balancing of interests is always important, with both zoning exemptions and consolidated permits (D/S Brief at 90).

E. Analysis and Findings

G.L. c. 40A, § 3 authorizes the Siting Board to grant exemptions from local zoning requirements for certain types of uses. The statute reflects the Legislature's intent that certain uses should be protected from local restrictions as a matter of public policy. Included in these protected uses is the use of land or structures by a public service corporation, and Section 3 allows a public service corporation to petition the Siting Board for an exemption from local

zoning ordinances. G.L. c. 40A, § 3. The purpose of this exemption is to ensure that local restrictions do not prohibit needed services. See Berkshire Power at 30; see also Save the Bay, 366 Mass. at 685-686; Town of Truro, 365 Mass. at 407; NY Central Railroad, 347 Mass. at 592. Without the ability of the Siting Board to balance the state's need for electricity with local interests, local restrictions could effectively veto facilities serving the state, and the wider public convenience and welfare. In this Decision, the Siting Board has assessed each Project impact and mitigation associated with those impacts. See Sections IVD and IVE.

The Company identified the zoning provisions applicable to the Project and demonstrated that zoning exemptions from the provisions are required. The record shows that there is no relief available to the Company from certain zoning provisions. In addition, Hillman asserts that to avoid the legal uncertainty, potential for adverse interpretations, delay, burden and undue expense associated with obtaining a special permit or variance, the Company requires exemptions from the Zoning Bylaw. The Siting Board finds the Company has established that individual exemptions are required for the Project for construction and operation of the Project.

Regarding the comprehensive zoning exemption, the Siting Board has previously held that the grant of a comprehensive exemption has been based on the specifics of each case. Compared to the grant of individual zoning exemptions, the grant of a comprehensive exemption serves to nullify a municipality's zoning code in its entirety with respect to the project under review. Thus, the Siting Board has previously held that, compared to the grant of individual zoning exemptions, a comprehensive zoning exemption constitutes a broader incursion upon municipal home rule authority. Southcoast Wind at 207; Park City Wind at 169-170. In the absence of a showing that substantial public harm may be avoided by granting a comprehensive exemption, the granting of such extraordinary relief is not justified. Southcoast Wind at 243-244; Park City Wind at 208; Beverly-Salem at 126-127; Vineyard Wind at 109-110. The Siting Board considers time sensitivity for projects to determine whether the granting of a comprehensive zoning exemption would avoid substantial public harm. See Southcoast Wind Energy LLC, EFSB 22-04/ D.P.U. 22-67/ 22-68, at 246 (2024) ("Southcoast Wind"); Park City Wind at 210; New England Power Company d/b/a National Grid, EFSB 12-1/D.P.U. 12-46/12-47, at 88 (2014).

The Siting Board has found that there is need for and benefits from the Project. See Section IV.B. In addition, delay in construction of the Project could negatively affect the Commonwealth's need for new clean energy projects in general and BESS capability in particular. The Project would fulfill Commonwealth policies relating to energy storage goals, which also have definitive deadlines for 2030. The 2024 Climate Act calls for the procurement of 5,000 MW of energy storage capacity by July 31, 2030. St. 2024, c. 239, § 98. More recently, the Commonwealth issued Massachusetts Executive Order 654 which calls for the addition of five gigawatts of energy storage available online or under development by 2035. The Executive Order notes that the added storage capacity would facilitate the integration of additional electricity supply, alleviate grid constraints, and reduce peak energy demand. The addition of this proposed Project is an important component in adding new BESS capacity to meet these requirements.

Without the grant of a comprehensive zoning exemption, the Project would not be constructed in a timely manner, resulting in substantial public harm. The Siting Board notes that the Town requested to become a party in these proceedings, testified in support of the proposed Project and has entered into an Host Community Agreement ("HCA") with Hillman. The Siting Board finds that the evidence shows that the Company engaged in good faith discussions with the Town. The record shows (1) the proposed Project contributes to a reliable energy supply for the Commonwealth; (2) the Project is time sensitive; (3) Hillman has actively engaged with local officials to discuss the applicability of local zoning provisions to the Project and any local concerns; and (4) the Town supports the issuance of the comprehensive exemption. The Siting Board finds that the grant of a comprehensive exemption to the Company is warranted.

F. Conclusion on Request for Zoning Exemptions

The Siting Board finds that (1) Hillman is a public service corporation; (2) the proposed use is reasonably necessary for the public convenience and welfare; and (3) zoning exemptions are required for purposes of G.L. c. 40A, § 3. In addition, the Siting Board finds that the Company engaged in good faith discussions with the Town. The Siting Board finds that the Company has identified and provided reasons that it cannot comply with the Zoning Bylaw and

therefore exemptions from the Zoning Bylaw are required. The Siting Board finds that a grant of a comprehensive zoning exemption would avoid the substantial public harm of delayed construction. Therefore, the Siting Board grants the Company's request for individual and comprehensive zoning exemptions.

VII. SECTION 61 FINDINGS AND ENVIRONMENTAL JUSTICE POLICY

A. Section 61 Findings

MEPA provides that "[a]ny determination made by an agency of the Commonwealth shall include a finding describing the environmental impact, if any, of the Project and a finding that all feasible measures have been taken to avoid or minimize said impact" and shall consider reasonably foreseeable climate change impacts, including additional GHG emissions, and effects, such as predicted sea level rise ("§ 61 Findings"). G.L. c. 30, § 61. Pursuant to 301 CMR 11.01(4)(c), § 61 Findings are necessary when an environmental impact report is submitted to the Secretary of EEA; and Section 61 Findings should be based on such environmental impact report. Where an environmental impact report has not been required and the Secretary has not required additional review, § 61 Findings are not necessary. 301 CMR 11.01(4). The Siting Board generally is not required to make a G.L. c. 30, § 61 finding, as the Siting Board is exempt by statute from MEPA. G.L. c. 164, § 69I.

The record shows that the proposed Hillman Project as initially proposed did not exceed a regulatory review threshold as listed in 310 CMR 11.03 (1) through (11) and as such did not require MEPA review (Exh. HEC-MB at 2). At hearing, Mr. Bergeron testified that the updated proposed Project presented in the December 4, 2025 supplemental filing would not be subject to MEPA review (Tr. 1, at 34). Therefore, no Section 61 Findings are necessary.

B. Environmental Justice Policy

The 2021 Environmental Justice ("EJ") Policy requires that the Siting Board provide certain enhanced requirements when a project is sited within one mile of an EJ Population and certain MEPA thresholds are triggered. See Section 20, 2021 EJ Policy, issued by the Executive

Office of Energy and Environmental Affairs. [84] In addition, the 2021 EJ Policy contains Secretariat-wide General Requirements provisions (Sections 13 and 15, in particular) that are applicable to the Siting Board, and do not depend on a project's MEPA filing status. Section 13 obligates EEA agencies "to develop strategies to proactively promote EJ in ways that are tailored to the agency's mission." Section 15 requires EEA agencies "to establish an inclusive, robust public participation program for key agency actions that focuses agency resources on outreach activities that enhance public participation opportunities for agency activities that potentially affect EJ populations."

As stated above, the Project does not trigger MEPA thresholds mandating enhanced participation provisions of the EJ Policy. In addition, there are no mapped EJ populations within one mile of the proposed Project. The closest mapped EJ population is approximately 1.7 miles from the Project Site (Ex. HEC-1, at 48). Hillman asserts that one of the factors considered by the Company in its selection of the proposed site to that the Project would have no impacts on EJ Populations (Company Brief at 40). In view of the above, the Siting Board finds that this Decision is compatible with applicable environmental justice policies.

VIII. DECISION

In Section III, the Siting Board finds that Hillman Energy Center, LLC qualifies as a public service corporation for purposes of G.L. c. 40A, § 3. In Section IV.B, the Siting Board finds that the Project serves a public need, and the public would benefit from its operation. In Section IV.C, the Siting Board finds that the Applicant has adequately evaluated the site alternatives considered for the Project, including its preferred Site (Candidate Site 4), which has clear advantages over other Candidate sites. Based on the Company's proposed Project design, mitigation measures, and Board-imposed conditions, the Board finds that Project impacts have been minimized and are consistent with the public convenience and welfare.

In Section IV.E, the Board finds that the Company's safety compliance obligations and required safeguards effectively address identified Project safety risks. Based on the review of

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[84] 2021 Environmental Justice Policy, Section 20: Enhanced Public Participation and Analysis of Impacts and Mitigation Under the Energy Facilities Siting Board.

the safety measures related to the proposed design and use of the LFPs, the cybersecurity provisions to be implemented, the conditions imposed in this Decision and commitments accepted by the Company as part of the HCA, the Board finds that the identified Project risks have been thoroughly evaluated and appropriately mitigated.

Additionally, based on the: (1) need for or public benefit of the use; (2) alternatives explored; and (3) impacts of the proposed use, the Board finds the Project is necessary for the purpose alleged; the benefits of the Project to the general public exceed the local impacts; and the Project is reasonably necessary for the convenience or welfare of the public and is consistent with the public interest.

In Section VI.E, The Siting Board finds that the Company engaged in good faith discussions with the Town. The Siting Board finds that the Company has identified and provided reasons that it cannot comply with the Zoning Bylaw and therefore exemptions from the Zoning Bylaw are required. The Siting Board finds that a grant of a comprehensive zoning exemption would avoid the substantial public harm of delayed construction. Therefore, the Siting Board grants the Company's request for individual and comprehensive zoning exemptions.

In Section VII, the Siting Board finds that this Decision is compatible with applicable environmental justice policies.

Accordingly, the Siting Board [Approves] the Company's Petition, as described herein, subject to the following Conditions[85]:

1. The Board directs the Company to comply with all applicable federal, state, and local laws, regulations, and ordinances from which the Company has not received an exemption. The Board directs the Company to ensure such compliance by its contractors, subcontractors, or other agents.

2. The Board directs the Company, within 90 days of Project construction completion, to submit a report to the Board documenting compliance with all conditions contained in this

[85] In this Section of the Decision, "Company" refers to Hillman Energy Center, LLC, and any successor owner of the Project in the future.

Decision, noting any outstanding conditions yet to be satisfied and the expected date and status of compliance.

3. Because issues addressed in this Decision relative to this facility are subject to change over time, the Board directs the Company to commence construction of the proposed Project within three years of the date of the Decision.

4. The Board notes that the findings in this Decision are based upon the record in this case. A project proponent has an absolute obligation to construct and operate its facility in conformance with all aspects of its proposal as presented to the Board. Therefore, the Board requires the Company, and its successors in interest, to notify the Board of any changes other than minor variations to the proposal so that the Board may decide whether to inquire further into a particular issue. The Company or its successors in interest are obligated to provide the Board with sufficient information on changes to the proposed Project to enable the Board to make these determinations.

5. Because the Siting Board relies on the Company's commitments in the HCA, where any future deviations from the HCA's provisions alter material facts or assumptions relied upon by the Board in the Final Order, the Board directs the Company to notify the Board in writing so that it may consider whether further inquiry is required.

6. Consistent with Section 7(B) of the HCA, upon request of the Town, the Board directs the Company to reasonably cooperate with, and provide assistance to, the Town in its efforts to review and evaluate the Project, including, but not limited to, any environmental, noise testing or other reports submitted by the Company to any Governmental Authority (as defined in Section 8 of the HCA), including changes to or modifications of the Project. The Board further directs the Company to reimburse the Town for costs incurred by the Town in connection with such reviews and reports, including peer reviews, to the extent required pursuant to Applicable Laws.

7. Consistent with Section 7(D) of the HCA, the Board directs the Company to work in good faith with the Town's officials to (i) consider any design changes to the Project and site plan as may reasonably be requested by the Town, and (ii) address material engineering and technical review concerns reasonably raised by the Town to protect the health and safety of residents, onsite employees and the impact on surrounding properties and environmental resources; provided, however, that in no event shall the Company be required to implement any design or other changes that would be considered, or that would otherwise trigger, a "material modification" to the Project requiring additional approvals and/or other action by the Siting Board, as determined in good faith by the Company (each, an "EFSB Material Modification").

8. Consistent with Section 8(A) of the HCA, and with the exception of any Tewksbury zoning and/or general bylaws that the Board shall exempt the Company from complying with, the Board directs the Company to ensure that the design, construction and operation of the Project conform to and comply with Applicable Laws and standards including, but

not limited to: (A) any traffic, noise or visual requirements or limitations, as listed in Section 10 of the HCA; (B) any applicable building, plumbing, electrical, gas, and fire safety codes; and (C) configuration of all Board-submitted plans for lighting, landscaping, building and site design(s), and signage.

9. Consistent with Section 10(C) of the HCA, the Board directs the Company to "use commercially reasonable efforts through final design and construction of the Project to shield abutting properties from increases in visual impacts...through plantings, landscaping, buffering walls, berm development, and/or fencing that shall be properly maintained throughout the course of the Term of the Agreement"

10. Consistent with Section 8(B) of the HCA, the Board directs that Company, and any successor project owner, shall operate the Project in accordance with Good Industry Practice, as defined herein. Consistent with Section 8(C) of the HCA, the Board further directs that the Company shall ensure that any subcontractors hired to perform construction or operation of the Project shall be required to comply with Applicable Laws and do so in accordance with Good Industry Practice and shall be adequately insured.

11. Consistent with Section 9 of the HCA, the Board directs the Company to provide a Construction Management Plan to the town 30 days before construction activities commence at the proposed Project Site and provide updates to this plan when there are material changes to the plan. Consistent with Section 15 of the HCA, the Board further directs the Company to provide prior notice to Tewksbury of any material changes to the Construction Management Plan, which shall include in the case of any delay of three months or more in the pre-construction, construction, or completion schedule(s).

12. Consistent with Section 11 of the HCA, the Board directs the Company to work with Tewksbury officials, including the Tewksbury Chief of Police, to address both construction- and operations-phase traffic, and to include traffic mitigation as part of its Construction Management Plan.

13. Consistent with Section 11(A) of the HCA, the Board directs the Company to utilize Tewksbury police details as may be required or directed by the Town during construction and operation of the Project to ensure the safety of the surrounding area. Use of such details in connection with construction or operation of the Project or upon local public ways shall be subject to the rules and requirements of the Tewksbury Chief of Police.

14. Consistent with Section 11(B) of the HCA, during construction, the Board directs the Company to submit any non-*de minimis* deviations from the Construction Management Plan to the Tewksbury Town Manager and Chief of Police for their approval, not to be unreasonably withheld.

15. Consistent with Section 11(C) of the HCA, the Board directs the Company, following the Commercial Operations Date ("COD") (but in no event later than six (6) months following COD), to repair any damage to Hillman Street, Clinton Street, Court Street, and

Washington Street in Tewksbury caused by construction of the Project as may reasonably be determined by the Tewksbury Highway Superintendent. Such repair shall be completed in accordance with the Tewksbury Roadway Rules and Regulations and, to the extent not inconsistent, other Good Industry Practices.

16. Consistent with Section 11(D) of the HCA, the Board directs the Company to coordinate with the Tewksbury Chief of Police and the Tewksbury Director of Public Works in advance of any transportation of oversized and/or overweight loads in connection with construction or operation of the Project.

17. Consistent with Section 11(E) of the HCA, during construction, the Board directs the Company to use commercially reasonable efforts to ensure that large truck, heavy equipment and machinery, semi-trailer truck, and oversized load traffic to and from the Project only utilize State-numbered routes available for use within the Town for access, with preferred access via Interstate 495 and Route 38.

18. The Board directs the Company to develop and provide a set of traffic management measures – to be incorporated into the construction management plan – no less than two weeks prior to the commencement of construction, and to publish the measures on the Company's Project website to ensure availability of traffic-related planning information for the Project area to residents and commuters in Tewksbury.

19. The Board directs the Company to hold a pre-construction meeting with the Town of Tewksbury's Planning Department, Department of Public Works, Building Department, and appropriate municipal staff determined by the Town before any construction. The Company shall contact the appropriate Town of Tewksbury's municipal staff and departments to schedule this meeting.

20. The Board directs that no earthwork (i.e., grading, , hauling in of soils, hammering, and blasting) shall take place without first receiving all required permits. Preliminary work in furtherance of permitting (e.g., soil boring, surveys) that does not impose significant adverse impacts is not considered Earth Removal or Construction.

21. The Board directs the Company to employ the following best management practices ("BMPs") related to dust control and air quality during construction of the Project:

    a. To minimize the potential for airborne dust from earth-disturbing activities, the Company shall require its contractors to place water trucks with misters in or near the work areas during construction activities and utilize them as appropriate when conditions require.

    b. If necessary to stockpile excavated soil on the site for a prolonged period, the Company shall cover stockpiled soil with plastic sheeting or a similar barrier to minimize the potential for the movement of dust and for soil migration from the work area.

c. Install anti-tracking pads at construction entrances and conduct regular sweeping of the pavement of adjacent roadway surfaces during the construction period to minimize the potential for construction traffic to kick up dust and particulate matter.

d. To minimize air emissions from construction equipment, the Company shall comply with state law (G.L. c. 90, § 16A) and MA DEP regulations (310 CMR 7.11 (1)(b)), which limit vehicle idling to no more than five minutes except for vehicles being serviced, vehicles making deliveries that need to keep their engines running, and vehicles that need to run their engines to operate accessories.

e. The Company shall require contractors who enter into an agreement with the Company to be contractually obligated to comply with the most current EPA emission standards for construction equipment at the time of construction.

f. To minimize air emissions from construction equipment, the Company shall comply with state law (G.L. c. 90, § 16A) and MA DEP regulations (310 CMR 7.11 (1)(b)), which limit vehicle idling to no more than five minutes except for vehicles being serviced, vehicles making deliveries that need to keep their engines running, and vehicles that need to run their engines to operate accessories.

22. The Board directs the Company to design the exterior lighting for the Project in a manner that is limited to lighting required for health, safety, security, emergencies, and operational purposes, and shall avoid off-site lighting effects and comply with the standards of the International Dark Sky Association, where practicable. The Board further directs that the Project shall minimize the amount of light that escapes upward.

23. The Board further directs that the Project shall minimize the amount of light that escapes upward.

24. The Board directs the Company to produce a staging and laydown plan to be submitted to the Board for review and approval in consultation with the Town of Tewksbury, no later than sixty (60) days before construction commencement. At a minimum, the plan shall detail the Applicant's Project staging and laydown site location(s) and, for each site, the timeline for use, proposed activities and hours of occurrence, use restrictions, mitigation methods to minimize impacts to surrounding areas, and post-use restoration plans.

25. The Board directs the Company to provide 110 percent oil containment for all oil storage in Project transformers.

26. The Board directs the Company to submit a Spill Prevention Control and Countermeasure Plan ("SPCC") to the Siting Board 60 days prior to commencement of construction for the proposed Facility in consultation with the Town. The Company shall comply with the requirements of G.L. c. 21E, 310 CMR 40.0000 and other applicable federal, state and local laws with respect to responses to releases of oil and hazardous materials.

27. The Board directs the Company to contract a MA-registered Licensed Site Professional (LSP) and MA-state licensed environmental services contractor to address hazardous materials and waste issues arising during construction operations at least 30 days prior to commencement of construction actions.

28. Consistent Section 10(A) of the HCA, the Board directs the Company to limit construction to its proposed schedule of Monday to Friday from 7:00 a.m. to 5:00 p.m. In the event the Company needs to extend construction work beyond those hours and days (with the exception of emergency circumstances on a given day that necessitate work beyond such times), the Company shall seek permission from the Town of Tewksbury prior to the commencement of such work and notify the Department and all parties and limited participants in this proceeding -with documentation that such permission was granted.

29. The Board directs the Company to use electric vehicles and equipment when practicable during the Project's construction. The Company shall document efforts to use electric vehicles and electric equipment, including construction equipment used during the construction phase.

30. Consistent with Section 16(A) of the HCA, the Board directs the Company provide promptly to the Town copies of material filings and other material information submitted or received in connection with such proceedings in any filing before an agency or department of the Commonwealth in connection with the Project as may occur. The Company shall, to the extent reasonably practicable and not prohibited by any Applicable Laws, provide reasonably promptly to the Town notice of and, where possible, a hyperlink to, all other material filings and other material information submitted or received before the Federal Energy Regulatory Commission or any other federal agency and ISO-NE that involve the Company.

31. Consistent with Section 16(B) of the HCA, the Board directs the Company, in consultation with the Town of Tewksbury, and other stakeholders, to develop a Community Outreach Plan ("Outreach Plan") for Project construction. The Outreach Plan shall be made available to the Town of Tewksbury no later than thirty (30) days prior to commencement of construction. The Plan shall specify procedures for providing prior notification to affected residents regarding: (1) identified notification distance/determination; (2) the scheduled start, duration, and hours of construction; (3) construction specific to particular areas; (4) construction that must occur outside of the hours detailed above (including night hours); and (5) anticipated street closures or detours. Further, the Outreach Plan shall detail communication methods that the Company will employ in its engagement efforts, which shall include, but not be limited to: (1) regular construction updates provided on the Company's Project website; (2) email and/or text updates sent to the public; and (3) a phone number and email address to be used by the public to contact the Company with Project-based concerns. The Outreach Plan shall require the Company to respond to all such concerns within 48 hours of receipt of a call or email, and maintain a log of dates, times, and reasons for each call or email, and the Company's response. The Outreach Plan

shall require that the Company, in good faith, work to rectify Project-based concerns in a reasonable timeframe and to the reasonable satisfaction of affected parties. Further, the Outreach Plan shall use plain, concise language, and shall be translated into other languages, as necessary.

32. Consistent with Section 16(C) of the HCA, the Board directs the Company to periodically (but at least once every six months or upon reasonable request of the Tewksbury Select Board) during pre-construction and construction activities provide public reports to the Town of Tewksbury at meetings of the Town Select Board, describing its progress in obtaining necessary permits and the status of construction of the Project, and matters that may reasonably be expected to affect the Town's interests, describing major issues which may have arisen and responding to questions from Town officials and/or the public.

33. Consistent with Section 16(C) of the HCA, the Board directs the Company to create and maintain a web page that will provide updates to the community with status and progress reports on the permitting, construction, and operation of the Project and any material changes thereto.

34. The Board directs the Company to dispose of construction waste in accordance with all applicable requirements.

35. The Board directs the Company to provide Project updates at the completion of 60 percent and 90 percent Project design stages, and upon receipt of associated approvals, to the Board.

36. Consistent with the HCA Appendix A (#16), to the extent that the Company seeks to expand or modify the Project during the Term of the HCA, the Board directs the Company to notify the Board and the Town and shall prepare a new construction management plan for such expansion or modification, with any such expansion or modification subject to approval of the Board and appropriate Town authority.

37. The Board directs to Company to decommission and remove the Project following the end of all use and/or operations of the Project, at the Company's sole cost and expense, in accordance with the decommissioning plan as provided by the Company to the Town and in accord with all Applicable Laws and Good Industry Practice in place during time of decommissioning. Consistent with Section 14 of the HCA, the Siting Board directs the Company to work with the Town of Tewksbury to develop the decommissioning plan, which shall be completed and submitted to the Tewksbury Town Manager and the Siting Board not later than 60 days prior to facility decommissioning.

38. During decommissioning, the Board directs the Company to dispose of the BESS facility components according to legal requirements and best practices, and to recycle as much as possible.

39. The Board directs that signage for the Project shall comply with ANSI Z535 and shall include the type of technology associated with the battery energy storage systems, any special hazards associated, the type of fire-suppression system installed at the Project facilities, and 24-hour emergency contact information, including phone number(s).

    The Board directs the Company to provide a copy of the Siting Board's Decision, including all conditions and attachments, to its general contractor no later than thirty (30) days before construction commencement.

40. After construction is completed, the Board directs the Company to provide an as-built plan to the Local Government(s) and State PEAs. Original as-built plans for the final plan shall be printed on mylar and stamped by a Professional Land Surveyor. The as-built plans shall also include a certification stamped by a Professional Engineer indicating the Project was constructed in accordance with the approved plans. An electronic file of the as-built plan sheets and AutoCAD files of the as-built plan for the Project shall be submitted concurrently with the hard copies. Elevations on the as-built plans shall reference the municipal GIS data.

41. Consistent with Sections 3 and 6(B) of the HCA, the Board directs the Company to pay for all applicable and required local permits and payment of all permitting and inspection fees in effect at the time of the application for each, including third-party inspections and reviews, if required by applicable Permits.

42. Except for well-drained, stable gravel, the Board directs the Company to apply six (6) inches of topsoil to areas stripped of topsoil during contouring or other site preparation. Wherever practicable, the Company shall re-use on-site topsoil from excavated areas to establish a vegetative cover that blends disturbed areas into the surrounding landscape once the Project is complete. Topsoil shall not be imported unless the Company provides information to the relevant Town of Tewksbury department regarding a demonstrated engineering need, with particular attention paid to preventing importing of invasive species. The Board further directs the Company to make provisions to stabilize any top-soil banks or berms.

43. Operations and Maintenance Plan: Within 60 days of commercial operation, the Board directs the Company to submit to Town of Tewksbury a plan for the operation and maintenance of the Project. The plan shall include measures for maintaining safe access to the Project, stormwater management control, and general procedures for operational maintenance. Maintenance shall also include, but not be limited to, painting structures, structural repairs, and preserving the integrity of security measures. The Company shall maintain the Project so that it remains in good condition.

44. The Board directs the Company to continue to abide by local, state, and federal guidelines and regulations regarding the removal of battery units that have reached the end of their useful life on the Project Site.

45. In addition to repairing or replacing BESS components to maintain the system, the Project may, at any time, be augmented or repowered without the need to submit a new site plan so long as the augmentation or repowering is within the same footprint (e.g., same dedicated use building or on footings/foundations in the same location) as detailed in the Project's as-built plan and there is no significant change in the battery chemistry. A proposal to significantly change the Project's footprint, or battery chemistry, may be considered a Project Change, subject to the local and state standards at the time of the request, requiring the submittal by the Company to the Board and Town of Tewksbury of a Project Change notice for review and approval.

46. For all proposed work within the 100-foot Wetlands Buffer Zone, the Board directs the Company to use BMPs, such as erosion control barriers including silt fence barriers, to establish limits of work, protect turtles, and to ensure that there are no short- or long-term impacts to adjacent wetland resource areas.

47. The Board directs the Company to submit a final Wetland Replication Plan (WRP) to restore all disturbed wetlands resource areas and to replicate permanently filled or altered wetlands resource areas for written approval by the Tewksbury Conservation Commission. The surface area or any disturbed wetlands resource areas and replications areas shall be at least 75% established with indigenous wetland plants within two growing seasons. Should the replication areas fail to meet this standard, MassDEP or the Tewksbury Conservation Commission may require additional measures necessary to achieve compliance. Areas must be replicated in accordance with applicable standards of 310 CMR 10.00 and the WRP.

48. To minimize the risk of contamination to the groundwater of this Zone II area in accordance with the intent of the local Tewksbury Groundwater Protection District bylaw, the Board directs the Company to minimize runoff and comply with the Massachusetts Stormwater Management Standards in 310 CMR 10.00 and to be consistent with the associated guidance in the Massachusetts Stormwater Handbook, including, but not limited to, the provision of artificial recharge as an alternative to the 15% impervious surface requirement in the Tewksbury Groundwater Protection District bylaw, as required by MassDEP's drinking water regulations at 310 CMR 22.21(2)(b)7. and the development of a Construction Period Soil Erosion and Sediment Control Plan. The Board further directs the Company to provide a compliance filing to the Town and Siting Board to demonstrate compliance with MassDEP Stormwater Standards within 6 months of completion of Project construction.

49. The Board directs the Company to minimize runoff and comply with the Massachusetts Stormwater Management Standards (per the Massachusetts Stormwater Handbook), including, but not limited to the development of a Construction Period Soil Erosion and Sediment Control Plan. The Board further directs the Company to provide a compliance filing to the Town and Siting Board to demonstrate MassDEP Stormwater Standards compliance within 6 months of completion of Project construction.

50. The Board directs the Company to develop a Stormwater Pollution Prevention Plan ("SWPPP") that will identify controls to be implemented to mitigate the potential for erosion and sedimentation from soil disturbance during construction.

51. The Board directs the Company to control sediment movement and stabilize exposed soils to prevent pollutants from moving offsite or entering waters or wetlands. The Board directs that land disturbance activities include demolition, construction, clearing, excavation, grading, filling, construction, and reconstruction. During construction, the Board directs the Company to hire a third-party inspector to submit monthly reports to the Town of Tewksbury. The third-party inspector shall go to the Project Site after significant storm events to confirm compliance with the Applicant's Construction Period Soil Erosion and Sediment Control Plan and/or SWPPP. A significant storm event shall be defined as more than one inch of rainfall in a 24-hour period. The minimum qualifications for the third-party inspector shall consist either of an educational degree in or related to the field at issue or three or more years of practice in the field at issue or a related field.

52. The Board directs the Company to locate all stockpiles (if necessary) outside of the 100-foot Buffer Zone and to refuel or store equipment—except for equipment that cannot be moved due to safety or operational requirements—beyond 100 feet from wetland resource areas.

53. In the event of the release of reportable quantities or concentrations of contaminants into soil, groundwater or wetlands during Project construction or operations, the Board directs the Company and its contracted experts (i.e., LSP and environmental services contractor) to map the extent of degree of contamination in soil, groundwater and wetlands to inform targeted response and remedial actions, including soil and water quality samples (i.e., pre-contaminant exposure and post-incident contamination of soil and groundwater) for contaminant plume mapping and remedial planning purposes. The Board directs the Company to continue mapping the nature, degree, and geographic extent of contamination through the period of response actions and remedial activities. The Board directs the Company to work with the Town and MADEP regarding contaminant mapping, response and remedial actions.

54. To reduce impacts on water resources, the Board directs the Company, to the extent feasible, minimize the use of de-icing chemicals on site both during operation and construction.

55. The Siting Board directs that the Project shall not cause or contribute to a violation of the Massachusetts Surface Water Quality Standards, 314 CMR 4.00, to protect public health and enhance the quality and value of the water resources of the Commonwealth.

56. The Board directs the Company to ensure that the bottom of subsurface stormwater Recharge Basins (including the underlying six-inch crushed stone layer) are at least 2.0 feet above the Seasonal High Groundwater Elevation (SHGW) as determined in 2025 and 2026 SHGW assessments.

57. The Board directs the Company to use the following strategies to limit construction noise:

    a. Use the quietest commercially available construction equipment, including generators and portable HVAC units during construction, as practicable.

    b. Position noise-generating construction equipment and noise-generating construction activities as far from adjacent sensitive receptors as practicable during construction.

    c. Ensure that all construction equipment being used is equipped with the appropriate manufacturer-specified noise reduction device(s), in proper working condition.

    d. The Company shall also ensure that construction equipment and vehicles are properly maintained pursuant to manufacturers' specifications and fitted with manufacturer-provided (or recommended) noise suppression devices (e.g., improved mufflers, equipment re-design, use of intake silencers, ducts, engine enclosures, and noise attenuating shields or shrouds, silencers, wraps).

    e. Mitigate noise from construction devices with internal combustion engines by ensuring that the engine's housing doors are kept closed, and by following the manufacturer's guidelines for engine operation. The Applicant shall further reduce noise by operating the devices at lower engine speeds during the work to the extent practicable.

    f. Use hydraulically or electrically powered tools (e.g., jack hammers, pavement breakers, and rock drills) for Project construction to avoid noise associated with compressed air exhaust from pneumatically powered tools, where practicable. For pneumatically powered tools, an exhaust muffler on the compressed air exhaust should be used, where practicable.

    g. Use temporary/ portable noise barriers in the vicinity of residents and sensitive receptors during construction (especially on the easterly and southerly facing directions at the Project Site), as practicable.

    h. Institute a noise mitigation training program for all field-worker supervisory personnel including subcontractor supervisors. Supervisory personnel shall field-train all field workers on best practices to minimize construction noise.

58. The Board directs the Company to comply with the Town of Tewksbury noise bylaw (Chapter 8.12) as well as MassDEP's noise regulations at 310 CMR 7.10 and Noise Policy during the Project's operational life.

59. The Board directs the Company to submit a noise evaluation and mitigation plan to the Board for approval in consultation with Town of Tewksbury and MassDEP no later than

thirty (30) days before construction commencement. At a minimum, the Board directs the Company to include in its evaluation and mitigation plan the following: (i) Company-generated data demonstrating current and continued compliance with all applicable MassDEP noise control regulations pursuant to 310 CMR 7.10 and MassDEP Noise Policy for construction and operation; (ii) Company noise-testing protocols to be employed during construction; (iii) remedies and response actions for noise violations or complaints; (iv) inspections and measurements, conducted by relevant municipal authorities, as necessary, to ensure compliance; and (v) mitigation measures.

60. Consistent with Section 10(D) of the HCA, the Board directs the Company to develop a post-construction sound monitoring protocol for the Town with the Massachusetts Department of Environmental Protection and the Town Manager, or his/her designated representative, and submit it to the Town and the Board no later than 30 days prior to the completion of construction. The Board directs the Company to perform post construction sound monitoring within 30 days of the Project being fully operational, including (but not limited to) along the eastern and southern property lines across Hillman and Clinton streets - minimally, at the property line of (1) 123 Clinton Street, (2) the nearest commercial building across Hillman Street from the proposed Project; and (3) other noise monitoring locations identified by the Tewksbury Town Manager or his stated designate. The Board directs the Company to promptly forward the results of testing directly to the Town Manager and the Siting Board. The Town Manager, or his/her designated representative, may witness the post construction operational sound level measurements. If the results of the sound policy exceed 10 dB(A) over ambient sound pressure levels or exceed pure tone requirements, then the Board directs the Company to remedy the situation by bringing sound levels and pure tones at these property lines into compliance with the MassDEP Noise Policy within 30 days of non-compliance measurements. The Board further directs the Company to provide a post-remedial report demonstrating compliance with the MassDEP Noise Policy at sound-monitoring locations and identifying the noise attenuation strategies and equipment employed to reach compliance. This Post-Remedial Noise Report shall be submitted to the Town Manager and the Siting Board within 60 days of notification of non-compliance with the MassDEP Noise Policy.

61. Consistent with Section 10(B) of the HCA, the Board directs the Company to use its best efforts to respond to complaints received by the Town about noise from construction and/or operation of the Project and the Company shall undertake all commercially reasonable actions to address such complaints. The Board further directs the Company to assign one representative to handle all complaints from the public and or the Town and shall notify the Town of the name and contact information for such person.

62. The Board directs the Company to implement the following to limit noise during the Project's operational phase:

    a. Noise mitigation measures identified in the Company's noise evaluation and mitigation plan

b. Increase the height of the southern sound attenuation barrier (sound wall) from 18 feet to at least 24 feet.

c. Specify noise levels from the M10 inverters and substation transformer to equipment providers for purposes of procuring this equipment to comply with the MassDEP Noise Policy and Town Bylaw.

d. Rotate the inverters so that their loudest sides face in a northern or northwesterly direction to maximize noise reductions to the south and east of the Project.

63. The Board directs the Company to comply with applicable industry standards, including the Massachusetts Comprehensive Fire Safety Code, 527 CMR 1.00, as well as the most recent edition of the National Fire Protection Association's NFPA 855: Standard for the Installation of Stationary Energy Storage Systems, in the design, construction, installation, commissioning, operation, maintenance, and decommissioning of the Project.

64. Consistent with Section 12(H) of the HCA, the Board directs the Company not to deploy, install, or use any secondhand, reconditioned, or previously used battery systems at the Project. The Board directs the Company to ensure that all batteries and battery systems used at the Project shall be tested and certified by Underwriters Laboratories with a UL 9540 and 9540A certificate of compliance. The Board directs the Company to provide the Town prior to installation a full 9540A test report for each type of battery device located on the property. The Board directs the Company to notify the Tewksbury Fire Chief and the Board in advance if the type of battery or batteries used on Site is to be changed and to provide publicly available 9540A testing results for that battery type that are reasonably acceptable to the Tewksbury Fire Chief. The Board directs the Company or its successors in interest, and the Town, to review this provision twenty years following commercial operation date.

65. Consistent with Section 12(J) of the HCA, the Board directs the Company to remove any permanently deactivated or no-longer used battery, battery pack, or other battery-related item from the Project Site as soon as safely and reasonably possible after deactivation.

66. Consistent with Section 6(A)(iii) of the HCA, the Board directs the Company to submit to the Tewksbury Fire Department an Emergency Response Plan ("ERP") for the Project prior to the Company's commissioning of the Project and shall incorporate Tewksbury Fire Department comments in such ERP except where incorporation of such comments is unreasonable.

67. Consistent with Section 12(E) of the HCA and the ERP, the Board directs the Company to ensure that any emergency notification systems used for safety or fire monitoring include immediate notification to the Tewksbury Fire Department in addition to the off-site third-party monitoring company or agent. The Board directs the Company to ensure that, in the event of a Project emergency, an official representative is present on Site no later than two hours after notification by the Fire Chief or the Fire Chief's designee. The Board directs

the parties to work together to ensure that the ERP includes appropriate provisions for notification of Tewksbury public safety officials of any hazardous condition or potentially hazardous condition at the facility. The Board directs the Company to update the ERP whenever a material change occurs, or at least annually, and submit to the Town Manager and Tewksbury Fire Department.

68. The Company shall notify the Director of the Siting Board, and the service list for the proceeding, of any incidents at the Project that (1) consist of a reportable release, and (2) require a response from the Tewksbury Fire Department. The Company shall provide such notification by email within 24 hours of the incident.

69. The Board directs the Company to complete the final ERP no later than 60 days before commencement of the Project's operation and provide the final ERP to the Tewksbury Town Manager when it is complete.

70. The Board directs the Company to include in its final ERP, at a minimum, the following:

    a. Procedures for safe shutdown, de-energizing, or isolation of equipment and systems under emergency conditions to reduce the risk of fire, electric shock, and personal injuries, and for safe start-up following cessation of emergency conditions;

    b. Procedures for inspection and testing of associated alarms, interlocks, and controls;

    c. Procedures to be followed in response to notifications from the Battery Management System, when provided, that could signify potentially dangerous conditions, including shutting down equipment, and providing agreed upon notification to Tewksbury Fire Department personnel for potentially hazardous conditions in the event of a system failure;

    d. Emergency procedures to be followed in case of fire, explosion, release of liquids or vapors, damage to critical moving parts, or other potentially dangerous conditions;

    e. Procedures for addressing BESS equipment damaged in a fire or other emergency event;

    f. Other procedures as determined necessary by the Town to ensure the safety of occupants, neighboring properties, residents, and emergency responders;

g. Annual training for local first responders on the contents of the ERP, and protocols and schedules for conducting drills of the emergency procedures;

h. A communications plan that outlines the parties responsible for contacting nearby residents impacted by an emergency event;

i. Evacuation and shelter-in-place protocols for residents near the Project; and

j. The names and phone numbers of local, state, and federal agencies and officials to be contacted in the event of an emergency.

71. The Board directs the Company to work with neighboring municipal fire departments to determine whether to develop a joint action plan as part of the ERP. If such a plan is warranted, the Board directs the Company to ensure that the plan provides neighboring fire departments with the information and training necessary to understand potential emergency risks and, if necessary, provide a coordinated response.

72. Consistent with HCA Appendix A (#12), the Board directs the Company to ensure that the fire alarm system includes a redundant loop connection linking all site panels so that communication is maintained even if a single break occurs (i.e., a Class A loop for site panel aggregation). The Board directs the Company to provide backup power from the fire alarm batteries for all fire alarm initiation and notification devices. The Board directs the Company to ensure that the exhaust system, fans, and louvers are supported by a separate backup power source sized based on the results of the large-scale fire test.

73. Consistent with HCA Appendix A (#11), the Board directs the Company to situate a first responder's Station or incident command post near the main entrance and space it a minimum of 100 feet from the nearest BESS enclosure. The Board directs the Company to locate the incident command post upwind of the BESS yard and ensure that Tewksbury Fire Department access routes to the Site are also located upwind. The Board directs the Company to use the incident command post as the muster point and to include there a fire alarm annunciator panel to provide necessary incident data to first responders at the Site. If a fire water tank is included in the Site layout, the Board directs the Company to collocate the tank with the fire alarm annunciator at the incident command post. The Board directs the Company to ensure that the fire alarm system is monitored at a UL Listed Central Station in accordance with NFPA 72. The Board directs the Company to install a fire alarm annunciator at any secondary site entrance for first responder convenience.

74. Consistent with Section 12(M) of the HCA and HCA Appendix A (#10), the Board directs the Company to ensure that the Project Site includes two entry/egress points. The Board directs the Company to provide a dedicated fire access road connected to these points that encircles the BESS yard, has a minimum width of 20 feet, and is surfaced to support a 75,000-pound fire apparatus in inclement weather conditions.

75. Consistent with HCA Appendix A (#8), the Board directs the Company, in accordance with NFPA 855 Section 4.9.5, to provide the Project with a permanent source of water for fire protection. The Board further directs the Company to provide accessible fire hydrants for the Project Site where public or private water supply is available. If water supply is deemed inadequate, the Board directs the Company to upgrade hydrant access to meet NFPA 855 standards or NPFA 1142, which establishes a minimum water supply standard for firefighting in areas without adequate municipal service.

76. Consistent with HCA Appendix A (#3), the Board directs the Company to permit on-site inspections as reasonably required for approval of applicable local permits during construction and operation of the Project, including any third-party UL 9540 field audit conducted to verify compliance with National Electrical Code requirements.

77. Consistent with Section 12(C) of the HCA, upon reasonable request, the Board directs Company Representative(s) to provide Tewksbury safety officials with reasonable and timely access to the Project to ensure (to the extent within their legal authority) that Project operations adhere to Applicable Laws and this Agreement. The Board further directs Company Representative(s) to provide access to the Project to Tewksbury officials for annual emergency response training and shall coordinate participation by Hillman Energy Center representatives in such emergency response training at a mutually acceptable time. The Company may limit Project access for Town officials to areas outside the Project fenceline as deemed necessary or advisable for safety purposes by the Company in its sole but good faith discretion; provided, however, that the foregoing shall not limit any access by Town safety officials in the event of an emergency or limit implementation of the ERP.

78. Consistent with Section 12(L) of the HCA, the Board directs the Company to comply with all applicable cybersecurity requirements including, but not limited to, North American Electric Reliability Corporation Critical Infrastructure Protection standards and National Institute of Standards and Technology standards.

79. Consistent with Section 12(I) of the HCA, the Board directs the Company to install spacing between battery packs, which may include multiple battery units on the property, in accordance with NFPA 855.

80. The Board directs the Company to provide the Tewksbury Town Manager and Siting Board with an annual report detailing the following: (1) any safety incident that required notification of local first responders along with any Project, protocol, or other changes the Company implemented in response to each incident; and (2) a summary of Project complaints received by the Company, including the complaint's nature and source, the Company's response, dates of complaint receipt and response, and the Company's resolution of the complaint.

81. The Board directs the Company to file an incident report to the Local Government(s) within one (1) week of any incident at the Project requiring notification to first responders.

The Board directs the Company to include in its report a description of the incident and response, and the date(s) and time(s) of the incident and response.

82. In an emergency incident, including a fire, the Board directs the Company to follow all federal, state, and local emergency response protocols outlining mandatory containment, remediation, testing, notification and monitoring efforts including, but not limited to, 310 CMR 22.00 and 310 CMR 40.0000.

83. Consistent with Section 12(A) of the HCA, the Board directs the Company to consult with the Tewksbury Fire Chief in its development of the Construction Management Plan, in relation to fire safety and emergency response and medical requirements. The Board directs the Company to incorporate the Tewksbury Fire Chief's suggestions into the design and operations plans for the Project, as reasonably appropriate, provided such suggestions do not give rise to any EFSB Material Modification.

84. Consistent with Section 12(B) of the HCA, the Board directs the Company and any successor or other Project owner to provide and maintain one or more employees, or third-party contractor(s) acting on the Company's behalf, as the Town's point of contact ("Company Representative(s)"). The Board directs the Company to ensure its Representative(s) are knowledgeable of the Project and are in a position of authority to assist the Town with construction, operation, emergency, and decommissioning questions. The Board directs the Company to ensure at least one Company Representative is available as a point of contact for the Town 24 hours per day, 7 days per week. Upon the Effective Date of the HCA, the Board directs the Company to provide the Town the contact information (name, address, telephone, and email address) of the Company Representative(s) and promptly update the Town in the event of a change in the Company Representative(s). In the event of any assignment or sale of the Project pursuant to Section 20 of the HCA, the Board directs the Company to promptly notify the successor owner of this requirement to provide and maintain an owner company contact with the Town.

85. Consistent with Section 12(D) of the HCA, the Board directs the Company to reimburse the Town annually for costs incurred by the Town to procure, replace, and/or restock materials and/or equipment as necessary to ensure that the Tewksbury Fire Department maintains appropriate equipment and supplies to provide for adequate fire suppression response in the event of a fire or incident at the Project, the exact specifications of which shall be reasonably determined by the Fire Chief annually to ensure that the most appropriate version or type of supplies or equipment are procured, replaced, or restocked (the "Fire Suppression Materials Payment").

86. Consistent with Section 12(F) of the HCA, the Board directs the Company to install (at the Company's sole cost and expense), to the reasonable satisfaction of the Tewksbury Fire Chief and Water & Sewer Superintendent, sufficient fire protection materials and equipment that provide for maximum fire protection on the property and at the facility; provided, however, that the foregoing shall not require the Company to take any action

that would, in the Company's determination, in its sole discretion, give rise to a material modification of the Project. Further, the Board directs the Company to be responsible for reimbursing the Town at applicable market rates for all water used on the property for fire suppression efforts, whether from on-site hydrants, mains or lines, or from off-property sources, with said amounts to be determined by the Town through meters or any estimating process that the Town deems reasonable.

87. Consistent with Section 12(G) of the HCA, the Board directs the Company to ensure that runoff resulting from water used in fire suppression activities is directed into the stormwater management system for the Project Site. The stormwater management design shall meet the Massachusetts Stormwater Policy recommendations, and the Project shall fully comply with MassDEP stormwater standards. The Board directs the Company to further ensure that water collected in the stormwater management detention basin, catch basins, water quality units, and/or other collection facilities shall be monitored during firefighting activities. The Board directs the Company to have a Licensed Site Professional and licensed environmental services company on contract to remove and properly dispose of affected runoff water within the stormwater management system.

88. Consistent with Section 6(A)(i) of the HCA, following Construction Commencement, the Board directs the Company to provide annual public safety and emergency management training for responding to, and preparing the community for, BESS and electrical systems incidents. This training shall be consistent with the latest available industry standards for BESS responses in accordance with good industry practice, including, but not limited to, standards established by the latest editions of the National Fire Protection Association's NFPA 855, Standard for the Installation of Stationary Energy Storage Systems.

89. Consistent with HCA Appendix A (#14), the Board directs the Company to provide the Tewksbury Fire Department and its third-party reviewer(s) with a complete set of documents demonstrating compliance with the 2026 edition of NFPA 855, including all applicable requirements of that standard, including, but not limited to:

    a. Construction documentation for both the site and battery unit per Section 4.2.1;

    b. Manuals per Section 4.2.3;

    c. Commissioning plan in accordance with Chapter 6;

    d. Decommissioning plan and information in accordance with Chapter 8;

    e. Emergency planning and training per the HCA and Section 4.3 to include: ERP/Emergency Operations Procedures for all phases of the Project (i.e., preconstruction, construction phase, commissioning phase, operational phases);

f. A Hazard Mitigation Analysis that covers both the battery enclosure and the site level per Section 4.4 to include: (i) Fire Risk Analysis for both the battery and the site level; and (ii) Plume analysis and modeling;

g. Combustible Storage near the battery enclosures shall be managed in accordance with Section 4.5 to include all Material Safety Data Sheets;

h. Equipment on site shall be in accordance with Section 4.6 and 9.3;

i. Designs and documentation that the installation is in accordance with Section 4.7 and 9.5;

j. Smoke and fire detection shall be in accordance with Section 4.8;

k. Water Supply and documentation shall be in accordance with Section 4.9.5;

l. Emergency Power Supply and documentation shall be in accordance with Section 4.10 as well as based on the large-scale fire test report findings;

m. Critical Safety System Control and Power and documentation shall be in accordance with Section 4.11;

n. System Interconnections to include disconnection means as well as proof of documentation to be in accordance with Chapter 5;

o. Fire and explosion testing documentation and data in accordance with Section 9.2;

p. Calculations and modeling data to determine compliance with explosion control and prevention in accordance with Section 9.7.6.7.3. This includes in-field testing and verification of the system to show that it complies with the data provided; and

q. Proper classification and documentation of all applicable systems and materials for review in accordance with Section 9.4.

90. Consistent with the HCA Appendix A(#9), per NFPA 855, the Board directs the Company to conduct a large-scale fire test representative of the Project Site layout on the selected battery technology. The data from this test shall be incorporated into the Hazard Mitigation Analysis and provide validation for the Project Site layout regarding spacing between enclosures, to ensure non propagation between enclosures during an incident.

91. The Board directs the Company to commence Project construction only after the Tewksbury Fire Department, in coordination with an independent third-party reviewer retained by the Town, has verified that the Project complies with all applicable fire safety codes, standards, and approved plans, including, but not limited to, the 2026 edition of NFPA 855, the HMA, and ERP.

92. Consistent with Section 12(O) of the HCA, the Board directs the Company to conduct a full functional test of the Critical Life Safety System and then conduct a second test witnessed by Tewksbury Fire Officials. These two shall be satisfactorily completed prior to any hot commissioning occurring. The Board directs the Company to include in this testing confirmation of the exhaust system's performance, demonstrating that it meets the minimum CFM output listed in the HMA as well as manufacturer's documentation.

93. Consistent with Section 12(K) of the HCA, the Board directs the Company to submit a snow storage and snow removal plan to the Town for approval, which shall address how the Company proposes to ensure snow is cleared from the property to prevent snow from unreasonably limiting or restricting access by emergency personnel to any battery pack or energy system on the property.

94. The Board directs the Company to prepare a Hazard Mitigation Analysis, as required by NFPA 855.

95. The Board directs the Company to design vegetative buffering and screening to meet all local requirements, provided that the plantings used shall be native, drought-resistant species, and shall not include any invasive and/or nuisance plantings listed in the most recent Massachusetts Prohibited Plant list published by the Massachusetts Department of Agricultural Resources.

96. The Board directs the Company to limit clearing of natural vegetation from the Project facilities to what is necessary for the construction, operation, and maintenance of the Project facilities. If applicable, the Board directs the Company to ensure that any herbicide or pesticide application is approved by Massachusetts Department of Agricultural Resources and consistent with all local regulations.

97. The Board directs the Company to ensure that the access roads to the Project facilities can always accommodate all emergency vehicles.

98. The Board directs the Company to provide, within sixty (60) days of construction completion, a report to the Town confirming that it has completed the clean-up of all construction debris and that any complaints concerning construction debris have been properly addressed.

99. The Board directs the Company to certify to the Town that non-PFAS fire suppression foams shall be employed to the extent that such products are commercially available and efficacious. The Board directs the Company to manage all chemicals and hazardous wastes in compliance with relevant requirements of M.G.L. c. 21C and 310 CMR 30.00.

100. To help ensure the Project's asserted renewable energy and air emission benefits are captured, and therefore ratepayers receive the benefits of the Project operating as proposed, the Board directs the Company to apply to register the Project as an eligible resource with the Clean Peak Program within 120 days of the facility's commercial

operation and to submit confirmation of acceptance into the program to the Siting Board once received.

Donna C. Sharkey

Donna C. Sharkey, Esq.
Presiding Officer

Dated this ___th day of June 2026

[APPROVED] by a vote of the Energy Facilities Siting Board at its meeting on Month Day, 2026, by the members present and voting. Voting for the Tentative Decision as amended: Rebecca L. Tepper, Secretary of Energy and Environmental Affairs and Chair, Energy Facilities Siting Board; Jeremy McDiarmid, Chair, Department of Public Utilities; Elizabeth Mahony, Commissioner, Department of Energy Resources; Bonnie Heiple, Commissioner, Department of Environmental Protection; Douglas Gutro, Director of the Permit Regulatory Office and designee for Eric Paley, Secretary, Executive Office of Economic Development; Thomas O'Shea, Commissioner of the Department of Fish and Game; Dr. Robert Goldstein, Commissioner of the Department of Public Health; Michael P. Cahill, Mayor of Beverly, Massachusetts, Public Member and Joseph C. Bonfiglio, Public Member.

_____
Rebecca L. Tepper, Chair
Energy Facilities Siting Board

Dated this ___th day of June, 2026

Appeal as to matters of law from any final decision, order or ruling of the Siting Board may be taken to the Supreme Judicial Court by an aggrieved party in interest by the filing of a written petition praying that the order of the Siting Board be modified or set aside in whole or in part. Such petition for appeal shall be filed with the Siting Board within twenty days after the date of service of the decision, order or ruling of the Siting Board, or within such further time as the Siting Board may allow upon request filed prior to the expiration of the twenty days after the date of service of said decision, order or ruling. Within ten days after such petition has been filed, the appealing party shall enter the appeal in the Supreme Judicial Court sitting in Suffolk County by filing a copy thereof with the clerk of said court. Massachusetts G.L., Chapter 25, Sec. 5; G.L. Chapter 164, Sec. 69P.