The Commonwealth of Massachusetts

DEPARTMENT OF PUBLIC UTILITIES

D.P.U. 22-18/22-19 June 30, 2023

Petition of Medway Grid, LLC, pursuant to G.L. c. 164, § 72 and G.L. c. 40A, § 3, for approval to construct and operate a 345 kilovolt interconnection between an electric substation to be constructed to serve a proposed Battery Energy Storage System and the Eversource West Medway Substation, and for exemptions from the zoning bylaws of the Town of Medway, Massachusetts, in connection with construction of said Battery Energy Storage System and adjacent substation.

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SUMMARY

Medway Grid, LLC ("Medway Grid" or the "Company") has proposed to construct a 250 megawatt/500 megawatt-hour battery energy storage system ("BESS") in Medway, Massachusetts; (2) a substation that would serve the BESS ("Project Substation"); and (3) an underground transmission line (collectively, the "Project") that would interconnect the Project to the existing Eversource West Medway Substation.

ISO New England selected Medway Grid to meet the need for capacity in Southeastern Massachusetts in the 2024-2031 period and requires the Project to be in commercial operation by June 1, 2024. The Company maintains that the Project will further the Commonwealth's renewable energy and 2050 net zero requirements by its intended participation in the Clean Peak Program, designed to store energy when renewable generation is most prevalent on the grid, and discharge a BESS during peak demand periods, when fossil fuel generating sources might otherwise be used.

Pursuant to G.L. c. 40A, § 3, the Company has requested: (1) several individual exemptions from the Medway Zoning Bylaw ("Zoning Bylaw"); and (2) a comprehensive exemption from all the provisions of the Zoning Bylaw. Pursuant to G.L. c. 164, § 72, the Company also requests the Department's permission to construct the transmission line that would interconnect the Project Substation with the electric grid at the West Medway Substation.

In this proceeding, the Department has reviewed whether the Company qualifies as a public service corporation, whether its proposed use of the land or structure is reasonably necessary for the public convenience or welfare, and whether an exemption from local zoning is required. The Department finds that the Project as proposed is necessary and will provide public benefits, and that the alternative sites evaluated, or a no-build alternative, are inferior. An evaluation of public safety and environmental impacts also showed that the applicable standard of meeting the public convenience or welfare has been met. Based on the record, the Department finds that several provisions of the existing Zoning Bylaw would prevent construction of the Project and require exemption. Similarly, the Department finds that a comprehensive zoning exemption is also required for the Project and necessary to avoid substantial public harm. The Department also finds that that the proposed transmission line is necessary for the purpose alleged, will serve the public convenience, and is consistent with the public interest.

The Order describes a Host Community Agreement negotiated by and between the Town of Medway and the Company that includes a number of provisions to address issues of concern to the Town of Medway, which the Company has agreed to address. In addition, the Department has imposed several conditions in this Order to help ensure the environmental and other benefits of the Project, and further minimize safety and environmental impacts of the Project.

I. INTRODUCTION

A. Background

On February 25, 2022, Medway Grid, LLC ("Medway Grid" or the "Company") filed two petitions with the Department of Public Utilities ("Department") to construct a battery energy storage system ("BESS") discussed in detail below. The first petition seeks certain individual exemptions and a comprehensive exemption from the Medway Zoning Bylaw pursuant to G.L. c. 40A, § 3 ("Zoning Petition"), docketed as D.P.U. 22-18. The second petition seeks approval to construct an underground transmission line pursuant to G.L. c. 164, § 72 ("Section 72 Petition"), docketed as D.P.U. 22-19. On the same day, the Company filed a petition with the Energy Facilities Siting Board (the "Siting Board") to construct the BESS and related infrastructure pursuant to G.L. c. 164, § 69J¼ ("Section 69J¼ Petition"), docketed as EFSB 22-02.

Under the authority provided by G.L. c. 25, § 4, the Department referred the Zoning Petition and the Section 72 Petition to the Siting Board, which were then consolidated with the Siting Board Petition. Medway Grid, LLC, EFSB 22-02/D.P.U. 22-18/D.P.U. 22-19, Referral and Consolidation Order (April 4, 2022). After notice, hearing, and due consideration, on May 11, 2023, the Siting Board dismissed the Siting Board Petition for lack of subject matter jurisdiction. Medway Grid, LLC, EFSB 22-02/D.P.U. 22-18/D.P.U. 22-19, at 26-27 (May 11, 2023). The Siting Board also relinquished its jurisdiction over the Zoning Petition and the Section 72 Petition and returned them to the Department where these were filed originally before being transferred to the Siting Board and consolidated with the now-dismissed Siting Board

Petition. EFSB 22-02/D.P.U. 22-18/D.P.U. 22-19, at 27-28. The Department addresses our determination on the Zoning Petition and the Section 72 Petition in this Order.[1]

B. Description of the Proposed Project

Medway Grid proposes to construct a BESS with a storage capacity of 500 megawatt-hours ("MWh") and a maximum discharge rate of 250 megawatts ("MW"), its own new electric substation ("Project Substation"), and a transmission interconnection ("Transmission Interconnection") linking the Project Substation to the nearby existing NSTAR Electric Company d/b/a Eversource Energy ("Eversource") West Medway Substation ("Eversource Substation") (collectively, the "Project") (Exh. MG-2, at 1). In addition, Eversource will make certain upgrades to its West Medway Substation (Exh. MG-2, at 1). The estimated Project cost is $125 million (Exh. MG-6, Att. F at 1).

The Project site is located in Medway, Massachusetts, immediately south of Milford Street (Route 109) ("Project Site") (Exh. MG-2, at Figure 2-4). Most of the BESS equipment will be located close to the northern boundary of the Project Site, with an adjacent, smaller cluster of BESS equipment due south (Exh. MG-2, at Figure 2-4). The Project Substation will be located further to the south of the BESS on the Project Site (Exh. MG-2, at Figure 2-4). The proposed Transmission Interconnection originates at the southern end of the Project Substation and will run underground further south and across an existing Eversource transmission corridor to connect to the existing Eversource Substation (Exh. MG-2, at 6, and Figure 2-4). The Eversource Substation and the adjacent Exelon West Medway Generating Station are approximately 460 to 500 feet,

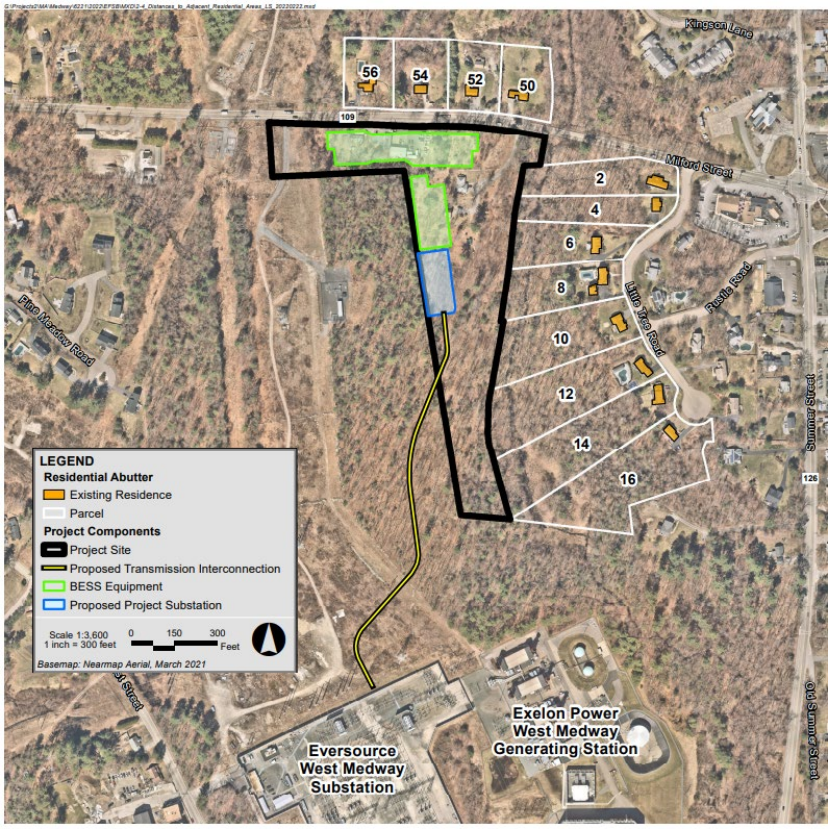
[1] For a detailed procedural history, see Section I.D, below.

respectively, to the south of the Project Site (Exh. MG-2, at 12 and Figure 2-4). See Project map in Figure 1 below.

There are no environmental justice populations within one mile of the proposed Project (Exh. MG-2, at 67). There are several areas of environmental justice populations in Milford and Franklin, Massachusetts, that are within five miles of the proposed Project; however, the Project does not produce air emissions (Exh. MG-2, at 67). Therefore, the Project does not require the Massachusetts Environmental Policy Act's ("MEPA") enhanced public participation protocols or enhanced analysis of potential project impacts on environmental justice populations (Exh. MG-2, at 67).

A perennial stream (Center Brook) runs near that eastern boundary of the Project Site (Exh. MG-2, at 6, and Figure 2-2). Eight residences on Little Tree Road, located to the east of Center Brook, range from 260 feet to 595 feet from the Project Site's eastern boundary (Exh. MG-2, at 12, and Figure 2-4). Further east of Little Tree Road, there are several residences on Summer Street (Exh. MG-2, at 6). There are four additional residential structures across Milford Street (Route 109) to the north, ranging from 105 to 115 feet from the Project Site (Exh. MG-2, at 12, and Figure 2-4).

Figure 1: Medway Grid Project Site.



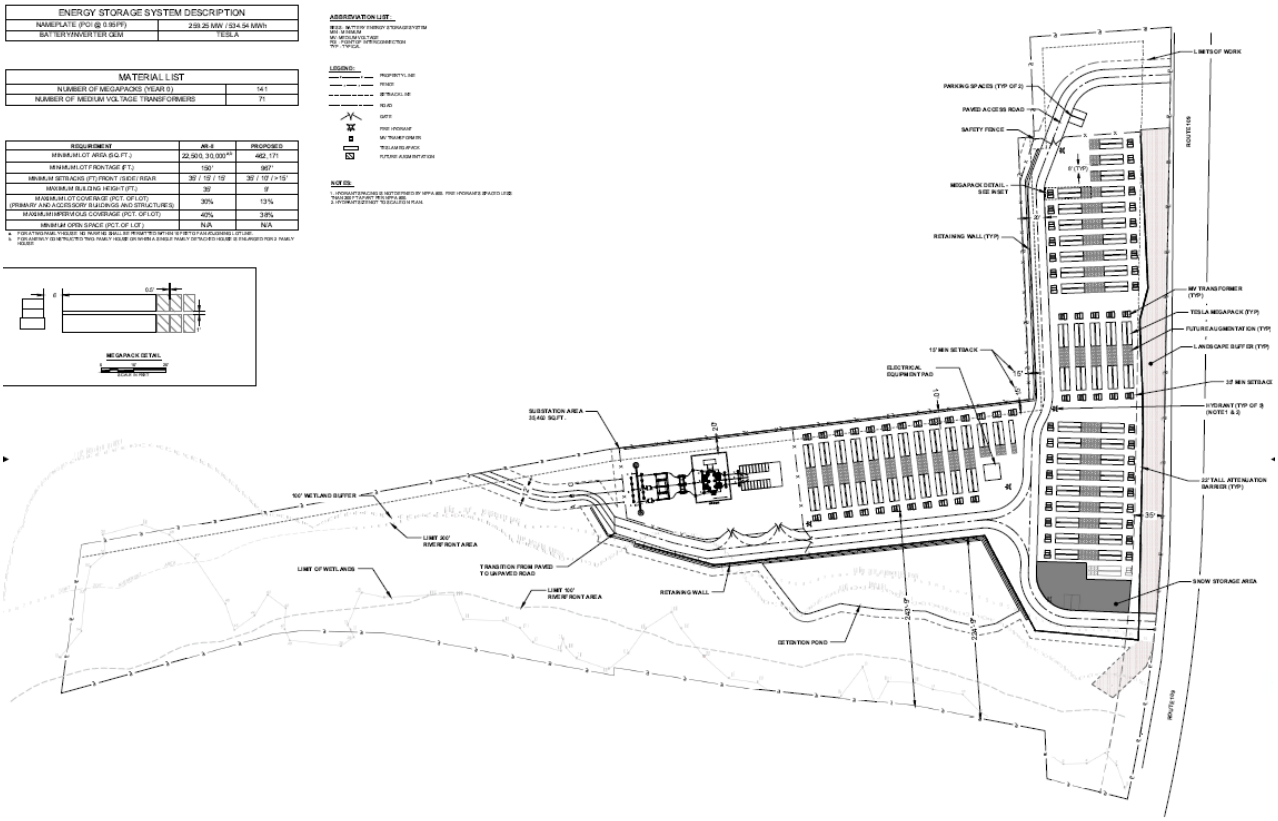
Adapted from: Exh. MG-2, at Figure 2-4.

The BESS is composed of lithium-ion batteries, housed in approximately 140 above-ground Megapack 2XL enclosures, manufactured by Tesla Inc. ("Tesla") (Exh. MG-2, at 1, 15). Each Megapack 2XL is approximately 28.9 feet long, 5.4 feet wide, and 9.2 feet tall with a maximum weight of 84,000 pounds (Exh. MG-7, at 2, n.3). According to Medway Grid, the Megapack 2XL is a standalone modular system with integrated lithium-ion batteries, a bi-directional inverter, a thermal management system, and a Tesla Site Controller with intelligent controls software (Exh. MG-2, at 15). Each pair of Megapack 2XL units would be placed immediately adjacent to a medium voltage transformer (Exh. MG-2, at 15). The paired enclosures

would be located eight feet apart from other pairs (Exh. EFSB-S-47, at 9, Figure 2). The Project Site will have 71 medium voltage transformers (Exh. MG-6, at 1-4).

Of the 10.6-acre Project Site, approximately 5.6 acres will be developed for the BESS and the Project Substation, and 0.84 acres for the Transmission Interconnection (Exh. MG-6, at 1-2 to 1-3). The BESS would be surrounded by a combination of a minimum eight-foot-high security fence and a 22-foot-high sound attenuation barrier wall (Exh. MG-2, at 2). The sound attenuation barrier will be approximately 1,280 feet in length and located along the north and east sides of the BESS (Exh. MG-2, at 2).

Figure 2: BESS Layout.



Source: Exh. MG-6, Att. D, drawing C001.

The proposed Project Substation includes a 345 kilovolt ("kV")/34.5 kV main power transformer, switchgear, circuit breakers, disconnect switches, low and high buses, and a static mast (Exh. MG-2, at 16). At its tallest point, the static mast would be up to 65 feet high (Exh. MG-2, at 16). The Project Substation will take the power output from the BESS to 34.5 kV collection switchgear and step it up to a transmission voltage of 345 kV (Exh. MG-2, at 16). The step-up in voltage enables the power from the BESS to be connected to the Eversource Substation via the proposed Transmission Interconnection (Exh. MG-2, at 16). The Company proposes to construct a new 1465-foot 345 kV underground Transmission Interconnection across two Eversource-controlled parcels (Exh. MG-7, at 1-2). During charging, the proposed Transmission Interconnection will carry electricity from the Eversource Substation back to the Project Substation where it is stepped down to 34.5 kV (Exh. MG-2, at 16-17). At this voltage, the electricity can then be routed to the BESS for storage (Exh. MG-2, at 17).

The proposed Project will require Eversource to upgrade some of its existing facilities for the Project to be interconnected at the Eversource Substation (Exh. MG-2, at 20). These interconnection upgrades include the installation of a new 345 kV breaker, 345 kV breaker disconnects, a 345 kV line terminal disconnect, a line terminal structure, coupling capacitor voltage transformers, lightning arresters, as well as associated civil work, wiring, and protection and control equipment (Exh. MG-2, at 20). These interconnection upgrades take place within the existing Eversource Substation fence line (Exh. MG-2, at 20). Eversource anticipates being able to permit its work at West Medway Substation through the available local process (RR-EFSB-4).[2]

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[2] In its initial brief, Eversource requested that the Siting Board approve the upgrades to its Substation (Eversource Brief at 2). As the Siting Board has determined it does not have

The Project Site is currently zoned as an Agricultural/Residential district (AR-II district) in the Town of Medway (Exh. MG-3, at 7).[3] Under the Town of Medway Zoning Bylaw ("Medway Zoning Bylaw"), an energy storage system is not a permitted use in an AR-II zoning district (Exh. MG-3, at 7, and Att. 1, at 47-52). Furthermore, Section 5.2(B) of the Medway Zoning Bylaw expressly prohibits use variances (Exh. MG-3, at 7, and Att. 1, at 45-46). In addition, the AR-II district limits the height of structures to 35 feet (Exh. MG-3, at 8, and Att. 1, at 76). The proposed Project Substation, described above, would contain components that would significantly exceed this height (Exh. MG-3, at 8, and Att. 1, at 76).

In general, the Company plans to charge the BESS during off peak periods, store the electricity, and then dispatch the electricity to the grid at times of peak demand (Exh. MG-2, at 1). The Company bid the Project into the ISO New England ("ISO-NE") via the Forward Capacity Auction ("FCA") 15 for the Southeastern New England ("SENE") capacity zone and was awarded a capacity supply obligation ("CSO"). Medway Grid stated that the Project is time sensitive and must meet its Commercial Operation Date of June 1, 2024; failure to meet this deadline could result in a substantial financial loss and/or termination of the CSO (Exhs. MG-2, at 1; EFSB-Z-4).

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jurisdiction over the project, and Eversource does not require zoning exemptions for the upgrades at its Substation, Eversource's request is moot.

[3] According to the Zoning Bylaw, an AR-II district is one of three residential districts in the Town of Medway, along with Agricultural Residential I and Village Residential districts (Exh. MG-3, Att. 1, at 43).

On March 18, 2022, the Secretary of the Executive Office of Energy and Environmental Affairs ("Secretary" and "EEA," respectively), pursuant to MEPA,[4] issued a certificate on the Company's Expanded Environmental Notification Form ("EENF") (Exh. MG-5). The EENF certificate required the Company to file a Single Environmental Impact Report ("SEIR") (Exh. MG-6, at 1-1). The Company submitted its SEIR to MEPA on August 31, 2022 (Exh. MG-6). On October 18, 2022, the Secretary issued a certificate on the SEIR finding that it "adequately and properly complies with MEPA and its implementing regulations" (Exh. MG-7, at 1).

C. Summary of Local Permitting Activity

On November 15, 2021, the Town of Medway held a special town meeting at which it imposed a temporary moratorium on the construction of BESS in the Town Energy Resources zoning district ("ER district"), which expires on June 30, 2023 (Exh. EFSB-Z-24(b)(i)(S)). At a special town meeting held on November 14, 2022, the Town enacted Articles 15 and 16 (Exhs. EFSB-Z-24(b)(ii)(S); EFSB-Z-24(S) Att. 9, at 12).

Article 15 segregates BESS facilities into two tiers (Exh. EFSB-Z-24(S) Att. 9, at 15). Tier 1 includes all facilities having an aggregate energy capacity of less than one MWh; Tier 2 includes all facilities having an aggregate energy capacity of more than one MWh (Exh. EFSB-Z-24(S) Att. 9, at 15). With a 500 MWh capacity, the Project would be classified as Tier 2. Article 15 also adds a new provision to the Medway Zoning Bylaw, section 8.12, that allows Tier 2 facilities to be constructed only by special permit, with "major site plan review," and only "in those zoning districts identified in Table 1, Schedule of Uses." (Exhs. EFSB-Z-19(S) at 3;

[4] The acronym "MEPA" also refers to the Office that administers said act: i.e., the Massachusetts Environmental Policy Act Office.

EFSB-Z-24(S) Att. 9, at 13-21). Article 16 amends Table 1, Schedule of Uses to prohibit Tier 2 BESS in all districts except for the ER district where it is allowed by special permit and with major site plan review (Exhs. EFSB-19(S) at 3, n.3; EFSB-Z-24(S) Att. 9, at 21). Consequently, construction of the Project in the AR-II district would be prohibited by the Medway Zoning Bylaw if the recent amendments were to take effect (Exhs. EFSB-19(S) at 3, n.3; EFSB-Z-24(S) Att. 9, at 21).

Articles 15 and 16 are the subject of a letter issued by the Office of the Attorney General May 17, 2023 (Exh. EFSB-Z-19(S)). Article 15 was approved by the Attorney General's office on May 17, 2023 (Exh. EFSB-Z-19(S). In addition, the Office of the Attorney General stated: "we disapprove and delete the portions of the Schedule [of Uses] that prohibit Tier 2 BESS in all districts except the ER district" (Exh. EFSB-Z-19(S)). The Attorney General's disapproval would not, however, automatically allow the Company to construct the BESS on the proposed site, as discussed more fully in section III.D below.

The Company finalized and signed a Host Community Agreement ("HCA") with the Town of Medway on September 7, 2022, and submitted the HCA to the Siting Board on December 14, 2022 (Exh. EFSB-G-26). According to the Town, the HCA addresses a multitude of issues, from legal protections of the Town by the Company to financial and insurance considerations, as well as health, safety, and environmental protections (Exh. MWY-MEB-1, at 5; Town Brief at 1-3).

D. Procedural History

1. Siting Board Proceeding

As discussed above, on April 4, 2023, the Chair of the Department, acting pursuant to G.L. c. 164, § 69H(2), issued a referral and consolidation order referring the Zoning Petition and the Section 72 Petition to the Siting Board for review and decision together with the Section 69J¼

Petition (together the "Petitions"). The Siting Board accordingly conducted a single adjudicatory proceeding and developed a single evidentiary record with respect to the Petitions as a consolidated docket EFSB 22-02/D.P.U. 22-18/22-19.

The Siting Board issued a Notice of Public Comment Hearing and Notice of Adjudication ("Notice"). The Company published the Notice in local newspapers, served it on municipal officials of Medway and adjoining towns, and mailed it to abutters within one-half mile of the Project site. The Company also posted the Notice and the Petitions to its own website and sent the Notice to the Town with the request that: (1) the Notice be posted at the Town Hall and local library; and (2) both the Notice and the Petitions be available to the public at the local library and Town Hall.[5]

The Siting Board conducted a remote public comment hearing via Zoom on July 13, 2022. At the remote public comment hearing, the Company made a presentation regarding the Project. Various Medway municipal officials and members of the public offered comments and asked questions.[6] The questions and comments addressed a number of topics including: risk of fire or other emergencies; whether the Company would file a plan with the Conservation Commission; whether the Project would obtain some or most of its grid power for recharging the BESS from

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5 The public also has full access to all of the Company's filings through the dedicated landing page for this Project. See https://www.mass.gov/info-details/medway-grid-battery-project.

6 Given the demographic data and project impact thresholds in the surrounding area of the Project, the Siting Board did not require either enhanced public participation or enhanced analysis of impacts and mitigation under the EEA Environmental Justice Policy; translation/interpretation in languages other than English was neither required by, nor requested under, the Language Access policies of the Commonwealth. See Executive Office of Administration and Finance Bulletin No. 16, October 10, 2012.

renewable resources; the Siting Board review and approval process; the distinction between energy storage and energy generation; and the financial benefits of the Project to Medway.[7] Michael Boynton, town manager for Medway, expressed his appreciation for the Company's "very cooperative manner with us" (Public Hearing Tr. at 28).

The intervention deadline in the proceeding was July 27, 2022. The Siting Board received four timely petitions to intervene filed by the Town of Medway, Eversource, an unincorporated association by the name of "Medway Enumerated Parties" ("MEP"), and Charles Myers, a Medway resident. On October 20, 2022, the Presiding Officer issued a ruling allowing intervention by the Town of Medway, Eversource, and MEP. The ruling denied Charles Myers's motion to intervene but allowed limited participant status.

On February 25, 2022, the Company submitted pre-filed testimony from seven witnesses: (1) Justin Adams, vice president of permitting, Eolian[8]; (2) A.J. Jablonowski, principal, Epsilon Associates, Inc.; (3) Benjamin Cotts, Ph.D., principal engineer, Exponent; (4) Marc Bergeron, principal, Epsilon Associates, Inc.; (5) Robert D. O'Neal, managing principal, Epsilon Associates,

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7 The risk of fire, the proposed safeguards, and emergency response are addressed in Section II.C.4.b.x (Public Safety). The Company's filings with the Conservation Commission are addressed below in Section II.C.4.b.iii (Wetlands, Water, and Groundwater Resources) and Section II.C.4.b.iii.(C) (Water Supply and Resources). The issue of renewable energy is addressed below in Section II.C.2 (Need) and Section II.C.2.c. The Siting Board approval process and the distinction between energy generation and energy storage are addressed in detail in the Final Decision issued in Medway Grid LLC, EFSB 22-02/D.P.U. 22-188/22-19, issued on May 11, 2023. The financial benefits of the Project to the Town of Medway are to a large extent embodied in the HCA (Exh. EFSB G 26(1)). These benefits are discussed throughout this Order, but especially in Sections II.C.4.x.(A) .

8 Sam Lines, senior vice president for Eastern Markets, Eolian, testified that Medway Grid's parent entity is Astral Infrastructure Holdings, LLC ("Astral") (Tr. 1, at 40). Astral is a "fully controlled entity under Eolian, L.P." (Tr. 1, at 40).

Inc.; (6) Christina Wolf, director of development for the Medway Grid energy storage project; and (7) Jason Kneldhans, director of energy storage solutions for the Medway Grid energy storage project. On January 4, 2023, the Town of Medway submitted the pre-filed testimony of Medway town manager Michael Boynton.

The Company responded to two rounds of Information Requests from the Siting Board and one round of Information Requests from the Town of Medway. The Town also responded to one set of Information Requests issued by the Siting Board.

On December 28, 2022, the Company informed the Siting Board that Ms. Wolf and Mr. Knedlhans would not be available for cross-examination at the evidentiary hearing. Justin Adams, who had already submitted pre-filed testimony, would testify in lieu of Ms. Wolf. Jason Yedinak, the Company's senior vice president, would testify in lieu of Mr. Knedlhans. On February 2, 2023, the Company submitted pre-filed testimony from Jason Yedinak; Ryan Callahan, a senior consultant acoustic engineer with Epsilon Associates, Inc.; Samuel Lines, senior vice president for eastern markets at Eolian, L.P.; and Paul Rogers, a former lieutenant in the New York City Fire Department and the founder of Energy Safety Response Group.

The Siting Board conducted three days of remote evidentiary hearings in February 2023. The Company presented eight witnesses for cross-examination: Jason Yedinak; Sam Lines; Ryan Callahan; and Paul Rogers; and Justin Adams, vice president of permitting, Eolian; Marc Bergeron, principal, Epsilon Associates, Inc.; A.J. Jablonowski, principal, Epsilon Associates, Inc.; Benjamin Cotts, Ph.D., principal engineer, Exponent. The Town of Medway's witness, Michael Boynton, Medway town manager, was also present for cross-examination.

More than 300 exhibits were introduced into evidence. The Company, the Town, Eversource,[9] MEP, and Charles Myers filed initial briefs on March 17, 2023.[10] The Company, the Town, and Mr. Myers filed one reply brief each on March 31, 2023. MEP filed two reply briefs on that date, a reply to the Town of Medway ("MEP Reply to Town Brief"), and one reply to Medway Grid ("MEP Reply to Company Brief").

After the conclusion of evidentiary hearings and the filing of briefs, on April 26, 2023, Siting Board staff distributed a copy of a Tentative Decision regarding the question of whether the Siting Board has jurisdiction to the BESS pursuant to G.L. c. 164, § 69J¼ to members of the Siting Board and all parties and the limited participants for review and comment.

The Siting Board conducted a remote public meeting to consider the Tentative Decision on May 10, 2023. The Company, Paul Yorkis (spokesperson for MEP), Eversource, the Town of Medway, and Charles Myers provided comments. After review, comments, and deliberation, on May 10, 2023, the Siting Board directed staff to prepare a Final Decision dismissing the Siting Board Petition for lack of subject matter jurisdiction, which issued on May 11, 2023. The Siting Board returned Medway Grid's Zoning Petition and the Section 72 Petition to the Department for determination.

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9 Eversource's brief was limited to the issues of its upgrades to the Eversource West Medway substation.

10 Both MEP and Mr. Myers attached to their initial brief certain documents that had not submitted into evidence. These documents are not part of the record in this case; they have no evidentiary value; and we do not rely upon them in this Order.

2. Department Proceeding

On May 11, 2023, the Department issued a Notice of Department Proceeding in the consolidated Siting Board and Department proceeding to all persons on the service list. The Notice of Department Proceeding informed the recipients that the Siting Board had dismissed the Section 69J¼ Petition for lack of subject matter jurisdiction and that the Zoning Petition and the Section 72 Petition would be adjudicated by the Department. The Department also sent the Notice of Department Proceeding to the Company along with an Order of Notice. The Order of Notice required the Company to serve a copy of the Notice of Department Proceeding on local officials and local property owners.[11]

The Department's Hearing Officer also issued a procedural notice on May 11, 2023 to the service list of the EFSB 22-02/D.P.U. 22-18/22-19. In the procedural notice, the Hearing Officer informed the parties that the Department: (1) would treat all existing intervenors and limited participants in EFSB 22-02/D.P.U. 22-18/22-19 as intervenors and limited participants, respectively, in the Department's continuing review of D.P.U. 22-18/22-19; (2) incorporated the full administrative record of EFSB 22-02/D.P.U. 22-18/22-19, including all filings, rulings,

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[11] The Order of Notice required the Company to serve the Notice of Department Proceeding on various Medway municipal entities and on "all abutters, owners of land directly opposite on any public or private street or way, abutters to the abutters, and all owners of property within 300 feet of the property to be used for the Project as they appear on the most recent tax list, regardless of the town in which the property is located[.]" On May 26, 2023, Paul Yorkis, spokesperson for MEP, sent an email to the Hearing Officer in which he requested that a copy of the Notice of Department Proceedings be served on all property owners within one-half mile of the Project. The language quoted above and incorporated into the Order of Notice is taken directly from the relevant notice statute for zoning exemption petitions: G.L. c. 40A, § 11. This statute does not require notice to all property owners within one-half mile of the Project. Therefore, there is no legal requirement for granting Mr. Yorkis's request, and accordingly, we deny it.

responses to discovery, comments, transcripts, and briefs, into the docket for D.P.U. 22-18/22-19; (3) set a date of May 19, 2023 to file any objections to moving the identified exhibits from EFSB 22-02/D.P.U. 22-18/22-19 into evidence in the Department proceeding; and (4) set a date of May 26, 2023 for parties and limited participants to file supplemental briefing in the Department docket. The Hearing Officer also consolidated D.P.U. 22-18 and D.P.U. 22-19 pursuant to 220 CMR 1.09.

No one filed an objection to the admission of the documents on the Exhibit List into evidence. On May 26, 2023, the Company, Eversource, and the Town of Medway submitted supplemental briefs. On June 2, 2023, the Hearing Officer moved all exhibits from the May 31, 2023 exhibit list into the evidentiary record of D.P.U. 22-18/22-19.

E. Host Community Agreement

The Town requests that the HCA and its specific provisions be incorporated into any approval granted by the Department (Town Brief at 2; Town Supplemental Brief at 1-2).

MEP contends that the Town of Medway Select Board approved the Company's HCA without a formal public hearing with notice to abutters (MEP Brief at 2; MEP Reply to Town Brief at 1, 4). MEP also alleges that the Select Board failed to incorporate recommendations from the Town of Medway Planning and Economic Development Board into the HCA (MEP Brief at 2; MEP Reply to Company Brief at 3, 8). MEP disagrees that issues raised by a Town Committee or Board while the Town was negotiating the HCA with the Company are outside the scope of the proceeding (MEP Brief at 9, citing Exh. MEP-28). MEP asserts that the HCA does not address issues that were identified during this proceeding, such as changes to Project design, EMF, sound attenuation, security issues, and abutter communication issues (MEP Brief at 8-9; MEP Reply to

Company Brief at 1, 3). Mr. Myers indicates that, even though the HCA was negotiated by the Town Administrator and two members of the Select Board, the Company has not met with the full Select Board since March 2021 (Myers Brief at 26).

We note that the HCA in the present case provides the context in which we have drafted this Order. NSTAR Electric Company d/b/a Eversource Energy, EFSB 15-04/D.P.U. 15-140/15-141, at 94 (2018) ("Woburn-Wakefield"). We base our decisions in part on the commitments made by the Company and expect the Company to abide by its commitments. However, the Department and Siting Board have 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. 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 HCA into this Order.

Because the Department 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 Department in the Final Order, the Company is obligated to notify the Department in writing so that it may consider whether further inquiry is required. Nevertheless, the Department, like the Siting Board, does not regard itself as the proper forum for enforcement of HCA 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 Department, separately from the proceeding. Woburn-Wakefield at 94.[12] With

[12] Any action for breach of this contract may be filed in the appropriate court of the Commonwealth. See Warner Ins. Co. v. Commissioner of Insurance, 406 Mass. 354, 359-360 (1990) (the Superior Court, and not the Commissioner of Insurance, had jurisdiction over a breach of contract action).

regard to the intervenors' concerns about the process used by the Town of Medway in negotiating the HCA, the Department finds that the Town is the best entity to address any questions regarding the local process leading to the execution of the HCA.

II. REQUEST FOR INDIVIDUAL ZONING EXEMPTIONS

Pursuant to G.L. c. 40A, § 3, the Company filed a petition seeking individual and comprehensive zoning exemptions from the Medway Zoning Bylaw for the Company's Project.

A. Standard of Review

G.L. c. 40A, § 3 provides, in relevant part, that:

> 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 [Department] 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 . . . .

Thus, a petitioner seeking exemption from a local zoning bylaw under G.L. c. 40A, § 3 must meet three criteria. First, the petitioner must qualify as a public service corporation. Vineyard Wind, LLC, D.P.U. 21-08, at 5 (2021) ("Vineyard Wind Department Case"); NSTAR Electric Company d/b/a Eversource Energy, D.P.U. 18-21, at 4 (2019) ("Westfield"); NSTAR Electric Company d/b/a Eversource Energy, D.P.U. 17-147, at 6 (2019) ("K Street Substation"); Save the Bay, Inc. v. Department of Public Utilities, 366 Mass. 667 (1975) ("Save the Bay"). Second, the petitioner must demonstrate that its present or proposed use of the land or structure is reasonably necessary for the public convenience or welfare. Vineyard Wind Department Case at 6; Westfield at 5-6; K Street Substation at 7-8; Boston Gas Company, D.T.E. 00-24, at 3 (2001) ("Boston Gas"). Finally, the petitioner must establish that it requires exemption from the zoning

ordinance or bylaw. Vineyard Wind Department Case at 6; Westfield at 6-7; K Street Substation at 8-9; Tennessee Gas Pipeline Company, D.T.E. 01-57, at 4 (2002) ("Tennessee Gas").

Additionally, the Department favors the resolution of local issues on a local level whenever possible, to reduce concern regarding any intrusion on home rule. The Department believes that the most effective approach for doing so is for a petitioner to consult with local officials regarding its project before seeking zoning exemptions pursuant to G.L. c. 40A, § 3. NSTAR Electric d/b/a Eversource Energy, EFSB 17-02/D.P.U. 17-82/17-83, at 193 (2019) ("Sudbury-Hudson); Vineyard Wind LLC, EFSB 17-05/D.P.U. 18-18/18-19, at 132 (2019), ("Vineyard Wind"); Russell Biomass LLC, EFSB 07-4/D.P.U. 07-35/07-36, at 61-62 (2009) ("EFSB Russell (2009)"). Thus, the Department encourages petitioners to consult with local officials, and in some circumstances, to apply for local zoning permits, before seeking zoning exemptions from the Department under G.L. c. 40A, § 3. Sudbury-Hudson at 193; Vineyard Wind at 132; EFSB Russell (2009) at 68.

B. Public Service Corporation Status

1. Standard of Review

In determining whether a petitioner qualifies as a "public service corporation" for the purposes of G.L. c. 40A, § 3, the Massachusetts Supreme Judicial Court ("SJC") has stated:

> among the pertinent considerations are whether the corporation is organized pursuant to an appropriate franchise from the State to provide for a necessity or convenience to the general public which could not be furnished through the ordinary channels of private business; whether the corporation is subject to the requisite degree of governmental control and regulation; and the nature of the public benefit to be derived from the service provided.

Save the Bay, 366 Mass. at 667, 680; see also Westfield at 4; Vineyard Wind at 133; NSTAR Electric Company d/b/a Eversource Energy, D.P.U. 18-155, at 11 (2020).

The Department interprets this list not as a test, but rather as guidance to ensure that the intent of G.L. c. 40A, § 3 will be realized, i.e., that a present or proposed use of land or structure that is determined by the Department to be "reasonably necessary for the convenience or welfare of the public" not be foreclosed due to local opposition. See Berkshire Power Development, Inc., D.P.U. 96-104, at 30 (1997) ("Berkshire Power"); Save the Bay, 366 Mass. at 685-686. The Department has interpreted the "pertinent considerations" as a "flexible set of criteria which allow the Department to respond to changes in the environment in which the industries it regulates operate and still provide for the public welfare." Westfield at 4; Berkshire Power at 30; see also Dispatch Communications of New England d/b/a Nextel Communications, Inc., D.P.U./D.T.E. 95-59-B/95-80/95-112/96-113, at 6 (1998) ("Nextel"). The Department has determined that it is not necessary for a petitioner to demonstrate the existence of "an appropriate franchise" to establish public service corporation status. See Berkshire Power at 31.

1. Positions of the Parties

a. Company

Medway Grid states that based on Department and Siting Board precedent, it is a public service corporation (Company Brief at 49-51). Specifically, the Company highlights the Department's, as well as the Siting Board's, prior findings that a corporation that owns generating assets in Massachusetts and makes those assets available to serve the New England market is a public service corporation (Company Brief at 50-51, citing Exelon West Medway, LLC, EFSB 15-01/D.P.U. 15-25, at 136 (2016); NRG Canal 3 Development, LLC, EFSB 15-06/D.P.U. 15-180, at 142-143 (2017); Russell Biomass LLC, D.T.E./D.P.U. 06-60, at 15 (2008)) ("Department Russell (2008)"). Medway Grid asserts that because it is proposing to construct a BESS to provide

capacity to the SEMA zone, and it intends to make the output of its facility available to the New England energy market, it is a public service corporation (Company Brief at 51).

In its supplemental brief, the Company reiterates that it is a public service corporation (Company Supplemental Brief at 2-3). Medway Grid Point notes the evolution of the concept of public service corporation and states that the Department consistently evaluates the nature of the public benefits from the service provided in its determination of public service corporation status (Company Supplemental Brief at 2-3). Based on the benefits provided by the Project, the Company asserts that it is a public service corporation (Company Supplemental Brief at 2-3).

b. MEP

MEP argues that the Company is an electricity trading company and an investment company, but not an electric company and therefore not a public service corporation (MEP Reply Brief at 2).

c. Eversource

Eversource does not address on brief the question of whether Medway Grid is a public service corporation; however, Eversource supports Medway Grid's request for zoning exemptions (Eversource Supplemental Brief at 1).

d. Charles Myers

Mr. Myers argues that Medway Grid is a private energy investment group and therefore not a public service corporation (Myers Reply Brief at 14-15). Mr. Myers contends that because the Project will return previously generated energy to the electric grid for a small portion of the day, it should not qualify as a public service corporation (Myers Reply Brief at 15).

2. Analysis and Findings

An entity requesting a zoning exemption must establish that it is a public service corporation. Neither the Department nor the Siting Board has issued a determination on whether a non-utility BESS petitioner is a public service corporation. The term "public service corporation" is not defined by statute, and the courts of Massachusetts have not provided any such definition. Berkshire Power at 29-30; USGen at 12. Consequently, in determining whether a BESS developer qualifies as a public service corporation under G.L. c. 40A, § 3, the Department considers the purposes of the statute, the precedent of the courts, especially the three "pertinent considerations" identified by the SJC in Save the Bay, and Department and relevant Siting Board precedent on this issue. Save the Bay, 366 Mass. at 680; USGen at 12. The Court has characterized the concept of "public service corporation" as a "term of art." Braintree, 420 Mass. at 26. The Department has interpreted the "pertinent considerations" of Save the Bay as a "flexible set of criteria which allow the Department to respond to changes in the environment in which the industries it regulates operate and still provide for the public welfare." Nextel at 6.

As stated by the SJC, the test we use to determine whether an entity is a public service corporation was established in 1975. The Department first considers the evolving judicial precedent on the concept of public service corporation. Then we consider the Department and Siting Board's application of the concept to petitioners before it. Finally, we apply the applicable tests to the petitioner before us. Based on the reasons discussed below, the Department concludes that Medway Grid qualifies as a public service corporation for purposes of G.L. c. 40A, § 3.

a. Judicial Precedent on Public Service Corporation

The term "public service corporation" has evolved with the changing energy and common carrier environment. The older SJC decisions focus on the whether a petitioner is a franchise holder or a common carrier. See Attorney General v. Haverhill Gas Light Company, 215 Mass. 394 (1913) ("[a] public service or quasi public corporation is one private in its ownership but having an appropriate franchise from the State to provide for a necessity or convenience of the general public incapable of being furnished through the ordinary channels of private competitive business and dependent for its exercise upon eminent domain or some agency of government"); Fall River Gas Works Company v. Board of Gas and Electric Light Commissioners, 214 Mass. 529 (1913) ("[i]t is the duty of a public service corporation to have its plant large enough to perform the service for which it was established, and it has a corresponding right to have such plant fairly capitalized"). Subsequent courts have expanded the concept of public service corporation to gas and electric companies, railways, common carriers (including transportation companies and communication companies such as cell tower companies, telephone companies, and telegraph companies); municipal electric departments; and water companies. See Truro v. Department of Pub. Utilities, 365 Mass. 407, 409 n.1 (1974) (identifying 1955-1973 court findings of public service corporation for various entities).

The seminal decision on public service corporations was decided by the SJC in 1975, and it is the basis of the standard of review above. Save the Bay assessed the status of public service corporation to a non-franchise-holding LNG facility. The SJC applied the factors listed in the Save the Bay decision to New England LNG:

> We recognize that the gas companies found to be public service corporations in these decisions were organized under G.L. c. 164, or its predecessor statutes (Weld v. Gas &

> Elec. Light Commrs., supra), and, as the petitioner points out, New England LNG has not been so organized. However, we believe that New England LNG is subject to *appropriate regulation* under G.L. c. 164 and the applicable Federal statutes. Moreover it appears that New England LNG will, like the facility in the Mezitt case, *supply gas to gas companies for distribution to the public in the Commonwealth and New England*. That is of primary importance in preserving its status as a public service corporation.
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> Save the Bay, 366 Mass. at 683 (emphasis added).[13]

Only one SJC decision since Save the Bay has analyzed a claim of public service corporation under the Save the Bay standard. In 1995, the SJC found that a municipal light plant could be a public service corporation. Planning Board of Braintree v. Department of Public Utilities, 420 Mass. 22, 26 (1995) (public service corporation includes municipal electric department; "public service corporation" is a term of art which is not limited to corporations but may include municipal electric departments such as Braintree Electric Light Department).

b. Department/Siting Board Precedent Regarding Public Service Corporation Status

Since Save the Bay and Braintree, the Department and the Siting Board have reflected the changes to the energy landscape from the Electric Restructuring Act in 1997 in their application to the concept of public service corporation. Generating facilities are no longer proposed by vertically integrated monopoly public utilities; instead they are developed by non-utility entities. The status of public service corporation has been applied to various non-utility generation petitioners. See Berkshire Power, D.P.U. 96-104, at 321 (1997) ("the Department finds the pertinent consideration of 'an appropriate franchise' as listed in Save the Bay to be of limited value in the electric industry as it has evolved since the Save the Bay decision was issued"). In 2004, the

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[13] Mezitt v. Department of Public Utilities, 354 Mass. 692 (1968).

Department went further in deciding on a zoning exemption for the Salem Harbor Station, stating that: "[t]he Department notes that this analysis could be applied to any generator serving the New England market. We conclude that *any corporation that owns generating assets in Massachusetts, and makes those assets available to serve the New England market, is a public service corporation.*" USGen New England, Inc., D.T.E. 03-83, 15 n.9 (2004) (emphasis added) ("USGen").

Since USGen, the Department and Siting Board have found that generators that provide power to the New England grid are public service corporations. See, e.g., Princeton Municipal Light Department, D.T.E./D.P.U. 06-11 (2007) (municipal light department proposing to construct two 1.6 MW wind turbines is a public service corporation) ("Princeton"); Department Russell (2008) (developer proposing wood-burning electric generating facility is a public service corporation based on USGen precedent, nature of the company's business and company plans to make the output of the facility available to the New England energy market); Exelon West Medway, LLC, EFSB 15-01/ D.P.U. 15-25 (2016) (developer proposing to construct a new 200 MW electric generating facility is a public service corporation based on USGen precedent, nature of company business, and ISO-NE CSO whereby Facility will begin serving the need for electric power in Massachusetts and in the New England market); NRG Canal 3 Development LLC, EFSB 15-06/D.P.U. 15-180 (2017) (developer proposing to construct a new 350 MW electric generating facility is public service corporation, same analysis as Exelon West Medway).

In 2021, the Siting Board granted a zoning exemption to a non-utility developer proposing a transmission line. Vineyard Wind LLC, EFSB 17-05/D.P.U. 18-18/18-19 (2019) ("Vineyard Wind"). In Vineyard Wind, at 134-136, the Siting Board treated the developer as a generator for

purposes of public service corporation status because the transmission line was one part of a project that consisted of generation and transmission elements ("[w]e therefore find that it is appropriate to consider Vineyard Wind as a generator for purposes of determining whether the Company qualifies as a [public service corporation]"). However, in 2021, the Siting Board granted zoning exemptions to a project that was neither transmission nor generation. In Northeast Energy Center LLC, EFSB 18-04/D.P.U. 18-96, at 201-203 (2021) ("NEC"), the Siting Board found that the developer, a non-utility developer of a LNG storage facility, was a public service corporation for purposes of G.L. c. 40A, § 3. The Siting Board stated that NEC would be providing a "needed public service to the Commonwealth, principally serving National Grid's reliability needs in addition to other uses." NEC at 203. The Siting Board also noted that in the Save the Bay decision, the SJC upheld the public service corporation status of another LNG facility. Id. The Siting Board concluded that NEC qualifies as a Massachusetts public service corporation for the purposes of G.L. c. 40A, § 3. Id.

a. Application to Battery Energy Storage Systems

Department as well as Siting Board precedent hold that any corporation that owns generating assets in Massachusetts and makes those assets available to serve the New England market, is a public service corporation. The Siting Board recently issued two decisions finding that a BESS is not a facility subject to the Board's jurisdiction under the Siting Board's enabling statutes. G.L. c. 164, § 69G. The Siting Board further found that a BESS is not a generating facility under G.L. c. 164, § 69J¼. While the Board found that a BESS does not meet the statutory definition of a generating facility under strict statutory construction rules, this finding does not necessarily answer the question of whether a non-utility BESS developer, such as Medway Grid, is

considered a public service corporation for purposes of G.L. c. 40A, § 3. As explained below, the Department finds that because a BESS is providing energy services in Massachusetts and the asset is available to serve the New England market, the BESS developer may be a public service corporation for the purpose of G.L. c. 40A, § 3.

The standard established by Save the Bay is flexible and applied to reflect competitive changes in the energy landscape, and the restructuring of vertically integrated utility companies that were historically the sole providers of regulated energy services in the Commonwealth. The Department and Siting Board have previously stated that a public service corporation need not hold a franchise from the state to be considered a public service corporation under the Save the Bay test. See, e.g., Berkshire Power at 31. In addition, energy services are now provided to the public by non-utility independent actors in one or more capacities that were once performed solely by vertically integrated utility companies. See Electric Restructuring Act, St. 1997, c. 164; see also Vineyard Wind, EFSB 17-05/D.P.U. 18-18/18-19 (2019); Northeast Energy Center LLC, EFSB 18-04/D.P.U. 18-96 (2021). It is necessary and appropriate that these non-utility entities should be able to avail themselves of the tools provided by the Legislature to ensure that construction of needed projects serving the public convenience or welfare are not obstructed by solely local concerns. See Pereira v. New England LNG Co., Inc., 364 Mass. 109, at 119-121 (1973).

In addition to the structure of the entity that provides energy to the grid, the technology to provide energy services to the public has evolved over time. The Department and Siting Board repeatedly held that the provision of electricity at wholesale is the type of public benefit that qualifies corporations that own and operate generating facilities as public service corporations.

NRG at 142-143; Exelon at 136; USGen at 14, and 14, n.8; Berkshire Power at 35-36. The Department notes that the finding that the provision of electricity at wholesale is a public benefit is not limited by how the electricity is produced. See Exelon and NRG (gas-fired generation); Princeton (wind generation); Department Russell (2008) (biomass generation). It is appropriate to consider that energy services provided to the grid beyond traditional generation are also the type of public benefit that are consistent with public service corporation status, and we do not think that our consideration of these benefits should be limited to generating facilities or particular technologies. The more important considerations for public service corporation status of the applicants are not the type of technology the facility would provide for public use, but rather, that the nature of the service provided meets the "public service" characteristics enunciated in Save the Bay.

In applying the Save the Bay factors, the Department recognizes the flexibility of the criteria and that no single factor is dispositive. In applying the factors in Save the Bay, the Court there gave extra weight to the fact that a public service corporation provides service to the public. Save the Bay at 683 ("[m]oreover it appears that New England LNG will, like the facility in the Mezitt case, supply gas to gas companies for distribution to the public in the Commonwealth and New England. That is of primary importance in preserving its status as a public service corporation"). Given the flexibility of the Save the Bay standard, and the goal of G.L. c. 40A, § 3 to provide an avenue for public service corporations to provide a benefit to the public despite local opposition, the provision of energy services by BESS developers is consistent with the intent of Section 3 and the SJC's interpretation. The Department concludes that a BESS developer may be a public service corporation under the Save the Bay standard for the purpose of G.L. c. 40A, § 3.

a. Application of Save the Bay to Medway Grid

Applying the Save the Bay factors to Medway Grid, the Department finds that Medway Grid is a public service corporation for purposes of G.L. c. 40A, § 3.

In assessing the first factor of level of regulation, to supply services to the electricity markets, Medway Grid is subject to significant regulation. Medway Grid provides energy pursuant to the Forward Capacity Market rules and has incurred a CSO which dictates several operational and financial rules by which it must operate (Exhs. MG-3, at 1011; MG-1, at 4; EFSB-J-3(1); EFSB-Z-7). See ISO-NE Transmission, Markets, and Services Tariff (Market Rule 1), Section III.13.3, Critical Path Schedule Monitoring;[14] and ISO-NE Manual for Forward Capacity Market, Manual M-20.[15] Medway Grid also must interconnect its Project to the New England electricity grid pursuant to a Large Generator Interconnection Agreement (Exh. EFSB-G-13; Medway Grid Brief at 13). See Schedule 22 of the Open Access Transmission Tariff (OATT), the Large Generator Interconnection Procedure.[16] In addition, Medway Grid's financial parameters are dependent on DOER's Clean Peak Program (Exhs. MG-2, at 66-67; EFSB-CPC-7; EFSB-

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1414 Market Rule 1 governs the operation of New England's wholesale electricity markets and includes detailed information on pricing, scheduling, offering, bidding, settlement, and other procedures related to the purchase and sale of electricity. https://www.iso-ne.com/static-assets/documents/regulatory/tariff/sect_3/mr1_sec_13_14.pdf.

15 https://www.iso-ne.com/static-assets/documents/2023/04/manual_20_forward_capacity_market_rev27_2023_04_06.pdf.

16 Schedule 22 of Market Rule 1 governing interconnection requirements for large generating units can be found at https://www.iso-ne.com/static-assets/documents/regulatory/tariff/sect_2/sch22/sch_22_lgip.pdf.

CPC-6 (Att.3); Clean Peak regulations, 225 CMR 21.00 et seq).[17] Medway Grid's activities relative to its BESS Project must comply with a series of prescriptive regulations.

In assessing the second factor, franchise from the state to provide for a necessity or convenience to the general public that could not be furnished through the ordinary channels of private business, the Department, as well as the Siting Board, have stated that a franchise is not necessary for public service corporation status. Save the Bay discussed whether it was *probable* for New England LNG to supply gas to the public. Save the Bay, 366 Mass. at 62. Where a BESS has a CSO, it has obligations to provide energy to the grid, and therefore service to the public. Medway Grid has secured a CSO for its energy services, which includes substantial financial incentives to provide service, including penalties for non-performance, and therefore it is likely that when constructed, Medway Grid will provide service to the public (Exh. EFSB-J-3(1)).

Further, Department precedent states that the provision of electricity at wholesale via the grid could not be furnished through the ordinary channels of private business. USGen at 13; Berkshire Power at 32. In the Berkshire Power decision, the Department held that: "the provision of electricity over such an integrated and regulated system is not comparable to the furnishing of a product through the ordinary channels of business." Berkshire Power at 32. Similarly, in USGen, the Department held that: "a wholesale generator of electricity in an integrated and regulated system provides a necessity to the general public which could not be furnished through the ordinary channels of private business." USGen at 13. After the Electric Restructuring Act, electric generation is no longer provided through vertically integrated monopolies, but non-utility

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[17] We note that Medway Grid will own and operate the BESS (Exhs. MG-2, a 1, 2; MG-3, at 5-6; EFSB-Z-1).

generation providers that operate in a highly integrated and regulated system. For Medway Grid to provide services to the grid, it may do so only through a set of state and federal regulatory provisions and rules established for the electricity grid generally, and unique aspects of BESS facilities.

In assessing the third factor, nature of benefit to the public, Department precedent states that electricity constitutes a necessity. See, e.g., Berkshire Power at 35 ("the Department reiterates that the . . . generation of electricity is a public necessity that is critical to public health and safety, and fundamental to the Massachusetts economy"); Boston Edison Co., D.P.U. 92-92, at 42 (1992) ("electricity has become a basic necessity of modern life"); see also USGen at 14. The Electric Restructuring Act characterized electricity service as "essential to the health and well-being of all residents of the [C]ommonwealth, to public safety, and to orderly and sustainable economic development." St. 1997, c. 164.

The Department and the Siting Board have repeatedly held that the provision of electricity at wholesale is the type of public benefit that qualifies corporations that own and operate generation facilities as public service corporations. NRG at 142-143; Exelon at 136; USGen at 14, and 14, n.8; Berkshire Power at 35-36. We note that our finding that the provision of electricity at wholesale is a public benefit is not limited by how the electricity is produced. See Exelon and NRG (gas-fired generation); Princeton (wind generation); Department Russell (2008) (biomass generation). The technology of generation has evolved over time, and we do not think that our finding should be limited to particular technologies.

The Department notes that state policy favors addition of BESS on the grid and has stated that increasing BESS will benefit the public. The Commonwealth created the Energy Storage

Initiative ("ESI") in May 2015, with the goal of advancing the energy storage segment of the Massachusetts clean energy industry by: (i) attracting, supporting and promoting storage companies in Massachusetts; (ii) accelerating the development of early commercial storage technologies; (iii) expanding markets for storage technologies, and valuing storage benefits to clean energy integration, grid reliability, system wide efficiency, and peak demand reduction; and (iv) recommending and developing policies, regulations and programs that help achieve those objectives. The ESI includes a study, demonstration projects, inclusion in broader policy and programs, and a procurement target for electric distribution companies.

The 2050 Clean Energy and Climate Plan ("CECP") identifies battery storage as a key technology critical to achieving Net Zero goals.[18] The development of BESS is also required by statute as the Legislature has set increasing goals for energy storage implementation. St. 2015, c. 188, An Act Relative to Energy Diversity (setting a goal of 200 MWh for energy storage procurement by 2020); St. 2018, c. 227, An Act to Advance Clean Energy (setting a goal of 1000 MWh for energy storage by 2025); St. 2022, c. 179, An Act Driving Clean Energy and Offshore Wind (requiring each electric company to develop an electric-sector modernization plan to upgrade the distribution and, where applicable, transmission systems, including promoting energy storage and electrification technologies).

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[18] 2050 CECP, Chapter 8, 134. The 2050 CECP can be found at https://www.mass.gov/doc/2050-clean-energy-and-climate-plan/download.

ISO-NE identifies battery storage projects as approximately 35 percent of the nearly 32,000 MW of new generating resources as of January 2023.[19] ISO-NE notes that battery storage plays an important role in improving reliability by balancing fluctuations in supply and demand with increasing levels of intermittent renewable resources to meet regional system demands.[20]

The Department has assessed Medway Grid in light of the Save the Bay factors, Department and Siting Board precedent, and the totality of the record in this proceeding, and finds that the Company is in the business of owning and operating facilities that provide energy services to the electric grid, and will make those assets available to the electric grid. See USGen, at 15 n.9. In addition, the Department finds that because Medway Grid will provide energy services in Massachusetts and the asset will be available to serve the New England market, Medway Grid would provide a necessity or convenience to the general public which could not be furnished through the ordinary channels of private business; Medway Grid is subject to the requisite degree of governmental control and regulation; and Medway Grid would provide a recognized public benefit by providing electricity to the electric grid. In addition, Medway Grid will provide a benefit to the public that will advance the Commonwealth's climate objectives. Therefore, the Department finds that Medway Grid is a public service corporation for the purposes of G.L. c. 40A, § 3.

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19 See https://www.iso-ne.com/static-assets/documents/2021/03/new_england_power_grid_regional_profile.pdf.

20 See https://www.iso-ne.com/about/what-we-do/in-depth/batteries-as-energy-storage-in-new-england.

C. Public Convenience and Welfare

1. Standard of Review

In determining whether the present or proposed use is reasonably necessary for the public convenience or welfare, the Department must balance the interests of the general public against the local interest. Save the Bay, 366 Mass. at 680; Town of Truro v. Department of Public Utilities, 365 Mass. 407, 410 (1974) ("Town of Truro"); K Street Substation at 7. Specifically, the Department 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) ("New York Central Railroad"); K Street Substation at 7; Hopkinton LNG at 10. When reviewing a petition for a zoning exemption under G.L. c. 40A, § 3, the Department is empowered and required to consider the public effects of the requested exemption in the state as a whole and upon the territory served by the applicant. Save the Bay, 366 Mass. at 685; New York Central Railroad, 347 Mass. at 592.

With respect to the particular site chosen by a petitioner, G.L. c. 40A, § 3, does not require the petitioner to demonstrate that its primary site is the best possible alternative, nor does the statute require the Department 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 primary 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; K Street Substation at 7.

Therefore, when making a determination as to whether a petitioner's present or proposed use is reasonably necessary for the public convenience or welfare, the Department 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 Department then balances the interests of the general public against the local interest, and it determines whether the present or proposed use of the land or structures is reasonably necessary for the convenience or welfare of the public. K Street Substation at 8; Hopkinton LNG at 6; Tennessee Gas Company, D.T.E. 98-33, at 4-5 (1998).

2. Need for or Public Benefit of Use

a. Description

The Company's Zoning Petition noted that the Department examines the need for, or public benefits of, the present or proposed use in deciding whether to grant a zoning exemption request (Exh. MG-3, at 10).[21] Medway Grid asserts that the Project is needed for reliability purposes (Company Brief at 2-3). The Company stated that the Project "has the capability of serving multiple applications interchangeably, including providing capacity supply, peak shaving, peak shifting, system resilience, renewable intermittency mitigation and ancillary services" (Exh. MG-3, at 10). The Company noted that the Project "may be able to achieve some of these applications simultaneously, thereby, combining multiple streams to benefit the public" (Exh. MG-3 at 10).

[21] The Zoning Petition referred to information contained in the Section 69J¼ Petition as demonstrating need for the Project's proposed use and the public benefit that results from meeting that need (Exh. MG-3, at 10).

The Company stated that "need for the Project was determined when ISO-NE awarded Medway Grid a capacity contract in the Forward Capacity Auction (FCA) 15, based upon its ability to provide 250 MWs/500 MWhs of capacity at the most affordable price" (Exh. MG-3, at 10-11). The Company noted that the Project has been designed to participate in ISO-NE's Forward Capacity Market and will contribute to system reliability in the SENE capacity zone of ISO-NE, comprised of Northeastern Massachusetts, Greater Boston, Southeastern Massachusetts, and Rhode Island (Exhs. MG-1, at 3; MG-3, at 11). The Company noted that the Project will also participate in the ISO-NE Day-Ahead and Real-Time energy markets, and ancillary service markets (Exh. MG-1, at 3). In addition, the Company described its intention to participate in the Massachusetts Department of Energy Resources ("DOER") Clean Peak Program and earn Clean Peak Standard certificates for the dispatch of energy during prescribed peak periods (Exhs. MG-2, at 1-2; EFSB-G-2; Tr. 3, at 407-408; Company Brief at 47).

As noted above, the Company also described how the Project would be consistent with, and help further, the Commonwealth's legislative and policy goals enacted over the past several years (Exh. MG-2, at 3). Such legislative enactments, policies and programs include: the 2008 Global Warming Solutions Act ("GWSA"), St. 2008, c. 298; the Energy Storage Initiative launched in 2015; An Act Relative to Energy Diversity, St. 2016, c. 188 (which directed DOER to adopt targets to achieve the state's energy storage goals); An Act to Advance Clean Energy, St. 2018, c. 227, enacted in 2018 that increased the Commonwealth's energy storage target; the Massachusetts Clean Peak Standard, 225 CMR 21.00 (designed to provide incentives to clean energy technologies that can supply electricity or reduce demand during seasonal peak periods, thereby displacing non-renewable generating resources); and the 2050 Net Zero target (adopted in the

Next-Generation Roadmap for Massachusetts Climate Policy enacted in March 2021, St. 2021, c. 8) (Exhs. MG-2, at 64-67; MG-6, at 2-2 to 2-5).

The Company stated that, in general, battery storage projects store excess energy when it is abundant and underutilized and make it available at times of peak demand (Exh. MG-6, at 2-1). The Company indicated that, if the Project is dispatched to meet peak demand (instead of a fossil fuel peaker plant), the Project would displace the fossil fuel power and emissions that would have otherwise been dispatched to serve peak load (Exh. MG-6, at 2-1). The Company noted that because renewable energy sources such as wind and solar are intermittent, energy storage is a necessary complement to help make full use of these renewable sources (Exh. MG-6, at 2-1). It is for this reason, the Company stated, that Massachusetts has established both renewable energy goals and battery storage goals, in an intertwined manner (Exh. MG-6, at 2-1). The Company noted that the emissions that Medway Grid would displace over time will depend on the pace at which wind and solar projects are deployed within the ISO-NE area (Exh. MG-6, at 2-1). The Company anticipated that the amount of carbon reduction from battery storage projects would increase year-over-year, but cannot be calculated in advance (Exh. MG-6, at 2-1).

The Company acknowledged that a precise quantitative measurement of the amount of stored energy to have originated from renewable sources (or the electricity displaced at fossil fuel generating facilities by discharge of the BESS) is not provided by the NEPOOL Generation Information System ("GIS") (Tr. 3, at 390-391, RR-EFSB-9).[22] The Company argued, however,

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22 The NEPOOL GIS is the generation accounting system used for tracking compliance with various attribute-related electricity market regulatory requirements of Massachusetts and other New England states (Tr. 3, at 390-391; RR-EFSB-9).

that the BESS requirements in the Clean Peak Program increase the likelihood of storing grid electricity during hours when renewable energy generation is more prevalent on the system, and discharging energy during peak hours, when fossil fuel generating units (typically operating to meet marginal energy demand) would likely be displaced by the BESS discharge to the grid (Exh. MG-2, at 66-67; Tr. 3, at 383).[23]

b. Positions of the Parties

i. Medway Enumerated Parties

MEP acknowledges that Medway Grid has a June 1, 2024, CSO with ISO-NE but faults the Company for having "made a commitment to ISO-NE that they could not guarantee," and that "[t]he residents of the Town of Medway had no involvement in that business decision and no obligation to that commitment" (MEP Brief at 5-6). However, MEP "does not dispute that a BESS facility would enhance energy reliability" although it does not regard the Project as being "time sensitive" (MEP Brief at 6).

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[23] DOER Clean Peak regulations specify BESS charging requirements "coincident with periods of typically high renewable energy production as a percent of the grid generation mix...(.)" 225 CMR 21.05(1)(2)(c). Clean Peak Certificates are created for BESS discharge during hours that are coincident with seasonal peak loads, when fossil fuel generating sources are more likely to be meeting marginal electricity demands. 225 CMR 21.05(3)(a); 225 CMR 21.05(4)(a). The Clean Peak regulations also establish a third-party Program Administrator to receive 15-minute interval metering data from eligible BESS facilities that track charging and discharging activity. 225 CMR 21.05(2). Based on the metering data, the Program Administrator determines the number of Clean Peak Certificates a qualified BESS resource has earned in a given period and reports them to the NEPOOL GIS for the purpose of "minting Clean Peak Certificates." 225 CMR 21.05(2). See Exh. EFSB-CPC-6 for Clean Peak regulations.

ii. Charles Myers

Mr. Myers disputes the Company's assertions that the Project's BESS would produce environmental benefits by increasing the use of clean and renewable energy and displacing the use of fossil fuels to generate electricity (Myers Brief at 6-7). Mr. Myers argues that the Company itself has acknowledged several key facts: (1) the Project does not have a dedicated on-site renewable energy source to recharge its batteries; (2) the Project does not have a contractual pairing with a qualified Renewable Portfolio Standard ("RPS") resource; (3) the recharging of the Project's BESS is subject to bids the Company would submit to ISO-NE, and therefore, is only indirectly controlled by the Company; and (4) the process of recharging and discharging the BESS has system efficiency losses that require the Company to procure more energy from the grid than it returns to the grid when discharging (Myers Brief at 6-7, 18-19; Myers Reply Brief at 12-13).

Mr. Myers contends that the Company's representation of air emissions benefits is based on its participation in DOER's Clean Peak Program, which provides an option of BESS recharging from the grid (coincident with periods of typically high renewable energy production) rather than from dedicated on-site renewable energy, or a contractual energy supply from an RPS resource (Myers Brief at 4-5, citing 225 CMR 21.05(1)(a)). Mr. Myers argues that, even if recharging occurs during the prescribed seasonally defined recharging hours of the Clean Peak Program, "[i]t does not mean that Medway Grid is using renewable energy and [the Project] will actually be using the composite grid mix for that time period" (Myers Brief at 18). Without a dedicated renewable energy resource, Mr. Myers argues that Medway Grid is reliant on the grid's overall composition of fossil and renewable resources when recharging (Myers Brief at 7). He reasons that the composite emission profile would, therefore, apply to Medway Grid, and emissions would

occur at generating locations elsewhere in Massachusetts, including those in environmental justice populations (Myers Brief at 28; Myers Reply Brief at 4). Additionally, Mr. Myer's contends that the emissions profile of the Project is exacerbated by the energy losses that occur during charging and discharging of the BESS (Myers Reply Brief at 13-14). Finally, Mr. Myers points out that Medway Grid has not yet submitted an application to participate in the Clean Peak Program (Myers Brief at 18, citing Exh. EFSB-CPC-8).

c. Analysis and Findings

The Company has described the role of the Project in meeting capacity needs in the SENE wholesale electricity market area administered by ISO-NE and ensuring system reliability during the period from 2024 through 2031 (Exh. MG-1, at 3). Despite the Siting Board's earlier determination that the Project is not a "generating facility" for the purpose of 164, § 69J¼, this determination does not alter the need for the Project and its energy resource benefits. The Project has a CSO with ISO-NE to provide capacity by June 1, 2024 (Exhs. MG-2, at 1; EFSB-Z-4). Although it places responsibility on Medway Grid for any difficulties in meeting the timeframes of the ISO-NE CSO, MEP acknowledges that a BESS facility would enhance energy system reliability (MEP Brief at 6).

The Siting Board has found on various occasions that successful participation of an energy resource in the ISO-NE wholesale market, and a resulting CSO to provide contracted capacity and energy when called upon, is an indicator that a wholesale energy resource is needed for reliability purposes by Massachusetts customers, and the New England market. See Exelon West Medway LLC and Exelon West Medway II, LLC, EFSB 15-01/D.P.U. 15-25 (2016) ("Exelon West Medway") at 17; NRG Canal 3 Development LLC, EFSB 15-06/D.P.U. 15-180, at 143, 156

("Canal"). The Company has also identified other important wholesale market opportunities in which the Project may participate, including the day-ahead and real-time energy, and ancillary services (Exh. MG-1, at 3). The Department views the Project's ability in providing multiple services in the wholesale market as another indication that it would play a useful role in providing diverse benefits to the respective markets and their customers.

The record in this proceeding also establishes that the Project would provide important benefits in keeping with legislative and policy goals enacted by the Commonwealth over the past several years to advance energy reliability, increase the use of clean and renewable energy, and achieve net zero carbon emissions in the Commonwealth by 2050. The Company intends to participate in multiple, complementary market opportunities through ISO-NE, and also at the state level, such as the Clean Peak Program (Exh. MG-2, at 1-2; Tr. 3, at 407-408). Importantly, the Company has identified the Clean Peak Program as a significant potential source of market revenue that helps make the economics of the Project favorable (Tr. 3, at 407-408).

The Department observes that Medway Grid's participation in the Clean Peak Program is relevant to the question of what mix of grid electricity the Project is likely to use to charge the BESS, and what sources of grid electricity the BESS would likely displace when discharged. We note that, by design, the Clean Peak Program requires recharging during hours when renewable energy production is anticipated to be most prevalent, and discharging during hours when system peaks are most likely to occur, and fossil fuel generating facilities would likely be displaced by

BESS discharge.[24] As Mr. Myers correctly observes, the Clean Peak Program does not guarantee that renewable energy is always used to charge the BESS, or that output from fossil fuel generating facilities would be avoided when the BESS is discharged (Myers Brief at 18). However, we note that DOER's design of the Clean Peak Program is intended to provide a degree of assurance that recharging occurs when renewables are most likely to be marginal resources, and that prescribed discharging occur during system peaks when fossil fuel generating facilities are most likely to be marginal resources that would be displaced.[25] Therefore, the Project's participation in the Clean Peak Program would help to ensure additional energy and environmental benefits, beyond those for participation in the ISO-NE wholesale market.[26,27] To help ensure attainment of the Project's

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24 Under the Clean Peak Program, the prescribed hours for BESS recharging are applicable only when a BESS participant has neither a dedicated on-site renewable resource, nor a contractually paired RPS resource available for recharging. See 225 CMR 21.05(1)(2)(c).

25 The Department does share Mr. Myers's concern that without a more rigorous real-time accounting system to track marginal sources of the energy stored in a BESS, and the generating sources avoided when the BESS is discharged (both, inclusive of loss factors), the emission benefits of a grid-charged BESS facility are not assured. We encourage DOER to explore such accounting questions in any future refinements of the Clean Peak Program.

26 As Mr. Myers correctly notes, efficiency losses from charging and discharging a BESS could diminish any net emissions benefits realized on the grid. The level of such combined efficiency losses for charging and discharging cited by Mr. Myers is approximately ten percent (Myers Brief at 19, citing Tr. 2, at 292). The Department infers that any emissions benefits from charging/discharging the BESS would be reduced by a similar percentage as the efficiency losses. Conversely, if BESS charging/discharging results in increased emissions, the efficiency losses would increase the net emissions by a similar percentage as the efficiency losses. As noted above, participation of the Project in the Clean Peak Program should help ensure that there are net emissions benefits from charging and discharging the BESS.

27 The Department notes that Medway Grid has not yet sought registration in the Clean Peak Program. There is ample time for that to occur prior to commercial operation of the

asserted renewable energy and air emission benefits, the Department requires the Company to submit an application to register the Project as an eligible resource with the Clean Peak Program within 120 days of the facility's commercial operation.

Accordingly, in view of the above, the Department finds that the Company has demonstrated that the Project is needed and that the construction and operation of the Project would result in public benefits.

3. Alternatives Explored

a. Description

Medway Grid stated that it conducted a comprehensive analysis to determine a suitable location for the 250 MW BESS (Company Brief at 14). The locations the Company evaluated had to meet specific requirements, including that the BESS be located: (1) within the immediate vicinity of the Eversource Substation in West Medway; (2) on a parcel of land greater than five acres; (3) in an area with existing access to a public roadway; and (4) in an area where the Project would have compatibility with surrounding land uses (Exhs. MG-2, at 44-45).[28] In addition to the Project Site, the Company identified two other sites (Candidate Sites 2 and 3) (Exh. MG-2, at 45). The Company also evaluated underground and overhead transmission corridor options from the Project Substation to the Eversource Substation (Exh. MG-2, at 59).

Project, and there are also strong economic incentives for Medway Grid to participate in the Clean Peak Program.

[28] The Company also described a "no build" alternative (Exh. MG-2, at 58). The Company explained that under this alternative, the Project would not be constructed and thus the Commonwealth would not meet its need for adequate capacity in the SENE capacity zone (Exh. MG-2, at 58). The Company did not offer further evaluation of this alternative (Exh. MG-2, at 58).

Candidate Site 2 is approximately 11.16 acres and comprises two parcels of land, one of which is owned by Eversource, off of Milford Street in Medway (Exh. MG-2, at 51). The Company explained that the two land parcels contain existing electric transmission infrastructure, a private residence and undeveloped forested upland (Exh. MG-2, at 51). The Company stated that the location of Candidate Site 2 within the SENE capacity zone and proximity to the Eversource Substation make it suitable (Exh. MG-2, at 57-58). However, the Company noted that this site alternative would result in the greatest impact to mature forested areas and was also not available for lease or purchase (Exhs. EFSB-SS-13; MG-2, at 57-58).

Candidate Site 3 is approximately 36-acres and consists of multiple existing parcels of land owned by multiple landowners (Exh. MG-2, at 54). The Company explained that the parcels are located along the Town of Medway and Town of Bellingham boundary, between Tulip Way and Stone End Road (Exh. MG-2, at 51). The Company stated that the Candidate Site 3 site is predominantly undeveloped and forested (Exh. MG-2, at 54). However, the Company noted that the site has an existing natural gas transmission corridor crossing and approximately four acres cleared for livestock (Exh. MG-2, at 54; Company Brief at 18). The Company stated that there is also an extensive wetland system and waterbody in the western portion of the site (Exh. MG-2, at 54).

While Candidate Site 3 is also located within the SENE capacity zone and proximate to the Eversource Substation, the Company considered it inferior to the other two sites for several reasons (Exh. MG-2, at 58). First, the Company stated that the Project at this location would result in impacts to the existing livestock land use (Exh. EFSB-SS-13; Company Brief at 18). Next, the Company determined that this site alternative would require a 3000-foot transmission

interconnection – twice as long as the other two candidate sites (Exh. MG-2, at 58). Finally, according to the Company, Candidate Site 3 does not have direct access from a public roadway, and would require additional easements from private landowners and Eversource for site access (Exh. EFSB-SS-4).

Medway Grid described the overhead transmission interconnection option as being approximately 1,800 feet long and requiring the Company to clear a corridor 100 feet in width (Exh. MG-2, at 59). The transmission line would be supported on eight steel lattice structures that are approximately 120 feet tall (Exh. MG-2, at 59). The Company stated that the overhead option would result in 4.13 acres of land alteration and would be located within the 100-foot buffer zone to BVW (Exh. MG-2, at 59). The Company argued that the underground option, which is its preferred option, would require substantially less land alteration (Exh. MG-2, at 59). Additionally, the Company indicated that the underground transmission line would be located entirely outside of 100-foot wetland buffer zones and riverfront areas ("RFA") (Exh. MG-2, at 59).

b. Positions of the Parties

i. Medway Enumerated Parties

MEP contends that in choosing the Project Site, Medway Grid is inconsistent with the siting practices of its parent company at its other BESS facilities in California and Texas, which are more distant from residential and commercial properties (MEP Brief at 2, citing Exh. MEP-14). MEP argues that locating a BESS facility on land already zoned for such facilities makes more sense (MEP Reply to Company Brief at 6). MEP asserts that the Company has not explained why it chose the Medway site instead of Company-controlled sites in two communities outside of Medway that "had been approved by ISO-NE" (MEP Brief at 12; MEP Reply to

Company Brief at 5-6). MEP alleges that these two additional sites provide substantially greater distance from residential properties (MEP Reply to Company Brief at 6). MEP also argues that Medway Grid could utilize more than one site for its BESS facility (MEP Reply to Company Brief at 6, 13). Finally, MEP suggests that a "financial decision" to locate a facility in Medway based "solely on profit" should not be the dominant criteria for siting (MEP Reply to Company Brief at 6). MEP further asserts that Medway Grid can explore opportunities to reach an agreement with owners of land in Medway that is currently and properly zoned for BESS or find land in other communities that is properly zoned (MEP Reply to Company Brief at 14).

ii. Charles Myers

Mr. Myers alleges that the Massachusetts grid system includes other substations along high voltage transmission corridors which offer equally attractive connection points for a BESS (Myers Brief at 5). Mr. Myers also argues that the Company failed to demonstrate that it evaluated other substation sites other than 345 kV substations in the region (Myers Reply Brief at 3). Mr. Myers asserts that the Company has previously submitted additional Massachusetts sites (outside of Medway) to ISO-NE, and received a favorable response, and that Medway Grid should have disclosed this in the proceeding (Myers Brief at 5, 28).[29] Mr. Myers also argues that the "no-build" alternative is not a source of increased emissions (Myers Brief at 5).

[29] Mr. Myers's Brief includes a link to ISO-NE correspondence to Able Grid Infrastructure Holdings LLC regarding Proposed Plan Applications (Myers Brief at 5). However, the referenced document has not been submitted as evidence in this proceeding, and the Department does not consider it. Mr. Myers also claims these additional sites demonstrate that the Company is considering BESS interconnection distances of up to two miles, and that site evaluations in Medway should have been similarly flexible (Myers Brief at 5).

Mr. Myers asserts that the Company failed to discuss the modular nature of BESS that could reduce the scale of the BESS in Medway (Myers Reply Brief at 3). Mr. Myers contends that the Project is too large for the selected site and should be downsized (Myers Brief at 30). Mr. Myers suggests that the Company could split the number of Megapack 2XL units between a site in Medway and a site in another part of the state to avoid noise and wetland impacts (Myers Brief at 6, 27). Mr. Myers advises that the Company be directed to reduce the number of BESS units on site to enable environmental compliance (Myers Brief at 27).

iii. Company Response

The Company asserts that MEP's and Mr. Myers's positions with respect to the alternative sites are not supported by the record or the requirements of the law (Company Reply Brief at 5). The Company contends that the siting parameters of affiliated projects in California and Texas have no relevance to the siting of the Project in Medway and, in any event, are not in the record of this proceeding (Company Reply Brief at 5).[30]

The Company alleges that the record is clear that it conducted a comprehensive analysis to determine a suitable location for the BESS (Company Reply Brief at 6). The Company explains that the locations evaluated meet specific requirements for a project of the size and scope under consideration (Company Reply Brief at 6). The Company also contends that a 115 kV transmission line could not accommodate 250 MW of power (Company Reply Brief at 6).

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30 Medway Grid cites language from G.L. c.164, § 69J ¼ and states that the siting considerations that went into projects in other areas of the country are not relevant to the instant proceeding (Company Reply Brief at 5). The Company also argues that contrary to Mr. Myers's claim, the Siting Board does not require alternative site descriptions be limited to different municipalities (Company Reply Brief at 6).

The Company adds that it is contemplating the two additional BESS project sites raised by Mr. Myers in his brief (Company Reply Brief at 6). Nonetheless, the Company states that those projects propose fewer MW than the Project and thus require different sites with different interconnection parameters, and would have been inappropriate to include in the site selection process for the Project (Company Reply Brief at 6). Medway Grid argues that without the Project (aka, the "no build option"), the Commonwealth would not meet its need for adequate capacity in the SENE capacity zone as it has been awarded a capacity contract via FCA 15 (Company Reply Brief at 7).

c. Analysis and Findings

When deciding as to whether a petitioner's present or proposed use of a site, under G.L. c. 40A, § 3, is reasonably necessary for the public convenience or welfare, the Department examines, among other things the present or proposed use, and any alternatives or alternative sites identified. Boston Gas at 2-6; Tennessee Gas at 5-6. Under G.L. c. 40A, § 3, the developer's site selection analysis is one factor to include in a determination of whether a use is reasonably necessary for the public convenience or welfare. See Martarano v. Department of Public Utilities, 401 Mass. 257, 265 (1987) (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); New York Central Railroad, 347 Mass. at 591. The Department acknowledges that the Company relies, in part, on its site selection information

provided in the now dismissed Siting Board Petition as support for its Zoning Petition.[31] While the Siting Board Petition was filed pursuant to G.L. c. 164, §69J¼, the Zoning Petition at issue in this proceeding was filed pursuant to G.L. c. 40A, § 3. Both the petitions were noticed and briefed by the parties. Further, to the extent that the different standard for Department zoning exemptions is material to the parties' arguments, after the Siting petition was dismissed, the Department allowed supplemental briefing to present additional argument.[32]

Medway Grid provided descriptions of three sites for the Project, all located in the vicinity of the Eversource Substation, as well as a "no-build" alternative (Exh. MG-2, at 45). The Company also evaluated an overhead version of the interconnection line between its proposed Substation and the Eversource Substation (Exh. MG-2, at 59). The record shows that the Project is needed and that the construction and operation of the Project would result in public benefits. See Section II.C.2. Specifically, the Project is required to provide capacity and energy to the ISO-NE Forward Capacity Market; would provide other services in the ISO-NE wholesale market; and would help achieve additional energy and environmental benefits (Exh. MG-3, at 10-11). Therefore, the Department finds that the "no-build" alternative is not a viable solution. The record also shows that the overhead approach to construction the interconnection line would have more land and wetland impacts than the underground option (Exh. MG-2, at 59).

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31 G.L. c. 164, § 69J¼ requires the Siting Board to determine whether an applicant's description of the site selection process used for the proposed generating facility is accurate. Exelon West Medway LLC and Exelon West Medway II, LLC, EFSB 15-01/D.P.U. 15-25 (2016) ("Exelon West Medway") at 8; Footprint Power at 10; Montgomery Energy Billerica Power Partners, LP, EFSB 07-2 (2009) ("Montgomery Energy") at 8.

32 The Department notes that neither MEP nor Mr. Myers filed supplemental briefs.

The Company evaluated the three candidate sites according to a set of criteria and chose the Project Site as a result (Exh. MG-2, at 45). Specifically, the record shows that the other two candidate sites would have significant deficiencies that include: additional cleared forested uplands; impacts to existing livestock land use; construction in BVW; a longer interconnection with additional environmental impacts; and are sites that require additional easements and may not be commercially available for purchase or use (Exh. MG-2, at 57-58; Company Brief at 18).

MEP and Mr. Myers suggest additional alternative approaches to achieving the Project outcome, including using sites in other towns, and reducing the Project footprint at the Company's preferred site by using two different sites to achieve the desired capacity (MEP Brief at 12; Myers Brief at 27, 30). G.L. c. 40A, § 3, does not require the petitioner to demonstrate that its primary site is the best possible alternative, nor does the statute require the Department to consider and reject every possible alternative site presented (and not 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 primary 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; K Street Substation at 7. The record in this proceeding demonstrates a sufficient basis for the Department to conclude that the proposed Project Site is preferred in comparison with alternatives that have notable deficiencies.

Accordingly, the Department finds that the Company's weighing of alternatives and decision to pursue the Project is reasonable. As part of its review of public convenience and

welfare, the Department will next evaluate the impacts of the proposed Project at the chosen Project Site.

4. Impacts of Proposed Use

a. Introduction

The Department examines the impacts associated with construction and operation of the proposed Project. In Section II.C.4.b.x, below, the Department considers impacts associated with emergency events.

b. Impacts of Project

i. Construction Schedule

Medway Grid anticipates the total timeline for construction and commissioning of the Project lasting approximately 240 days (Exh. EFSB-CM-1). As required by the Company's HCA with the Town of Medway, its construction hours would be restricted to 7:30 a.m. to 6:00 p.m. from Monday to Friday (Exh. EFSB-G-26(1) at 9).

The Company stated that the sequence of work would generally be the following: (1) site preparation; (2) underground civil utilities installation; (3) BESS underground electrical conduits, ground grid and foundation construction; (4) Transmission Interconnection preparation and construction; (5) Substation preparation and construction; (6) BESS equipment delivery and installation; (7) BESS equipment cabling, termination and grounding; (8) BESS equipment testing and commissioning; and (9) auxiliary electrical installations (Exh. EFSB-CM-5). The Company explained that certain phases of construction would overlap with each other (Exh. EFSB-CM-1). The Company will prepare and submit a construction management plan to the Town that will include several of Medway Grid's HCA obligations (Exh. EFSB-G-26(1) at 8)).

The major phases of construction by Eversource at the Eversource Substation include: (1) ensuring outages on station equipment; (2) removing electric bus work and foundations; (3) installing new foundations for structures and equipment; (4) installing new wiring trenchwork; (5) installing structures; (6) installing equipment and protection and control equipment; (7) installing minor conduit and connections, (8) pulling all wiring and terminating them, (9) installing bus work, strain bus and high voltage connections; (10) calibrating protection and control equipment; (11) coordinating with customer equipment; and (12) testing (Exh. EFSB-CM-2).

ii. Land Use, Historical and Archaeological Impacts

According to the Company, the predominant land use categories that apply to the Project Site in its current condition are residential, followed by industrial (Exh. EFSB-LU-1(1)). Land cover types within the Project Site include: previously disturbed area; previously cut (early successional forest) area; oak/maple forest; pine/oak forest; forested wetlands; 100-foot wetland buffer zones; 25-foot no-disturbance zones around wetlands; and 200-foot Riverfront Area (Exh. EFSB-LU-2(1)). The Company stated that the 25-foot-wide underground Transmission Interconnection corridor would pass through previously cut areas and oak/maple forest cover (Exh. MG-6, at 5-4). Four hundred and seventy feet of the underground transmission line length would pass through existing and currently maintained electric and gas transmission ROW, while the remaining 165 feet and 830 feet would pass through previously cut area and forested area, respectively (Exh. MG-6, at 1-5). Preparing the corridor would involve the clearing of vegetation, which will be seeded and allowed to revegetate with low-growing vegetation similar to the existing utility corridor (Exhs. EFSB-LU-4; MG-6, at 1-5).

Medway Zoning Bylaw requires that removal of trees be minimized to the extent possible (Exh. EFSB-Z-9, at 184). According to the Company, 20 mature trees would have to be removed within the Project footprint area, including eleven trees on the Project Site and nine trees on the Transmission Interconnection corridor (Exh. MG-6, at 5-4). Proposed mitigation for removal of vegetation and mature tree cover includes the planting of a vegetated buffer between Milford Street and the proposed sound attenuation barrier comprising approximately 53 trees and 178 shrubs (Exh. MG-6, at 5-5). The Company stated that the Project has been developed to retain a significant mature forest buffer of approximately 500 to 1000 feet between the BESS facility and the residences along Little Tree Road (Exh. MG-6, at 3-3). Medway's HCA with the Company also requires the Company to provide funding to the Town for purposes of abutter property landscaping (Exh. EFSB-G-26(1) at 6-7). Additionally, the HCA requires that the Company use reasonable efforts to shield abutters from the visual and noise impacts, including through plantings and landscaping (Exh. EFSB-G-26(1) at 9).

The Company stated that the Project would have no adverse effect on archeological and historic resources (Exh. MG-6, at 10-4). The Company reported that its archeological survey revealed no potentially significant cultural materials on the Project Site (Exh. MG-6, at 6-1). The Massachusetts Historical Commission ("MHC") reviewed the archeological survey and recommended no further action (Exh. MG-6, Att. G). Further, the Company reported no potentially significant historic resources eligible for the National Register of Historic Places (Exh. MG-6, at 6-1).

According to the Company, the site is not located within Estimated or Priority Habitats of Rare Species (Exh. MG-7, at 4). The Company stated that the Project would have no adverse

effect on wildlife in the area or their movement within existing wildlife corridors in and around the site (Exh. MG-6, at 5-11).

iii. Wetlands, Water, and Groundwater Resources

(A) Wetlands

The Company maintains there will be no impact to wetlands or water resources from the Project (Company Brief at 22). According to the Company, state and local wetland resource areas located on or near the Project Area include BVW, 200-foot RFA, and the 100-foot buffer zone to the BVW (Exhs. MG-2, at 27 and Att. B, at Figure 2-1). The 100-foot buffer zone of a wetland is considered a wetland resource area by Town of Medway bylaw (Exh. MG-2, at 27). The Company stated that the wetland resource area boundaries pertaining to the Project Site and adjacent to the proposed Transmission Interconnection have been verified and approved by the Medway Conservation Commission through an Order of Resource Area Delineation, issued on February 27, 2020 (Exh. MG-2, at 8). The Company will submit a Notice of Intent ("NOI") to the Medway Conservation Commission to review the Project for compliance with state wetland regulations and the local wetland bylaw; the NOI would include a proposed RFA restoration plan (Exh. MG-6-, at 5-7, 5-10 to 5--11).[33] The RFA restoration plan would aim to restore and enhance approximately 13,000 square feet of previously developed area of the RFA of Center Brook (Exh. MG-6, at 5-5; Tr. 1, at 78-80).[34]

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[33] As per the permitting procedure outlined by the Company, the Medway Conservation Commission will review the NOI, and issue a permit in the form of an Order of Conditions (Exh. MG-2, at 27).

[34] According to the Company, the newly created RFA is not required by either the Massachusetts Wetlands to Protection Act ("WPA") or the Town of Medway Wetlands Protection Bylaw (Exh. EFSB W-14).

The Company stated that the Project has no proposed impacts within the BVW (Exh. MG-6, at 5-7). However, the Project Site occupies 11,745 square feet of the related 100-foot wetland buffer zone (Exh. MG-6, Table 5-6 at 5-8). The Project Site also occupies 17,880 square feet of RFA (Exh. MG-6, at 5-8). Work proposed by the Company within these wetland resource areas includes clearing, grading, constructing parts of the Company's proposed stormwater management system, and constructing a retaining wall (Exhs. MG-2, at 28-29). The Company committed that all Project work within the wetland buffer zone would be more than 50 feet from the delineated BVW (Exh. MG-6, at 5-8). The Company indicates that there would be no proposed impacts within the 100-foot Inner Riparian Zone of the RFA or to the mature forest cover within the 100-foot wetland buffer zone (Exh. MG-6, at 5-8).

The Company has also developed an Erosion and Sediment Control Plan that will be implemented to ensure no direct or indirect impacts to BVW resource areas during construction (Exh. MG-6, at 10-3). The Project Site is located outside Federal Emergency Management Agency ("FEMA") 100-year floodplains (Exh. MG-7, at 4). The Company also observes that there are no Outstanding Resource Waters or Areas of Critical Environmental Concern located on or near the Project Site (Exh. MG-7, at 4).

(B) Stormwater

According to the Company, the Project would create 1.5 acres of impervious surface (Exhs. MG-6, Att. I at 1-1; MG-7, at 4). The Company asserts that the stormwater management design for the Project follows Massachusetts Department of Environmental Protection ("MassDEP") Stormwater Standards and the Climate Resilience Design Standards and Guidelines developed by the Resilient Massachusetts Action Team ("RMAT") (Exh. MG-6, Att. I at 1-1; Company Brief

at 25-27). According to Medway Grid, the stormwater quality and quantities for the site will be addressed through implementation of best management practices ("BMP"), and all water treatment device designs will follow Massachusetts Stormwater Handbook standards (Exh. MG-6, Att. I at 1-4-). In addition, the HCA requires the Company to meet Massachusetts Stormwater Policy recommendations, and to comply with MassDEP Stormwater Standards and suggestions by the Town (Exh. EFSB-G-26(1) at 12).

The Company will also develop and submit a snow storage and snow removal plan for the Town's approval as required by the HCA (Exh. EFSB-G-26(1) at 12). The Company stated it has designed an appropriately sized area on the north-east corner of the site for the storage of excess snow (Exh. MG-6, Att. I at 1-4 to 1-5).

The Company's proposed stormwater management system includes:[35]

- Perforated underground pipes installed throughout the site to catch runoff that has infiltrated through the crushed rock surfacing.
- A deep sump catch-basins that would collect this percolated water for pretreatment.
- Subsurface infiltration structures that would recharge the stormwater back into the ground.
- A detention basin system to collect stormwater runoff from the site. The Company stated that the detention basin would be designed for stormwater volumes corresponding to 100-year, 24-hour storms without overflowing.
- Outfall and discharge structures that include a concrete outfall to manage outflows.
- A single corrugated high density polyethylene pipe, fitted with a vortex unit, that would gravity drain outflows from the basin structure to the bed of Center Brook (the outlet pipe from the detention basin is located just outside the 100-foot buffer to a BVW).

[35] The Company explains that these provisions were based on a 30 percent completed Project design and that the final design would dictate the pretreatment methods adopted for the Project (Exh. EFSB-W-10).

Exhs. MG-6, Att. I at 1-4; MG-2, Att. D at 371; MG-7, at 14.

The Company will develop a Stormwater Pollution Prevention Plan ("SWPPP") for the site, which the construction contractor will follow at all stages of Project construction (Exhs. MG-6, at 9-1; MG-2, at 28-29). The SWPPP will include the designation of a construction supervisor to ensure compliance with Construction General Permit and Town Order of Conditions requirements, and coordination of regular inspections on the site (Exh. MG-2, at 29). The SWPPP will also include a construction personnel contact list, a description of proposed work, stormwater controls and spill prevention measures, and inspection practices for managing construction related stormwater discharges from the Project (Exh. MG-2, at 29).

(C) Water Supply and Resources

The Company indicates that the Project would have no potential to impact any public water supply sources or other water resources (Exh. MG-2, at 26; Company Brief at 22). The Company would not use the Town's water supply during construction or operation of the Project (Exh. EFSB-W-1). The Company stated that the Project would only be connected to public water through five hydrants used for fire protection (Exh. MG-2, at 26). During construction, the Company would use portable water supply for vehicle cleaning, self-contained portable toilets and hand washing stations, and for dust control (Exh. EFSB W-1).

Regarding groundwater resources, the Company stated that the Project Site is not located in any MassDEP-approved Zone I or Interim Wellhead Protection Area (Zone II) (Exh. MG-2, at 14). The Company confirmed that the Zone II Wellhead Protection Areas nearest to the Site were 4,750 feet and 10,500 feet away (Exh. EFSB-W-3). The Company stated that a BESS does not require a source of onsite water for operation (Exh. MG-2, at 26). The Company also indicated

that the Project would not generate any process-related wastewater and would not require any sanitary sewer connection to the Town's existing sewer system (Exh. MG-2, at 26).

The Project Site is within the Charles River watershed (Exh. MG-2, Att. B at 1-1). The Company stated that the Charles River qualifies as an impaired waterbody, and that two Total Maximum Daily Loads ("TMDL")[36] apply to discharges to the river: one for pathogens, and the other for nutrient discharges (Exh. MG-6, Att. I at 1-4). The Company maintains that the Project does not require or propose to use any product that would generate excess nutrients or be a source of nutrients within the watershed (Exh. MG-6, Att. I at 1-4). The Company also indicates that its proposed stormwater treatment would achieve 80 percent total suspended solid removal (Exh. MG-6, Att. I at 1-4).

The Company estimated that excavation and fill requirements to grade the site would result in net export of 13,400 cubic yards of excavated soil (Exh. MG-7, on 3). The Company proposes to manage sediment transfer by implementing an Erosion and Sediment Control Plan (Exh. MG-6, on 9-1). The Company will install sediment control barriers between wetland resource areas and the limits of work (Exh. MG-6, on 9-1). The barriers will be maintained until the Medway Conservation Commission deems it fit to remove them (Exh. MG-6, on 9-1). The Company's construction contractor will inspect the controls before and after every significant precipitation event and repair them as needed (Exh. MG-6, on 9-1). The Company also proposes to include

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[36] A TMDL is the calculation of the maximum amount of a pollutant allowed to enter a waterbody so that the waterbody will meet and continue to meet water quality standards for that particular pollutant. See https://www.epa.gov/tmdl/overview-total-maximum-daily-loads-tmdls#1.

protection of the outfall of the dry detention basin with rip rap lining to protect the channel from erosion during stormwater flows (Exh. MG-2, Att. B at 1-3).

iv. Visual

According to Medway Grid, the greatest visual change from the Project would be along Milford Street (Route 109) with the construction of a 22-foot-high sound attenuation wall (Exh. MG-2, at 34; Company Brief at 28). Four residences along Milford Street would have a direct view of the Project Site (Exh. MG-6, at Figure 1-3 and 3-1; Tr. 2, at 169-171). The Company explains that the views from those residences are currently of wooded areas or an automotive repair shop and residence (Exh. MG-2, at 34). After the Project is constructed, the residences would see the proposed sound attenuation barrier and landscaping (Exh. MG-7, at 10).[37] See Figures 2 to 5 below for comparisons of views along Milford Street under present conditions and with the Project.

Figures 2 and 3: Existing View (left) and Proposed View (right) along Milford Street.

[37] The Company has not selected the material for the sound attenuation barrier (Exh. EFSB-NO-5).

Figures 4 and 5: Existing View (left) and Proposed View (right) along Milford Street

Source: Exh. EFSB-V-1.

The Company characterized the visual impacts of the Project to residences along Little Tree Road as minimal because the nearest residence is approximately 412 feet from the Project and shielded by forest (Exh. MG-2, at 34; Company Brief at 29). However, the Company stated that the residents would be able to partially see the 65-foot static masts above the tree line and the sound attenuation barrier during leaf-off conditions (Exh. MG-2, at 34).

During operation, the Company stated, the Project would not be lit (Exh. MG-2, at 38). The Company also stated, however, that there would be security lighting at the facility that complies with local lighting standards and would remain off unless manually turned on for occasional maintenance visits (Exh. MG-2, at 38). Medway Grid indicates that it does not anticipate using temporary lighting during construction as the Town of Medway Zoning Bylaw limits construction work hours to "daylight hours" of 7 a.m. to 7 p.m., and the HCA defines construction hours between 7:30 a.m. and 6:00 p.m., Monday to Friday (Exhs. MG-2, at 38; EFSB-G-26(1) at 9).

v. Traffic

According to Medway Grid, traffic impacts due to the initial construction of the Project and occasional on-site maintenance visits during operation would be minimal (Exh. MG-1, at 4). The Company indicated that there should not be any delays to local traffic except when delivery vehicles travel on narrow roadways, or when there is an occasional oversized vehicle (Exh. MG-2, at 40). The Company would locate any remote parking areas or contractor staging and laydown areas within previously developed and disturbed areas in proximity to the Project Site (Exh. MG-2, at 40). The Company committed to working with the Town of Medway to manage local traffic (Exh. MG-2, at 40). Additionally, as required by the HCA, the Company will implement a community outreach plan with Medway officials to keep the Town apprised of progress in constructing the Project (Exh. EFSB-G-26(1) at 14). The Company explained that, during operation, any traffic to the Project site would be limited to periodic site inspections and maintenance visits (Exh. MG-2, at 40).

vi. Noise

When operating, the BESS would produce audible noise (Exh. MG-7, at 10). Noise mitigation measures include use of low noise equipment, a 22-foot-tall sound attenuation barrier, and operational restrictions (40 percent fan speed and limiting the number of active units during the quietest periods, from midnight to 6 a.m.) (Exh. MG-7, at 10). The Company stated that the Project will comply with the MassDEP Noise Policy at all property lines and at the nearest residences (Exh. MG-7, at 10).

To assess operational noise, Medway Grid completed a sound level assessment report for the Project (Exh. MG-6, at 7--1). The Company conducted an existing sound level survey during "daytime" (7 a.m. to 10 p.m.) and "nighttime" (10 p.m. to 7 a.m.) hours to characterize existing

baseline levels in the vicinity of the Project Site (Exh. MG-2, Att. C at 5-1, 6-4). The Company chose four long-term sound level measurement locations that were representative of property lines in all four directions of the Project (Exh. MG-2, Att. C at 5-11). The Company identified existing sound sources in the areas surrounding the Project Site included vehicle traffic, wind, rustling vegetation, wildlife, insects, industrial activity, and occasional aircraft (Exh. MG-2, Att. C at 5-4). The Company used the sound level measurements from the long-term locations to evaluate the facility's compliance with MassDEP noise policy (Exh. MG-2, Att. C at 5-5).[38] The Company modeled the primary sources of sound associated with the facility as the Megapack 2XL units and the Project Substation power transformer (Exh. MG-2, Att. C at 6-1). The Company evaluated sound levels at fourteen residences, representing the closest sensitive receptors to the facility (Exh. MG-2, Att. C at 6-1).

The results of the measurements showed that daytime L_{90}[39] sound levels range from 37 to 42 A-weighted broadband decibels ("dBA"), and 31 to 32 dBA at night (Exh. MG-2, Att. C at 5-5 to 5-6). According to the Company, without any mitigation, during daytime hours, modeled sound levels increased between 8 to 28 dBA at the residential receptors and 13 to 38 dBA at night (Exh. MG-2, Att. C at 6-420). Therefore, to meet applicable noise requirements, the Company incorporated noise mitigation measures into the Project's design (Exh. MG-6, at 7-1). These

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38 MassDEP regulation 310 CMR 7.10 prohibits "unnecessary emissions" of noise and interprets increases in sound pressure levels of more than 10 dBA above ambient levels to be a violation of its noise regulation (Exh. MG-2, Att. C at 10). MassDEP's noise rules do not apply to construction. 310 CMR 7.10.

39 L_{90} is the sound level exceeded 90 percent of the time during a measurement period (Exh. MG-2, Att. C at 8).

mitigation measures include limiting the fan speeds of the Megapack 2XL units to 40 percent of their nominal speed;[40] installing 22-foot tall sound attenuation barriers along the northern and eastern sides of the site;[41] using a low-noise power transformer at the Project Substation; and nighttime operational restrictions that limit the number of Megapack 2XL units that simultaneously charge or discharge to 25 percent of the total number at night (Exh. MG2, Att. C at 7-2-).[42]

As a result of mitigation, the Company reported that the predicted increase in sound levels would be no more than 9 dBA at all modeled receptor locations at night and 5 dBA in the day (Exh. MG-2, Att. C at 6-7). The modeled daytime combined facility and background levels ranged between 39 to 46 dBA, and 33 to 41 dBA at night (Exh. MG-2, Att. C at 6-8 to 6-9).[43] The Company reported that the highest increase was at one property line north of the Project (Exh. MG-2, Att. C at 23). [44] Nonetheless, the Company stated that nine dBA was below the ten dBA

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40 According to the Company, the temperature characteristics of the Project Site dictated how much the cooling fan speeds of the Megapack 2XL could be limited (Exh. MG-2, Att. C at 29).

41 The Company reported that based on its modeling, increasing the height of the barriers above 22 feet would have no perceptible acoustic benefits (Exh. MG-2, Att. C at 29).

42 Specifically, operational restrictions apply between the hours of 10 p.m. and 6 a.m. (Exh. MG-2, Att. C at 29-30).

43 For context, the Company described 35 dBA as the sound level that would be perceived by those nearby as the sound made in a library, 42 dBA as a whisper three feet away from the person speaking, and 45 dBA as the equivalent of the noise of a "small town residence" (Exh. MG-1, Att. C at 9).

44 It appears that the receptor is PL1 (Exh. MG-2, Att. C at 22).

MassDEP noise policy criteria (Exh. MG-2, Att. C at 23). Additionally, the Company represented that the facility would not create any "pure tone" conditions (Exh. MG-2, Att. C at 6-7).

The Company committed, as part of the HCA, to performing a post-construction sound level survey to ensure that the Project is in compliance with MassDEP standards (Exhs. MWY-3; MEP-2; EFSB-G-26(1) at 10). The Company seeks an exemption from Medway Zoning Bylaw sound level requirement that is "more restrictive" than the MassDEP noise policy (Exh. MG-2, Att. C at 4-1).[45] The Company also requests that the Project be allowed to charge or discharge at maximum power level if ISO-NE implements any one of ten actions (Actions 2 to 11) under Operating Procedure 4 ("OP-4") of its Tariff, or when a Capacity Scarcity Condition exists in the Project's capacity zone (Exh. MG-2, Att. C at 7-2).[46]

Medway Grid stated that, during construction, it would require its construction contractor to implement BMPs to avoid and minimize construction noise related impacts (Exh. EFSB-NO-2). The Company represented that the sound levels from construction activity would be dominated by the loudest equipment operating at the time (Exh. EFSB-NO-3). The Company adds that it would comply with noise laws during construction as outlined in the HCA between the Company and the Town of Medway (Exh. EFSB-NO-2).

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45 It appears that the restrictions cited by the Company refer to maximum permissible sound pressure levels measured at the property line of a noise source or sensitive receptor in a Residential Zoned Property not exceeding 32 to 47 dBA depending on the time of day (Exh. MG-Z, Att. 1, at 118-119). Based on the Department's calculations, the Project would not be able to comply with the Town's regulations from the hours of 7 p.m. to 10 p.m.

46 According to the Company, the eleven actions can be used by system operators to maintain system reliability and expedite the return of normal system conditions (Company Reply Brief at 15).

vii. Air

Medway Grid represents that, during operation, the Project would have no combustion or chemical processes that emit pollutants that degrade air quality, harm human health or the environment, or contribute to greenhouse gas (Company Brief at 20). The Company stated that the Project has zero air emissions of criteria pollutants, such as nitrogen oxides, sulfur dioxide, methane, nitrous oxide and fine particulates (Exh. EFSB-A-1). The Company also indicates that by storing energy during hours when renewable energy is most prevalent on the grid, and discharging power during peak periods, the Project would also have a beneficial effect in displacing air emissions from fossil fuel peaking plants that would otherwise operate to serve peak loads (Exh. MG-6, at 2-1). See Section II.C.2, above.

Medway Grid stated that it would implement BMPs related to dust control and air quality during construction of the Project (Exh. MG-2, at 25). The Company would require its contractors to place water trucks and misters in or near the work areas during construction activities to minimize potential for airborne dust from earth-disturbing activities (Exh. MG-2, at 25). The Company would also cover excavated soil with plastic sheeting or a similar barrier to minimize the potential for release of dust or soil migration from the work area (Exh. MG-2, at 25). Additionally, the Company will install anti-tracking pads at construction entrances and carry out regular sweeping of pavement adjacent roadway surfaces to minimize the potential for construction traffic to kick up dust and particulate matter (Exh. MG-2, at 25). The Company will comply with state law, by limiting most vehicle idling to no more than five minutes (Exh. MG-2, at 26). Finally, the Company will encourage its construction contractor to use U.S. Environmental

Protection Agency ("EPA") Tier 4 standards or retrofitted equipment to minimize emissions from construction equipment (Exh. MG-2, at 26).

viii. Solid Waste and Hazardous Materials

Medway Grid stated that all wastes generated during demolition, site preparation, construction and operation of the Project will be transported offsite in accordance with local, state, and federal guidelines and regulations (Exh. MG-2, at 32-33). The Company added that it would not generate a solid or hazardous waste stream on a regular basis during Project operation (Exh. MG-2, at 33; Company Brief at 28). Nonetheless, due to the ten-year useful life of lithium-ion batteries, the BESS units would need to be replaced throughout the Project operation (Exh. MG-2, at 33). The Company indicated that the operational life of the Project would be between 20 to 40 years (Exh. EFSB-G-17). The Company stated that any used batteries will be removed from the site, transported, and managed according to all local, state, and federal guidelines and regulations (Exh. MG-2, at 33).

Regarding spill mitigation on site, the Company stated that it will prepare a Spill Prevention, Control, and Countermeasure Plan ("SPCC") (Exh. MG-6, Att. I at 2-5 to 2-6). According to the Company, the SPCC will describe spill reporting and response procedures, along with inspection and monitoring procedures, testing, and training requirements to be employed to prevent oil and hazardous materials from reaching navigable waters (Exh. MG-6, Att. I at 2-5). The Company maintains that there are no liquids in the batteries and hence no chance of a spill or leak into the environment during operation (Exh. MG-6, at 8-2). BESS components would be thermally managed by an integrated liquid cooling and heating system which, according to the Company, contains a non-hazardous coolant fluid (Exhs. MG-2, at 16; MG-6, at 8-2). The

transformers at the Project Site also would contain oil-based dielectric fluid and would include secondary containment that holds greater than 100 percent the volume of the transformer oil (Exhs. EFSB-HW-5; MG-6, at 8-2).[47]

The Company stated that during the demolition phase of the Project's site preparation it would generate solid waste such as metal, scrap wood, asphalt, brick, and concrete (Exh. EFSB-CM-15; Tr. 1, at 67). The Company committed that it would implement measures to minimize solid and other wastes and that materials would be picked up for proper processing and recycling (Exh. MG-2, at 33). Finally, Medway Grid would transport any non-recyclable solid wastes to a licensed solid waste landfill (Exh. MG-2, at 33).

According to the Company, during construction, it would use heavy equipment that contains petroleum products (Exh. EFSB-HW-6). The Company stated, however, that there would not be on-site storage of gasoline or diesel fuel (Exh. EFSB-HW-6). Additionally, the Company will confine refueling and maintenance to a designated area where mobile refueling vehicles would refuel heavy equipment or where fluids could be safely added (Exh. EFSB-HW-6). The Company clarified that, if on-site fueling of equipment is necessary, it would conduct fueling outside the wetland resource areas and the 100-ft buffer zone (Exh. MG-6, at 9-4). Any on-site fueling would be done within paved areas to the extent practical (Exh. MG-6, at 9-4).

ix. Magnetic Fields

Magnetic fields are present whenever current flows in a conductor; they are not dependent on the voltage of the conductor (Exh. MG-2, Att. E at 8). At any point, the strength of the

[47] The Company has not finalized the amount of dielectric fluid to be used (Exh. EFSB-HW-5).

magnetic field depends on characteristics of the source; in the case of power lines, magnetic-field strength is dependent on the arrangement of conductors, the amount of current flow, and distance of the receptor from the conductors (Exh. MG-2, Att. E at 8-9). Magnetic fields from transmission lines decrease with distance from the conductors (Exh. MG-2, Att. E at 9).

Medway Grid asserts that there are no impacts from electric and magnetic field levels ("EMF") from the Project (Company Brief at 31). The Company modeled maximum EMF levels from existing lines at adjacent properties to the Project to estimate existing EMF levels (Exh. MG-2, Att. E ag 17). The Company stated that post-development sources of EMF include direct current ("DC") magnetic fields from the battery banks and from the cables connecting the battery banks to the power inverters, as well as alternating current ("AC") fields from Project Substation equipment, the 345 kV AC underground Transmission Interconnection, as well as from the power inverters in each Megapack 2XL (Exh. MG-2, at 38). The Company expects that the highest levels of EMF outside the Project Site would occur directly above the underground 345 kV Transmission Interconnection from the Project Substation to the existing Eversource Substation (Exh. MG-2, at 39).[48] The Company stated that there are no residences or public facilities in close vicinity of the underground Transmission Interconnection (Exhs. MG-2, at 39; Tr. 1, 23-26).

The Company stated that the nearest residences on Milford Street are located approximately 550 feet or more from the Project Substation and the 345 kV Transmission

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[48] The Company explains that the DC EMF levels would be a small fraction of the Earth's natural static geomagnetic field, therefore the operation of those sources would have no appreciable effect on DC EMF levels outside of the Project Site (Exhs. MG-2, at 38; EFSB-MF-1). The Company adds that the power inverters, which produce AC field at frequencies greater than 60 Hz, generally cause fields that decrease rapidly to low levels within a distance of tens of feet or less (Exh. MG-2, Att. E at 23).

Interconnection, while residences along Little Tree Road are more than 450 feet away from these sources (Exh. MG-2, at 39). According to the Company, these distances are sufficiently great such that the magnetic field levels from Project equipment at the residences would fall within the range of background values (Exh. MG-2, at 39). Even for the highest current flow at full charging or discharging, the Company's model estimated that additional magnetic field levels from the Project at the residences would be on the order of 0.1 to 1 milligauss[49] ("mG") (Exh. EFSB-MF-1).

x. Public Safety

(A) Safety Standards and Plans

According to the Company, the proposed BESS was designed to comply with all relevant international, national, and state safety requirements and standards (Exhs. MG-2 at 41; EFSB-G-26(1) at 7; Company Brief at 32). The Company explained that the codes apply to "redundant safeguards built into the hardware and management systems of the BESS that mitigate the risk of fire and thermal events" as well as the design, construction, installation, commissioning, operation, maintenance, and decommissioning of the BESS (Exh. MG-2, at 41). The Company stated that standards and codes to which the BESS will adhere include but are not limited to:

- UL 1973: Standard for Batteries for Use in Light Electric Rail (LER) Applications and Stationary Applications;
- UL 9540: Standard for Energy Storage Systems (ESS) and Equipment Test Method for Evaluating Thermal Runaway Fire Propagation in Battery Energy Storage Systems;
- UL9540A: Test Method for Evaluating Thermal Runaway Fire Propagation in Battery Energy Storage Systems;
- International Electrotechnical Commission ("IEC") 62619: Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for secondary lithium cells and batteries, for use in industrial application;

[49] Gauss is a unit of measurement of magnetic induction.

- Massachusetts Comprehensive Fire Safety Code (527 CMR 1.00) which addresses requirements for stationary storage battery systems (including lithium-ion battery systems);[50]
- National Fire Protection Association ("NFPA") 855: Energy Storage Systems Standard, which establishes standards for minimizing the hazards associated with ESS;
- NFPA-70: National Electrical Code for electrical installations including BESS; and
- NFPA 1 which provides requirements for stationary storage battery systems.

Exhs. MG-2, at 41- 42; MG-6, at 8-2.

Medway Grid stated that, pursuant to NFPA 855, it prepared a draft Emergency Response Plan ("ERP") and draft Hazard Mitigation Analysis Plan ("HMA") (Exhs. MG-2, Att. G; EFSB-S-47). According to the Company, NFPA 855 sets forth the national and international safety standards for the proper installation of stationary energy storage systems (Tr. 3, at 450-451). The Company stated that the ERP will be finalized prior to operation of the facility in collaboration with the Medway Fire Department, the battery supplier, and the Medway Grid operations and maintenance team (Exh. EFSB MG-2, at 43). The final ERP will be shared with the Town of Medway prior to the commissioning of the Project (Exh. EFSB-G-26(1) at 4). The Company explains that the ERP is meant to provide guidance and documentation of the facility information; provide roles and responsibilities for safety and emergency response; identify protocols for severe

[50] The Board of Fire Protection adopted Section 1.04 of CMR 527 in December 2022, incorporating the provisions of the NFPA Fire Code, the NFPA 1 Fire Code, 2021 edition into the Massachusetts Comprehensive Fire Code (RR-EFSB-5). In turn, NFPA 1 incorporates NFPA 855 which sets forth the national and international safety standards for the proper installation of stationary energy storage systems (RR-EFSB-5).

weather planning; and identify protocols for the preparation and planning for emergencies, emergency procedures, and fire response plans (Exh. EFSB-MG-2, at 43).

The Company committed to finalizing the HMA in collaboration with the Medway Fire Department on or before June 2024 (Exh. EFSB-S-47). According to the Company, the HMA was prepared in accordance with the 2023 edition of NFPA 855 § 4.4, and evaluated the consequences of the following fault conditions: (1) a thermal runaway or mechanical failure condition in a single BESS unit; (2) failure of the BMS or protection system; (3) failure of a required protection system including, but not limited to, ventilation, smoke detection, fire detection, fire suppression, or gas detection (Exh. EFSB-S-47, at 6).

Regarding the Project Substation and Transmission Interconnection line, the Company stated that it would also comply with international, national and state standards, including but not limited to the National Electrical Safety Code, NFPA-70, Department regulations at 220 CMR 125: Massachusetts Code for the Installation and Maintenance of Electrical Transmission Lines ; and Occupational Safety and Health Administration ("OSHA") standards (29 CFR 1926) for safety of construction workers including electrical distribution and transmission industry (Exh. MG-6, at 8-2).

(B) Battery Testing and Design

The Company proposes to install a BESS that will consist of approximately 140 Tesla Megapack 2XL enclosed units (or cabinets) located on the westernmost portion of the Project Site (Exhs. MG-2, at 15). The Company provided a report on a test conducted on Tesla Megapack

2XL based on UL 9540A[51] testing parameters ("Fisher Report") (Exh. EFSB-G-8(1)). The Company describes UL 9540A as a reasonable "worst" case test scenario of thermal runaway and propagation within a unit (Company Reply Brief at 23, citing Exh. EFSB-G-8). The test was conducted by TÜV, an OSHA-approved National Recognized Testing Laboratory, at the Northern Nevada Research Center (Exh. EFSB-G-8(1) at 16).

The "credible worst-case scenario" noted by the Company in the Fisher Reports is a forced thermal runaway of six battery cells in a tray of a module at the bottom of the unit by simultaneously heating the battery cells with four film heaters, with the battery unit's safety mechanisms (designed to prevent a thermal runaway) turned off (Exh. EFSB-G-8(1) at 17).[52] Additionally, the Company provided a description of "full-scale" – cell-, unit- and module-level testing – information (Exh. EFSB-G-8(1) at 14-18). According to the Fisher Report, the design of the Megapack 2XL conforms to all standards required of a BESS (Exh. EFSB-G-8(1) at 1).

The UL 9540A testing demonstrated that Megapack 2XL meets or exceeds all performance criteria of UL 9540A (Exh. EFSB-G-8(1) at 1). According to the Fisher Report, the UL 9540A testing resulted in limited propagation of thermal runaway – the thermal runaway did not propagate beyond adjacent cells in the same battery module (Exh. EFSB-G-8(1) at 1). The Fisher

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51 According to the Company, UL 9540A testing evaluates the fire characteristics of a BESS that undergoes thermal runaway (Exh. MG-2, at 41). NFPA 855 requires this test (Exh. EFSB-S-27).

52 Thermal runaway was initiated during the test via film strip heaters installed on both of the wide side surfaces of each test battery cell at 100 percent state of charge (Exh. EFSB-G-8(1) at 11-12). The Company explained that this meant that six battery cells were heated simultaneously until they reached their thermal runaway temperature (Company Brief at 34).

Report also found that even under worst modeled wind conditions, fire did not propagate from the initiating battery unit to adjacent units when placed at clearances of eight feet in front, six inches behind and six inches to the sides (Exh. EFSB-G-8(1) at 2).

The Fisher Report also observed that the test did not result in any deflagration, flying debris, projectiles, detonation or other explosive discharge of gases (Exh. EFSB-G-8(1) at 1). Air sampling tested for 27 different hazardous metal pollutants; no traces of any of these metals were detected in the gas samples collected (Exh. EFSB-G-8(1) at 30). The air testing also included mercury and hydrogen fluoride (HF), two byproducts that are commonly of concern when discussing a lithium-ion battery fire or thermal runaway event (Exh. EFSB-G-8(1) at 30). The test detected no traces of mercury (Exh. EFSB-G-8(1) at 30). The test detected HF at values of 0.10 and 0.12 parts per million ("ppm") in the two sampling locations – two orders of magnitude below NIOSH's Immediately Dangerous to Life or Health ("IDLH") standard of 30 ppm (Exh. EFSB-G-8(1) at 31).[53] The Company adds that during UL 9540A testing, there was no free-flowing liquid runoff observed when the Megapack 2XL unit's doors were opened (Exh. EFSB-G-8 at 29).

The Megapack 2XL uses LFP-based battery chemistry (Exh. EFSB-G-4).[54] Medway Grid represents that the Megapack 2XL has built-in safety features including sensors supporting embedded battery monitoring system ("BMS"), controls and electrical interface equipment for AC

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53 The IDLH standard is an atmospheric concentration of any toxic, corrosive or asphyxiant substance that poses an immediate threat to life; would cause irreversible or delayed adverse health effects; or would interfere with an individual's ability to escape from a dangerous atmosphere (Exh. EFSB-G-8(1) at 21).

54 According to the Company, the U.S. Department of Energy describes LFP as having lower energy density and more thermal stability than other battery chemistries (Exh. EFSB-G-19, Chapter 3, at 6).

protection (Exh. MG-6, at 1-4; Company Brief at 36 citing Exh. EFSB-G-8(1) at 8-9). The Company adds that the battery enclosures are equipped with a thermal management system that operates by flowing a cooling liquid through a coolant loop into each module to ensure each cell is controlled thermally (Exh. MG-2, at 16).

The Fisher Report stated that, as required by NFPA 855, the Megapack 2XL has overpressure vents and sparker systems that work to mitigate risk of overpressure and deflagration events (Exh. EFSB-G-8(1) at 10-11). According to the Fisher Report, the overpressure vents create a natural ventilation flow path, which would not allow flammable gases to accumulate within the Megapack 2XL cabinet to compromise cabinet integrity through deflagration or an explosion (Exh. EFSB-G-8(1) at 10). Furthermore, the sparker systems are designed to ignite gases early in a thermal runaway event before there is time for the gases to accumulate within the battery enclosure and become an explosion hazard (Exh. EFSB-G-8(1) at 10). The Fisher Report finds that, by maintaining the Megapack 2XL cabinet integrity, the likelihood of a thermal event having an impact on public safety is significantly reduced (Exh. EFSB-G-8(1) at 11). Additionally, the Fisher Report stated that the likelihood of a fire propagating to other bays within the same enclosure, adjacent Megapack 2XL cabinets, or electrical equipment is reduced by maintaining cabinet integrity (Exh. EFSB-G-8(1) at 11).

During normal operation the BESS would be unmanned and remotely monitored (Exh. MG-2, at 40). The Company also stated that it would continuously monitor the Project remotely, with support from Tesla (Exh. EFSB-G-8(1) at 9). According to the Company, the facility would be controlled remotely and have internal sensors to continuously monitor system operation (Exh. MG-2, at 42). The Company adds that if safety circuits on these sensors detect an abnormal

situation, the energy supply and discharge would be stopped, and individual system components would automatically shut down (Exh. MG-2, at 42). Furthermore, the Company represented that the safety systems would allow a facility operator to remotely initiate an emergency shut down sequence that puts the system into safe mode and cause it to stop exporting or importing power (Exh. MG-2, at 42). The Company stated that facility operators would be able to assess different scenarios and take the necessary actions to mitigate impacts on the batteries and accessory equipment during maintenance work, shutdowns, or outages, and enable them to come back online smoothly and efficiently when the disruption is concluded (Exh. MG-2, at 42).

The Company stated that although the Project would not normally be staffed, operations and maintenance staff would be dispatched to the site as needed (Exh. MG-2, Att. G at 3). The Company would contract with a third-party vendor to perform operations and maintenance at the BESS facility (Exh. MG-2, Att. G at 5). The Company indicated that the vendor will be contractually obligated to meet the requirements of the Company's ERP and HMA, including, but not limited to response requirements mandated by the Medway Fire Department (Exh. EFSB-S-4). As part of the HCA, the Company is required to have an "official representative" onsite no later than two hours after notification by the Fire Department (Exh. EFSB-G-26(1) at 11).

Medway Grid's HCA with the Town includes provisions requiring the Company to provide support for the Town, including training and funding (Exh. EFSB-G-26(1) at 4, 6). For example, the HCA includes a payment for a Technical Review Fund to allow the Company to retain independent consultants and counsel (Exh. EFSB-G-26(1) at 4). The Company committed to providing emergency management preparedness training to the Town on an annual basis (Exh. EFSB-G-26(1) at 4). The Company will also fund any additional training needed for emergency

response services that the Town identifies and submits in writing (Exh. EFSB-G-26(1) at 4). Such funding support would also include assistance with the Town's emergency preparedness, and maintenance of a Risk Reduction Training Position Fund for the first four years of the Facility's operation (Exh. EFSB-G-26(1) at 6).

The Company agreed to provide a copy of any decommissioning plan in connection with permitting or approval of the Project by the Town (Exh. EFSB-G-26(1) at 13). The Company and the Town agreed to an initial bond amount of $5 million for decommissioning (Exh. EFSB-G-26(1) at 13). Medway Grid also agreed to provide the Town of Medway with at least one hundred and eighty days' prior written notice of the decommissioning of the Project (Exh. EFSB-G-26(1) at 13). In this regard, the Company has committed to conduct an appraisal of the estimated cost required to remove all equipment and structures from the Project Site, address any hazardous materials or contamination, and to restore the Project Site to a condition equal to that in existence at the time of acquisition by Medway Grid, no earlier than the tenth anniversary of commercial operation of the Project (Exh. EFSB-G-26(1) at 13).

(C) Emergency Response and Impacts

In the instance of a thermal runaway event, the Company and Tesla recommend that emergency responders allow a BESS unit to burn itself out (Exhs. MG-6, at 8-3; EFSB-W-1). However, the Company stated that water may be used during a thermal event for cooling adjacent enclosures, if necessary (Exhs. EFSB-HW-7; EFSB-S-45; MEP-35; Tr. 2, at 200, 264). Medway Grid describes this approach by emergency responders from the Medway Fire Department as a "defensive stance" to further mitigate the spread of the burning hazard (Exh. EFSB-S-45). The Company adds that the Fire Department would allow the battery unit to cool down for a minimum

of twelve hours after all fire and smoke has visibly subsided (Exh. EFSB-S-45). Finally, the Fire Department would monitor the temperature of the battery pack using a thermal imaging camera to determine whether it was safe to interact with the battery unit (Exh. EFSB-S-45). The Company stated that the final ERP and HMA would provide additional instructions, scenarios, and steps to take to safely contain and safeguard thermal runaway events (Exh. EFSB-S-45).

According to the Company, the Megapack 2XL manufacturer (Tesla) does not recommend using water for fire-fighting purposes (Exh. EFSB-W-1). However, as stated above, the Project would be connected to public water for fire protection with the installation of five hydrants onsite (Exh. EFSB-W-2). The Company stated that the five proposed hydrant locations were determined in collaboration with the Medway Fire Department based on compliance with relevant codes (Exh. EFSB-W-2). The Company will make an application to the Medway Department of Public Works when it finalizes Project engineering to determine if the 12-inch public water main on Milford Street has sufficient supply for the Project's purposes (Exh. EFSB-W-2).[55]

If water is used for cooling adjacent enclosures, the Company plans to direct any "limited water runoff" that could result from fire suppression activities into the stormwater management system and engage a licensed environmental services company to remove and properly dispose of affected runoff water (Exh. MG-6, at 8-3). According to the Company the water used during a potential thermal event would be similar to pure water run-off (Tr. 2, at 288). The Company explains that the any potential contaminants would be contained within a BESS cabinet experiencing a thermal runaway event, and that water would only be used for cooling purposes of

[55] The Company is yet to provide an estimate of water volume requirements for fire protection (Exh. MEP-32).

adjacent units (Tr. 2, at 288). The Company explains that it discourages attempts to extinguish a BESS fire with water for the following reasons:

- Application of water was found to delay the combustion of the entire BESS unit, instead of stopping it, since the fire source is often beneath several layers of steel material.

- Allowing the BESS unit to burnt itself out eliminates chances for water contamination and decreases in pH levels of the water used.

Exh. MG-6, at 8-3.

The Company indicated that combustion products for the BESS would be consistent with structural residential or commercial fires, which could include methane, carbon dioxide, hydrogen, and carbon monoxide (Exh. EFSB-HW-1). The Company stated that it did not conduct air dispersion modeling as the UL 9540A testing demonstrated that the Megapack 2XL did not emit metals or gases beyond 20 feet downwind and 5 feet upwind (Exh. EFSB-S-13).[56] The Company submits that it would finalize the minimum approach distance to be maintained to minimize the risk of persons inhaling gases generated from actively combusting battery modules in its HMA with the Medway Fire Department (Exh. EFSB-S-47).[57] According to the Company, this distance is intended to provide thermal separation distance in addition to meeting requirements for installation and maintenance activities (Exhs. EFSB-S-17; EFSB G-8(1) at 2,36). The Company

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[56] Dispersion modeling uses mathematical formulations to characterize the atmospheric processes that disperse a pollutant emitted by a source. See https://www.epa.gov/scram/air-quality-dispersion-modeling.

[57] The Company represented that Tesla recommends a minimum approach distance of 20 meters, which is approximately 66 feet (Exh. EFSB-S-47). The Department notes that this is more than the 20 feet distance at which no traces of metal or gases were found upwind during the UL 9540A testing (Exh. EFSB-S-47, at 34).

explains that this distance provided is greater than the minimum distance identified in the UL 9540A testing (Exh. EFSB S-17).

(D) Site Security

The Company stated that to prevent any vandalism or intentional harm to the facility, the BESS would be surrounded by a combination of an eight-foot-tall security fence in certain sections and a 22-foot-tall sound attenuation barrier wall (Exh. EFSB-S-15). Additionally, according to the Company, access gates will always be locked, and the site will be accessible only to qualified personnel (Exh. EFSB-S-15). The Company also agreed to make a one-time payment to the Town for the installation of sidewalks to improve pedestrian safety outside the Project Site (Exh. EFSB-G-26(1) at 6). Medway Grid also agreed to maintain insurance against risks of injury to personnel and property (Exh. EFSB-G-26(1) at 14). Addressing public safety concerns regarding performance in a seismic event, the Company maintained that although the Megapack 2XL cannot detect a seismic event, it could operate during an earthquake or tremor as it meets IEEE (Institute of Electrical and Electronics Engineers) 693-2018[58] and ICC-ES (ICC-Evaluation Service) AC156- 2018 (Exh. EFSB-S-18).[59]

The Company also commits to implement best practice cybersecurity controls and strategies in alignment with the US National Institute of Standards and Technology Cybersecurity Framework, and meet or exceed applicable NERC Critical Infrastructure Protection requirements

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58 Recommended Practice by the IEEE for Seismic Design of Substations. See https://ieeexplore.ieee.org/document/8686442.

59 ICC-ES Acceptance Criteria 156 specifies a specific input motion to which non-structural components should be subjected. See https://icc-es.org/acceptance-criteria/ac156/.

(Exh. EFSB-S-23). Such cybersecurity measures, the Company asserts, would help ensure that the Project operates in a safe, secure, and reliable manner (Exh. EFSB-S-23).

(E) Monthly Incident Reporting Condition

To ensure that the Department and the public are provided with timely information about the Project's safety performance and other matters of public concern, the Department directs the Company to submit informational monthly reports to the Department during the first six months of commercial operation. Each report shall detail: (1) any safety incidents of the Project that required notification of the Medway Fire Department, including a full description of the incident, actions taken, and lessons learned for future operation of the facility; and (2) a summary of any complaints regarding the Project received by the Company, including the date received and nature of the complaint, actions taken by the Company in response to the complaint and when, and the ultimate resolution of the complaint. All summaries of complaints shall exclude information that would identify the complainant.

c. Positions of the Parties

i. Town of Medway

The Town of Medway asserts that the conditions in its HCA with Medway Grid would help the Project minimize environmental impacts and be constructed and operated in a manner consistent with public interest (Town Brief at 2). The Town also expects that the Company make "timely and complete" filings for local permits for which approval is required (Town Brief at 3).

ii. Medway Enumerated Parties

MEP asserts that the Company's plans describing the proposed facility were not complete during the hearing process (MEP Reply to Company Brief at 1, 8). Regarding the impacts of

construction and normal operations, MEP recommends that the Company develop a drainage plan specific for the proposed site, as well as a retention pond that would isolate water or any other fire suppression material used during an incident (MEP Brief at 10; MEP Reply to Company Brief at 1, 7-8). Additionally, MEP contends that the design for sound attenuation is incomplete and lacks specifications for the proposed sound attenuation wall (MEP Reply to Company Brief at 1, 9). MEP also requests that Medway Grid be required to do quarterly testing for EMF during the first two years of operation and annually during the remaining years the facility operates (MEP Brief at 10; MEP Reply to Company Brief at 1). Finally, MEP also alleges that the Company did not share information during the hearing process regarding the area for additional BESS units to address anticipated losses of efficiency (MEP Reply to Company Brief at 1).

MEP asserts that the Project will not meet noise standards of the Commonwealth or the Town of Medway and that MEP cannot find a waiver granted to the Company regarding the Medway Noise Bylaw (MEP Brief at 4).[60] MEP argues that it is incumbent that the "peaceful enjoyment that currently exists [for residents of the Town of Medway, direct abutters and those within one half mile of the Project] is not diminished in any manner" (MEP Brief at 4; MEP Reply to Company Brief at 9). MEP contends that the Company has not explained why it cannot comply with the Medway Noise Bylaw (MEP Reply to Company Brief at 9). MEP indicates that the Project would inflict an industrial noise source on residential zoned land (MEP Reply to Company Brief at 9). MEP argues that sound attenuation levels required by the Town of Medway Noise

60 The Department notes that the Medway noise bylaw provisions are part of the Town Zoning Bylaws and Company has asked for an exemption to this requirement in its Zoning Petition (Exh. MG-Z at 8).

Bylaw can be achieved and the Project should not be approved otherwise (MEP Brief at 4-5; MEP Reply to Company Brief at 9). MEP requests that the Company contract with an independent sound monitoring engineering firm to test and document that sound levels are in compliance at least once per week at varying times during the first 52 weeks of operation with reports furnished to the Town of Medway Select Board on a monthly basis (MEP Brief at 11; MEP Reply to Company Brief at 9).

MEP asserts that Exhibit EFSB-MF-1 clearly shows that residences on Milford Street to the north of the proposed Project would be exposed to new magnetic fields (MEP Brief at 2; MEP Reply to Company Brief at 2, 10). MEP indicates that the Company's description of magnetic field levels represents "hopeful guestimates" (MEP Reply to Company Brief at 10). MEP argues that "inflicting" magnetic fields on residents, where they are not currently exposed, is unwarranted (MEP Brief at 2). MEP adds that Medway Grid should be required to conduct pre-construction EMF surveys of abutting properties and post-construction EMF monitoring monthly at different times of the day with reports shared with the Town of Medway Board of Health (MEP Reply to Company Brief at 10).

MEP disagrees that the Project would not have an impact on wetlands (MEP Reply to Company Brief at 7). MEP notes that the Project would impact RFA and wetland buffer zones (MEP Reply to Company Brief at 7). MEP observes that the Company's application did not include approvals and permits from the Medway Conservation Commission (MEP Brief at 3). MEP argues that it is presumptive of the Company to assume that the Medway Conservation Commission would issue an affirmative Order of Conditions (MEP Reply to Company Brief

at 7).[61] Further, MEP notes that it appears that the Company's current plans do not prohibit the use of deicing chemicals, which could negatively impact water quality within Center Brook and negatively impact wetlands plant life (MEP Brief at 3; MEP Reply to Company Brief at 8).

MEP argues that monitoring water visually for contamination is unacceptable (MEP Brief at 3). MEP recommends that Medway Grid have a Massachusetts Licensed Site Professional ("LSP") test water used in fire suppression during the full duration of an event and ensure that the water used for the fire suppression is directed exclusively to a clay- or rubber-membrane-lined retention pond, not into the Company's stormwater drainage system (MEP Brief at 11). MEP requests that Medway Grid be required to have an annual testing protocol by an LSP to conduct a 21E phase 1 test[62] of the land and drainage within the Site with the report presented to the Town of Medway Select Board, Conservation Commission, and posted on the applicant's social media website (MEP Brief at 10).

MEP argues that the Company's stance that the visual impacts of the Project are minimal is an expression of opinion and that abutters on Milford Street disagree with the Company's position (MEP Reply to Company Brief at 8). MEP also contends Milford Street residents will be impacted by the sound wall, and that the final design of the wall and landscaping have not been presented to the community and to direct abutters (MEP Reply to Company Brief at 8). MEP also questions

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61 MEP additionally asserts that there has been no public hearing on the Company's NOI application to the Medway Conservation Commission, and contends that upon review and a hearing, a negative Order of Conditions could result (MEP Reply to Company Brief at 7).

62 G.L. c. 21E, Massachusetts Oil and Hazardous Material Release Prevention Act, addresses identification and cleanup of property contaminated by releases of oil and/or hazardous material to the environment. A phase I or phase II report is an environmental assessment. See https://www.mass.gov/service-details/re77c13-21e-for-commercial-real-estate.

how lighting at the facility would impact abutting properties (MEP Brief at 7). MEP indicates that the proposed facility would create a "thermal impact" that needs to be evaluated in terms its impact on abutting properties, people, wildlife, and plant life in the area (MEP Brief at 3).

MEP argues that the Company has not provided a comprehensive safety and security plan to ensure that people and property within one-half mile of the site would not be harmed as a result of an accident or incident (MEP Brief at 7). MEP asserts that the Company would not have agreed to specialized training for first responders if the proposed facility presented no danger to residents or first responders of Medway (MEP Reply to Company Brief at 1-2). MEP indicates that the proposed site is in close proximity to residential and commercial properties, including a childcare center (MEP Reply to Company Brief at 2).[63] MEP adds that, operating the facility with no onsite personnel places an added responsibility on the Town of Medway police department (MEP Brief at 7). MEP asks a series of questions regarding the nature of Medway Grid's BESS remote monitoring system, as well as its proposed security plan for the facility (MEP Reply to Company Brief at 10-11). MEP requests that the Company be required to have redundant monitoring safety and security systems and to have redundant human monitoring personnel (MEP Brief at 10). MEP questions the Company's statement on the Project meeting Massachusetts, national and international safety standards (MEP Reply to Company Brief at 10).

MEP observes that the Town acknowledged that its estimate for the decommissioning of the facility was developed without the benefit of industry expert input (MEP Reply to Company Brief at 1). MEP argues that it is essential to acquire substantial expertise from the Energy Storage

63 It appears that the childcare center is located on Summer Street, east of Little Tree Road.

Association, insurers, and other appropriate organizations regarding the cost of decommissioning a BESS facility based upon the operational life expectancy of the Project (MEP Brief at 9). MEP asserts that approving a project without a professionally determined bond amount would be a potential long-term disservice to the residents of the Town of Medway and would set a precedent that is not in the best interest of the Commonwealth (MEP Brief at 9). MEP recommends that Medway Grid provide a documented bond estimate for decommissioning of the proposed facility prepared by a qualified entity (MEP Brief at 9).

MEP argues that the current iteration of the Project, which had substantial changes from the original plan, was not shared as part of a public meeting in Medway (MEP Brief at 6, 15-16). MEP argues that Medway Grid has not held additional meetings with property owners within one-half mile of the Project Site since June 2021, and has not provided additional information by mail to the owners – even though plans have been "substantially modified" (MEP Brief at 7; MEP Reply to Company Brief at 3, 16). MEP explains that the Company held only one public meeting (via Zoom) and argues that such does not constitute active engagement with the community (MEP Reply to Company Brief at 3, 16). MEP asserts that to allow an applicant of a project of this magnitude to ignore the community is a violation of public trust (MEP Brief at 7-8).

MEP asserts that the Company did not present evidence that it had experience operating a facility of this size (MEP Brief at 6). MEP questions the Company's representation of the Project meeting Massachusetts, national and international safety standards (MEP Reply to Company Brief at 10). MEP asks a series of questions regarding the nature of Medway Grid's BESS remote monitoring system, as well as its proposed security plan for the facility (MEP Reply to Company Brief at 10-11). MEP argues that building one facility to meet one half of the Commonwealth's

1000 MWh policy goal immediately adjacent to residentially zoned and occupied properties is unacceptable (MEP Reply to Company Brief at 13).

MEP listed a number of conditions that it recommends should the Project be approved (MEP Brief at 9). These MEP proposed conditions and the Company's responses are also shown in Table 1 below, followed by the Department's findings.

iii. Charles Myers

Mr. Myers argues that the Project would cause an increase in air temperatures of abutting residences during operation because of fan systems exhausting hot air from the BESS (Myers Brief at 11). Mr. Myers notes that, according to the Company, on a 113 degree Fahrenheit day, there could be an immediate temperature increase around a BESS unit to approximately 140 degrees (Myers Brief at 11, citing Tr. 1, at 121). Mr. Myers asserts that the Company's comparison of the rise in temperature to that from large areas of pavement or black rooftops is not applicable as those features do not exist at the Project Site currently (Myers Brief at 11). Mr. Myers adds that the Company did not account for the gravel area of the site, and impervious roadway surfaces on the site that would generate heat (Myers Brief at 11). Mr. Myers suggests that the vegetation that would be installed would not have mitigating impacts (Myers Brief at 11-12). Mr. Myers also questions the Company's stance that the heat impact would only be for a two-hour period, during discharge, as the fans would need to operate during recharging as well (Myers Brief at 11). Furthermore, Mr. Myers notes that the heating information provided by Medway Grid appears to apply to just a single BESS unit and not for the 141 units proposed (Myers Brief at 12).

Mr. Myers asserts that Medway Grid failed to directly ask for a waiver from Town of Medway Noise regulations, instead burying such mention in an attachment to its application to the

Siting Board (Myers Brief at 7-8).[64] Mr. Myers states that because the Project meets MassDEP noise regulations only when using operational restrictions, in the event ISO-NE implements emergency Actions 2 to 11, the Project would exceed MassDEP noise regulations (Myers Brief at 7-8). Additionally, Mr. Myers notes that the Company did not discuss noise during commissioning activities, which he argues could last months and involve the BESS running at full capacity (Myers Reply Brief at 6).

Mr. Myers notes discrepancies in the Company's testimony and HCA regarding whether it plans to conduct post construction operational noise testing (Myers Brief at 9-10). Mr. Myers asserts that if a noise test shows levels are higher than regulations permit, the Company (which claims to have reduced noise using all possible mitigation steps) may not be able to operate the Project at further reduced noise levels (Myers Brief at 10). Mr. Myers asserts that any noise assumptions by the Company are from third party information and not from actual experience (Myers Brief at 8). Mr. Myers argues that the Company has no operational history with a BESS of this scale (Myers Brief at 8-9, 22).

Mr. Myers describes the visual impacts from the Project to residences and traffic along Milford Street as immediate and long lasting (Myers Reply Brief at 4, 10). Mr. Myers also argues that visual impacts should be measured from residential lot lines, not residential structures (Myers Reply Brief at 5). Mr. Myers disputes the assertion by the Company that the distance of 412 feet from the closest residence at Little Tree Road would result in minimal impacts as residents would be able to see the Project from their backyards (Myers Reply Brief at 4-5). Mr. Myers also

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64 As stated above, the Department notes Medway Grid has asked for a specific waiver of this condition in its list of individual zoning exemption requests (Exh. MG-Z at 8).

contends that the Company's lighting plans should not violate Town of Medway Lighting Regulations (Myers Reply Brief at 5). In response to the Company's brief, Mr. Myers also indicates that there would be impacts to EMF levels from the Project (Myers Reply Brief at 7).

Mr. Myers suggests that statements made by the Company's witnesses regarding the safety features of the Megapack 2XL are unproven and cannot be relied on (Myers Brief at 9, Myers Reply Brief at 10). Mr. Myers observes that the Company did not make any Tesla witness available for hearings (Myers Reply Brief at 2). Mr. Myers also observes that the HMA draft contains contradictory statements, calling into question the level of detail of the safety review that has taken place (Myers Brief at 15, 16).[65] Mr. Myers concludes that this question over the attention to detail serves as a reason to defer any Project decisions until the contradictions can be resolved (Myers Brief at 15).

Mr. Myers also criticizes the Fisher Report for not including copies of or specific reference to the listing documents for the Megapack 2XL, calling into question the validity of the entire report (Myers Brief at 13-14). Mr. Myers asserts that the Company has not submitted evidence that the Tesla Megapack 2XL is listed to UL standards, only that the Megapack 2XL has been tested to UL 9540A by a UL-approved testing agency (Myers Brief at 12). Furthermore, Mr. Myers argues that reliance on a UL 9540A test report alone is not guarantee that a thermal event of

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65 Mr. Myers highlights HMA inconsistencies describing specific actions and procedures inconsistently – sometimes as being "anticipated" and at other times being described with certainty, or actions taken by the Company, and, at other times, taken by Tesla (Myers Brief at 16). Mr. Myers recommends that the HMA clearly define what is being monitored, by whom, and where, so that the Town of Medway and Medway Fire Department understand what an event alarm signifies and how it can be handled promptly (Myers Brief at 16).

scale would not occur in the future for a Megapack 2XL (Myers Brief at 17). Mr. Myers argues that the UL 9540A standard is not a "linchpin of safety" (Myers Brief at 8). Mr. Myers alleges that the UL 9540A test originally lacked a technical feature that could have prevented an incident that occurred in Australia (Myers Brief at 17). Mr. Myers questions whether the updated UL 9540A covers all possible types of conditions to which a BESS could be subject (Myers Brief at 17; Myers Reply Brief at 8).

Mr. Myers also suggests that the Project does not meet required standards, and that information provided by the Company is incomplete (Myers Reply Brief at 7). Mr. Myers asserts that the draft HMA is not yet complete and does not fulfill the requirements of NFPA 855 Section 4.4, and therefore the Company cannot represent that its Project meets NFPA 855 (Myers Brief at 13, Myers Reply Brief at 7-8). Mr. Myers also suggests that the draft HMA was not created by licensed individuals with operational experience with a BESS of similar scale (Myers Reply Brief at 8, 14). Mr. Myers argues that without an approved and completed HMA (and ERP) in place that includes the installation and commissioning process, the Project Site and first responders are at risk (Myers Brief at 14-15).[66] Mr. Myers explains that, with battery units arriving at the site before commissioning already containing lithium-ion chemistry, an ERP should be completed before delivery (Myers Reply Brief at 12). Mr. Myers argues that, while LFP battery chemistry may be more stable, there is a large amount of it (Myers Reply Brief at 9, citing RR-EFSB-10). Mr. Myers asserts that knowledge of what is being monitored and by whom is particularly important during

66 Mr. Myers notes that a failure incident involving a large-scale battery installation in Victoria, Australia occurred during the commissioning the BESS (Myers Brief at 14, citing Tr. 2 at 253).

commissioning (Myers Brief at 17). Mr. Myers asserts that any permit or approval should be delayed until the HMA and ERG are finalized and approved (Myers Brief at 15).

Mr. Myers notes that Medway Grid cited thermal imaging cameras as the primary source of fire detection for the Project (Myers Brief at 16). Mr. Myers asks that the Company be required to provide the "position mapping and discussion on the positioning and integration into the fire alarm system," and that an independent review be conducted on the BMS and fire detection systems (Myers Reply Brief at 10-11, Myers Brief at 15-16). Mr. Myers asserts that, should water be used for any firefighting or thermal event cooling purposes, there are no design features that: (1) prevent the stormwater basins from allowing contaminated water to enter the groundwater system, wetlands, and riverfront areas; and (2) retain contaminated water that exits the stormwater system, before a monitoring agent is able to arrive at the site (Myers Brief at 28).

Mr. Myers also notes that the Company has not discussed commissioning protocols in the record (Myers Reply Brief at 6). Mr. Myers argues that the Company's most recent construction schedule starts six months later than the initial date provided in Medway Grid's Petitions (Myers Brief at 17, citing Exhs. EFSB-MG-2; EFSB-G-1). Mr. Myers asserts that the construction schedule provided by the Company leaves insufficient time to commission the full system, adding significant risk (Myers Brief at 14). Specifically, Mr. Myers questions how the Company could compress an initially contemplated six-month commissioning period into one month and ensure safety (Myers Brief at 18).

Mr. Myers also observes that there are discrepancies between the cost of the Project in the record and extra-record information (Myers Brief at 24-25). Mr. Myers also asserts that because Medway Grid's parent company, Eolian, sold off a "substantive percentage" (35 percent) of

another project interest before construction was completed, there is a question about the commitment Eolian has to its projects (Myers Brief at 24). Furthermore, Mr. Myers represents that the amount of energy stored does not match the nameplate rating noted in the Project plans (Myers Brief at 21). Mr. Myers also argues that the Project would store more energy than 500 MWh as represented by the Company (Myers Brief at 4). Mr. Myers alleges that the overall energy storage of the Project would make it one of the ten largest battery energy projects in the U.S. (Myers Reply Brief at 2).

iv. Company Response

The Company argues that contrary to arguments by MEP and Mr. Myers, Medway Grid has operational experience with large BESS projects (Company Reply Brief at 8). The Company states that the 200 MW energy storage facility in Texas referenced by both MEP and Mr. Myers is operational (Company Reply Brief at 8). The Company adds that the Texas project provides the longest duration of any energy storage asset operating in ERCOT and is the world's largest fully-merchant, market-facing energy storage facility built-to-date (Company Reply Brief at 8). Medway Grid argues that contrary to Mr. Myers's argument, the Project is designed to discharge no more than 250 MW/500 MWh (Company Reply Brief at 26). The Company adds that all electrical generation and distribution equipment have efficiency losses, but that energy storage has one of the highest levels of efficiency (Company Reply Brief at 26).[67]

Medway Grid disputes MEP's statement that the Project "inflicts EMF radiation on residents" not currently exposed to EMF (Company Reply Brief at 8). First, the Company asserts

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67 The Company asserts that energy storage has an efficiency percentage in the mid-90s as compared to 30 percent for coal facilities and 60 percent for natural gas facilities (Company Reply Brief at 26).

that people living in modern communities are effectively surrounded by EMF (Company Reply Brief at 8, citing Exh. MG-2, Att. E). The Company states the EMF sources from the BESS are not significant contributors to EMF outside the property line (Company Reply Brief at 9, citing Exh. EFSB-MF-1). The Company contends that the highest Project-related EMF levels calculated at the nearby residences are similar to or lower than the expected background EMF levels in the area (Company Reply Brief at 9-10).

Medway Grid argues that MEP incorrectly states that water used to control or suppress a fire would become contaminated (Company Reply Brief at 10). The Company adds that the stormwater management system has deep sump catch basins that will contain water so that it can be pumped out, if deemed necessary (Company Reply Brief at 10, citing Exh. MEP-34; MEP-35). The Company also argues that including a clay or rubber membrane lined retention pond into the stormwater system would prohibit effective treatment and infiltration of natural storm water events (Company Reply Brief at 10-11).

Medway Grid asserts that, despite MEP's and Mr. Myers's claim, the record demonstrates that the Project would not have thermal impacts on abutters (Company Reply Brief at 11, citing Exhs. EFSB-LU-1; MEP-26). The Company alleges that the localized heat releases from equipment would be emitted into a suburban environment "with rural characteristics" that contains an "abundance of natural vegetation and waterbodies that provide offsetting cooling mitigation" (Company Reply Brief at 11-13). The Company further argues that the Project would use existing developed areas on the Project Site and has been designed to "preserve mature forested areas and vegetated wetlands" (Company Reply Brief at 11-12). The Company argues that the "key ingredient" for heat island effect is the abundance of urban materials combined with a lack of

natural features (Company Reply Brief at 11). The Company asserts that "urban geometry" does not occur within the Project area or on the Project Site and construction of the Project would not result in the creation of an urban environment (Company Reply Brief at 13).

The Company notes that the Project would occupy 5.6 acres of the 10.6 acres site, with the remaining 5.0 acres remaining undeveloped for the life of the Project (Company Reply Brief at 12). Furthermore, the Company asserts that it proposes to plant supplemental trees and vegetation on the Project Site to offset those removed (Company Reply Brief at 11). The Company adds that the Town of Medway is identified by the Metropolitan Area Planning Council as having extremely low vulnerability to "Extreme Heat" and is not located in an area that contains unique geographic features that could exacerbate a heat island effect (Company Reply Brief at 13, citing Exh. MEP-26).

The Company argues that Mr. Myers is incorrect in stating that the Project fails to adhere to Town of Medway Noise Bylaw (Company Reply Brief at 14, citing Myers Brief at 4). The Company asserts that the Project is being constructed in a parcel zoned for agriculture and that the Town does not have noise parameters for facilities located within an agriculturally zoned parcel (Company Reply Brief at 14). The Company further reiterates that it would conduct a post-construction operational noise assessment (Company Reply Brief at 14, citing Tr. 1, at 89). The Company also disagrees Mr. Myers's position that to reduce noise, the Company should be required to split the Project as the record shows that not to be feasible and, in any event, was not proposed by the Company (Company Reply Brief at 15, n.5, citing Myers Brief at 8).

Medway Grid argues that Mr. Myers suggests, without record evidence, that battery noise would increase in the "unlikely event" that ISO-NE implements Actions 2 through 11 during OP-4

emergency procedures (Company Reply Brief at 15, citing Myers Brief at 8). The Company alleges that, based on the ISO-NE website, most of the 11 emergency actions, besides Action 9, would not require the use of Project (Company Reply Brief at 15).[68] The Company asserts that its batteries could be used during Action 9 only in the highly unlikely event the previous eight actions did not sustain reliability (Company Reply Brief at 16). The Company disagrees with Mr. Myers's position that the Company's reliance on "third party" information for noise data is flawed (Company Reply Brief at 16). The Company notes that the third-party information was provided by the battery manufacturer itself (Company Reply Brief at 16).

The Company asserts that it has given ample consideration to decommissioning of the Project (Company Reply Brief at 19). The Company explains that, to account for fluctuations in markets, the Company and Town negotiated in the HCA a $5 million bond to be posted before operation of the Project, and then at a date later, the Town may request that a qualified independent engineer perform an appraisal of the estimated cost (Company Reply Brief at 19-20). The Company argues that the HCA provision provides sufficient safeguards and due consideration for the agreed bond amount, and that the agreement contemplates a bond amount up to $15 million (Company Reply Brief at 20; Exh. EFSB-G-26(1) at 13). The Company adds that it is committed to responsible industry practices as it pertains to end-of-life management of lithium-ion energy storage systems (Company Reply Brief at 20).

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[68] According to the Company, with Action 9, ISO-NE would request for the activation of transmission customer generation not contractually available to Market Participants during a capacity deficiency (Company Reply Brief at 16). The Company states that this action has a potential use for the Project's batteries but, depending on the time of day or operational parameters, may or may not increase the noise levels of the batteries (Company Reply Brief at 16).

The Company also asserts that the Project complies with all national and international safety codes and standards (Company Reply Brief at 22). The Company contends that none of the arguments brought up by MEP and Mr. Myers regarding the Company's safety plans and battery testing related certifications are accurate (Company Reply Brief at 22, citing MEP Brief at 7; Myers Brief at 12-14). The Company stated that the Megapack 2XL was tested by TÜV Rhineland, an OSHA Nationally Recognized Testing Laboratory (NRTL), in compliance with UL 9540A standards (Exh. EFSB-S-5). The Company explains that a battery cannot be tested under UL 9540A unless it has been "listed" under UL 9540A (Company Reply Brief at 22, citing Exh. EFSB-G-8(1) at 1). The Company adds that Medway Grid has to comply with the Massachusetts Comprehensive Fire Code to install the Megapack 2XL and that the code requires the Company must meet the requirements of NFPA 1, NFPA 855 and UL9540 (Company Reply Brief at 23, citing 527 CMR 1.04).

The Company contends that Mr. Myers's argument that reliance on UL 9540A does not guarantee that a thermal event would not occur in the future is a misinterpretation of the purpose of UL 9540A (Company Reply Brief at 23). The Company asserts that the UL 9540A test is specifically referenced by the ICC IFC (International Code Council International Fire Code), NFPA 1 and NFPA 855 as demonstrating functionality of BESS fire protection features during large-scale fire testing (Company Reply Brief at 24, citing Exh. EFSB-S-37). The Company contends that the purpose of the test was to determine whether a thermal runaway would lead to a cascading effect on other cells in the BESS unit and adjacent units (Company Reply Brief at 24, citing Exh. EFSB-SS-5). The Company alleges that the Massachusetts Board of Fire Protection

must also agree with the value of UL 9540A testing as it requires UL 9540A testing of batteries in its regulations (Company Reply Brief at 24).

Medway Grid argues that the Mr. Myers makes an unfounded assumption that the myriad fire professionals, including Company witness Lieutenant Paul Rogers, who worked on formulating the UL 9540A standards, missed the mark (Company Reply Brief at 24). The Company states that Mr. Myers ignores numerous safety features built into the Megapack 2XL (Company Reply Brief at 24). The Company also states that the final design for the number and placement of thermal cameras would be completed by a registered fire protection engineer prior to operation of the BESS (Company Reply Brief at 25, citing Exh. EFSB-S-3).

The Company argues that Mr. Myers's claims regarding the draft HMA are misinformed and that the HMA is final only when the Medway Fire Department signs off on it (Company Reply Brief at 25). The Company indicates that the Fire Department is not going to review the HMA until the Project is approved by the Department (Company Reply Brief at 25, citing Tr. 1, at 25). The Company adds that, when the Fire Department is ready, Medway Grid would meet and review the HMA with them, resolve any ambiguities or other items that the Fire Department raises, discuss batteries installation and commissioning, the protocols for a fire event including notifications to the Fire Department, then finalize the HMA and have it stamped by a professional engineer (Company Reply Brief at 25-26). The Company asserts that it is confident that it can meet the construction timeline in a safe manner and that there is no evidence to the contrary (Company Reply Brief at 26).

The Company claims that it has provided and continues to provide the community with updated information about the Project (Company Reply Brief at 27). The Company describes that

as part of the Siting Board process, the Company provided Notice, which received a significant number of comments from the community and allowed approximately 59 abutters of the Project, as part of MEP, and Mr. Myers to participate in the proceeding (Company Reply Brief at 28). The Company asserts that it continues to keep the Medway community updated through its website (Company Reply Brief at 28).

Finally, the Company offered a point-by-point response to each of MEP's proposed conditions (Company Reply Brief at 29-34). Table 2 below summarizes MEP's proposed conditions and the Company's responses.

Table 2: MEP Proposed Conditions and Company Responses

No.	MEP Condition	Company Response
	Project Design	
1	Require the applicant to scale back the size of the proposed facility from 141 BESS units to 100 BESS units.	The Company has proposed to construct a 250 MW/500 MWh BESS. To meet that size, the record demonstrates that 141 Tesla Megapack 2 XL batteries are required. MEP's request to ask the Department to arbitrarily reduce the number of batteries from 141 to 100 for this facility is not supported by the record in this proceeding.
2	Require the applicant to move the proposed facility further back from Route 109/Milford Street and further away from the homes and businesses located to the east of the proposed facility.	As demonstrated on the record in this proceeding, the Company has designed the Project to maximize the use of existing previously developed areas on the northern portion of the Project Site, which include an existing auto repair facility, existing residences, and a managed electric/gas transmission right-of-way. In addition, Center Brook and an associated bordering vegetated wetland system are located along the entire eastern portion of the Project Site. The Company is required to design the Project such that it complies with all applicable state and local performance standards for proposed alteration within the

No.	MEP Condition	Company Response
		100-foot Buffer Zone and the 200-foot Riverfront Area of these features. The Project Site cannot be setback any further south from Route 109/Milford Street and be in compliance with all applicable performance standards associated with these wetland jurisdictional areas. As shown in Exh. MG-2, Figure 2-4, the Megapacks have been sited on the western side of the Project Site to maximize the distance from residences to the east of the Project Site.
	Local Permitting	
3	Require the applicant to seek zoning approval in compliance with the Medway Zoning Bylaw.	There is no ability to obtain zoning approval of this Project. The Attorney General stated "because the moratorium is limited solely to the Town's Energy Resources (ER) zoning district, it does not apply to the pending application by Medway Grid, LLC to the Department to construct a 250MW/500MWh stand-alone Battery Energy Storage Facility, including a new electric substation, on a parcel outside of the ER district."
4	Require Medway Grid to comply with the Town of Medway Planning and Economic Development Board and Town of Medway Design Review Committee site plan review and approval process concerning all aspects of the site plan including lighting, landscaping, fence, and wall design and location.	In accordance with the law, the Company will submit its Notice of Intent to the Medway Conservation Commission for approval of all jurisdictional requirements. The Town of Medway Planning and Economic Development Board has a moratorium in place precluding the construction and operation of a BESS. MEP members and Mr. Myers encouraged the Town to issue the moratorium precluding the Company from appearing before the Planning and Economic Development Board to propose the Project. Those same individuals are now requesting that the Department mandate approval of the Planning and Economic Development Board for a Project that is not allowed to be constructed in the Town of Medway. As

No.	MEP Condition	Company Response
		such, the Company requests the Department to reject this proposed condition.
5	Require Medway Grid to obtain from the Town of Medway Planning and Economic Development Board and Town of Medway Conservation Commission approval of a tree replacement plan that results in no negative environmental impact.	See above.
6	Require Medway Grid to obtain all approvals for all Town of Medway Boards, Commissions, and Committees prior to construction.	See above.
	Emergency Response	
7	Require the applicant to develop a drainage plan that is specific for the proposed site and a separate retention pond plan that will function in case of an incident that requires the application of water or other substances to extinguish or contain a fire.	The Company has proposed a stormwater system that complies with all applicable performance standards of the Massachusetts Stormwater Management Standards, local requirements, and which considers climate change. The record indicates that no water will be used to extinguish a fire in a battery enclosure and that any water used to cool adjacent cabinets at the discretion of the emergency responders would be free of contaminants and the same as storm-related water generated from natural events. The Company is required to and has designed a stormwater system that improves the quality of stormwater runoff, reduces the quantity of stormwater runoff, and provides infiltration and recharge to groundwater.
8	Require an annual monitor testing protocol by a Massachusetts Licensed LSP to conduct a 21E phase 1 testing of the land and drainage system within the site with the Phase 1 report presented to the Town of Medway Select Board, Conservation Commission, and posted on the applicant's social media website.	This type of testing is inappropriate and unnecessary for annual monitoring purposes. As presented in Exh MG-6, Section 9.4.1, the Company hired an environmental professional to complete a Phase 1 Environmental Site Assessment for each of the Project Site parcels. During construction of the Project, the Company will continue to consult with a Massachusetts Licensed Site Professional as necessary to ensure that no contaminated soil, groundwater, or media within the

No.	MEP Condition	Company Response
		jurisdiction of G.L. c. 21E (and, potentially, c. 21c) is excavated, removed, handled, or disposed of without proper notification and coordination with the MassDEP Bureau of Waste Site Cleanup. Prior to operation of the facility, the Company will be required to develop and implement a Spill Prevention, Control, and Countermeasure Plan (SPCC). The SPCC requirement was implemented by the USEPA to ensure that facilities have in place containments and other controls that will prevent oil and hazardous materials from reaching wetlands and waterbodies and to contain discharges of such materials should a spill occur. The SPCC contains spill reporting and response procedures, along with inspection and monitoring procedures, testing, and training requirements.
9	Require Medway Grid to have a Massachusetts licensed LSP to collect samples for testing of water used in fire suppression during the full course of the event and ensure that the water used for fire suppression is directed exclusively to a clay or rubber membrane lined retention pond not into the storm water drainage system.	The Company will have a licensed environmental services company on contract prior to commercial operation to be on site in the unlikely event of a fire at the facility. Water will not be applied directly to a battery cabinet experiencing a thermal event, but, rather on adjacent cabinets, only if necessary and at the discretion of emergency responders, for cooling purposes. The water used to cool adjacent cabinets is free of contaminants and is essentially the same as storm-related water that will fall on the site from natural events. As demonstrated in the record on this proceeding, the Company is required to and has designed a stormwater system that improves the quality of stormwater runoff, reduces the quantity of stormwater runoff, and provides infiltration and recharge to groundwater. The stormwater system includes deep sump catch basins and underground infiltration structures that will collect and store runoff in the unlikely event of a thermal event and which can be

No.	MEP Condition	Company Response
		pumped before infiltration to the ground occurs. The inclusion of a clay or rubber membrane lined retention pond into the stormwater system would prohibit effective treatment and infiltration of natural storm water events.
10	Require the applicant to have redundant monitoring safety and security systems for the proposed facility including redundant human monitoring personnel.	The Project includes monitoring systems for safety and security, and cameras at various locations. The NOC would be staffed and monitored 24/7 as would the Tesla NOC. First responders will be dispatched in the event the monitoring systems determine an abnormal condition. The Company is unclear as to what MEP means by "redundant human monitoring personnel".
11	Medway Grid's response within MEP-4 places the responsibility for communicating with property owners, "most likely" through the reverse 911 systems on the Town of Medway. In the case of a thermal event or facility accident, alerting the surrounding property owners in a timely fashion would be critical. Medway Grid's shifting the responsibility of communicating an emergency situation is unacceptable. The Department should require Medway Grid to install an emergency communication system to area residents. That system should be developed to include individuals who are hearing disabled.	The record affirms that the Medway Fire Department would be notified in the unlikely event of an incident concerning the BESS. If the Medway Fire Department determines that an incident requires notification to the public, there is an established statewide system on how the public is informed of an emergency. The statewide system should not be superseded by the Department at the unreasonable request of MEP. Accordingly, the Company requests that the Department reject MEP's proposed condition.
Normal Operating Conditions		
12	Require quarterly testing for EMF radiation during the first two years of operation and annually during the remaining years the facility operates.	Magnetic-field levels from the BESS under any operational scenario at any adjacent property are calculated to be low and within the background levels found in a typical environment in which electricity is used including within homes. MEP's proposed condition is overly burdensome and will provide little or no new information regarding EMF from the BESS. Accordingly, the Company requests that the

No.	MEP Condition	Company Response
		Department reject MEP's proposed condition.
13	Require Medway Grid to comply with the Town of Medway Noise Bylaw and require Medway Grid to contract with an independent sound monitoring engineering firm to test the sound levels and document that the sound levels are in compliance at least once per week at varying times during the first 52 weeks of operation with reports furnished to the Town of Medway Select Board on a monthly basis. Sound level testing to be conducted during charging and discharging cycles.	The Town of Medway Noise Bylaw is not applicable to this Project. Moreover, if the noise bylaw were determined to be applicable, the Company requested an exemption from the Town of Medway Zoning Bylaws.
14	Require Medway Grid to present a documented bond estimate for the decommissioning of the proposed facility prepared by a qualified entity approved by the Department.	The Company and the Town negotiated a $5M bond to be posted before Commercial Operation and then at a date (no earlier than the tenth anniversary of the Commercial Operation of the Project), the Town may request that a qualified independent engineer perform an appraisal of the estimated cost required to remove all equipment and structures from the site, address any hazardous materials or contamination that may be identified, and to restore the site to a condition equal to that in existence at the time of acquisition by Medway Grid at the end of the expected useful life of the Project. Given the protections within the HCA, it is the Company's position that requiring a bond estimate prior to construction – and at least 20 years prior to the decommissioning date – would serve no purpose. Accordingly, the Company requests that the Department deny MEP's proposed condition.
15	Require Medway Grid to provide documentation regarding the "thermal impact" and require Medway Grid to monitor the potential impact of the "thermal impact" on the residents, employees of businesses, plant life and	"Thermal impact" is a non-issue in this proceeding. This condition is burdensome and unnecessary. Accordingly, the Company requests that the Department reject this proposed condition.

No.	MEP Condition	Company Response
	animal life within the project site and on the abutting properties.	

Sources: MEP Brief at 9-12; Company Reply Brief at 29-34.

d. Analysis and Findings

i. Construction and Normal Operations

(A) Land Use

The Project Site is 10.6 acres and located entirely in the Town of Medway (Exh. MG-2, at 6, at Figure 2-1). The Project Site is within the AR-II zone according to the Town's Zoning Map (Exh. MG-3, at 7). Three of the four parcels that make up the Project Site are used for residences, while one is occupied by an automotive repair facility and associated parking spaces (Exh. MG-2, at 6). As per the Schedule of Permitted Uses in the Town's Zoning Bylaw (Amended in 2021, 2022), the automotive repair facility and associated parking are not permitted uses in the AR-II Zone (Exh. MG-3, Att. 1, at 44). Hence the Department notes that both in its current use as well as proposed use, the Project Site is partly occupied by uses not permitted by the Medway's Zoning Bylaw. In addition, the Project Site is located near energy structures, and use as a BESS is consistent with those uses.

The record shows that the proposed Project would utilize 2.69 acres of previously developed area on the Project Site, and impact 2.91 acres of existing undeveloped land (Exh. MG-6, at 1-3). Construction of the underground transmission corridor would involve clearing nine mature trees, and in preparation for the BESS facility, the Company would remove eleven mature trees (Exh. MG-6, at 5-4).[69] The Company will plant 53 trees to serve as vegetated buffers and

[69] From a count conducted by Department staff, six of those trees are pine/oak trees and twelve are oak/maple trees (Exh. MG-6, at Figure 5-1).

restore 13,000 square feet of previously developed areas of RA, including trees (Exh. MG-6, at 5-5; Tr. 1, at 78-80). The Department finds that these additional trees could likely offset the loss of twenty trees on the Project Site and along the Transmission Corridor.

The record shows that there are no potentially significant historic resources affected by the Project (Exh. MG-6, at 6-1). Nor is the site located within Estimated or Priority Habitats of Rare Species (Exh. MG-7, at 4). MEP requests that the Company work with local agencies to create a tree replacement plan, and to maintain a landscape maintenance plan for the Project (MEP Brief at 11-12; MEP Reply to Company Brief at 12). The record shows that the Company's HCA requires it to conduct landscaping-related mitigation for abutters (Exh. EFSB-G-26(1) at 6-7, 9).

(B) Water and Wetland Resources

The Project is located near a BVW and would be located within the related 100-foot buffer zone and 200-foot RFA (Exhs. MG-2, at 27 and Att. B at Figure 2-1). The record shows that the Project Site would not impact BVW (Exh. MG-6, at 5 -7 to 5-8). The record shows that the wetland buffer zone and RFA footprints are mostly within previously developed or cut areas (Exh. MG-6, at 5-8). The record shows that the Company requires an OOC issued by the Medway Conservation Commission (Exh. MG-2, at 27). The Company has not submitted its NOI to the Conservation Commission (Exh. EFSB-W-13). MEP argues that the Company is not guaranteed a positive determination from the Conservation Commission (MEP Reply to Company Brief at 7). The Department notes that the Company must receive an OOC from the Conservation Commission before it may construct the Project.[70] The Department directs the Company to notify the

[70] The Department also notes that a grant of exemption from the Zoning Bylaw does not exempt the Company from the requirements of state and local wetlands regulations.

Department when it files its notice of intent to the Medway Conservation Commission, as well as after it receives a determination from the Conservation Commission.[71]

The Project would result in 1.5 acres of impervious cover within the 10.6 acres site (Exhs. MG-6, Att. I, MG-7, at 4). The record shows that the Company would adhere to state standards set by MassDEP and RMAT, and follow BMPs in the Massachusetts Stormwater Handbook (Exh. MG-6, Att. I at 1-1). The record also shows that the Company's HCA with the Town dictates some additional stormwater and snow mitigation for the Project Site (Exh. EFSB-G-26(1), at 12). The record shows that the Project would not impact any public water supply sources or water resources during normal operation (Exh. MG-2, at 26). The Company would implement mitigation during construction to minimize potential water quality impacts, including managing sediment transfer by implementing an Erosion and Sediment Control Plan (Exh. MG-6, at 9-1). Nonetheless, MEP argues that the Company's plans do not prohibit the use of de-icing chemicals onsite, which it asserts could negatively affect water and wetland resources (MEP Brief at 3; MEP

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[71] On June 26, 2023, MEP sent a comment letter to the Department with an attachment containing: (1) an NOI filing; and (2) a Stormwater Management and Land Disturbance Permit Application, both from Medway Grid to the Medway Conservation Commission, and both dated June 8, 2023 ("June 26, 2023, Comment Letter"). MEP did not file a motion seeking to re-open the record to introduce these documents in evidence. Nevertheless, MEP alleges that the filings appear to indicate that the Project layout is substantially different from the information presented by Medway Grid during the hearing process, and that prior studies by Medway Grid regarding noise, heat island impacts, and magnetic fields "were based on substantially different layouts" (June 26, 2023, Comment letter at 1). Charles Myers also filed two comments on June 27, 2023, regarding the Conservation Commission filings. Medway Grid did not respond to the June 26, 2023, Comment Letter or Charles Myers's letters. As discussed below, the Department's approval in this Order is based on the proposed Project described in the Company's filings in this proceeding. Medway Grid or its successors in interest must notify the Department of any changes other than minor variations to the Project reviewed in this proceeding so that the Department may decide whether to inquire further into a particular issue.

Reply to Company Brief at 8). To reduce impacts on water resources, the Department recommends the Company, to the extent possible, minimize the use of de-icing chemicals on site both during operation and construction.

(C) Visual

The record shows that the Project design includes several sound attenuation walls that are 22 feet in height, which would replace the abutters' view of an automotive shop currently on the site (Exhs. MG-7, at 10; MG-2, at 34). Based on the visual renderings by the Company, the sound attenuation wall is clearly visible from residences across Milford Street (Route 109) (Exh. EFSB-V-1). The record also shows that there would be limited, but still visible, impacts to residents living along Little Tree Road (Exh. MG-2, at 34). Both MEP and Mr. Myers note these visual impacts (MEP Reply to Company Brief at 8; Myers Reply Brief at 4). MEP represents that a final design of the wall and landscaping has not been presented to the community at large and to direct abutters (MEP Reply to Company Brief at 8). Given the visual impact to abutters during operation of the Project, the Department directs the Company to ensure local input regarding the wall design (including wall material specifications) and related landscaping plans. The Company shall file the final design with the Department prior to commencing construction of the wall.

The record also shows that the Project would be mostly unlit, with security lighting used in some limited instances (Exh. MG-2, at 38). Mr. Myers asserts that the Company's described lighting plans likely violate Town of Medway Lighting Regulations, and MEP also notes concerns with lighting affecting abutters (Myers Reply Brief at 5; MEP Brief at 7).

The Company indicated that, during construction, there would be limited impacts from lighting because it proposes to construct during "daylight hours" (Exhs. MG-2, at 38; EFSB-G-26).

The record shows that the Company refers to the permissible construction hours between 7 a.m. and 7 p.m. in the Town of Medway Zoning Bylaw, as "daylight hours" (Exh. MG-2, at 38). In its HCA with the Town, the Company has agreed to more stringent construction hour limits of 7:30 a.m. to 6:00 p.m. (Exh. EFSB-G-26(1) at 9). The Department notes that at certain times of year, actual daylight hours are likely to be shorter than the Company's HCA construction hour period, and that any construction lighting that may be necessary for construction efficiency and safety purposes in such limited hours would have minimal impacts on area residents, and is therefore reasonable.

(D) Traffic

The record shows that Medway Grid will work with the Town of Medway to manage construction traffic (Exh. MG-2, at 40). The record also shows that there would be limited periodic site inspection and maintenance traffic trips during Project operation (Exh. MG-2, at 40). To mitigate known disruptions to abutters to the Project site, the Department directs Medway Grid, in consultation with the Town of Medway, to develop its community outreach plan to be used by the Company to inform potentially impacted stakeholders of plans for Project construction and operation, and file a copy with the Department. The outreach plan should, at a minimum, identify procedures for providing prior notification to affected residents of the following: (1) the scheduled start, duration, and hours of construction; (2) any construction that must take place outside the normal hours or days indicated above; (3) any operation the Company intends to conduct that could result in unexpected community impacts due to unusual circumstances; and (4) process for complaints to be submitted to the Company and Company response procedures, including contact information.

(E) Noise

Medway Grid conducted sound level analyses at the Project Site to compare existing daytime and nighttime baseline conditions with post-Project conditions (Exh. MG-2, Att. C at 11, 20). The results of the analyses showed that, with mitigation, the noise level increase from the Project would comply with MassDEP noise policy criteria of not more than 10 dBA increase over baseline conditions (Exh. MG-2, Att. C at 23). Noise mitigation measures include: limiting BESS unit fan speeds; installing the 22-foot-tall sound attenuation barriers; using low noise equipment; and enforcing operational restrictions that limit the number of BESS units simultaneously operating at night (Exh. MG-2, Att. C at 29). As MEP noted above, the design and specifications for the proposed sound wall have not been completed (MEP Reply to Company Brief at 1, 9). MEP and Mr. Myers contend that the Company has been inconsistent in its representations on whether it would conduct post-construction sound monitoring, and they request that such monitoring be conducted (MEP Brief at 11; Myers Brief at 9-10). As part of its HCA, the Company has agreed to conduct post-construction noise measurements to ensure compliance with the MassDEP requirements (Exh. MWY-3; EFSB-G-26(1) at 10). The Company will also require its contractor to apply BMPs to mitigate noise during construction and also abide by requirements of the HCA (Exh. EFSB-NO-2). The Department directs the Company to file the initial post-construction noise measurement results as required by its HCA with the Department.

The record shows that the Town of Medway has its own noise-related bylaw for residential parcels that is more restrictive than MassDEP's standard (Exh. MG-2, Att. C at 10). MEP argues that the Company should be required to comply with local noise bylaw, Table 1 Condition 13 (MEP Brief at 4-5; MEP Reply to Company Brief at 9). The Project Site is mostly zoned within an

Agricultural Residential II Zoning District according to Town Zoning Bylaw (Exhs. MG-6, at 3-2; EFSB-LU-1(2); MG-Z, Att. 1, at 43). The Company alleges that the Project zone is agricultural, meaning that it is exempt from complying with the Town's residential zoning bylaw (Company Reply Brief at 14). Nonetheless, the Company requests for an exemption from compliance with the Medway Noise Bylaw as part of the Zoning Petition (Exh. MG-2, Att. C at 10).

The Department disagrees with the Company's assertion that the Project is zoned solely as agricultural. It is clear that the district is zoned for both agricultural and residential uses. Therefore, the Medway Noise Bylaw would appear to apply to the Project. In this regard, the Department notes that it appears that the Company would not be able to meet the Medway Noise Bylaw during nighttime hours, where the Bylaw requires an absolute maximum sound level of 32 dBA (See Exh. MG-Z, Att. 1, at 118-119). The record shows that the nighttime baseline conditions in the area as measured by the Company already range from 31 to 32 dBA (Exh. MG-2, Att. C at 15-16). The Department observes that it is unlikely that the Company would be able to meet the requirements of the local bylaw, even with operational restrictions.

Mr. Myers also questions the Project's ability to meet the MassDEP noise policy requirements, particularly under certain ISO-NE emergency operating conditions; he notes that there would be noise from BESS unit commissioning as well (Myers Brief at 7). The Company responds that the particular action that could cause the Project to operate outside of its operation restrictions was unlikely, as it would be preceded by eight other actions targeted at addressing an emergency condition (Company Reply Brief at 16).

The Department expects Medway Grid and its contractors and subcontractors to minimize construction noise by using best construction practices. Further, the Department directs Medway

Grid to limit construction to its proposed schedule of Monday to Friday from 7:30 a.m. to 6:00 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), Medway Grid should seek permission from the Town of Medway 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.

(F) Air Quality and Temperatures

The record shows that the BESS would not emit the same pollutants, including criteria pollutants such as nitrogen oxides, sulfur dioxide, methane, nitrous oxide and fine particulates, as fossil fuel generation (Exhs. MG-2, at 25; EFSB-A-1). The record shows that, during construction, the Company would implement BMPs to control emissions and dust (Exh. MG-2, at 25). The Company indicates that it would encourage its construction contractor to use U.S. EPA Tier 4 standards or retrofitted equipment to minimize emissions from construction equipment (Exh. MG-2, at 26). The Company will also limit most vehicle idling to no more than five minutes (Exh. MG-2, at 26).

Mr. Myers disagrees with the Company's argument that the Project would contribute to lower emissions than fossil fuel generation (Myers Reply Brief at 14). Mr. Myers observes that the current energy mix contains fossil fuels and that the Project does not have dedicated renewable energy contracts (Myers Brief at 4-5). Mr. Myers also contends that the Project's emissions impacts would be felt offsite and could affect the Commonwealth more broadly, which would include environmental justice populations (Myers Brief at 7, 28). As noted above, the Department

found that the Project's participation in the Clean Peak Program is likely to produce environmental benefits in the form of reduced emissions. See Section II.C.2.c.

Both MEP and Mr. Myers discuss the potential for "thermal impacts" by the BESS unit exhaust fans, including that the Company failed to consider various site conditions that made it vulnerable to heat, such as impervious and gravel surfaces (MEP Brief at 3; Myers Brief at 11). The Company asserts that, on the contrary, the conditions on the site, such as the vegetation that would remain, as well as additional landscaping, would mitigate heat impacts from the BESS (Company Reply Brief at 11). MEP also offers a condition to monitor thermal characteristics at the Project Site, Table 1 Condition 15 (MEP Brief at 9-11). The Department finds that the record does not support the need for monitoring advocated by MEP.

(G) Solid and Hazardous Waste

The record shows that the Project would generate waste during the construction of the Project, particularly in the demolition phase of site preparation (Exh. EFSB-CM-15; Tr. 1, at 67). The record shows that the Company would implement mitigation measures to minimize such waste (Exh. MG-2, at 33). The heavy equipment onsite during construction would use petroleum products (Exh. EFSB-HW-6). The main transformer on the Project Site would contain oil-based dielectric fluid (Exhs. EFSB-HW-5; MG-6, at 8-2). The record shows that the Company will implement mitigation measures to prevent and mitigate potential spills (Exh. EFSB-HW-6). The record also shows that Medway Grid would mitigate a potential spill of the transformer dielectric fluid by using secondary containment that can contain more than the volume of dielectric fluid (Exhs. EFSB-HW-5; MG-6, at 8-2).

While the Project would not create waste regularly during operation, the Company would have to replace battery units over the life of the Project (Exh. MG-2, at 33). The record shows that the Company must replace the used battery units according to all local, state and federal regulations (Exh. MG-2, at 33). The Department expects 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.

(H) Magnetic Fields

The Company conducted analysis of various potential sources of EMF of Project components (Exh. MG-2, at 38). The record shows that both the pre- and post-construction values were conducted by modeling instead of in-person measurements (Exh. MG-2, Att. E at 17). MEP and Mr. Myers both express concern about EMF levels and their potential impacts on residences (MEP Brief at 2; Myers Reply Brief at 7). MEP also requests pre-construction measurement of EMF levels as well as regular post-construction measurement, Table 1 Condition 13 (MEP Brief at 10; MEP Reply to Company Brief at 1). The record shows that the closest residences are more than 450 feet away from the Project components, and EMF experienced at the residences would therefore diminish to background levels (Exh. MG-2, at 39). The record shows that these values are between 0.1 to 1 mG (Exh. EFSB-MF-1). These predicted magnetic field values are magnitudes lower than levels in projects previously approved by the Department. See Westfield at 37; New England Power Company d/b/a National Grid, D.P.U. 14-128/14-129 (2015); NSTAR Electric Company, D.P.U. 14-08 (2015).

ii. Safety

(A) Battery Design and Testing

The Company proposes to use Tesla Megapack 2XL units (Exhs. MG-6, at 1-1; MG-2, at 15). The record shows that the LFP-based battery chemistry of the Megapack 2XL is recognized as being more thermally stable[72] than other lithium-ion battery chemistry compositions (Exh. EFSB-G-9(1), Chapter 3 at 4-5). The record shows that testing the simulated combustion of a Megapack 2XL unit did not demonstrate risk of deflagration, flying debris, projectiles, detonation or other explosive discharge of gases (Exh. EFSB-G-8(1) at 3). The record shows that the design of the Megapack 2XL conforms to all standards required of a BESS (Exh. EFSB-G-8(1) at 3). The record also shows that the Megapack 2XL meets the UL 9540A requirements of cell-level testing (Exh. EFSB-G-8(1) at 11) and module-level testing (Exh. EFSB-G-8(1) at 13).

Mr. Myers questions various aspects of the testing, including the validity of the test itself (Myers Brief at 17). The Company contends that none of the arguments raised by MEP and Mr. Myers regarding the Company's safety plans and battery testing related certifications are accurate (Company Reply Brief at 22, citing MEP Brief at 7; Myers Brief at 12-14). The Department finds adequate assurance in the record that the Megapack 2XL meets the necessary parameters for public safety of the proposed Project.

MEP offers a condition related to regular monitoring of the facility, Table 1 Condition 10 (MEP Brief at 9-11). The record shows that the Company would be able to control the facility

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[72] The US Department of Energy's Energy Storage Handbook describes LFP as more thermally stable because it is generally more difficult for an LFP-based chemistry to self-produce oxygen needed for a thermal runaway event compared to other lithium-ion chemistries (Exhs. EFSB-G-28; EFSB-G-25, Chapter 3, at 4-5).

remotely and would use internal sensors to continuously monitor system operation (Exh. MG-2, at 42). The facility design also allows the operator to initiate an emergency shut down sequence remotely if an abnormal situation was detected (Exh. MG-2, at 42). Nonetheless, the Company will be able to send a representative to the site as needed in two hours or less (Exh. EFSB-G-26(1) at 11). MEP requests that the Medway Grid install an emergency communication system directly to area residents, Table 1 Condition 11 (MEP Brief at 10). The Department notes that it is likely that the Town of Medway has existing systems used to communicate emergencies with residents, such as the statewide reverse 911 system. Therefore, we do not see the need for the Company to propose a new system. Nevertheless, the Department directs the Company to work with the Town of Medway and the Medway Fire Department to include provisions in the ERP/HMA to provide residents near the Project Site real-time notification and instructions in the event of an emergency at the site. Further, the Department expects the Company, in consultation with the Town of Medway and the Fire Department, to include in the ERP/HMA evacuation and/or shelter-in-place protocols for residents near the Project Site, in the event of an emergency at the site.

The record also shows that the Company will provide training and funding to the Town as required by the HCA (Exh. EFSB-G-26(1) at 4, 6). Additionally, the Company will provide for decommissioning of the Project with a decommissioning plan and a bond amount of $5 million (Exh. EFSB-G-26(1) at 13). The record shows that the Company and the Town estimated this bond estimate as part of the HCA (Exh. EFSB-G-26(1) at 13). MEP asserts that the Company should instead provide a documented bond estimate by a qualified entity, Table 1 Condition 14 (MEP Brief at 9). The record shows that the Project's predicted operational life would be between 20 to 40 years (Exh. EFSB-G-17). The HCA also provides for a reevaluation of the initial bond

estimate to increase up to $15 million if found necessary by the Town (Exh. EFSB-G-26(1) at 13). The Company asserts that requiring a detailed estimate so early in the process would serve no purpose (Company Reply Brief at 32). Given the above, the Department finds the provision to be sufficient to ensure the financial resources necessary to decommission the Project.

(B) Safety Standards and Plans

The proposed BESS must comply with all relevant codes and standards with regard to safety, in particular NFPA 855 (Exh. MG-2, at 41). NFPA 855 sets forth the national and international safety standards for the proper installation of stationary energy storage systems (Tr. 3, at 450-451). NFPA 855 is a standard tailored to the needs and experience of BESS safety and has evolved along with BESS technology and incident experience to date, and the important lessons learned (Exh. EFSB-G-8(1), app. 2). In their briefs, MEP and Mr. Myers both question whether the Project meets NFPA 855 standards (Myers Reply Brief at 7; MEP Reply to Company Brief at 10). MEP and Mr. Myers also question the Company's experience in operating battery projects of similar size (MEP Brief at 6; Myers Reply Brief at 8, 14). The Company argues that it has operational experience with large BESS projects (Company Reply Brief at 8).[73]

As part of compliance with NFPA 855, the Company must prepare an HMA and an ERP (Exhs. MG-2, Att. G; EFSB-S-47(1) at 6). The Company submitted a draft ERP and a draft HMA for the proposed BESS facility (Exhs. MG-2, Att. G; MG-6, at 8-4; EFSB-S-47). MEP and Mr.

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[73] The Company described its parent company's experience siting and constructing several BESS of similar size and scope in Texas and California (Exh. EFSB-G-15). The Company adds that, contrary to MEP and Mr. Myers's claims that the 200 MW BESS in Mission, Texas, which had a targeted operational date of summer 2023, was already operational and is the largest "fully-merchant" and market-facing energy storage facility built to date (Company Reply Brief at 8).

Myers both note that these plans have not been finalized and ask that they be finalized prior to Department approval (MEP Brief at 7; Myers Brief at 15). The record shows that the Company will work with the Medway Fire Department to finalize both plans (Exhs. EFSB-S-47; EFSB MG-2, at 43). The record also shows that the Company will provide funding for the Town to hire independent consultants for its review purposes (Exh. EFSB-G-26(1) at 4). The Department finds that the following conditions shall be addressed in the Company's efforts to revise the ERP and HMA drafts into final documents:

- To ensure that the Company's HMA and ERP processes are completed in a timely and transparent manner, the Department directs the Company to provide quarterly updates to the service list in this proceeding on the progress of finalizing its HMA and ERP, with the first update due within 45 days of this Order. The Company's updates should, at a minimum, include descriptions of any incremental updates to the plans, including compliance regarding the Department's ERP/HMA conditions. The Company is required to file finalized ERP and HMA with the Fire Department and the Department 30 days prior to commercial operations.

- The Department expects the Company's ERP to include information regarding personnel, equipment, and apparatus required to respond to a significant thermal event.

- Consistent with the HCA, the Department expects the Company, in consultation with the Fire Department, to provide training, emergency equipment and funding for a fire safety consultant.

- The Department directs the Company to work with the Town of Medway and the Medway Fire Department to include provisions in the ERP/HMA to provide residents near the Project Site real-time notification and instructions in the event of an emergency at the site. Further, the Department expects that the Company, in consultation with the Town of Medway and the Fire Department, to include in the ERP/HMA evacuation and/or shelter-in-place protocol for residents near the Project Site, in the event of an emergency at the site.

- The Department encourages the Company to work with the Fire Department to determine whether to develop a joint action plan as part of its ERP/HMA to provide neighboring fire departments the appropriate information, including necessary training, to understand various emergency scenarios and provide, if necessary, a coordinated response in the event of a thermal event at the Project Site.

Mr. Myers argues that the Company has not discussed commissioning protocols on the record (Myers Reply Brief at 6; Myers Brief at 14). Mr. Myers asserts that without a final HMA and ERP, first responders would be at risk during installation and commissioning (Myers Brief at 14-15, 17). Mr. Myers asks that the Company's plans include consideration of safety during the commissioning process (Myers Reply Brief at 16-17). MEP and Mr. Myers also note various other plans and system designs that have not been finalized (such as the BMS), and that should be reviewed by independent parties (MEP Reply to Company Brief at 1, 8, 10-11; Myers Reply Brief at 10-11). As part of his brief, Mr. Myers asks that the Company provide "position mapping and discussion on the positioning of and integration into the fire alarm system" of the BESS units (Myers Reply Brief at 10-11).[74] The Department finds that the Company plans to include the above information sought by Mr. Myers in its finalized ERP and HMA (Company Reply Brief at 25-26). Importantly, Department further notes that the sufficiency of both the ERP and HMA will be evaluated by the MFD, which, as the agency having jurisdiction, must sign off on both these plans for their completion (Company Reply Brief at 23).

(C) Safety Issues

In the instance of a thermal runaway event, Tesla and the Company state that the BESS unit should be allowed to burn itself out (Exh. MG-6, at 8-3). If water is used for fire suppression activities, such as cooling adjacent enclosures, the potentially contaminated runoff would be directed into the stormwater management system (Exhs. MG-6, at 8-3; EFSB-HW-7; EFSB-S-45; MEP-35; Tr. 2, at 200, 264). The Project would be connected to public water for fire protection

[74] The record shows that the final design for the number and placement of thermal cameras would be completed by a registered fire protection engineer (Company Reply Brief at 25, citing Exh. EFSB-S-3).

with the installation of five hydrants onsite (Exh. EFSB-W-2). The Department has no reason to question the Company's view that the performance characteristics and safety features of the Megapack 2XL suggest that any thermal event inside the unit should not propagate to other cells within the unit, or to other adjacent units. The record shows that the water runoff during a thermal event is not likely to be contaminated with chemical from the BESS units as the BESS units are sealed (Tr. 2, at 288).

MEP has proffered a number of water-related conditions, should the Department grant the zoning exemption (MEP Brief at 9-11). These proposed conditions, and the Company responses, are shown above in Table 1, Conditions 7-9. The Company opposes each of these proposed conditions for various reasons, as noted above in Table 1 (Company Reply Brief at 29-34). Mr. Myers also asserts that the Company's design does not prevent contaminated water from infiltrating through the ground nor retain the water before a monitoring agent is able to arrive on site (Myers Brief at 28). The record shows that the Company will engage a licensed environmental services company to remove and properly dispose of affected runoff water (Exh. MG-6, at 8-3). Nonetheless, the Department agrees that the use of firefighting water, and the potential for related environmental impacts, cannot be discounted, and that appropriate conditions to address this issue are warranted.

Consistent with the HCA, the Department expects the Company to include in the ERP/HMA a plan to ensure that any firefighting water effluent would be fully contained in the stormwater basins and not be discharged outside the basin, or otherwise infiltrate into the ground. The ERP/HMA shall include a plan to collect samples for testing of any water used in fire suppression in the event of a thermal runaway event. To promote transparency, the Company shall

submit a report to the Department with the results of such testing. Further, the Department directs the Company to ensure its compliance with MassDEP poly-fluoroalkyl substances ("PFAS") regulations, 310 CMR 112.

The Department notes that UL 9540A testing of the Megapack 2XL, involving induced module-level thermal runaway conditions, included hazardous air emission sampling and testing in close proximity to the battery (20 feet upwind and five feet downwind) (Exh. EFSB-G-8(1) at 21). According to the Fisher Report, hydrogen fluoride at trace levels were detected after combustion but at levels two orders of magnitude below applicable NIOSH safety standards, and the test indicated no other detectable hazardous air emissions (Exh. EFSB-G-8(1) at 4). The tests did not find any gas traces of twenty-seven different metals, including lithium and mercury (Exh. EFSB-G-8(1) at 4). As described above, the record shows that the Megapack 2XL has several built-in safety management systems that are designed to prevent the propagation of a thermal runaway within and between battery units (Company Brief at 34; Exh. CP-B at 33). The Company and Tesla will also continuously monitor various safety-related parameters of the battery units during operation and effect shutdown of a battery unit, given any indications of thermal or other irregularities that could lead to a safety incident (Exh. CP-B at 33-34). However, to promote transparency, the Department directs the Company to report to the Department and to the service list in this proceeding within seven days following any incidents at the Project Site that require notification to the Fire Department. The report should include a description of the incident and any actions taken by the Company.

In addition, to ensure that the Department and the public are provided with timely information about the Project's safety performance and other matters of public concern, the

Department directs the Company to submit informational monthly reports to the Department during the first six months of commercial operation. Each report shall detail: (1) any safety incidents of the Project that required notification of the Medway Fire Department, including a full description of the incident, actions taken, and lessons learned for future operation of the facility; and (2) a summary of any complaints regarding the Project received by the Company, including the date received and nature of the complaint, actions taken by the Company in response to the complaint and when, and the ultimate resolution of the complaint. All summaries of complaints shall exclude information that would identify the complainant.

The Department concludes that with the Project's compliance with (1) all applicable federal, state, and local laws and regulations; and (2) the avoidance, minimization, and mitigation measures that the Company has stated it will implement during Project construction and operation, the impacts of the Project are identified and minimized. In addition, the Department has placed reasonable conditions to mitigate some of the impacts and promote ongoing community engagement to further mitigate health, safety and other community concerns resulting from the zoning exemption.

5. Conclusion on Public Convenience and Welfare

Based on the foregoing analysis of (1) need for or public benefits of use; (2) alternatives explored; and (3) impacts of the proposed use, the Department finds that the Project is necessary for the purposed 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. The Department finds that the Project aligns with the Commonwealth's clean energy goals and will further energy reliability and help meet peak demand.

D. Zoning Exemptions Required

1. Standard of Review

In determining whether exemption from a particular provision of a zoning bylaw is "required" for purposes of G.L. c. 40A, § 3, the Department makes a determination whether the exemption is necessary to allow construction or operation of the petitioner's project. K Street Substation at 8; Hopkinton LNG at 10; Tennessee Gas Company, D.P.U. 92-261, at 20-21 (1993). It is a petitioner's burden to identify the individual zoning provisions applicable to the project and then to establish on the record that exemption from each of 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 Department 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 Department is provided ample opportunity to investigate the need for the required exemptions.

New York Cellular Geographic Service Area, Inc., D.P.U. 94-44, at 18 (1995); K Street Substation at 9; Hopkinton LNG at 10.

2. Company Request

The Company is seeking exemptions from individual sections of the Medway Zoning Bylaw as well as a comprehensive exemption (Exh. MG-3, at 1). The Company asserts that both individual exemptions and a comprehensive exemption are needed promptly to allow sufficient time to construct the Project so that it may fulfill its Forward Capacity Market obligations that begin on June 1, 2024 (Exhs. MG-3, at 9, 11; MG-2, at 21; EFSB-G-1; EFSB-Z-4(1)). The Company argues that the Project was awarded a capacity contract via FCA 15 based upon its ability to provide needed capacity by June 1, 2024 (Company Reply Brief at 7, citing Exh. MG-2).

The Company asserts that it would commence construction once the Department issues an Order granting its Petitions, which it expects to receive in June 2023 (Company Reply Brief at 26). This timing would allow the Company approximately one year to construct and commission the Project, and thereby meet its contractual obligation to supply energy and capacity to the grid by June 1, 2024 (Company Reply Brief at 26; Exhs. MG-1, at 21; EFSB-Z-4(1); EFSB-G-1(1)). Failure to build the Project on time, the Company asserts, would result in a loss of needed capacity in the SENE capacity zone and significant financial consequences to the Company (Company Reply Brief at 7, citing Exh. MG-2; see also, Exh. EFSB-Z-7).[75]

In his comments on the Tentative Decision in the Siting Board proceeding, Andrew Kaplan, counsel for the Company, stated that the Project would not be viable unless the Department issued a decision on the Department Petitions by June 2023 (Andrew Kaplan letter of May 5, 2023, to the Presiding Officers at 3).[76] Mr. Kaplan concluded his comments by stating: "We are approaching the point in the process where the Projects[77] will be deemed not viable solely as a result of this protracted regulatory process" (Andrew Kaplan letter of May 5, 2023, to the Presiding Officers at 3). In its supplemental brief, the Company specifically asks for "expedited

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75 When the Zoning Petition was filed, the Company anticipated commencing construction in March of 2023 (Exh. MG-2, at 21). By late December 2022, the Company had pushed back its schedule significantly and anticipated that construction permitting would be completed by July 3, 2023, and construction would begin on August 28, 2023 (Exh. EFSB-G-1(1)). The Company's anticipated date for substantial completion was May 31, 2024, the day before the Forward Capacity Market obligation begins (Exh. EFSB-G-1(1)).

76 https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/17423051.

77 The "Projects" to which Mr. Kaplan was referring are the Project in the present case and the proposed BESS project in Cranberry Point Energy Storage LLC, EFSB 21-02/D.P.U. 22-59 (2023).

approval of the Company's 40A and 72 petitions" (Company Supplemental Brief at 5; see also, Town of Medway Supplemental Brief at 1 ("The Town urges the Department of Public Utilities to expeditiously render its decision in these two dockets")) (parenthetical text omitted).

Table 3, below, presents: (1) each of the specific provisions of the Medway Zoning Bylaw from which the Company seeks an exemption; (2) the relief available through Medway's local zoning process; and (3) the Company's argument as to why it cannot comply with the identified zoning provision or why the available zoning relief is inadequate.

Table 3. Zoning Exemptions Sought

Provision	**Description**	**Zoning Relief**	**Company Rationale for Seeking Exemption**
§§ 5.1(A), 5.2(A), 5.2(B), 5.4, Table 1: Schedule of Uses	Proposed use not allowed in AR-II district.	None Available	The Medway Zoning Bylaw expressly prohibits the granting of use variances. Section 5.2(B). Therefore, an exemption from the operation of this prohibition – set forth in Section 5.1(A), 5.2(A), 5.4, and Table 1: Schedule of Uses – is *per se* required.
§6.1; Table 2 of the Town Zoning Bylaw	Proposed height of structures not allowed in AR-II district.	None Available	The Medway Zoning Bylaw states that structures in the AR-II zone may not exceed 35 feet in height. There are some components of the Project Substation that meet the definition of structures and will exceed this height limit.
§6.2(c)	Lot "shape factor".	Variance	The Medway Zoning Bylaw requires a lot "shape factor" of 22 or less. Given the size and shape of the site, the "shape factor" may exceed the maximum permitted. The Company would be required to seek a variance. It is difficult, perhaps impossible, to demonstrate the existence of unique conditions that are required for the grant of a variance. Even if a variance were granted, it would be susceptible to revocation on appeal. To avoid the legal uncertainty, potential for adverse interpretations, delay, burden and undue expense associated with obtaining a variance, the Company requests an exemption.

Provision	Description	Zoning Relief	Company Rationale for Seeking Exemption
§7.3 Hazards	Uses that produce excessive noise are prohibited.	Variance	The Project has been designed to reduce noise sources and provide additional noise mitigation. Nevertheless, whether sound emitting during the construction and operation of the Project is "excessive" or constitutes a "nuisance or hazard" is subjective. To ensure the Company's compliance with Section 7.3, a variance would be required. To avoid the legal uncertainty, potential for adverse interpretations, delay, burden, and undue expense associated with obtaining a variance, the Company requests an exemption.

Source: Company Brief at 54-55; Exh. MG-3, at 9.

3. Consultation with Municipal Officials and Community Outreach

The Department continues to favor the resolution of local issues on a local level whenever possible to reduce concern regarding any intrusion on home rule. Hopkinton LNG at 70; NSTAR Electric d/b/a Eversource Energy, D.P.U. 15-85, at 38-39 (2016) ("Woburn Substation"); EFSB Russell (2009) at 60-65. The Department 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. Woburn Substation at 41-42; NSTAR Electric Company, D.P.U. 14-55/14-56, at 41 (2015) ("NSTAR Belmont"); NSTAR Electric Company, D.P.U. 13-177/13-178, at 36 (2015) ("Seafood Way").

The Company asserts that there is currently no pathway for local land use approval for BESS facilities with the Town (Exh. MG-3, at 12; Company Brief at 57). According to the Company, the Zoning Bylaw restricts the placement of energy storage facilities to the Energy-Resources ("ER") district (Exh. MG-3, at 12; Company Brief at 57). The Company asserts that it cannot construct the Project in the ER district because all parcels in that district are owned or controlled by Exelon or Eversource (Exh. MG-3, at 12; Company Brief at 57). Furthermore, the

Town has imposed a temporary moratorium on the construction of BESS facilities in the ER zoning district (Exhs. EFSB-Z-24(b); MG-3, Att. 1, at 2, §1.8).[78]

Faced with this situation, the Company represents that it has "worked extensively with Town staff, local Boards, and the public to consider local land use approval pathways for the Project" (Exh. MG-3, at 12; Company Brief at 57). In its Zoning Petition, the Company provided a list of 14 separate occasions on which, it asserts, its staff met with local elected officials, Town boards and committees, Town department heads, residents, and abutters (Exh. MG-3, at 15). In addition, the Company proposed several land use changes for the Project (Company Brief at 57).

Regarding these proposals, the Company represents that, in the spring of 2021, the Town explored rezoning the land to be occupied by the Project from AR-II to ER (Exh. MG-3, at 12; Company Brief at 57). The Company asserts that it attended several Planning Board, Select Board, and Committee meetings at which rezoning was addressed (Exh. MG-3, at 12-13; Company Brief at 57-58). Due to local opposition, however, this rezoning was never accomplished (Exh. MG-3, at 12-13; Company Brief at 57-58).

The Company represents that it also presented the concept of a "like and similar use" determination to Town staff (Exh. MG-3, at 13; Company Brief at 58). The Company argues that given: (1) that the use "Public Utilities" is a specially-permitted use in the AR-I (Agricultural Residential I), AR-II, VR (Village Residential) and CB (Central Business) zoning districts and is a by-right use in six other districts; and (2) the Project is located in the AR-II zone, such a "like and

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78 This moratorium expires on June 30, 2023, and it applies only to the ER district (Exhs. MG-3, Att. 1, at 2, § 1.8(b); EFBS-Z-24(b)). As mentioned above, the Town attempted to replace this temporary moratorium with Articles 15 and 16 that would place significant zoning limitations on BESS (Exhs. EFSB-Z-24(b)(ii)(S); EFSB-Z-19(S)).

similar use" determination would allow the Company to submit the application to the Zoning Board of Appeals, which could review the application package and impose certain conditions on its approval (Exh. MG-3, at 13).[79] According to the Company, such an action would "allow the /parcels' designation as AR-II to remain unchanged, eliminating the risk that accompanied rezoning in which other energy uses could be developed in the future" (Exh. MG-3, at 13; Company Brief at 58). The Company asserts that the Town staff was not comfortable with this approach and it was never pursued (Exh. MG-3, at 13; Company Brief at 58).

Finally, the Company represents that it proposed to the Town the creation of a "Zoning Overlay District" (Exh. MG-3, at 13; Company Brief at 58). According to the Company, such a district would be overlaid on the existing AR-II district and a specific site plan would be approved with accompanying restrictions and mitigation measures (Exh. MG-3, at 13; Company Brief at 58). Creation of such a district, the Company asserts, would have allowed the Town to "craft a very specific approval and ensure various protections" (Exh. MG-3, at 13; Company Brief at 58). According to the Company, the Town did not pursue this option due to opposition by the Town staff (Exh. MG-3, at 13; Company Brief at 58).

4. Positions of the Parties

a. Town of Medway

In its Initial Brief and Supplemental Brief, the Town states:

> After a review of the record and the transcripts of the three days of evidentiary hearings and subject to incorporation of the HCA as set forth above as well as the Board's

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79 The Company does not define or explain the meaning of the term a "like and similar use determination" (see Company Brief at 58; Exh. MG-3, at 13). Nor does the Company explain why such a determination, if obtained, would allow it to submit an application directly to the Zoning Board of Appeals (see, Exh. MG-3, at 13; Company Brief at 58).

> imposition of reasonable conditions on the Project pursuant to application of the relevant statutory standards under G.L. c. 164, §69J ¼, the Town believes that its interests and those of its residents will be adequately protected.
>
> Town Brief at 2; Town Supplemental Brief at 3.

b. Medway Enumerated Parties

In its briefs, MEP does not directly address the issue of whether the requested zoning exemptions are necessary to allow construction or operation of the petitioner's Project. Nevertheless, MEP does address zoning in a general manner. MEP argues that "[a]pproving Medway Grid's proposal to locate the proposed facility in a predominantly residentially zoned neighborhood is inconsistent with the siting of the parent companies *[sic]* other BESS facilities in California and Texas" (MEP Brief at 2). According to MEP, "Medway Grid's parent company chose to locate three other facilities at a substantially greater distance from residential and commercial properties" (MEP Brief at 2, citing Exh. MEP-14).

MEP also asserts that "Medway Grid has stated that they do not need to comply with the Town of Medway Zoning Bylaw" (MEP Brief at 4). MEP states that, currently, the abutters to the Project and those within one-half mile of the project "can enjoy their backyards, patios, porches, and decks without the drone of an industrial facility" (MEP Brief at 4). MEP urges that the status quo not be disrupted (MEP Brief at 4). Furthermore, "MEP believes that the sound attenuation levels required by the Town of Medway Noise bylaw can be achieved" (MEP Brief at 4-5). MEP concludes "If Medway Grid refuses to meet the Town of Medway Noise Bylaw the project should not be approved" (MEP Brief at 5).

MEP also argues that "The fact that Medway Grid has requested that the EFSB circumvent the local zoning process is unacceptable" (MEP Brief at 5). MEP states that residents of the Town

worked to revise the Zoning Bylaw to address construction of a BESS in the Energy Facilities zone (MEP Brief at 6). MEP asserts that "The vacant Eversource land would serve as a much better site, is properly zoned for a BESS facility, and would have substantially less impact on abutting property owners and substantially less environmental impact" (MEP Reply to Company Brief at 5). In a similar vein, MEP complains that the Company is seeking approval for a BESS development in an AR-II zone when "vacant land properly zoned for the use exists" (MEP Reply to the Company Brief at 12).

Regarding municipal engagement and outreach, MEP criticizes the Company's outreach efforts (MEP Reply to the Company Brief at 3). MEP alleges that much of the communications from the Company took place before "the plan" was revised and that the post-revision communication was lacking (MEP Reply to Company Brief at 3-4). Furthermore, MEP addresses the Company's representation that it held 14 meetings with Medway Town staff and residents, asserting that there were no public hearings (MEP Reply to Company Brief at 15). Furthermore, of the 14 meetings, MEP asserts that eight of them were "exclusively with Medway Staff and Department Heads" (MEP Reply to Company Brief at 15). According to MEP, there was only one meeting with abutters, other residents, and elected officials on June 23, 2021 (MEP Reply to Company Brief at 16). MEP notes that the Company has not held regular meetings with abutting property owners since June 2021, even after the Project was substantially changed (MEP Brief at 6-7).[80] The Company argues that it has continued to provide the "community" with updated

[80] The Department notes that the Company filed its Petitions with the Siting Board and Department on February 25, 2022. As described above, abutters and Town residents were provided notice of the Siting Board process with details of how to participate in public comment hearings, provide written and/or oral comments, and participate as an intervenor

information about the Project, specifically as part of the Siting Board proceeding and through the Company's website (Company Reply Brief at 27-28). Additionally, MEP alleges that Medway Grid did not meet with the Town of Medway Zoning Board of Appeals or Design Review Committee (MEP Reply to Company Brief at 3-4). MEP references a letter from the Director of the Town of Medway Office of Community Economic Development to the Secretary of the EEA regarding the Company's ENF, which raises issues related to environmental concerns (MEP Brief at 3-4). MEP asserts that it is in the best interest of the Commonwealth that each and every area of concern be addressed by Medway Grid (MEP Brief at 4).

c. Charles Myers

Mr. Myers points to the Energy Resource Zoning District as an area that can be used by BESS developers in Medway (Myers Brief at 26). Myers argues that the Town of Medway does not oppose siting a BESS in the Town "if" it were sited in an appropriately zoned district and designed/constructed in a safe and appropriate manner and had no impact on abutting residents of the Town (Myers Brief at 27). Mr. Myers alleges that the Town contracted an engineering technology company to develop its zoning regulations (Myers Brief at 27). Instead, according to Mr. Myers, the Company is choosing to bypass a knowledgeable Town (Myers Brief at 27).

Mr. Myers asserts that the Zoning Petition fails to ask for relief from the "Town of Medway Noise Zoning regulations" (Myers Brief at 7). This is significant, Mr. Myers asserts,

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in the proceeding. In the SEIR Certificate, the Secretary describes several "minor changes" to the Project since the Company filed its EENF on April 20, 2022 (Exh. MG-7, at 4). This included the addition of one Megapack 2XL and one transformer, and shifting portions of the Project layout to the west to be closer to the existing Eversource transmission corridor (Exh. MG-7, at 4).

because in the Company's "Sound Level Assessment Report," the Company is, in fact, requesting a waiver of the zoning provisions relating to noise (Myers Brief at 8, citing Exh. MG-1, Att. C, § 4.3, page 10 of 36). Mr. Myers further argues that if ISO-NE implemented "Actions [2-11], noise level restrictions would be lifted" (Myers Brief at 8). Should this happen, Mr. Myers represents, the Project noise levels would exceed both the level allowed by the Medway Zoning Bylaw and the MassDEP regulations (Myers Brief at 8). Mr. Myers maintains that if the Project, when operated, exceeds the level permitted by regulations despite all possible mitigation, then the Company could not operate the Project (Myers Brief at 10).

Mr. Myers also asserts that the community outreach to and within the Town of Medway by the Company has been limited and ceased after June 2021 (Myers Brief at 25). Mr. Myers notes that the current Project plans are different from those shown to the public in June 2021 (Myers Brief at 25). Critically, Mr. Myers notes, the current site configuration has BESS units located closer to residence abutters to the east of the Project, which was not made clear by the Company to the residents of Medway (Myers Brief at 25). Mr. Myers also alleges that Medway Grid has not met with any Town Board or Commissions since March 2021, and did not attend public meetings that discussed the Project (Myers Brief at 26). Mr. Myers claims that the Company did not meet with the Select Board at a "posted" meeting since March 2021 (Myers Brief at 26). Mr. Myers concludes that Medway Grid thus cannot be seen as an organization that wants to be a member of the Medway community (Myers Brief at 26).

5. Company's Response

In its review of Medway's recent amendments to its Zoning Bylaw, the Office of the Attorney General issued a letter on May 17, 2023, that states "we disapprove and delete the

portions of the Schedule [of Uses] that prohibit Tier 2 BESS in all districts except the ER district" (Exh. EFSB-Z-19(S)). In its Supplemental Brief, the Company argues that "Even with this rejection, the Town would have to reopen the zoning process to amend the zoning bylaws and the outcome of that prolonged process is uncertain" (Company Supplemental Brief at 5). In addition, the Company denies the allegations that the Project will not comply with Zoning Bylaws relating to noise (Company Brief at 14-15). See Section II.C.4.c.iv above.

Medway Grid asserts that MEP's argument that the Company has not cooperated with the Town is erroneous (Company Reply Brief at 17). Specifically, the Company states that it has met with the Town Planning and Economic Development Board, Select Board, Medway staff and Department heads in 2021 (Company Brief at 17). Only after these meetings did the Town vote to impose a moratorium on the construction of a BESS (Company Brief at 17, citing Exh. MG-3, at 13-15). Since this moratorium has been imposed, the Company argues, there was no pathway for local land use approval of an energy storage system within the Town (Company Reply Brief at 17, citing Exh. MG-3, at 13-15). Specifically, the Company explains, the Project could not even be constructed in the area zoned for ER (Company Reply Brief at 28). The Company also notes that the only parcels zoned for ER are under ownership and use by Exelon for its peaker plant complex, or under control by Eversource for the West Medway Substation and other future electrical transmission use, and not for sale (Company Reply Brief at 17, 28). The Company also observes that in meetings in spring 2021 with the Town, residents including Mr. Myers and members of MEP opposed rezoning of several Eversource-owned AR-II parcels to ER zones (Company Reply Brief at 17; Tr. 3, at 348).

6. Analysis and Findings

a. Individual Exemptions

The Project Site is located in an AR-II district (Exh. MG-3, at 7). As the Zoning Bylaw now stands, construction of a BESS is not an allowed use in such a district (Exh. MG-3, Att. 1, §§ 5.2(A), 5.4). Furthermore, the Medway Zoning Bylaw expressly forbids the grant of a use variance (Exh. MG-3, at 7, and Att. 1, § 5.2(B)). Consequently, we find that an exemption from Medway Zoning Bylaw sections 5.1(A), 5.2(A), and 5.2(B) is necessary to allow construction and operation of the petitioner's Project. Even with the issuance of the May 17, 2023, letter from the Attorney General's office which disapproves and deletes the portions of the Schedule of Uses that prohibit Tier 2 BESS in all districts except the ER district (Exh. EFSB-Z-19(S)), this letter does not alter the Company's need for individual exemptions from Medway Zoning Bylaw sections 5.1(A), 5.2(A), and 5.2(B). The Project is not located in the ER district.

Medway Zoning Bylaw section 6.1, Table 3, prohibits structures greater than 35 feet tall in an AR-II district (Exh. MG-3, Att. 1, § 6.1). The Zoning Bylaw defines "structure" as "Anything constructed or erected at a fixed location on the ground to give support or to provide shelter" (Exh. MG-3, Att. 1, § 2). Some components of the Project Substation would meet this definition of "structure" (Exh. MG-3, at 8, 9). Therefore, we find that an exemption from Medway Zoning Bylaw section 6.1 is necessary to allow construction and operation of the petitioner's Project.

As described in Table 3 above, the record shows that construction of the Project would require the Company to obtain variances from Medway Zoning Bylaw section 6.2(c) (lot shape factor) and section 7.3 (hazards as that section relates to noise). The Department accepts the Company's argument that the criteria for obtaining a variance are difficult to fulfill. See G.L. c.

40A, § 10; see also, Hopkinton LNG at 69 ("the criteria for obtaining variances are both subjective and difficult to fulfill"); 28 Mass.Prac.Series, Real Estate Law, § 23.24 (4th ed.) ("[e]stablishing each one of the three requirements [for obtaining a variance] is a very difficult task").

Additionally, we note that the granting of a variance may be appealed. See G.L. c. 40A, § 17; see also Hopkinton LNG at 69; 28 Mass.Prac.Series, Real Estate Law, § 23.24 (4th ed.) ("it is not surprising that few variances stand up when challenged in court"); NextSun Energy LLC v. Fernandes, Land Court Misc. Case Nos. 19 MISC 000230 and 000564, at 2 (RBF) (May 9, 2023). Consequently, requiring the Company to obtain variances could result in significant delay. See Hopkinton LNG at 69. As mentioned above, the Project must be completed by June 1, 2024, to fulfill the Company's Forward Capacity Market obligations (Exhs. MG-1, at 4; EFSB-Z-4). Accordingly, the Department finds that exemptions from Medway Zoning Bylaw sections 6.2 and 7.3 are necessary to allow construction and operation of the petitioner's Project.

In addition, arguments in favor of siting the BESS in the ER district fail to consider that most of the ER district is occupied by existing energy infrastructure (Exh. MG-3, at 12). Even if there were available space in the ER district, the existing moratorium would preclude construction of the Project in the ER district.

b. Municipal Consultation and Outreach

The record shows that the Company consulted with local elected officials, Town boards and committees, Town department heads, residents, and abutters on 14 separate occasions (Exh. MG-3, at 15). The first such consultation took place on September 23, 2019, more than two years before the petitions were filed (Exh. MG-3, at 15). Furthermore, the Company and the Town have

entered into an HCA that is extensive and it addresses a wide variety of topics (Exh. EFSB-G-26)(1).

The negotiation of such a comprehensive HCA is a significant achievement for the Company in the context of municipal consultation. In a similar situation, the Siting Board held that it "recognizes the benefit of local support, including the successful negotiation of host community agreement(s)" to the implementation of projects. Vineyard Wind at 126. The existence of such an HCA complements the Siting Board's policy to "strongly encourage meaningful municipal and public consultation and engagement by proponents." Vineyard Wind at 126. The Department agrees with the Siting Board on this point; the Department also strongly encourages meaningful municipal and public consultation and engagement, and it recognizes an executed HCA as tangible evidence of such consultation and engagement. Furthermore, we take this opportunity to encourage all petitioners to work with affected municipalities to explore, and where possible, execute, an HCA, or similar document, with the municipalities in which their projects would be constructed.

In addition, at the public comment hearing, Mr. Boynton, Medway's Town Manager, expressed his appreciation for the Company's "very cooperative manner" (Transcript of July 13, 2022, public comment hearing at 28). We therefore find that the Company made a good faith effort to consult with municipal authorities and that the Company's communications have been consistent with the spirit and intent of Sudbury-Hudson, Vineyard Wind, and EFSB Russell (2009).

E. Conclusion on Requests for Individual Zoning Exemptions

G.L. c. 40A, § 3, includes exemptions from local zoning requirements for certain types of uses. Tracer Lane II Realty LLC v. City of Waltham, 489 Mass. 775 (2022). G.L. c. 40A, § 3, reflects the Legislature's intent that certain uses should be protected from local community opposition as a matter of public policy, including religious, educational, and agricultural uses. 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 Department for an exemption to local zoning bylaws. G.L. c. 40A, § 3. The purpose of this exemption is to ensure that local opposition does 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; New York Central Railroad, 347 Mass. at 592. Without the ability of the Department to balance the state's need for electricity with local interests, local opposition could implement veto power over facilities serving the state. We note this appears to be the case for proposed BESS facilities, as restrictive zoning is enacted in multiple communities (Exhs. EFSB-1; EFSB-Z-19(S)). See Cranberry Point Energy Storage LLC, EFSB 21-02/D.P.U. 22-59 (2023). If the Department interprets G.L. c. 40A, § 3 in a manner that makes it impossible for BESS developers to request exemptions from local zoning, BESS developers would likely be forestalled from providing this service, even when the developers can demonstrate that the use of the land or structure is reasonably necessary for convenience or welfare of the public. The objections of a few residents could make it impossible to achieve the Commonwealth's energy storage mandates. This is neither a logical nor acceptable result.

As described above, the Department finds that (1) Medway Grid is a public service corporation; (2) the proposed use is reasonably necessary for the public convenience and welfare;

and (3) the specifically identified zoning exemptions are required for purposes of G.L. c. 40A, § 3. Additionally, the Department finds that the Company engaged in good faith consultations with the Town of Medway. Accordingly, the Department grants the Company's request for the individual zoning exemptions listed above in Table 3, subject to the conditions set forth in this Order.

III. REQUEST FOR A COMPREHENSIVE EXEMPTION

A. Standard of Review

The Department considers requests for a comprehensive zoning exemption on a case-by-case basis. Westfield at 54; Hopkinton LNG at 73; Princeton at 37. The Department will not consider the number of exemptions required as a sole basis for granting a comprehensive exemption. Princeton at 37. Rather, the Department will consider a request for comprehensive zoning relief only when issuance of a comprehensive exemption would avoid substantial public harm. Westfield at 54; K Street Substation at 41; Hopkinton LNG at 73.

B. Company's Position

According to the Company, "The Project is unlikely to be constructed and operational by June 2024 without a comprehensive zoning exemption" (Exh. EFSB-Z-21; Company Supplemental Brief at 5). In support of this statement, the Company asserts, "the Town does have an ongoing process whereby new bylaws restricting battery storage is set to go into effect in June 2023. That is the time that construction on this Project must commence to be operational by June 2024, the date by which ISO-NE requires the Project to provide capacity" (Exh. EFSB-Z-21). New bylaws, the Company asserts, "would restrict construction of the Project" (EFSB-Z-21). Furthermore, "if construction cannot commence by June 2023," the Company represents, "operations by June 2024 are not possible" (Exh. EFSB-Z-21).

In addition, the Company represents that the factors usually considered in evaluating a petition to grant a comprehensive zoning exemption favor the grant of such an exemption in this case (Exh. EFSB-Z-21). These factors are:

- Reliability. The project is required for reliability. In support, the Company notes that "[t]his project has been selected by ISO-NE to provide much needed capacity to the region by June 2024" (Exh. EFSB-Z-21).

- Time sensitivity. "This Project must commence operations in June 2024. To meet this critical deadline, the Project must commence construction by June 2023" (Exh. EFSB-Z-21; see also, Company Supplemental Brief at 5).

- Outreach. "The project proponent actively engaged with the community and responsible officials to discuss the applicability of local zoning provisions to the Project and any local concerns" (Exh. EFSB-Z-21).

- Municipal agreement. "[T]he Town does not oppose the implementation of a comprehensive zoning exemption" (Exh. EFSB-Z-21).

C. Positions of the Parties

Neither the intervenors nor the limited participant directly addresses the Company's request for a comprehensive zoning exemption. However, MEP disputes the Project is time sensitive (MEP Brief at 6). MEP argues that Medway Grid should not have committed to ISO-NE that the Project would be operational by June 1, 2024 (MEP Brief at 6). The Company emphasizes the time-sensitive nature of the Project (see, e.g., Company Supplemental Brief at 5).

D. Analysis and Findings

The grant of a comprehensive exemption is based on the specifics of each case. Westfield at 55. Compared to the grant of individual zoning exemptions, which are tailored to meet the construction requirements of a particular project, the grant of a comprehensive exemption serves to nullify a municipality's zoning code in its entirety with respect to the project under review. Westfield at 55. Thus, compared to the grant of individual zoning exemptions, a comprehensive

zoning exemption constitutes a broader incursion upon municipal home rule authority. Westfield at 55. 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. NSTAR Electric Company, D.P.U. 13-126/13-127, at 37-38 (2014) ("Electric Avenue") at 37; New England Power Company d/b/a National Grid, D.P.U. 12-02, at 35-37 (2012); NSTAR Electric Company, D.P.U. 08-1, at 35-37 (2009).

Department and Siting Board cases that have considered and granted comprehensive exemptions have often involved projects that were time sensitive and that dealt with the zoning ordinances of multiple municipalities, where conflicting interpretations could arise. Hopkinton LNG at 80; New England Power Company d/b/a National Grid, D.P.U. 14-128/14-129, at 45 (2015) ("NEP Cabot Taps"); New England Power Company d/b/a National Grid, EFSB 12-1/D.P.U. 12-46/12-47, at 88 (2014). In this case, the Project does not span more than one municipality (Exh. MG-1, at 1). However, construction of the Project immediately is necessary for system reliability, thereby making the Project time sensitive (Exh. EFSB-Z-21; Company Supplemental Letter Brief dated May 26, 2023, at 5; Town of Medway Supplemental Brief at 1. Moreover, the Company has consulted extensively with the Town of Medway, and it has entered into an HCA with the Town.

In addition, the record supports the Company's assertion that there is currently no way to approve land use for BESS facilities (see Company Brief at 57; Exh. MG-3, at 12). The Medway Zoning Bylaw restricts the placement of energy storage facilities to the ER district (Exh. MG-3, at 12; Company Brief at 57). However, the Project cannot be constructed in the ER district because all parcels in that district are owned or controlled by Exelon or Eversource (Exh. MG-3,

at 12; Company Brief at 57). Furthermore, the Town has imposed a temporary moratorium on the construction of BESS facilities in the ER zoning district (Exhs. EFSB-Z-24(b); MG-3, Att. 1, at 2, §1.8). Although this moratorium will expire on June 30, 2023, it has been replaced by Articles 15 and 16, amendments to its Zoning Bylaw that the Town enacted on November 14, 2022, which contain further restrictions (Exhs. EFSB-Z-24(b)(ii)(S); EFSB-Z-24(S) Att. 9, at 12-13; EFSB-Z-19(S)). These requirements would undoubtedly delay a project that is already time sensitive. Therefore, the issuance of the May 17, 2023, letter by the Office of the Attorney General does not change our conclusion regarding the Company's need for a comprehensive zoning exemption.

We have found that there is need for the Project, and the need is immediate. The need has been identified by ISO-NE. Furthermore, the Project fulfills Commonwealth policies relating to energy storage goals, which have definitive deadlines. Without the grant of a comprehensive zoning exemption, the Project will not be constructed in a timely manner, resulting in substantial public harm. Accordingly, the Department grants a comprehensive zoning exemption for the Project.

IV. SECTION 61 FINDINGS

MEPA provides that "[a]ny determination made by an agency of the [C]ommonwealth 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" ("Section 61 findings"). G.L. c. 30, § 61. Pursuant to 301 CMR 11.01(4)(c), Section 61 findings are necessary when an Environmental Impact Report ("EIR") is submitted to the Secretary of EEA and the findings should be based on such EIR. Where an EIR is not required, Section 61 findings are not

necessary. 301 CMR 11.01(4). The Company was required to prepare an EIR (Exh. MG-7, at 3). Accordingly, the Department is subject to MEPA review requirements in this proceeding and makes all required MEPA Section 61 findings.

The Company filed its SEIR with MEPA on August 31, 2022 (Exh. MG-6). On October 18, 2022, the Secretary issued a Certificate in which she found that the SEIR "adequately and properly complies with MEPA and its implementing regulations" (Exh. MG-7). The SEIR accepted by the Secretary proposed mitigation measures relative to the potential environmental impacts of the Project (Exh. MG-7).

In Section II.C.4 above, the Department conducted an analysis of the environmental impacts of the proposed Project. Further, the record contains the MEPA documents submitted by the Company, including the EENF, and SEIR for the Project, as well as public comments on the SEIR (Exhs. MG-5; MG-6). In accordance with the requirements of MEPA, the Department has reviewed the SEIR for the Project; evaluated, and determined the impact of the Project on the natural environment; and specified in detail in this Order measures to be taken by the Company to avoid damage to the environment or, to the extent damage to the environment cannot be avoided, to minimize and mitigate damage to the environment to the maximum extent practicable. G.L. c. 30, § 61.

While there are no environmental justice populations within one mile of the proposed Project, there are several areas of environmental justice populations within five miles of the proposed Project (Exhs. MG-2, at 67; MG-7, at 6). These populations are located in Milford and Franklin, Massachusetts (Exhs. MG-2, at 67; MG-7, at 6). The Project, however, does not impact air quality and the record does not demonstrate other environmental impacts that would

disproportionately affect these populations (Exh. MG-2, at 67). Therefore, MEPA's enhanced public involvement protocols or enhanced analysis of potential project impacts on environmental justice populations are not required for this Project (Exh. MG-2, at 67). Nevertheless, the SEIR provided a review of the construction period truck routes and the need for emergency management plans that might be necessary in an emergency and their effect on environmental justice or other vulnerable populations (Exh. MG-7, at 6). The SEIR stated that there is no need for emergency management plans to specifically address environmental justice or other vulnerable populations in the area, given that the nearest environmental justice population is 2.3 miles from the Project site (Exh. MG-7, at 10). Furthermore, the anticipated truck routes related to construction do not go through environmental justice populations (Exh. MG-7, at 16). On October 18, 2022, the Secretary of Energy and Environmental Affairs issued a certificate on the SEIR which determined that said document adequately and properly complies with MEPA and implementing regulations (Exh. MG-7, at 1).

Accordingly, the Department finds that all feasible measures have been taken to avoid or minimize the environmental impacts of the proposed Project. See G.L. c. 30, § 61; 301 CMR 11.2(5).

V. REQUEST FOR AUTHORITY TO CONSTRUCT AND USE TRANSMISSION LINES PURSUANT TO G.L. C. 164, § 72

A. Standard of Review

General Laws c. 164, § 72, requires, in relevant part, that an electric company seeking approval to construct a transmission line must file with the Department a petition for:

> authority to construct and use … a line for the transmission of electricity for distribution in some definite area or for supplying electricity to itself or to another

> electric Company or to a municipal lighting plant for distribution and sale … and shall represent that such line will or does serve the public convenience and is consistent with the public interest .... The [D]epartment, after notice and a public hearing in one or more of the towns affected, may determine that said line is necessary for the purpose alleged, and will serve the public convenience and is consistent with the public interest.[81]

The Department, in making a determination under G.L. c. 164, § 72, considers all aspects of the public interest. Boston Edison Company v. Town of Sudbury, 356 Mass. 406, 419 (1969). Among other things, Section 72 permits the Department to prescribe reasonable conditions for the protection of the public safety. Id. at 419-420.

In evaluating petitions filed under G.L. c. 164, § 72, the Department examines (1) the need for, or public benefits of, the present or proposed use; (2) the present or proposed use and any alternatives identified; and (3) the environmental impacts or any other impacts of the present or proposed use. NEP Cabot Taps at 47-48; Northfield/Erving at 59-60; NSTAR Electric Company/New England Power Company d/b/a National Grid, D.P.U. 11-51, at 6 (2012).

B. Analysis and Findings

In evaluating petitions filed pursuant to G.L. c. 164, § 72, the Department relies on the analysis conducted for G.L. c. 40A, § 3, for determining whether the Project is reasonably necessary for the convenience or welfare of the public. The Company maintains that that the transmission line that is part of the Project meets this standard (Company Brief at 61-62). Based on the record in this proceeding and the analysis provided in Section II above, compliance with the

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[81] Pursuant to G.L. c. 164, § 72, an electric company must file with its petition a general description of the transmission line, a map or plan showing its general location, an estimate showing in reasonable detail the cost of the line, and such additional maps and information as the Department requires.

directives and mitigation discussed in Section II, and compliance with all applicable federal, state, and local laws and regulations, the Department finds, pursuant to G.L. c. 164, § 72, that the proposed transmission line is necessary for the purpose alleged, will serve the public convenience, and is consistent with the public interest.

VI. ORDER

Accordingly, after due notice, hearing, and consideration, it is hereby

ORDERED: That the petition of Medway Grid seeking individual exemptions set forth in Table 3 above from the operation of the Town of Medway Zoning Bylaw pursuant to G.L. c. 40A, §3, is granted, as provided herein; and it is

FURTHER ORDERED: That the petition of Medway Grid seeking a comprehensive exemption from the operation of the Town of Medway Zoning Bylaw pursuant to G.L. c. 40A, §3, is granted, as provided herein; and it is

FURTHER ORDERED: That the petition of Medway Grid filed pursuant to G.L. c. 164, § 72 for permission to construct and operate a transmission line is granted; as provided herein; and it is

FURTHER ORDERED: That Medway Grid and its contractors and subcontractors comply with all applicable state and local regulations for which Medway Grid has not received an exemption; and it is

FURTHER ORDERED: That Medway Grid obtain all other governmental approvals necessary for the Project; and it is

FURTHER ORDERED: That within 90 days of Project completion, Medway Grid shall submit a report to the Department documenting compliance with all conditions contained in this

Order, noting any outstanding conditions yet to be satisfied and the expected date and status of such resolution; and it is

FURTHER ORDERD: That Medway Grid and its successors in interest shall comply with all other directives contained in the Order; and it is

FURTHER ORDERD: That Medway Grid or its successors in interest notify the Department of any changes other than minor variations to the Project so that the Department may decide whether to inquire further into a particular issue; and it is

FURTHER ORDERED: That because the issues addressed in this Order relative to this Project are subject to change over time, construction of the Project must commence within three years of the date of this Order; and it is

FURTHER ORDERED: That the Secretary of the Department transmit a certified copy of this Order to, and that Medway Grid serve a copy of this Order on the Select Board, Town Manager, Planning Board, and Department of Public Works, Conservation Commission for the Town of Medway and Town Zoning Board of Appeals, within five business days of its issuance, and that Medway Grid certify to the Secretary of the Department within ten business days of its issuance that such service has been accomplished; and that said certification be served upon the Hearing Officer to this proceeding; and it is

FURTHER ORDERED: To help ensure attainment of the Project's asserted renewable energy and air emission benefits, the Department requires the Company to submit an application to register the Project as an eligible resource with the Clean Peak Program within 120 days of the facility's commercial operation; and it is

FURTHER ORDERED: The Department directs the Company to notify the Department when it files its notice of intent to the Medway Conservation Commissions, as well as after it receives a determination from the Conservation Commission; and it is

FURTHER ORDERED: To reduce impacts on water resources, the Department recommends the Company, to the extent possible, minimize the use of de-icing chemicals on site both during operation and construction; and it is

FURTHER ORDERED: Given the visual impact to abutters during operation of the Project, the Department directs the Company to ensure local input regarding the wall design (including wall material specifications) and related landscaping plans. The Company shall file the final design with the Department prior to commencing construction of the wall; and it is

FURTHER ORDERED: To mitigate known disruptions to abutters to the Project site, the Department directs Medway Grid, in consultation with the Town of Medway, to develop its community outreach plan to be used by the Company to inform potentially impacted stakeholders of plans for Project construction and operation, and file a copy with the Department. The outreach plan should, at a minimum, identify procedures for providing prior notification to affected residents of the following: (1) the scheduled start, duration, and hours of construction; (2) any construction that must take place outside the normal hours or days indicated above; (3) any operation the Company intends to conduct that could result in unexpected community impacts due to unusual circumstances; and (4) process for complaints to be submitted to the Company and Company response procedures, including contact information; and it is

FURTHER ORDERED: The Department directs the Company to file the initial post-construction noise measurement results as required by its HCA to the Department. The Company

will also require its contractor to apply BMPs to mitigate noise during construction and also abide by requirements of the HCA; and it is

FURTHER ORDERED: The Department expects Medway Grid and its contractors and subcontractors to minimize construction noise by using best construction practices; and it is

FURTHER ORDERED: The Department directs Medway Grid to limit construction to its proposed schedule of Monday to Friday from 7:30 a.m. to 6:00 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), Medway Grid should seek permission from the Town of Medway 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; and it is

FURTHER ORDERED: The Department expects 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; and it is

FURTHER ORDERED: To ensure that the Company's HMA and ERP processes are completed in a timely and transparent manner, the Department directs the Company to provide quarterly updates to the service list in this proceeding on the progress of finalizing its HMA and ERP, with the first update due within 45 days of this Order. The Company's updates should, at a minimum, include descriptions of any incremental updates to the plans, including compliance regarding the Department's ERP/HMA conditions. The Company is required to file finalized ERP and HMA with the Fire Department and the Department 30 days prior to commercial operations; and it is

FURTHER ORDERED: The Department expects the Company's ERP to include information regarding personnel, equipment, and apparatus required to respond to a significant thermal event; and it is

FURTHER ORDERED: Consistent with the HCA, the Department expects the Company, in consultation with the Fire Department, to provide training, emergency equipment and funding for a fire safety consultant; and it is

FURTHER ORDERED: The Department directs the Company to work with the Town of Medway and the Medway Fire Department to include provisions in the ERP/HMA to provide residents near the Project Site real-time notification and instructions in the event of an emergency at the site. Further, the Department expects that the Company, in consultation with the Town of Medway and the Fire Department, to include in the ERP/HMA evacuation and/or shelter-in-place protocol for residents near the Project Site, in the event of an emergency at the site; and it is

FURTHER ORDERED: To promote transparency, the Department directs the Company to report to the Department and to the service list in this proceeding within seven days following any incidents at the Project Site that require notification to the Fire Department. The report should include a description of the incident and any actions taken by the Company; and it is

FURTHER ORDERED: To ensure that the Department and the public are provided with timely information about the Project's safety performance and other matters of public concern, the Department directs the Company to submit informational monthly reports to the Department during the first six months of commercial operation. Each report shall detail: (1) any safety incidents of the Project that required notification of the Medway Fire Department, including a full description of the incident, actions taken, and lessons learned for future operation of the facility;

and (2) a summary of any complaints regarding the Project received by the Company, including the date received and nature of the complaint, actions taken by the Company in response to the complaint and when, and the ultimate resolution of the complaint. All summaries of complaints shall exclude information that would identify the complainant; and it is

FURTHER ORDERED: The Department encourages the Company to work with the Fire Department to determine whether to develop a joint action plan as part of its ERP/HMA to provide neighboring fire departments the appropriate information, including necessary training, to understand various emergency scenarios and provide, if necessary, a coordinated response in the event of a thermal event at the Project Site; and it is

FURTHER ORDERED: Consistent with the HCA, the Department expects the Company to include in the ERP/HMA a plan to ensure that any firefighting water effluent would be fully contained in the stormwater basins and not be discharged outside the basin, or otherwise infiltrate into the ground. The ERP/HMA shall include a plan to collect samples for testing of any water used in fire suppression in the event of a thermal runaway event. To promote transparency, the Company shall submit a report to the Department with the results of such testing; and it is

FURTHER ORDERED: The Department directs the Company to ensure its compliance with MassDEP poly-fluoroalkyl substances ("PFAS") regulations, 310 CMR 112.

By Order of the Department:

James M. Van Nostrand, Chair

Cecile M. Fraser, Commissioner

Staci Rubin, Commissioner

An appeal as to matters of law from any final decision, order or ruling of the Commission 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 Commission be modified or set aside in whole or in part. Such petition for appeal shall be filed with the Secretary of the Commission within twenty days after the date of service of the decision, order or ruling of the Commission, or within such further time as the Commission 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. G.L. c. 25, § 5.