COMMONWEALTH OF MASSACHUSETTS
ENERGY FACILITIES SITING BOARD

Petition of NSTAR Electric Company d/b/a Eversource Energy pursuant to G.L. c. 164, § 72 for Approval to Construct, Operate, and Maintain a New 115-kV Transmission Line on an Existing Right-of-Way in Acushnet and Mattapoisett and for Zoning Exemptions pursuant to G.L. c. 40A, § 3 from the Operation of the Zoning Bylaw of the Town of Mattapoisett	)	EFSB 25-03/D.P.U. 24-93/24-94

INITIAL BRIEF OF
NSTAR ELECTRIC COMPANY d/b/a EVERSOURCE ENERGY

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I. INTRODUCTION

On June 4, 2024, NSTAR Electric Company d/b/a Eversource Energy ("Eversource" or the "Company") filed a petition with the Department of Public Utilities (the "Department") requesting that the Department: (1) approve pursuant to G.L. c. 164, § 72 its proposal to construct, operate, and maintain an approximately three-mile extension to an existing 21-mile, 115-kilovolt ("kV") overhead transmission line (Line 112) (the "New Line Extension") along existing right-of-way ("ROW") 142 between Eversource's Mendall Road Tap in Acushnet and the Crystal Spring Substation #646 ("Crystal Spring Substation" or the "Substation") in Mattapoisett; and (2) to accommodate the New Line Extension, grant individual and comprehensive zoning exemptions pursuant to G.L. c. 40A, § 3 from the operation of the *Zoning By-Laws of the Town of Mattapoisett* ("Zoning Bylaw"). The zoning exemptions are required to expand the Crystal Spring Substation, which is located on Company-owned property at 26R Crystal Spring Road in Mattapoisett (the "Substation Site" and the "Substation Expansion") (the "Petition"). The New Line Extension and the Substation Expansion will be constructed, owned, and operated by Eversource and are collectively referred to herein as the "Project."

As discussed in more detail below, the Project is a component of Eversource's Capital Investment Project ("CIP") proposal that was submitted in accordance with the Department's directives in its Provisional System Planning Program ("Provisional Program"), D.P.U. 20-75-B (2021) ("D.P.U. 20-75-B"). The goal of the Provisional Program is to ensure the expeditious installation of electric power system ("EPS") upgrades to enable the construction of solar and energy storage system projects (i.e., distributed generation "DG" facilities) currently in the interconnection queue that may not be able to move forward because of the high cost of

interconnection.[1] D.P.U. 20-75-B at 2.

On April 15, 2022, in accordance with the Provisional Program, Eversource filed the Marion-Fairhaven CIP Proposal ("M-F CIP Proposal") for the Marion-Fairhaven area, docketed as D.P.U. 22-47. The M-F CIP Proposal identified various upgrades and additions, including the New Line Extension and the Substation Expansion, which are necessary to safely interconnect DG resources to the Company's EPS in the Marion-Fairhaven area ("M-F Group Upgrades"). The Department approved the M-F Group Upgrades subject to certain modifications on December 30, 2022. NSTAR Electric Company d/b/a Eversource Energy, D.P.U. 22-47 (2022) (referred to herein as the "M-F Order"). To ensure expeditious implementation, the M-F Order imposes a four-year deadline within which the Company must permit, construct and bring into operation the M-F Upgrades. D.P.U. 20-75-B at 39.

The four-year construction window for M-F Group Upgrades, including the New Line Extension and the Substation Expansion, concludes on January 19, 2027.[2] The Company has used its resources efficiently and made all commercially reasonable efforts to avoid undue delays in designing the Project and preparing and filing the Petition, all of which occurred within 16 months of the start of the construction window. The Company estimates it will take approximately 19 months to complete construction of the Project once construction commences. This provides a

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[1] DG resources, also known as distributed energy resources ("DER"), are facilities that must submit an application under a Distribution Company's Standards for the Interconnection of Distributed Generation Tariff, regardless of whether the interconnecting facility actually generates electricity, including certain types of solar and energy storage systems. D.P.U. 20-75-B at 1. DER and DG are used interchangeably herein.

[2] In D.P.U. 20-75-B, at footnote 41, the Department stated: "For these purposes, the Department's adjudicatory process includes completion of the adjudicatory proceeding, issuance of a final Order, ruling on any post-Order motions, and ruling on any judicial appeal." Id. at footnote 41. The Department approved the M-F CIP with the issuance of a Final Order on January 20, 2022. G.L. c. 25, § 5 provides a 20-day window to file a petition for appeal with the Department, which is a prerequisite to filing a complaint with the Supreme Judicial Court to challenge a Final Order. No petitions for appeal were filed with the Department and, accordingly, the M-F Order became final at the conclusion of the 20-day appeal period, on January 19, 2023. Four years from that date establishes the required end date of the construction window – January 19, 2027.

window of approximately 13 months to obtain all permits and approvals needed for the start of construction (including the Siting Board's grant of the zoning exemptions requested herein) and complete the procurement process.

The Project satisfies the standards for approval under G.L. c. 164, § 72 and G.L. c. 40A, §3 because the Project is needed immediately and will serve the public interest by: (1) maintaining a reliable electric system; (2) enabling distributed generation facilities currently seeking interconnection to safely and reliably interconnect and operate; (3) enabling future distributed generation applicants to interconnect; and (4) facilitating future load growth due to electrification. Accordingly, the Company respectfully requests expeditious review and approval of the Project under Section 72 and the grant of the requested zoning exemptions under G.L. c. 40A to support timely completion of the Project within the four-year construction window established in D.P.U. 20-75-B.

II. PROCEDURAL HISTORY

A. Public Notice Requirements

1. First Public Notice

On August 28, 2024, the Department issued a Notice of Adjudication/Notice of Public Comment Hearings (the "Notice") that established: (1) a public comment hearing date of September 26, 2024, and (2) a deadline of October 10, 2024, for petitions for leave to intervene or for limited-participant status in the adjudicatory proceeding, and to file written comments. Exh. EV-2. In compliance with the Department's directives (see Exh. EV-3), the Company took the following actions:

Publication of Notice. The Company caused the Notice to be published in English in the *New Bedford Standard Times* on September 11 and 18, 2024, in English in *The Wanderer* on

September 12 and 19, 2024, and in Portuguese in *The Portuguese Times* on September 11 and 18, 2024.

Posting of Notice. On September 10, 2024, a copy of the Notice (in English and Portuguese) was sent to the Acushnet and Mattapoisett Town Clerks and the Department with a request to post for public view until October 10, 2024.[3] In addition, the Notice (in English and Portuguese) and the Petition, including attachments, were posted on the Company's website.

Service of Notice. As directed by the Department, the Notice (in English and Portuguese) was served as follows:

i. On September 10, 2024, by first class mail, with a copy of the Petition and all attachments, to the Mattapoisett and Acushnet Public Libraries, with a request that they be made available during regular business hours.

ii. On September 10, 2024, by first class mail, to the Mattapoisett and Acushnet Select Boards, Town Administrators, Planning Boards, Zoning Boards of Appeals, Conservation Commissions, and Departments of Public Works, as well as to the planning boards of Marion, Rochester and Fairhaven, which towns abut Mattapoisett where the Substation is located.

iii. On or by September 12, 2024, by first class mail, to all U.S. Mail addresses and persons owning real estate within 300 feet of the boundary of the New Line Extension ROW between the Mendall Road Tap in Acushnet and the Crystal Spring Substation in Mattapoisett, including owners of properties opposite the New Line Extension across any public or private street or way, abutters to the New Line Extension, and abutters to abutters within 300 feet of the

[3] Contemporaneous with its June 4, 2024, filings with the Department, the Company sent copies of the Petition with attachments to the Town Clerks in Mattapoisett and Acushnet, as required by G.L. c. 164, § 72, with instructions to make them available for public viewing during regular business hours.

boundary of the ROW lot line of the New Line Extension, as they appeared on the most recent applicable tax lists of the Towns of Mattapoisett and Acushnet.

iv. On or by September 12, 2024, by first class mail, to all U.S. Mail addresses and persons owning real estate within one-quarter mile of the property boundary of the proposed expansion of the Crystal Spring Substation located on Company-owned property at 26R Crystal Spring Road in Mattapoisett including to owners of properties opposite the Substation Expansion across any public or private street or way, abutters to the Substation Expansion, and abutters to abutters within one quarter-mile of the lot line of the Substation Expansion, as they appear on the most recent applicable tax list of the Town of Mattapoisett.

2. Second Public Notice

On February 21, 2025, the Department transferred the proceeding to the Energy Facilities Siting Board ("Siting Board) for review and decision pursuant to St. 2024, c. 239 ("2024 Climate Act"), which transferred authority to grant zoning exemptions under G.L. c. 40A, § 3 from the Department to the Siting Board, effective February 18, 2025. St. 2024, c. 239, § 37; NSTAR Electric Company d/b/a Eversource Energy, D.P.U. 24-93/24-94, Order (Feb. 21, 2025).

On March 5, 2025, the Siting Board issued a Procedural Order that consolidated the Section 72 and Zoning Petitions (D.P.U. 24-93/D.P.U. 24-94) into one proceeding before the Siting Board (EFSB 25-03) with the same parties. The Siting Board issued a Notice of Filing and Request for Comments ("Second Notice") and established a new public comment period for the Project with a deadline of March 28, 2025, for submission of written comments. In compliance with the Siting Board's directives (see Exh. EV-5), the Company took the following actions:

Posting of Second Notice. On March 11, 2025, a copy of the Second Notice (in English and Portuguese) was sent to: (1) the Mattapoisett Library, (2) the Acushnet Public Library, and

(3) the Mattapoisett and Acushnet Town Clerks, with a request that the Second Notice and the previously provided Petitions be made available for public inspection. In addition, a copy of the Second Notice (in English and Portuguese) and the Petition, including attachments, were posted on the Company's website.

Service of Second Notice. As directed by the Siting Board, the Notice of Filing and Request for Comments (in English and Portuguese) was served as follows:

i. On March 11, 2025, by first class mail, to the Mattapoisett and Acushnet Public Libraries with a request that the Second Notice and the previously provided Petitions be made available for public inspection.

ii. On March 11, 2025, by first class mail, to the Mattapoisett and Acushnet Select Boards, Town Administrators, Planning Boards, Zoning Boards of Appeals, Conservation Commissions, Departments of Public Works, as well as the planning boards of Marion, Rochester and Fairhaven, which towns abut Mattapoisett where the Crystal Spring Substation is located.

iii. On or by March 11, 2025, by first class mail, to all U.S. Mail addresses and persons owning real estate within 300 feet of the boundary of the New Line Extension ROW between the Mendall Road Tap in Acushnet and the Crystal Spring Substation in Mattapoisett, including owners of properties opposite the New Line Extension across any public or private street or way, abutters to the New Line Extension, and abutters to abutters within 300 feet of the boundary of the ROW lot line of the New Line Extension, as they appeared on the most recent applicable tax lists of the Towns of Mattapoisett and Acushnet as of August 28, 2024.

iv. On or by March 11, 2025, by first class mail, to all U.S. Mail addresses and persons owning real estate within one-quarter mile of the property boundary of the proposed expansion of the Crystal Spring Substation located on Company-owned property at 26R Crystal Spring Road in

Mattapoisett including to owners of properties opposite the Substation Expansion across any public or private street or way, abutters to the Substation Expansion, and abutters to abutters within one quarter-mile of the lot line of the Substation Expansion, as they appear on the most recent applicable tax list of the Town of Mattapoisett as of August 28, 2024.

B. Site Visit and Public Comment Hearing

The Department conducted a site visit and a public comment hearing on September 26, 2024. The site visit included stops at the Mendall Road Tap, the Crystal Spring Substation, and various locations along the New Line Extension. The public comment hearing was held in the evening at the Old Rochester Regional High School in Mattapoisett, Massachusetts. Several members of the public attended and provided oral comments. In addition, several written comment letters were submitted.

C. Intervention and Participation

Only one petition to intervene was filed, by Lauren Machie ("Ms. Machie") on October 7, 2024, and the Department granted intervention on November 13, 2024. Exh. M-1. Ms. Machie has a fee interest in the property at 275 Mendall Road, upon which the Company holds easement rights to construct, operate and maintain overhead transmission lines and maintain the ROW. Exhs. LM-18; DPU-PA-6. Her predecessor-in-interest granted the easement to the Company in 1963. Exh. LM-18. The easement and the plan fixing its location are recorded in the property's chain of title. Exhs. LM-18(1) and (2). Ms. Machie's primary concerns include the location of a transmission structure (Structure #2) within the ROW/easement on her property, the removal of vegetation in the ROW/easement, particularly, ornamental plantings where Structure #2 is proposed, and the proximity of the New Line Extension to her house.

No requests for participation in the proceeding were filed.

D. Evidentiary Hearing and Evidentiary Record

The Siting Board conducted the evidentiary hearing on April 15, 2025. The Company presented a total of 15 witnesses for cross examination by Siting Board staff and Ms. Machie:

(1) Christopher Lombardi, Eversource Energy, Project Director
(2) Daniel Hagen, Burns & McDonnell, Project Manager
(3) James Clancy, Eversource Energy, Specialist/Licensing and Permitting
(4) Keith Jones, Eversource Energy, Principal Engineer/Distribution System Planning
(5) John McLaughlin, Eversource Energy, Principal Engineer/Transmission System Planning
(6) John Zicko, Eversource Energy, Director of Engineering Capital Projects
(7) Nick Forzono, Eversource Energy, Supervising Engineer/Overhead Transmission Lines
(8) Patrick Fitzgerald, Eversource Energy, Manager/Substation Engineering
(9) Michael Howard, Epsilon Associates, Managing Principal/Environmental Licensing and Permitting
(10) Chris Rodstrom, Epsilon Associates, Lead Scientist
(11) Stephen Dudek, Eversource Energy, Supervisor/Project Engagement
(12) Anne McGinnes, Eversource Energy, Specialist/T&D Right of Way
(13) Michael Babineau, Eversource Energy, Supervisor/Transmission Vegetation Management
(14) Anthony Veilleux, Eversource Energy, Senior Specialist, Community Relations
(15) James Blais, Eversource Energy, Supervisor/T&D Right of Way

In addition, Ms. Machie was subject to cross-examination. Approximately 200 exhibits were entered into the evidentiary record, including the Petition, responses to Information Requests and Record Requests and hearing exhibits.

III. PROJECT SUMMARY

The Project consists of the New Line Extension and the Substation Expansion as well as certain limited work needed to connect the New Line Extension to the existing Line 112 at the Mendall Road Tap. The Company will obtain all required federal, state, and local permits for the Project. Exhs. EV-1, at 63-64; DPU-G-2.

A. New Line Extension

Line 112 is a 21-mile, 115-kV overhead transmission line located on ROWs 140, 141, 142, and 143 that currently connects Eversource's Tremont Substation in Wareham with the Acushnet Substation in Acushnet. Exh. EV-1, at 4. There are four tap lines from Line 112 that extend to the

Rochester Substation in Rochester, Industrial Park Substation in New Bedford, Wing Lane Substation in Acushnet, and Arsene Street Substation in Fairhaven. Id. The New Line Extension will tap Line 112 at the Mendall Road Tap and extend approximately three miles to the Crystal Spring Substation along the Company's ROW 142. Id.

The New Line Extension will be a single-circuit overhead transmission line, installed on approximately 26 new weathering steel structures consisting of 21 H-frame structures, four three-pole structures and one monopole structure. Exh. EV-1, at 4, 31-33. For its entire length, the New Line Extension will parallel Line 114, an existing single-circuit, radial 115-kV overhead transmission line also located on ROW 142. Id. at 4. Once completed, the New Line Extension will serve 2,043 of the 5,598 customers currently being served by Line 114, and the remainder will continue to be served by Line 114. Exh. DPU-N-1.

B. Substation Expansion

The existing Crystal Spring Substation is a single transformer substation currently fed by Line 114. Exh. EV-1, at 5, 15-16. The fenced area of the Crystal Spring Substation is presently 8,300 square feet. Id. at 5. To accommodate the New Line Extension, the Crystal Spring Substation will be expanded by approximately 36,700 square feet, resulting in a total footprint of approximately 45,000 square feet. Exhs. EV-1, at 5; EV-1(D). The Company acquired additional land from an adjacent landowner to accommodate the Substation Expansion. Exh. EV-1, at 5. Most of the expansion will be to the northwest and southwest of the current Substation footprint and will include a new access road. Id.; Exh. DPU-CM-4.

The primary driver of the space required for the expansion is construction sequencing for proposed equipment to be safely added. Exh. DPU-PA-4. To keep the Substation continuously in service, the Substation Expansion will be conducted in phases. Exhs. EV-1, at 5, 31-32; DPU-PA-

4. Initially, one of the new transformers and switchgear will be constructed outside of the current fence line, while the existing Substation equipment remains online. Exh. DPU-PA-4. Once the new transformer and switchgear are in operation, the existing substation equipment can be decommissioned and removed, allowing space for the second transformer. Id. After the new equipment is installed, all existing foundations, equipment, and enclosures will be removed as part of the Project. Exh. EV-1, at 5.

The area around the Substation will be graded to support the expansion, and approximately 0.69 acres of trees will be removed as part of the site preparation and grading work. Exh. EV-1, at 5. The following equipment will be installed inside the expanded fence line of the Crystal Spring Substation as part of the Project:

- Two 115-kV dead-end A-frame structures (one structure for Line 112 and one structure for Line 114), 65 feet high by 13 feet wide by 42 feet long;
- Six 115-kV coupling capacitor voltage transformers mounted within A-frame structures;
- One 115-kV bus section;
- Galvanized chain-link mesh fence of similar height to existing fence (eight feet high plus one foot of barbed wire);
- Control cable, grounding, 115-kV leads and taps;
- Two 115-kV circuit switchers;
- Two 37/50/62.5 megavolt-amperes ("MVA"), 115/13.2-kV transformers (one of which replaces the existing transformer);
- Two enclosed 13.2-kV series reactors;
- Two 150-kVA station service transformers;
- Underground connections for connections to the new distribution switchgear;
- One medium voltage switchgear enclosure;
- Two115-kV disconnect switches and two 115-kV line disconnect switches;
- Two 13.2-kV capacitor banks; and
- Three shielding masts, 65 feet in height.[4]

Id. at 5-6.

[4] The Petition stated that among the equipment to be installed at the Substation are: (1) one 115-kV disconnect switch; and (2) four shielding masts. Exh. EV-1, at 5-6. Based on more advanced engineering, the Company now plans to: (1) add a 115-kV disconnect switch for a total of two 115-kV disconnect switches; and (2) eliminate one shielding mast for a total of three shielding masts. Exh. EV-11.

C. Mendall Road Tap

Project work at the Mendall Road Tap is limited to replacement of the three-pole dead-end structure with a similar three-pole dead-end steel structure in the same location that will be approximately ten feet higher than the existing structure. Exh. EV-1, at 6, 33.

D. Agency and Community Outreach

The Company has actively consulted with officials in Mattapoisett and Acushnet regarding the Project and is committed to working closely with municipal officials and abutters to the Project to provide transparent, proactive communications throughout the life of the Project. Exh. EV-1, at 10. The Company's initial outreach efforts were aimed at briefing local officials and other stakeholders on the project need, the anticipated schedule, potential impacts, and the permitting and siting processes, including opportunities for public input. Id. The Company has continued these efforts during the permitting and siting process and will maintain a focused communication program throughout construction, including outreach to municipal officials and abutters along the route with regards to construction staging and laydown and traffic management plans, as such details become available. Id. The Company's outreach plan is designed to engage the community, foster public participation, solicit feedback from stakeholders, collaborate with stakeholders and use feedback to develop solutions to reasonably mitigate Project impacts. Id.; Exh. DPU-CO-1(S1)(1). The Company summarized its outreach communications with municipal officials and other stakeholders in Table 1 of the Petition. Exh. EV-1, at 12-13.

The Company hosted three open houses to introduce the Project to the community and to provide information about the DER program, the need for and benefits of the Project, the proposed design of the New Line Extension and the Substation Expansion, environmental considerations, and an overview of the siting process, schedule, and construction activities. Exhs. EV-1, at 11;

EV-1(E). The open houses provided the public with an opportunity to meet with the Company's subject matter experts to ask questions and discuss concerns. Exh. EV-1, at 11. An open house was held on April 11, 2024, at the Mattapoisett Fire Station, followed by a virtual open house on April 16, 2024, and an open house on April 18, 2024, at the American Legion Post 265 in Acushnet. Id. The Company provided notice of the open houses as follows: (a) on March 27, 2024, the Company mailed open house invitations to abutters located within 300 feet of the Project route, within a quarter mile of the Crystal Spring Substation and the Mendall Road Tap, and to municipal officials in each town; (b) advertisements of the open houses were published in the Mattapoisett Wanderer on April 4, 11, 18, 2024 and the New Bedford Times on April 7 and 14, 2024; and (c) door-to-door outreach was conducted on April 3, 2024, with direct abutters of Crystal Spring Road at the request of the Town of Mattapoisett to personally invite those residents to the open houses and brief them on the Project. Id. Eighteen residents attended the open house in Mattapoisett, four residents attended the Acushnet open house, and three attendees joined the virtual open house. Id.

The Company has continued to update stakeholders about the status of the Project by email and regular mail. Exh. EV-1, at 13. The Company will continue to communicate on a regular basis with municipal officials through the Siting Board review process and project construction. Id. In addition, the Company also will continue to work with neighboring property owners and stakeholders, including state and local agencies, to address any concerns or issues that may arise, using multiple outreach channels, including door-to-door outreach and mailings, a Project website (updated weekly), email notification campaign, as well as contact channels, including an information hotline and email address. Id. at 13-14; Exhs. DPU-CO-2; DPU-CO-3. Finally, the Company will develop a construction communication plan at least two months prior to beginning construction and will post this plan on the Project website. Exh. DPU-CO-2.

E. Project Construction Schedule and Costs

The Company estimates that it will take approximately 19 months to complete construction of the Project once construction commences. Exhs. EV-1, at 6; DPU-G-1(1). The New Line Extension work will take approximately five months, and the Substation Expansion work will take approximately 12 to 19 months. Exh. EV-1, at 6, 31. The Company's objective is to complete the Project no later than December 2026 to meet the requisite four-year construction window. Id.

The current total cost estimate for the Project is approximately $76.3 million, based on a planning grade estimate with an anticipated level of accuracy of +25/-25 percent. Exhs. EV-1, at 6; DPU-C-2. The estimated costs of the New Line Extension and Substation Expansion are $20.5 million and $55.8 million, respectively, which include costs for engineering, project management, siting, permitting, materials, construction, and testing. Exhs. EV-1, at 6; DPU-C-2(1).

Project costs associated with the transmission system will be recovered from wholesale customers under the Open Access Transmission Tariff of the Independent System Operator-New England ("ISO-NE"). Exhs. DPU-C-1; DPU-C-3; RR-EFSB-7. Project costs associated with the distribution system will be recovered as follows: (1) approximately 41 percent of the costs associated with the Crystal Spring Substation will be recovered from DER applicants; and (2) the remainder, approximately 59 percent, will ultimately be recovered from retail customers through base rates. Exhs. DPU-C-1; RR-EFSB-7.

IV. STANDARD OF REVIEW

A. Section 72 Approval

Pursuant to G.L. c. 164, § 72, an electric company seeking approval to construct a transmission line must file a petition for:

> [A]uthority to construct and use or to continue to use as constructed or with altered construction 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 department, 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.

In making a determination under G.L. c. 164, § 72, all aspects of the public interest are considered. Boston Edison Company v. Town of Sudbury, 356 Mass. 406, 419 (Mass. 1969); NSTAR Electric Company d/b/a Eversource Energy, EFSB 19-06/D.P.U. 19-142/19-143, at 112 (2022) ("Eversource Mid Cape"); NSTAR Electric Company d/b/a Eversource Energy, D.P.U. 19-80, at 6 (2020) ("Eversource Barnstable"). All factors affecting any phase of the analyses performed by a company in connection with the public interest and public convenience are weighed in a determination under G.L. c. 164, § 72. Town of Sudbury v. Department of Public Utilities, 343 Mass. 428, 430 (1962); Eversource Mid Cape at 112; Eversource Barnstable at 6; NSTAR Electric Company d/b/a Eversource Energy, D.P.U. 19-46, at 5 (2020) ("Eversource Dartmouth"). In addition, Section 72 permits the Department to prescribe reasonable conditions for the protection of public safety. Boston Edison Company v. Town of Sudbury, 356 Mass. at 419-420; Eversource Mid Cape at 112.

In evaluating petitions filed under G.L. c. 164, § 72, the Siting Board examines: (1) the need for, or public benefits of, the present or proposed use; (2) the environmental impacts or any other impacts of the present or proposed use; and (3) the present or proposed use and any alternatives identified. Eversource Mid Cape at 112; Eversource Barnstable at 7; Eversource Dartmouth at 5. In determining whether a proposed project is reasonably necessary for the public convenience or welfare, the interests of the general public are balanced against the local interests and determination is made as to whether the line is necessary for the purpose alleged and will serve

the public convenience and is consistent with the public interest. Eversource Mid Cape at 112; Eversource Barnstable at 7; Eversource Dartmouth at 5.

B. Zoning Exemptions

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 [Siting Board] shall, after notice given pursuant to section eleven and public hearing in the town or city, determine the exemptions required and find that the present or proposed use of the land or structure is reasonably necessary for the convenience or welfare of the public.

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." See generally Save the Bay, Inc. v. Dep't of Pub. Utils., 366 Mass. 667 (Mass. 1975) ("Save the Bay"); NSTAR Electric Company d/b/a Eversource Energy, D.P.U. 18-155, at 11 (2020) ("Eversource Oak Bluffs"); NSTAR Electric Company d/b/a Eversource Energy, D.P.U. 18-21, at 3 (2019) ("Eversource Westfield"); NSTAR Electric Company, D.P.U. 13-64, at 4 (2014) ("NSTAR Electric Hyannis Junction").

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. Eversource Oak Bluffs at 11; Eversource Westfield at 3; NSTAR Electric Hyannis Junction at 4.

Third, the petitioner must establish that it requires the requested zoning exemption from the zoning ordinance or bylaw. Eversource Oak Bluffs at 11; Eversource Westfield at 3-4; NSTAR Electric Hyannis Junction at 4.

The Department and Siting Board's well-established precedent provides that the public interest analysis required by G.L. c. 164, § 72 is analogous to the Department and Siting Board's analysis for the "reasonably necessary for the convenience or the welfare of the public" standard

under G.L. c. 40A, § 3. NSTAR Electric Company, D.P.U. 13-126/13-127, at 40-41 (2014); New England Power Company, EFSB 97-3, at 75-76 (1998). Accordingly, to the extent that the Company has demonstrated that the Project has satisfied the statutory requirements of G.L. c. 164, § 72, so too has it demonstrated that the Project has satisfied the "convenience or welfare of the public" standard under G.L. c. 40A, § 3.

V. THE COMPANY SATISFIES THE REQUIREMENTS FOR APPROVAL UNDER SECTION 72

The Project is a component of the Company's CIP proposal for the Marion Fairhaven area, which was approved in the M-F CIP proceeding, D.P.U. 22-47, where the Department found that the Company's proposed EPS upgrades, including the New Line Extension and the Crystal Spring Substation Expansion, were reasonable to enable the interconnection of multiple DG facilities. D.P.U. 22-47, at 59, 95. As demonstrated below, in compliance with the Siting Board's standards for approval of new electric infrastructure, the Company has shown that the Project is needed to: (1) maintain a reliable electric system under applicable standards and criteria; (2) enable the DG facilities currently seeking interconnection to safely and reliably interconnect and operate; (3) enable future DG applicants to interconnect; and (4) facilitate future load growth due to electrification. Exh. EV-1, at 14-24; see also Tr. 1, at 60-63.

A. The Company Has Established that the Project Is Needed.

1. The Project Is Needed to Comply with Applicable National, Regional, and Company Reliability Standards and Criteria for Transmission and Distribution System Planning.

As a transmission provider, the Company is obligated to maintain its transmission system consistent with the reliability standards and criteria developed by the North American Electric Reliability Corporation ("NERC"), the Northeast Power Coordinating Council ("NPCC"), and ISO-NE, all of which were established under the purview of NERC, which sets the standards for

electric power transmission for all North America. Exh. EV-1, at 14-15. The criteria set by these entities require transmission operators to design, test, and operate their systems to withstand representative contingencies. Id. As a transmission operator, if Eversource's transmission system does not have sufficient capability to serve forecasted load under the representative contingencies, the Company must plan and implement system additions and upgrades to address the identified inadequacies. Id. at 15.

The NERC, NPCC, and ISO-NE standards provide limits for voltages and loading for transmission systems. Exh. EV-1, at 15. If identified criteria violations are not addressed, there is a risk that transmission equipment could become overloaded and voltage levels could be outside of acceptable operating ranges under certain system conditions. Id. The resulting impacts could range from unsafe conditions to equipment damage to widespread line and power outages. Id. NERC, NPCC, and ISO-NE may levy penalties and fines against the Company where voltages and loading are not within applicable limits if a solution is not implemented. Id.

Currently, the Crystal Spring Substation is a single transformer substation fed by a single, radial 115-kV transmission line (Line 114). Exh. EV-1, at 15. The New Line Extension will also be a radial circuit. Id. While NERC, NPCC, and ISO-NE transmission planning standards do not directly apply to the radial parts of the transmission system, the Company has developed similar planning standards that do apply to radial portions of its transmission system to ensure that the entire system is planned, designed, and tested in accordance with the NERC, NPCC, and ISO-NE standards and criteria. Id. Eversource's planning standards applicable to radial portions of its transmission system are covered under its Transmission System Design and Analysis Guideline ("TSDAG"), which provides the current standards, criteria, and assumptions used for planning Eversource's transmission system in New England. Id. at 16; Exh. DPU-N-5. The criteria and

guidelines in the TSDAG are consistent with the criteria established for the interconnected bulk power system by the Federal Energy Regulatory Commission, NERC, NPCC, and ISO-NE, which all require that the transmission system be designed with sufficient transmission capacity to serve area loads in the event of an N-1 contingency or an N-1-1 contingency (a second contingency following an initial contingency). Exhs. EV-1, at 16; DPU-N-5.

In addition to its obligations as a transmission operator, Eversource, as a distribution provider, must maintain and operate its bulk distribution substations and distribution system consistent with its applicable design standards and planning and performance criteria. Exh. EV-1, at 16. The Company's Bulk Distribution Substation Assessment Procedure, known as SYS PLAN 010,[5] establishes the guidelines for the planning and design of the Company's bulk substation and distribution facilities, and sets forth reliability criteria by which the capacity and reliability performance of the Company's supply systems is gauged, and how these assessments are conducted. Id. Without the Project, these guidelines would be violated, as discussed in more detail below regarding assessment of the Marion-Fairhaven Group Study.

Building upon these guidelines, the Eversource Distribution System Planning Guide ("DSPG") outlines the planning criteria, design and analysis methods, and engineering rationale for effectively expanding the distribution system to meet demand. Exh. EV-1, at 16-17. It sets forth standards for distribution system design and system studies including loading criteria, equipment ratings, system voltages, power quality, reliability, standard substation designs, secondary network criteria, evaluation of the interconnection of DG, system modeling criteria, load forecasting, system study methodologies, and modeling assumptions. Id.

[5] Appendix A of SYS PLAN 010, provided at Exh. EV-1(F), identifies the Reliability Criteria for the Planning/Design of Bulk Distribution Substation Facilities that apply to the Project.

In addition to the above-described reliability standards, the Company also must comply with its tariff, "Standards for Interconnection of Distributed Generation" M.D.P.U. No. 55A, ("DG Interconnection Tariff"), which sets forth the process and requirements for the interconnection of DER into Eversource's electric power grid. Exh. EV-1, at 17. In accordance with the DG Interconnection Tariff, the Company performs system impact studies to ensure the safe and reliable interconnection of DG resources to Eversource's EPS. Id. The Company also follows its Distributed Energy Resources Planning Guide ("DERPG"), which was developed to describe the planning criteria and analyses used to study the impacts of DER seeking to interconnect to the Company's EPS. Id.; Exh. DPU-N-6. The planning criteria and analyses are used to ensure that DG does not degrade the safety, performance, or reliability of the EPS. Id.

2. The Company Conducted a Group Study to Evaluate the Impact of Interconnecting DG.

As discussed above, the Provisional Program is a framework for planning and funding essential upgrades to the EPS to foster timely and cost-effective development and interconnection of DG. See D.P.U. 20-75-B, at 2; M-F Order at 3-4. To that end, the Provisional Program is a modified cost allocation and recovery methodology aimed at addressing imminent short-term DG interconnection cost concerns. Id. The program allows Eversource (and other Massachusetts electric distribution companies) to file certain EPS infrastructure upgrade proposals with the Department that limit the interconnection costs allocated to interconnecting DG facilities. Id.

The Company performs impact studies to identify what modifications are needed across its transmission and distribution systems to safely interconnect DG resources. In accordance with the Provisional Program, in January 2021, the Company conducted a Group Study of the four Eversource substations that supply customers in the Marion-Fairhaven area: (1) Arsene Street Substation #654 in Fairhaven; (2) Crystal Spring Substation #646 in Mattapoisett; (3) Rochester

Substation #745 in Rochester; and (4) Wing Lane Substation #624 in Acushnet, as well as the interconnecting distribution/feeder line system ("M-F Group" and "M-F Group Study").[6] Exh. EV-1, at 18. The M-F Group Study evaluated the existing system to determine how the interconnection of the Group Study DG facilities would affect the Company's transmission and distribution system in the M-F Group Study area and what upgrades would be necessary to enable the interconnected DG facilities to remain online under N-1 distribution and transmission contingencies, and N-1-1 transmission contingencies, including after post-contingency transfers.[7] Exh. EV-1, at 20. The primary focus was to evaluate the expected impacts of the Group Study DG facilities on the system's steady state voltage and loading, voltage flicker, fault current contribution, interaction with voltage control equipment, as well as transient overvoltage phenomena, and risk of inadvertent islanding and the objective was to develop recommendations to ensure that all customers served by the M-F Group substations will be within the established allowable ranges for voltage, that fault protection will be sufficient, and that there will be no compromise to safety and reliability for any customers and/or equipment. Exh. EV-1, at 20-21.

While Rochester and Wing Lane Substations are served by both Line 112 and Line 114, the Crystal Spring Substation is currently served only by Line 114. Exh. EV-1, at 18; Tr. 1, at 20. The Crystal Spring Substation has one 24/32/40 MVA transformer that supplies four 13.2-kV distribution feeders. Exh. EV-1, at 18. Rochester Substation has two 10/12.5 MVA transformers that each supply one 13.2-kV feeder. Id. Arsene Substation has one 21/28/35 MVA transformer

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[6] A "Group Study" is a single system impact study that is performed at the same time for two or more interconnection applications for proposed DG facilities in a particular common geographic area (rather than a single study for one Interconnection Application) to identify the scope and costs of modifications to the Company's system that would be needed to accommodate all the proposed DG facilities included in the interconnection applications. See M-F Order at 8; see also DG Interconnection Tariff, at 8. Here, the Group Study included 17 DG facilities totaling 48 MW ("Group Study DG"). M-F Order at 10.

[7] Two of the Group Study DG facilities propose to connect to Crystal Spring Substation. The remaining facilities propose to connect to the Arsene Street Substation, Wing Lane Substation, or Rochester Substation.

that has three 13.2-kV distribution feeders. Id. Wing Lane Substation has two transformers, one 12/16/20 MVA transformer and one 24/32/40 MVA transformer, which supply three 13.2-kV feeders. Id. at 18-19.

The four substations were studied as a group because they rely on each other for day-to-day operations and under N-1 conditions. Exh. EV-1, at 19. The amount of DG already connected at these substations limits the Company's ability to reconfigure the distribution system (by permanently transferring sections of a feeder to another feeder or substation) or to operate the system (by temporarily transferring to another feeder or substation), which subsequently impacts the safety, flexibility, and reliability of the EPS. Exhs. EV-1, at 19; DPU-N-7. More particularly, due to the amount of DG already connected to the substations, including the Crystal Spring Substation, as well as the amount of summer peak native customer load, should an outage of the Crystal Spring Substation or the single 115-kV line that supplies it occur, existing summer peak and forecasted native load served by the Crystal Spring Substation could be transferred to other substations, but all existing DG would be tripped offline. Exhs. DPU-N-7; DPU-N-14. Because of the substations' interdependence in the area, the Company must coordinate analysis of system constraints and upgrades - that is, the addition of DG to any of these substations or between these substations. Exh. EV-1, at 19-20.

The four substations collectively serve 57 megawatts ("MW") of native customer peak load.[8] Exh. EV-1, at 20. In addition, 70 MW of DG is currently connected to the four substations, consisting of 60 MW of ground-mounted solar (large) DG and 10 MW of rooftop solar (small) DG. Id. The amount of DG already connected and seeking to connect to the Eversource system in

[8] Native customer load refers to wholesale and retail power customers as distinguished from interconnecting DG facilities.

this area is substantial relative to the native customer peak load. Id. Currently, there is a total of 94 MW of DG from 23 applicants in the Marion-Fairhaven area interconnection queue, consisting of 11 DG applicants totaling 38 MW from the original Group Study, 7 DER applicants totaling 31 MW from the Round 2 Group Study and 5 DG applicants totaling 25 MW in queue for a future Round 3 Group Study.[9] Exh. RR-EFSB-1. When the original Group Study DG is connected, the total DG penetration at the M-F Group Substations will be almost twice the current, native customer peak load and approximately six times higher than the current, native customer daylight minimum load. Id.; see also Exh. RR-EFSB-1. When all the DG in the queue is connected, the penetration will be even greater.

3. The Group Study Results Support the Need for the Project.

The results of the M-F Group Study are summarized in the M-F Interconnection Impact Study, dated April 14, 2022. Exhs. EV-1, at 21; DPU-N-9(1). The M-F Group Study confirmed that, given the current DG connected to the system, under specific N-1 contingencies and existing peak load and estimated light load conditions, there would be residual load loss in the Marion-Fairhaven area even without the addition of the Group Study DG.[10] Exh. EV-1, at 21.

At present, the electric power system in the Marion-Fairhaven area does not comply with two of Eversource's applicable planning criteria. Exh. DPU-N-14. First, without the Project, under certain N-1 contingencies (loss of a single transmission element), native customer load could be backed up via 13.2 kV switching, but even after transferring this load, both existing and anticipated

[9] When the Company filed its Petition, there was a total of 70 MW of DER in the Marion-Fairhaven area interconnection queue, consisting of 38 MW (11 DER applicants) that had been studied in the original Group Study and 32 MW of DER in the queue that had not yet been studied. Exhs. EV-1 at 18, 23; RR-EFSB-1.

[10] During daytime light load conditions, there is more DG exported to the M-F Group Substations than customer load served by those stations. Accordingly, the electric current flowing on the 115-kV system during daylight light load conditions, during periods of high solar output is greater than during summer peak conditions.

DG would be tripped off and would remain offline until the primary transmission system and Crystal Spring Substation are restored. Exh. EV-1, at 21. As currently configured, the Crystal Spring Substation cannot automatically restore customer electric service if Line 114 is out of service, which would violate SYS PLAN 010 criteria requiring that the transmission system supplying distribution bulk substations be designed such that that no single transmission contingency event results in loss of customer load, and criteria requiring that when individual transmission lines provide the supply to more than one bulk transformer, all customer load shall be served in the event of the coincident loss of transformers, after operation of automatic restoral systems or the use of distribution automation capabilities. Exh. DPU-N-14; see also Exhs. EV-1, at 16, 21; EV-1(F) (Appendix A, Sections 4.11.1 and 4.11.3). The New Line Extension, coupled with the second transformer at Crystal Spring Substation, will enable the Company to install an automatic bus-restoral scheme, which will automatically transfer customers and DER that are interrupted for loss of either the 115-kV line or transformer to the companion transformer. Exh. DPU-N-14.

Second, the loss of both existing and anticipated DG during specific single contingencies would violate Section 3.5 of the TSDAG, Consequential Load Loss Guidelines, which has a 0 MW threshold for residual load loss resulting from the loss of a radial, single element serving load. Exhs. EV-1, at 21, DPU-N-14. For instance, an N-1 outage of Line 114 connecting to the Crystal Spring Substation would result in residual load loss at the Crystal Spring Substation, which would cause three transformers to be forced out of service in the Marion-Fairhaven area, including the existing transformer at the Crystal Spring Substation, and would force existing DG to remain offline until Line 114 and the Crystal Spring Substation could be restored. Exh. DPU-N-14. Customer load could be transferred via 13.2-kV ties to Arsene Street and Rochester Substations

upon loss of Line 114, but existing, online, standalone DG and Group Study DG could not be transferred because the interaction with DER already connected to these substations would cause violations of various criteria in the Eversource DERPG. Exh. DPU-N-14.

Finally, in addition to these reliability concerns, the SYS PLAN 010, DERPG, and TSDAG criteria violations result in an inability to interconnect 94 MW of DG projects currently seeking interconnection. Exh. RR-EFSB-1. Moreover, without the proposed upgrades, even after transferring native customer load and DG, under a specific N-1 contingency, the Crystal Spring Substation transformer would be loaded to 107 percent of its long-term emergency ("LTE") rating in violation of Section 4.11.3 of SYS PLAN 010, Section 2.3 of the DSPG, and Sections 3.0 and 6.5 of the DERPG.[11] Exhs. EV-1, at 21-22; EV-1(F).

The M-F Group Study also identified other system limitations that would be caused or aggravated by DER interconnections, including: (1) DER facilities sending power back to substation transformers (i.e., reverse flow) where adequate ground fault overvoltage protection is not available; (2) thermal capacity constraints or voltages in excess of the maximum allowable, which can cause damage to utility or customer equipment; (3) potential risk of "islanding" or transient over voltages;[12] (4) excessive fault current on the distribution system, which can cause damage to utility and/or customer equipment; and (5) voltage flicker (rapid changes in system

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[11] The LTE rating is the capability of a transformer. If the loading on a transformer exceeds its LTE rating, then it represents an LTE thermal overload. Exh. EV-1, at 22.

[12] "Islanding" refers to the situation where an outage occurs on the distribution system, and DG is disconnected from the bulk power system but continues to serve a portion of the distribution system. Islanding causes safety and reliability issues. A transient over voltage can result from islanding when an upstream breaker or protective device opens due to a fault, customers on the un-faulted phases may experience momentary excessive voltages that may damage appliances and equipment. Exh. EV-1, at 22.

voltages that affects the quality of power for customers) violations and excessive tap operations.[13] Exhs. EV-1, at 22, DPU-N-14.

To avoid thermal overloads and the loss of load and DG under N-1 contingencies, the Company identified seven EPS upgrade projects consisting of substation, distribution line and feeder upgrades that are required to address these identified needs. M-F Order at 58-59. These system upgrades, which include the four that comprise the Project, are needed to enable DG facilities to safely interconnect and operate and for the Company to maintain a reliable EPS. Exh. EV-1, at 22-23.[14] The EPS upgrades that comprise the Project consist of the following, as identified in the M-F Group Study:

- Upgrade the existing substation transformer and switchgear at Crystal Spring Substation;
- Add a second transformer, switchgear, duct bank getaways (substation conduit outlet), and cable at Crystal Spring Substation;
- Upgrade distribution feeders at Crystal Spring Substation; and
- Extend a new lateral 115-kV transmission line off the existing overhead 115-kV Line 112 for approximately three-miles from Eversource's Mendall Road Tap to the new substation transformer at Crystal Spring Substation.

Id. at 23. The Project is needed to reliably serve existing customer demand and to serve interconnecting DG demand. Id. at 14-16. Replacing the existing transformer with a larger transformer and the addition of a second transformer at Crystal Spring Substation, as well as the New Line Extension, will resolve capacity constraints caused by DER output under various N-1

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[13] Excessive tap operations occur when a high number of tap operations on the transformer's load tap changer are required to maintain acceptable system voltages, which can lead to load tap changer maintenance issues or premature failure of the load tap changer. Exh. EV-1, at 22.

[14] The other upgrades are as follows: (1) Arsene Substation - distribution line upgrades, (2) Rochester Substation - an upgrade to the existing transformers, switchgear and the addition of duct bank getaway cables; and (3) Wing Lane Substation – upgrades to two existing substation transformers and the addition of getaway cables. Zoning relief was not needed for the upgrades at the Arsene and Wing Lane Substations and local zoning relief was obtained for the upgrades at the Rochester Substation; accordingly, grants of zoning exemptions were not required for these upgrades. Exh. EV-1, at 23; Tr. 1, at 63-64.

contingency events. Exh. DPU-N-8. Adding a second transformer at the Crystal Spring Substation will improve reliability and resilience of supply because it will enable the Company to automatically transfer customers and DER that are interrupted for loss of either the 115-kV line or existing transformer to the second transformer. Id. Overall, these upgrades will enable all customers and DER to remain online during a bulk system failure, which benefits customers by having a more reliable transmission system. Id.

4. The Department's Order in M-F CIP Proceeding Supports the Need for the Project.

On April 15, 2022, Eversource filed its first EPS infrastructure upgrade proposal under the Provisional Program, the M-F CIP Proposal, docketed as D.P.U 22-47. Exh. EV-1, at 23. Based on the results of the M-F Group Study, the M-F CIP Proposal included upgrades the Company determined were needed to interconnect proposed DER in the Marion-Fairhaven area and to ensure that the Company's system would continue to operate safely and reliably consistent with all applicable standards under various contingencies. The Company documented that M-F Upgrades would enable the interconnection of up to 140 MW of DG capacity in the Marion-Fairhaven area, consisting of the Group Study DG, as well as an additional 92 MW of DG capacity (consisting of 32 MW from projects currently in the interconnection queue and an additional 60 MW available for future DG). M-F Order at 63-66; Exh. EV-1, at 23-24; Exh. DPU-N-10 (explaining how the 140 MW of DG capacity was derived). Importantly, because the four substations in the M-F Group Study area (Crystal Spring, Arsene Street, Wing Lane, and Rochester Substations) are highly saturated with DG and all have zero MW of available bulk substation hosting capacity[15] to

[15] Bulk station hosting capacity is the amount of DG a substation can accommodate, assuming one of the transformers at the substation is off-line (either for service or repair). Location hosting capacity is the amount of distributed energy a circuit can accommodate, which cannot exceed the bulk substation hosting capacity of the circuit's substation. Exh. DPU-N-13.

accommodate interconnection of DG, construction of the Project, in addition to upgrades at the other substations in the M-F Group Study area, will increase hosting capacity for all four substations and specifically, will increase hosting capacity for the Crystal Spring Substation from zero to 40 MVA. Exh. DPU-N-13. The addition of hosting capacity at the four substations will facilitate the future interconnection of DG, as well as load electrification, without the need to upgrade the substations in the near future. Id.; Exh. DPU-N-1.

The Department concluded that the M-F CIP Proposal met the Department's eligibility criteria in the Provisional Program. M-F Order at 71. The Department found that the M-F CIP Proposal (including the Project) "is reasonably based on the EPS upgrades identified for the M-F Group Study and that the proposed EPS upgrades and cost estimates are reasonable."[16] Id. The Department approved the M-F CIP Proposal, finding that it will enable the interconnection of multiple DG facilities and that it "provides system upgrades that are consistent with the Commonwealth's clean energy objectives while maintaining the safety and reliability of the EPS." Id. at 59, 95. The Department made the following conclusions about the M-F CIP Proposal:

> [W]e find that based on the totality of the circumstances, the M-F CIP Proposal results in an equitable distribution of costs and resultant benefits to distribution customers and M-F Interconnecting Customers, maintains safety and reliability of the EPS, and provides a reliable predictor that the resulting rates will be just and reasonable. The M-F CIP Proposal provides a set of tangible, practical, and operationally necessary capacity and reliability benefits to distribution customers, including: (1) ensuring fewer service disruptions and outages, particularly as more DG is interconnected with an already saturated distribution system; and (2) reliably and safely serving its future electrification load, as well as enabling the interconnection of 11 MW of small rooftop solar. Further, in the absence of the Provisional Program, the costs of EPS upgrades needed to accommodate further DG and future customer electrification load in the Marion-Fairhaven region likely would be borne entirely by ratepayers through a base distribution rate case proceeding. However, it is the Marion-Fairhaven Group Study projects that are triggering an immediate need for the proposed upgrades. The Company's proposed cost allocation ensures that costs are equitably allocated amongst the M-F

[16] The Department did not identify any analytical errors or significant concerns with the Company's M-F Group Study, upon which the proposed upgrades in the M-F CIP Proposal were based. M-F Order at 72-73.

> Interconnecting Customers causing the upgrades, distribution customers, and future Enabled DG that benefit from the EPS upgrades.

Id. at 88-89 (citations and footnote omitted); see also Exhs. DPU-N-3; DPU-N-12. Approval of the M-F CIP Proposal also furthers the Commonwealth's critical objectives of having reliable and resilient electric supply at a reasonable cost to customers and DG developers, and it promotes the development of energy resources and helps facilitate electrification of various sectors, such as transportation, buildings, and residential use, such as electric vehicle charging and heat pumps. Exhs. DPU-N-3; DPU-N-12. Timely achievement of these energy policies is consistent with the statutory standard of public convenience and the public interest. Exh. DPU-N-3. In approving the M-F CIP Proposal, the Department also noted that it would "provide[] system upgrades that are consistent with the Commonwealth's clean energy objectives while maintaining the safety and reliability of the EPS." M-F Order at 95.

5. Conclusion on Need

The Project is consistent with the EPS upgrades identified and approved by the Department in the M-F CIP proceeding; accordingly, the Project is reasonably necessary for the public convenience or welfare to enable the interconnection of multiple DG facilities. Exhs. DPU-N-3; DPU-N-11. Moreover, the Project is needed to address the potential for thermal overloads and voltage concerns following certain contingencies when DG is connected to the Company's transmission system. Exh. EV-1, at 24. This system reliability need is immediate, and the Project must be timely implemented under the four-year timeframe imposed in D.P.U. 20-27-B so that the Company can fulfill its obligation to interconnect DG while maintaining safety and reliability for its existing customers. Id. at 24-25. Thus, as a component of the M-F CIP Proposal, the Company has demonstrated that the Project is reasonably necessary for the public convenience or welfare.

B. The Project Best Meets the Identified Need Compared to a Range of Possible Alternatives.

In addition to the Project, Eversource identified and evaluated a range of potential alternatives to the Project to address the identified needs described above. Exh. EV-1, at 25-30. In evaluating the alternatives, the Company considered the approach that best balances reliability, cost, and environmental impact. Id. The Company considered a "no build" approach (id. at 26), non-wires alternatives ("NWAs") (id. at 26-27), and transmission design and route alternatives to the Project, including both underground and overhead route alternatives (id. at 27-29).

1. The Preferred Alternative

The Company's preferred solution involves both the construction of the New Line Extension - approximately three miles of new 115-kV transmission line on existing ROW 142 between the Mendall Road Tap and Crystal Spring Substation - and expansion of the existing Crystal Spring Substation. Exh. EV-1, at 25; Tr. 1, at 65-66. The New Line Extension will span Mendall Road in Acushnet and Long Plain Road, Tinkham Lane, and Crystal Spring Road in Mattapoisett. Exh. EV-1, at 25. The New Line Extension will also span an access drive extending from Hereford Hill Road to a municipal pumping station in Mattapoisett. Id.

The vast majority of ROW 142 from Mendall Road Tap to Crystal Spring Substation is maintained and cleared of trees for the full width of the easement. Exh. EV-1, at 25. Some limited side trimming, mowing and selective tree and plant removal will be needed to accommodate the New Line Extension. Id. The New Line Extension will be similar in height and construction to Line 114, which occupies the ROW for the entire three-mile length of the New Line Extension, and the new structures will be adjacent to the Line 114 structures; thus, there will not be a substantial change in the viewshed. Id. Only four new structures (Structures #3, #4, #14, and #15) will be installed in Bordering Vegetated Wetlands ("BVW") and one new structure (Structure #19)

will be installed in Bordering Land Subject to Flooding ("BLSF") (100-year floodplain), and the Company will provide a minimum one for one replication and compensatory flood storage as mitigation. Exhs. EV-1, at 26; DPU-W-4; LM-8. Potential impacts to wetlands and rare species habitat resulting from the placement of construction mats during constriction will be temporary in nature. Exh. EV-1, at 25-26. Accordingly, the environmental impacts of line construction are anticipated to be temporary and minimal.

2. No-Build Alternative

Although a no-build approach would have no direct environmental or cost implications, it would not increase hosting capacity for the substations in the group and, therefore, would not allow the Company to connect DG or enable the Company to reliably meet demand in the event of certain contingencies. Exh. EV-1, at 26. Because the no-build alternative would not meet the Project need and is inconsistent with the Department's Order in the M-F Order, the Company rejected it as a solution. Id.

3. Non-Wire Alternatives ("NWAs")

The Company considered whether certain NWAs would effectively meet the identified need. Exh. EV-1, at 26. NWAs include a combination of energy efficiency and demand response programs, new DG, and new energy storage facilities to defer or avoid the underlying need for new energy infrastructure. Id. Thus, they may be effective when the underlying need for a Project is driven by increasing customer load levels, so that the load reductions provided by the NWA allow an increasing number of customers to be served with existing transmission and distribution infrastructure. Id. In this instance, however, the underlying Project need is to reliably serve the proliferation of existing and proposed DG projects, not to meet increasing customer loads. Id.; Tr. 1, at 160-61. Rather, a substantial package of transmission, substation, and distribution upgrades,

including the New Line Extension, is required to increase the system hosting capacity needed to interconnect DG applicants because the existing transmission and distribution facilities in the M-F Group Study area do not have sufficient capacity. Exh. EV-1, at 26-27. To accommodate new DG projects, the additional hosting capacity (in this case, the amount of distributed energy a circuit can accommodate) afforded by the Project is critically needed to enable interconnection of DG. Exhs. EV-1, at 26-27; DPU-N-13. NWAs are neither a solution to the identified need nor a viable alternative to the proposed Project but rather would depend on it. Exh. EV-1, at 27. For these reasons, the Company eliminated NWAs from further consideration.

4. Transmission Design and Route Alternatives

As part of Project planning for the New Line Extension, Eversource considered both overhead and underground route and design alternatives to determine if any would potentially reduce anticipated environmental impacts, project costs, or improve system reliability as compared to the Project, while satisfying the identified need for the Project. Exh. EV-1, at 27. Notably, given the arrangement of the existing transmission system and established Project need, any geographic alternative and technically feasible design would be required to connect between the Mendall Road Tap and Crystal Spring Substation. Id.; Exh. EV-1(G).

a. Overhead Alternative

There are few practicable overhead transmission line routing options between the Mendall Road Tap and the Crystal Spring Substation. Exhs. EV-1, at 29; EV-1(G). The Company evaluated an option that would follow existing Eversource ROWs other than ROW 142. Exhs. EV-1, at 29; EV-1(G). This alternative overhead option is approximately 10 miles long, nearly three times longer than the proposed three-mile New Line Extension on ROW 142. Exh. EV-1, at 29. Based on a desktop review of Massachusetts Geographic Information System ("MassGIS") mapping

data, this alternative would likely result in significantly greater temporary and permanent environmental impacts to wetlands (including salt marsh habitats and other coastal resource areas associated with the Nasketucket River), mapped rare species habitat, floodplains, and other sensitive resource areas, compared to the Project. Id. Further, some of the ROWs are constrained by existing transmission and distribution infrastructure limiting available space in the ROWs and could require obtaining additional easement rights. Id. Constructing a new transmission line on this alternative route would also likely impact significantly more residential and commercial abutters and would involve work in a third community (Fairhaven) compared to the Project route that is located in relatively lightly populated residential areas of Acushnet and Mattapoisett. Id. A new overhead line on this circuitous route would be more expensive, could have additional constructability and engineering challenges, and would have greater environmental and community impacts than the New Line Extension. For these reasons, this alternative was not considered further. Id.

b. ROW 142 Underground Alternative

The Company considered installing a new underground transmission line on ROW 142. This option would require extensive trenching and backfilling through significant areas of state-listed species habitat, wetland resource areas and archaeologically sensitive areas. Exh. EV-1, at 27. Trenchless construction techniques would likely be required at several wetland and waterbody and roadway crossings to avoid and minimize environmental impacts. Id. at 27-28. Environmental impacts of underground line construction would be greater than the proposed overhead transmission line construction on the existing ROW (including land disturbance, wetlands, archaeological resources, and state-listed rare species). Id. at 28; see also Exh. LM-2. Further, unlike the overhead line design, the Company does not have contiguous rights on ROW 142 to

construct and operate a new underground line. Exh. EV-1, at 28. With an order of magnitude cost of between $20-$25 million per linear mile, an underground design in the existing ROW 142 would be significantly more expensive than an overhead design and, in addition, would require a shunt reactor and riser structures at the Mendall Road Tap. Id. Due to the significantly greater environmental impacts and costs, the Company eliminated this alternative from further consideration. Id.

c. Public Roadway Underground Alternatives

The Company also considered two underground line designs that followed public roadways. Exhs. EV-1, at 28; EV-1(G). Underground line construction in or along public streets generally avoids potential impacts to wetlands, rare species habitat and archaeological resources, which can occur along a cross-country ROW. Exh. EV-1, at 28. However, consideration must be given to existing underground utilities, traffic management, and construction scheduling with underground projects to avoid and minimize disruption to residences and businesses. Id. The two underground alternatives evaluated by the Company would be approximately one to two miles longer than the New Line Extension and would result in more construction impacts from trenching and backfilling in public roads compared to the Project. Id. In addition, an underground design in public roadways would cost between $35-$50 million per linear mile and, therefore, would be significantly more expensive than the proposed overhead New Line Extension. Id. Thus, for these reasons, the underground line designs in public roadways were not considered further. Id.

5. Comparison of Alternatives

Constructing a new overhead 115-kV line in ROW 142 between the Crystal Spring Substation and the Mendall Road Tap is the lowest cost solution to address the need and can be constructed and operated with fewer environmental and construction impacts when compared to

other possible transmission solutions. Exh. EV-1, at 29. More specifically, compared to the Project as proposed, there are no established ROWs that would be a shorter or more direct connection between the Mendall Road Tap and Crystal Spring Substation. Id. at 29-30. Of the alternate transmission routes considered by the Company, all of them are longer and more circuitous (between 4.52 and 9.58 miles) than the New Line Extension (2.94 miles). Id. at 30. Each alternate route would exceed the estimated cost of the New Line Extension ($18.9 million), be more time-consuming to construct and likely would result in greater environmental impacts and schedule implications, among other considerations. Id. Following completion of the review of potential alternative transmission routes, the Company determined that none of the potential transmission geographic alternatives or design options were superior to the proposed Line 112 overhead design. Id.

C. The Company Has Appropriately Avoided or Minimized Environmental Impacts and Proposed Appropriate Measures to Mitigate Unavoidable Environmental Impacts.

Consistent with the Siting Board's standards, the Company conducted a detailed analysis of the potential environmental impacts of the Project and has shown that the environmental impacts associated with the Project have been avoided or minimized to the greatest extent practicable and that unavoidable impacts are minor and/or temporary and will be minimized to the extent possible.[17] The Company has appropriately considered the full range of environmental impacts, including construction activities and methods, land use, wetland and water resources, flood zone, air quality, traffic, waste, debris, contaminated soil, electric and magnetic fields ("EMF"), archaeological and historical resources, areas of critical environmental concern ("ACEC"),

[17] Notably, the Project underwent review under the Massachusetts Environmental Policy Act (G.L. c. 30, §§ 61-62L), which concluded with the issuance of the Certificate on the Final Environmental Impact Report on March 17, 2025, by the Secretary of the Executive Office of Energy and Environmental Affairs.

protected open space and Article 97 lands, and protected species and habitat. Exhs. EV-1, at 30-52; EV-1(I). Overall, Eversource's analysis demonstrates that the Project will achieve an appropriate balance among environmental impacts, reliability, and cost.

1. Construction Activities and Methods and Compliance Monitoring

The Project will be constructed in full compliance with the National Electric Safety Code, standards of the Institute of Electrical and Electronic Engineers, and the American Standards Institute, good utility practice, and in accordance with the Company's specifications, best management practices ("BMPs"), final engineering plans, and the conditions specified in permits and approvals obtained for the Project. Exh. EV-1, at 30. The Company will employ appropriate security measures during construction and operation of the Substation. Exh. DPU-S-4; Tr. 1, at 185-86.

Construction of the proposed Project is expected to last up to 19 months, including construction of both the New Line Extension and Substation Expansion. Exh. EV-1, at 30-31. Construction work will take place between 7:00 a.m. to 6:00 p.m., Monday through Friday, and from 8:00 a.m. to 4:00 p.m. on Saturdays, when daylight and weather conditions allow, unless an emergency requires work outside these hours.[18] Exh. DPU-G-4. The schedule may be adjusted by written request of the Company in consultation with the towns of Mattapoisett and Acushnet. Id. In limited circumstances, some work tasks (such as cable splicing, concrete pouring, transformer filling), once started, will require continuous operation until completion. Exh. EV-1, at 31. Work requiring scheduled outages and work that requires continuous operation until completion may need to be performed on a limited basis outside of normal working hours (including evenings,

[14] The Company and the Town of Acushnet have mutually agreed to these construction hours and the Company will meet with Town of Mattapoisett officials to discuss a similar agreement prior to the start of construction. Tr. 1, at 55-56.

Sundays, and holidays). Id. The Company will notify the towns should continuous operation and extended work hours needs arise. Id. The Company will perform work at the Crystal Spring Substation, Mendall Road Tap, and along the New Line Extension in tandem, potentially with several work sites active at a time. Id. at 31-33; see also Exh. DPU-PA-4. While no customer outages are expected due to construction, in some cases, certain DG facilities may need to come offline temporarily during construction. Exh. DPU-G-3.

Construction activities include: (1) mobilization and laydown, (2) erosion and sediment controls, (3) ROW preparation and vegetation removal, (4) timber construction matting, (5) gravel access roads and spur roads, (6) temporary work pads, pull pads, and splice pads, (6) structure installation, (7) counterpoise installation, (8) conductor and shield wire installation, (9) ROW restoration and demobilization, and (10) compliance monitoring during and after construction. Exh. EV-1, at 30-39.

Following completion of construction, or between phases of work in areas where all work is complete, portions of the ROW will be restored to reflect their original condition. Exh. EV-1, at 38. Except for Structure #2 (which will be restored so the surface is not gravel, see Exh. LM-9), the Company may retain small 50-by-50-foot permanent work pads around the new structures located outside of wetland resource areas and mapped habitat for state-listed species to facilitate access for maintenance in accordance with environmental permits and approvals. Exhs. EV-1, at 38; DPU-LU-1.

During and following construction, environmental compliance monitoring will be conducted by qualified individuals to ensure that appropriate construction methods are employed to reduce environmental impacts and ensure compliance with applicable regulatory requirements, including in the MassDEP Zone Wellhead Protection Area, which is discussed in more detail

below. Exhs. EV-1, at 38; DPU-CM-1; DPU-W-3. Monitoring and frequency of inspections will occur in accordance with the requirements of regulatory approvals issued for the Project, including the U.S. Environmental Protection Agency ("USEPA") National Pollutant Discharge Elimination System Construction General Permit, which requires the development of a Stormwater Pollution Prevention Plan ("SWPPP") for the Project that will be finalized towards the end of the permitting process. Exhs. EV-1, at 38-39; DPU-CM-1; DPU-W-2; Tr. 1, at 211-13. Monitoring will continue until all elements of the Project are complete, and land areas altered by construction activities are stabilized. Exh. EV-1, at 39. During construction, at a minimum, inspections will be conducted at least once every seven calendar days and within 24 hours of the occurrence of a storm event that produces 0.25 inches or more of precipitation within a 24-hour period. Exh. DPU-CM-1. Additional inspections may be required when work is occurring in wetland resource areas, mapped Estimated and Priority Habitat, or in accordance with environmental permit conditions. Id.

2. Land Use

There are several land uses within and adjacent to the Project ROW, Mendall Road Tap, and Crystal Spring Substation, including: (1) Grassland associated with the maintained overhead transmission line ROWs leading to the Mendall Road Tap and Crystal Spring Substation as well as some associated access roads adjacent to these facilities, (2) Palustrine emergent wetlands associated with wetland areas along the ROW and adjacent to the Mendall Road Tap and Crystal Spring Substation, (3) Bare Land and Industrial, associated with the Mendall Road Tap and Crystal Spring Substation, and (4) small areas of Developed Open Space and Impervious, associated with residential yards and access road segments, respectively. Exh. EV-1, at 39. There will be no appreciable change in the total area of Grassland or Palustrine Emergent Wetlands because of the Project. Id.

Approximately 2.4 acres of land in total will be disturbed by the proposed Crystal Spring Substation work, including approximately 0.69 acres of tree removal. Exh. EV-1, at 39. This estimate includes approximately 0.2 acres of previously developed land occupied by the existing Crystal Spring Substation facility. Id. The balance of the land in this location is generally occupied by gravel access roads. Id. An additional approximate 1.18 acres of trees and vegetation will be selectively removed or trimmed along the northerly ROW edge in Mattapoisett and Acushnet to facilitate construction and operation of the New Line Extension. Exhs. EV-1, at 39-40; DPU-G-5; DPU-LU-2; Tr. 1, at 208. Of those acres, approximately 0.18 acres of trees and vegetation will be removed from mapped Estimated and Priority Habitat, but the Company does not anticipate any overall loss of habitat. The existing understory will remain substantially intact in these locations, thus contributing to the rapid and natural regeneration of low growing, early successional woody vegetation. On January 28, 2025, the Natural Heritage and Endangered Species Program ("NHESP") determined that the proposed Project would not result in a prohibited Take of state-listed species and issued its permit approving the Project. . Exh. DPU-SLS-6.

3. Vegetation Management

The Company implements a uniform transmission Vegetation Management Plan for its transmission corridors to ensure the safe and reliable delivery of electricity to its customers. Exhs. DPU-V-7; DPU-G-6; DPU-G-7; LM-6. The Vegetation Management Plan and overhead transmission line maintenance guidelines specify that vegetation that obscures the ROW corridors and grows tall enough to interfere with the safe, efficient and legal operation of an electrical power line is considered incompatible with the intended use of the ROW. Exh. DPU-V-7.

Currently, the Company manages the ROW as two zones, a wire zone and border zone, to ensure the safety and reliability of electric transmission. Tr. 1, at 92-93. The wire zone is located

directly beneath and around the Line 114 conduits and is maintained with low-growing vegetation whose mature height is less than 15 feet, like grasses and herbs, to prevent vegetation coming in contact with the conduits. Id. The border zone lies outside the wire zone and a wider range of vegetation, including shrubs and smaller trees, has been allowed while still maintaining adequate clearance from Line 114. Id. Once the New Line Extension has been constructed, the entire ROW will be managed as a wire zone.[19] Tr. 1, at 92-93. Only plant species that are less than 15 feet tall at maturity will be allowed in the ROW so as not to interfere with both sets of conductors. Exh. DPU-V-7; Exh. LM-6; Tr. 1, at 102, 121-23.

4. Wetland and Water Resources

Portions of ROW 142 and the Crystal Spring Substation parcel contain or are adjacent to freshwater wetlands and waterways, the majority of which are Palustrine scrub-shrub and emergent wetlands that have been previously altered through construction and operation of the existing overhead electric transmission and distribution lines, as well as approved ROW maintenance and vegetation management activities. Exh. EV-1, at 40. The Company has delineated wetlands and waterways as well as floodplains on the ROW and sensitive habitat areas (including potential vernal pool habitat, which is not anticipated to be impacted), and has identified areas of temporary

[19] As a regulated electric utility, Eversource is required to establish and implement a uniform transmission vegetation management program that will ensure the safe and reliable delivery of electricity to its customers. Exh. LM-6; Tr. 1, at 122. The transmission vegetation management program was developed utilizing industry best practices and standards that are supported by the International Society of Arboriculture, Utility Arborist Association, American National Safety Institute, along with other organizations associated with the utility vegetation management industry. Id. It provides a clear and accessible area for the safe operation, review and maintenance of the electric facilities located on its ROWs by targeting incompatible vegetation to promote a compatible, early successional plant community dominated by grasses, ferns, forbs, bushes and shrubs with an allowable mature height of 15 feet or less by species. Id. All other vegetation with a mature height greater than 15 feet is removed. Id. Eversource is solely responsible for the management of vegetation within its transmission right of way corridors, and exceptions to its program specifications, such as "topping" or "self-maintenance" are not accepted practices by the industry or the Company's standards. Id.

alteration and land disturbance within wetlands from construction mat placement, vegetation removal, and transmission structure installations. Id.; Exhs. EV-1(H); DPU-W-6.

Work in wetlands has been reduced to the extent practical. Exh. EV-1, at 40. Limited unavoidable impacts to wetland resource areas are associated with structure installation (Structures #3, #4, #14, #15, and #19) and use of temporary construction mats and selective removal of trees and vegetation. Id. In all, approximately 23,400 square feet of vegetation will be altered in BVW, approximately 900 square feet will be altered within Riverfront Area, and approximately 600 square feet will be altered within BLSF. Exh. DPU-LU-2.

Use of construction mats will allow for equipment movement and staging within wetlands without the need to substantially remove vegetation beneath access ways and other work areas. Exh. EV-1, at 40. Construction mats also will minimize the potential of rutting in wetland soils by distributing loads over a broad surface area. Id. at 40-41. The Company will utilize appropriate mitigation measures to limit impacts to wetlands due to required tree and vegetation removal. Exh. DPU-LU-2; Exh. DPU-G-5. Any temporary impacts associated with the placement and subsequent removal of timber construction mats will be mitigated through restoration, and all restoration efforts will be monitored by the Company after construction to ensure compliance with any applicable conditions. Exh. DPU-W-1; Tr. 1, at 200-02. While there will be unavoidable impacts to BVW, the Company will provide one for one replication as mitigation. Exhs. EV-1, at 41; DPU-W-1; DPU-W-7.

Waterways cross the ROW in two locations (Mattapoisett Brook in Mattapoisett and an unnamed stream tributary to Tinkham Pond in Acushnet), each of which is in a Federal Emergency Management Agency ("FEMA") mapped 100-year floodplain. Exhs. EV-1, at 43; EV-1(H). The total length of the floodplains on the ROW is approximately 1,250 linear feet. The existing access

roads on the ROW include culverted crossings of the two waterways. Exh. EV-1, at 43. The installation of one transmission structure foundation (Structure #19) will result in approximately 50 square feet of fill in the floodplain. Exhs. EV-1, at 43; DPU-W-7. Compensatory flood storage will be provided as required by the Wetlands Protection Act regulations. Exh. EV-1, at 43.

The Company will consult with Acushnet and Mattapoisett Conservation Commissions as the detailed design is advanced and during the Notice of Intent review processes; notably, neither conservation commission expressed any concerns during the MEPA review process. Exh. DPU-W-7.

A portion of ROW 142, generally located between Structures #13 and #21, is located within a MassDEP Zone II Wellhead Protection Area and is also near municipal groundwater supplies in Mattapoisett. Exhs. EV-1, at 41; EV-1(I); DPU-W-3. In addition to the use of construction matting and other BMPs to avoid and minimize impacts to wetlands and waterways during construction, including the Zone II Wellhead Protection Area, regulated materials that are used for the Project will be managed in accordance with applicable laws and regulations and all contractors will be presented with and be required to follow the Company's spill contingency plan. Exhs. EV-1, at 42; DPU-W-3. This will include 110 percent passive secondary containment structures for the proposed transformers that employ dielectric fluid (which is comparable to industry standards and guidelines),[20] and appropriate storage of all regulated materials stored and used at the Crystal Spring Substation. Exhs. EV-1, at 42; DPU-S-1.

[20] The typical drainage area for a transformer of this size is approximately 962 feet. Exh. DPU-S-1. Each transformer foundation will be surrounded by a secondary containment with openings in the floor. These openings will be equipped with imbiber beads that will allow water to drain from the containment but will solidify upon contact with dielectric fluid. The water will drain to a below-grade leaching system. Id. The planned secondary containment will be able to accommodate a 24-hour, 25-year storm event, which is defined as seven inches of rainfall over a 24-hour period. Id.

To minimize the risk of environmental impacts associated with potential spills, contractors are required to inspect vehicles and equipment daily and to refuel a minimum of 100 feet away from any wetland or waterbody, apart from equipment that cannot be feasibly moved from its working location, such as drilling equipment, dewatering pumps, or large cranes. Exh. EV-1, at 42. In the unlikely event of a release of oils (hydraulic oil); greases (lubricating); and construction equipment fuels (gasoline and diesel), which may be used in varying quantities during construction, Eversource maintains a 24-hour-per-day/7-day-a-week spill response program. Id.; Exhs. DPU-S-2; DPU-W-3. The Company and its contractors are required to always have spill kits available and spill response will be activated immediately, and the spilled material and any contaminated material will be contained, cleaned, and disposed of properly. Exhs. EV-1, at 42; DPU-G-5; DPU-W-3. The Company contracts with vendors that can facilitate remediation of spills in emergency situations. Tr. 1, at 213-14.

5. Visual

Where visible, the existing Crystal Spring Substation and transmission structures and overhead wires within the ROW are highly dominant and visually complex groupings of utility scale infrastructure. Exhs. EV-1, at 43; EV-1(J). Construction of the Project will introduce similar transmission structures and substation equipment into the same viewsheds, consistent in scale and character with similar equipment already in view. Exh. EV-1, at 43. Thus, the proposed Substation Expansion and New Line Extension represent a continuation and expansion of an existing use and overall and do not significantly alter the visual characteristics of the area. Exh. EV-1(J).

The proposed substation work and new transmission structures may be observed from Crystal Spring Road, Tinkham Lane, and Long Plain Road in Mattapoisett, and Mendall Road in Acushnet. Exh. EV-1, at 43; see also Exh. DPU-V-4. Overall, the Project will result in modest

alteration of existing views and the Company will limit tree cutting or removal to mitigate impacts to scenic roads in Mattapoisett (i.e., Crystal Spring Road and Long Plain Road). Exhs. EV-1, at 43; DPU-V-4. The Company will coordinate with the Mattapoisett tree warden as required regarding mitigation for any trimming or tree removal at public way crossings of the ROW. Tr. 1, at 196. The Company will notify affected landowners, through multiple channels, of the opportunity to work with the Company on mitigation measures and will work with affected homeowners to address concerns and, where appropriate, offer reasonable mitigation.[21] Exhs. EV-1, at 43; DPU-V-1, DPU-V-2, DPU-V-6.

6. Noise

The Company will use construction methods and equipment, where appropriate, to reduce construction noise. Exh. EV-1, at 43. These mitigation efforts will include use of the quietest equipment possible to perform the work, foundation designs that minimize the amount of excavation required and maximizing preassembly of components off site. Id. at 43-44. Moreover, working within approved hours of construction mitigates noise impacts associated with construction equipment. Tr. 1, at 192. Because the Project involves work on an existing power system that serves customers, there may be times that work will need to occur outside of proposed work hours previously described. Exh. EV-1, at 44. In addition, there are certain operations that, due to their nature or scope, must be accomplished in part outside the specified working hours. Id. Such work generally consists of activities that must occur continuously, such as cable splicing, once begun. Id.

To the extent such expanded hours are necessary, the Company will work with affected stakeholders to minimize noise impacts. Id.

[21] Visual impacts related to Structure #2 on Ms. Machie's property and planned mitigation to address those impacts are discussed in Section VI.

New sources of sound associated with the operation of the expanded Substation are the two new transformers (one of which is replacing the existing transformer), both rated at 62.5 MVA with a maximum design sound output of 64 A-weighted decibels ("dBA"). Exh. EV-1, at 44; see also Exh. DPU-NO-1. The Company conducted a sound level assessment to determine potential sound level impacts associated with the operation of the Crystal Spring Substation. Exhs. EV-1, at 44; EV-1(K). The assessment included a sound monitoring program to measure ambient sound levels in the vicinity of the Substation, sound level modeling to predict impacts from the Substation Expansion, and a comparison of modeled sound levels with the applicable noise policy of MassDEP, which limits source levels to a sound level increase of no more than 10 dBA over background at the property line of residences and other noise-sensitive receptors. Exh. EV-1, at 44. Potential sound level impacts from the Substation were evaluated against this limit and the "pure tone" criteria using ambient sound levels and the modeled sound levels referenced in the report. Id. Modeling indicates the Substation Expansion will comply with the MassDEP Noise Policy at the property line of all noise-sensitive receptors and the nearest residential property line. Id. at 44-45; Exh. EV-1(K). In addition, operation of the new transformers is not expected to cause a pure tone condition. Exh. EV-1, at 45. The sound study conservatively assumed the maximum allowable operating conditions for the new transformers, which would account for new DG interconnections. Exh. DPU-NO-4. Thus, the Company has demonstrated that the Substation Expansion will comply with the MassDEP noise policy even with new DG interconnections.[22] Exh. EV-1, at 45; Exh. DPU-NO-4.

[22] Neither the Town or Acushnet nor the Town of Mattapoisett have noise ordinances applicable to the Project. Exhs. DPU-NO-2 and DPU-NO-3; see also Tr. 1, at 179, 191-93.

7. Air Quality

Air quality impacts are anticipated to be temporary and limited to the fugitive dust from disturbed soil surface areas and emissions from construction equipment and motor vehicles. Exh. EV-1, at 45. Installation of transmission line structures, vegetation removal, and Crystal Spring Substation construction activities are not anticipated to be significant sources of dust during construction. Exh. DPU-A-2. If necessary, dust generated from earthwork and other construction activities will be controlled by spraying with water when airborne dust is created. Exhs. EV-1, at 45; DPU-A-1. Anti-tracking pads (typically installed at all points of egress to public roads from the ROW) and regular sweeping of the pavement of adjacent roadway surfaces during the construction period will minimize the potential for construction traffic to kick up dust and particulate matter. Exh. EV-1, at 45. Eversource will direct its contractors to retrofit any diesel-powered non-road construction equipment rated 50 horsepower or above to be used for 30 or more days over the course of the Project with USEPA-verified (or equivalent) emission control devices (e.g., oxidation catalysts or other comparable technologies). Id. Eversource uses ultra-low sulfur diesel ("ULSD") fuel in its own diesel-powered construction equipment. Id. ULSD has a maximum sulfur content of 15 parts per million as opposed to low sulfur diesel fuel, which has a maximum sulfur content of 500 parts per million. Id. By using ULSD fuel, there is a 97 percent reduction in the sulfur content as compared to low sulfur diesel fuel. Id.

Eversource and its contractors will also comply with state law (G.L. c. 90, § 16A) and MassDEP regulations (310 C.M.R. 7.11(1)(b)), which limit vehicle idling to no more than five minutes. Exh. EV-1, at 45. There are exceptions for vehicles being serviced, vehicles making deliveries that need to keep their engines running, and vehicles that need to run their engines to

operate accessory equipment. Id. at 45-46. There may be other times when idling is permitted if it is necessary, such as for safety reasons. Id. at 46.

8. Traffic

The Project will require access from local roads during construction. Exh. EV-1, at 46. To the extent practicable, delivery of materials or equipment will be planned during off-peak traffic hours. Id. The transmission line aerial crossings of Crystal Spring Road, Tinkham Lane, and Long Plain Road in Mattapoisett, and Mendall Road in Acushnet will require short-term closures when stringing the wires over the roadway. Id. This work will occur during off-peak commuter hours with police details, as directed by local officials. Id. During construction, there may also be situations when Crystal Spring Road must be temporarily blocked for a short duration to accept supplies, move larger pieces of equipment onto the Substation Site, or to facilitate underground distribution line installation across the road, but these situations will be infrequent and of short duration. Id. In cases where traffic must be temporarily delayed, a police detail will be used to control traffic. Exhs. EV-1, at 46; DPU-T-1; DPU-T-2. Ordinarily, construction vehicles will be working within the Project site and only limited entry and exiting of these vehicles will occur onto Crystal Spring Road, Tinkham Lane, and Long Plain Road in Mattapoisett, and Mendall Road in Acushnet. Exh. EV-1, at 46. The Company will coordinate with the Towns of Mattapoisett and Acushnet to ensure that construction traffic impacts are minimized. Exhs. EV-1, at 46; DPU-T-1; DPU-T-3.

9. Waste, Debris, and Contaminated Soil

There are no mapped MassDEP Tier Classified 21E sites or properties with activity and use limitations within one mile of the Project ROW, the Mendall Tap or the Crystal Spring Substation. Exh. EV-1, at 46. The nearest MassDEP mapped site is approximately 7,300 feet

southeast of the Crystal Spring Substation. Id. In the event contaminated soil, contaminated groundwater, or other regulated materials are encountered along the route, soils/groundwater will be managed pursuant to the Utility Related Abatement Measure provisions of the Massachusetts Contingency Plan ("MCP"). Id. Eversource will contract with a Licensed Site Professional as needed, consistent with the requirements of the MCP at 310 C.M.R. 40.0460 et seq. Id. at 47. Eversource contracts with vendors that provide emergency remediation services. Tr. 1, at 213-14.

10. EMF

The calculated EMF levels for the Project are well below acceptable limits. The Company modeled EMF levels associated with the proposed transmission facilities under peak and minimum annual loading conditions. Exh. EV-1, at 47. The results of the modeling along the Line 112 ROW (left (southwestern edge) (-) to right (northeastern edge) (+)) are presented in the tables below:

Calculated Electric Field Levels (kV/m)

Section	Configuration	Electric Field (-) Edge of ROW	Electric Field Max on ROW[23]	Electric Field (+) Edge of ROW
Crystal Spring Substation to Mendall Road Tap	Existing: Proposed:	0.46 0.52	0.92 1.33	0.06 0.74

Calculated Magnetic Field Levels at Summer Peak Loads with no DG Export (mG)

Section	Configuration	Magnetic Field (-) Edge of ROW	Magnetic Field Max on ROW	Magnetic Field (+) Edge of ROW
Crystal Spring Substation to Mendall Road Tap	Existing: Proposed:	3.6 1.8	11.4 8.5	0.8 3.3

[23] The maximum field columns identify the peak calculated electric field value within the ROW bounds for the respective field type and load condition. The specific point of maximum field relative to the edge of the ROW varies, but it is typically beneath one of the transmission lines or between multiple transmission lines. Exh. DPU-MF-2.

Calculated Magnetic Field Levels at Minimum Loads with Full DG Export (mG)

Section	Configuration	Magnetic Field (-) Edge of ROW	Magnetic Field Max on ROW	Magnetic Field (+) Edge of ROW
Crystal Spring Substation to Mendall Road Tap	Existing: Proposed:	9.6 10.4	30.7 34.6	2.2 1.6

Id. at 47-48; Exhs. DPU-MF-5; LM-11. The reference levels for whole body exposure by the public to 60-Hz fields are summarized below.[24] Exh. EV-1, at 49; see also Exh. DPU-MF-3.

Reference Levels for Whole Body Exposure by the General Public to 60-Hz Fields

Organization, Recommended Limit	Magnetic fields	Electric fields
International Commission on Non-Ionizing Radiation Protection, reference level	2,000 mG	4.2 kV/m
International Committee on Electromagnetic Safety, maximum permissible exposure	9,040 mG	5 kV/m[25] 10 kV/m[26]

As demonstrated in the tables above, the calculated EMF levels after construction of the Project are anticipated to be significantly lower than published international guidelines. Exh. EV-1, at 49; Exh. DPU-MF-4. Notably, EMF levels attenuate significantly over distances from transmission lines, and EMF levels are typically highest directly underneath or between multiple transmission lines compared to the edge of the ROW. Exhs. DPU-MF-2; DPU-MF-4. In most locations, exposure to magnetic fields will be similar to existing levels once the Project is completed.[27] Exhs. EV-1, at 49; DPU-MF-4.

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[24] Both organizations concluded that evidence for effects from long-term exposure was insufficient for setting exposure standards.

[25] Maximum permissible exposure at and beyond the ROW edges.

[26] Maximum permissible exposure exception within the transmission ROW.

[27] Ms. Machie's property at 275 Mendall Road is located on the northeastern edge of the ROW. Exh. LM-11. The tables above and in Exh. LM-11(1), Tables 3, 4 and 5 include calculated values for existing and proposed electric and magnetic fields under various operating scenarios. The last column in the tables with "(+) Edge

Magnetic field levels were not calculated for the area surrounding the Substation because changes to the magnetic field levels at the Substation boundary are not expected to increase beyond what the present station contributes. Exh. DPU-MF-4. Fields from substation sources undergo significant attenuation at the distance to the fence line. Id. The dominant source of magnetic fields in the vicinity of substations is typically the lines entering the substation. Id. Magnetic fields were calculated for the transmission lines, and while the typical cross section is not exactly comparable for the Substation entry, the results of the cross-section calculations are conservative and the attenuation of fields over distance will be similar from the Substation sources. Id. With the nearest abutting house approximately 200 feet from the proposed Substation fence, fields will be at typical background levels (i.e., the proposed Substation will not have a significant contribution to the overall MF levels) and will be well below health-based exposure guidelines. Id.

11. Archaeological and Historical Resources

The Company investigated the Project area to determine if it contained significant archaeological resources. Exh. EV-1, at 49. The archival research, walkover survey, and subsurface testing did not identify any potentially significant archaeological resources within the Project's "Area of Potential Effect." Id. at 49-50. Accordingly, based on the archaeological surveys and investigations, there is a low probability that an archaeological resource will be discovered during construction. Exh. DPU-AH-1. In the event of an unanticipated archaeological discovery during construction, the contractor will stop work and immediately notify Eversource, who will then notify its archaeological consultant to assess the site for any archaeological significance, and

of ROW" in the header is the column for the northeastern edge of ROW. As indicated in these tables, there will not be an appreciable increase in EMF levels resulting from the Project and they will be magnitudes lower than the recommended limits of published international guidelines. Exh. LM-11.

Eversource will notify the State Historic Preservation Officer and the Tribal Historic Preservation Officer(s) as appropriate. Id.

12. ACEC

Neither the Project ROW, Mendall Road Tap, nor Crystal Spring Substation are within or near any ACECs. Exhs. EV-1, at 50; EV-1(I).

13. Protected Open Space and Article 97 Lands

A portion of ROW 142 passes through several open parcels in Acushnet and Mattapoisett. Exhs. EV-1, at 50; EV-1(I). According to MassGIS™ data, several of these parcels are owned by the Buzzards Bay Coalition and are associated with the Mattapoisett River Reserve. Exh. EV-1, at 50. The other parcels are owned by the Mattapoisett Land Trust, Girl Scouts of America, Town of Mattapoisett Water Department, and a sportsmen club (Fin Fur and Feather Club of Mattapoisett). Id. Although the Eversource ROW extends through municipal lands protected for water supply purposes, construction of the overhead transmission line within the ROW does not require Article 97 approval. Id. The existing ROW easement specifically allows construction of overhead transmission lines. Id.

14. State-Listed Species and Habitat

Areas of protected habitat for state-listed species on the ROW were identified utilizing ArcGIS™ software and applying MassGIS mapping of NHESP Priority and Estimated Habitat areas. Exh. EV-1, at 50. Mapped habitat exists along approximately 40 percent (5,145 linear feet) of the Project ROW, however, neither the Crystal Spring Substation nor the Mendall Road Tap are located in mapped habitat. Id.; Exh. EV-1(H), (I). No portion of the Project in Acushnet (including near Mendall Road) is in mapped habitat, however, certain portions of the Project in Mattapoisett are in mapped habit. Exhs. EV-1; EV-1(H), I; LM-3. The mapped habitat along the ROW is

associated with a turtle species.[28] Exhs. EV-1, at 50; LM-3; DPU-SLS-1. Potential impacts include direct mortality during construction, primarily from movement of construction vehicles and disturbance of vegetation. Exh. EV-1, at 50. In consultation with the Massachusetts Division of Fisheries & Wildlife, the Company developed a Turtle Protection Plan ("TPP") that incorporates measures to protect turtles from unintentional injury or death during construction of the Project. Id. at 50-51; Exh. DPU-SLS-2. The Massachusetts Division of Fisheries & Wildlife approved the Project subject to certain conditions, which, if followed, determined that it would not result in a take of eastern box turtles. Exh. DPU-SLS-2(S1). The conditions include implementation of the TPP by an approved wildlife biologist with a valid Scientific Collection Permit, removal of all erosion controls after construction, and submission of a compliance report by the Company within 30 days of completion of work. Id.

The existing understory will remain substantially intact in these locations, thus contributing to the rapid and natural regeneration of low growing, early successional woody vegetation. Exh. EV-1, at 51. While the conversion in cover type from a forested habitat to a scrub-shrub habitat is minimal, it will nonetheless offer potential foraging, migratory, and basking habitat for turtles following Project construction. Id.

Overall, impacts associated with the proposed Project are anticipated to be minor or temporary in nature, and the Project will be constructed in a manner that will not adversely impact listed species. Moreover, the Company does not anticipate any impacts to federally listed species because of construction of the Project. Exh. DPU-SLS-3. Permanent impacts to mapped habitat are limited to approximately 550 square feet and associated with transmission Structures #14 and

[28] According to current NHESP data, there are no known locations of winter hibernacula or maternity roost trees for protected bat species within the towns of Acushnet or Mattapoisett. Exh. LM-4. In addition, there is no mapped habitat of marbled salamander in the Project area. Exh. LM-3; Tr. 1, at 202-05.

#16 through #23. Exh. EV-1, at 51. Temporary impacts to mapped habitat from timber construction matting will total approximately 2.3 acres. Id. at 51-52; Exh. DPU-SLS-5. To mitigate potential impacts, the Company also employs "look aheads" during construction, which involve assessment of areas prior to equipment being moved onto them to ensure that construction is complying with permits and approvals. Tr. 1, at 173-74. The construction mats will be removed as soon as practicable to minimize impacts to underlying vegetation and support revegetation. Exh. EV-1, at 52. Id. Temporary impacts to mapped habitat from underground distribution line work and temporary spur road construction are limited to approximately 0.04 and 0.1 acres, respectively. Id. These disturbed areas will be substantially restored to their preexisting condition with loam and a native seed mix following construction. Id.; Exh. DPU-SLS-5.

VI. THE PROPOSED LOCATION FOR STRUCTURE #2 IS THE ONLY FEASIBLE LOCATION

The Intervenor, Ms. Machie, opposes the location of Structure #2 which, as proposed, will be within the Company's ROW easement on Ms. Machie's property at 275 Mendall Road, approximately 50 feet to the east of Mendall Road and adjacent to the corresponding Line 114 structure.[29] Tr. 1, 67-69, 77-78, 226-27. Structure #2 would be located in a patch of existing

[29] Ms. Machie questioned the location of the southern boundary of the Eversource easement on her property. Exh. EV-10. This is because an Eversource plan dated May 29, 2024, shows the Eversource easement approximately 18 feet off her southern property line whereas other plans in Ms. Machie's possession show it along (and coinciding with) her southern property line. Id. Ms. Machie asserts that the 150-foot-wide easement should be measured from her southern property boundary, which she presumes would allow Eversource to shift Structure #2 (and the corresponding Line 114 structure) 18 feet to the south. Id. Ms. Machie's contention is not correct. Tr. 1, at 39-41. The easement was granted to Eversource by Ms. Machie's predecessor in title in 1965. Id.; Exhs. LM-18; LM-18(1). An easement plan recorded in 1965 shows the location of the easement with a call sign relative to a concrete monument located on the west side of Mendall Road. Tr. 1, at 39-41; Exhs. LM-18; LM-18(2). The easement was created before the grantor divided his property; therefore, the boundary of the easement could not have been marked by the boundary of Ms. Machie's property. Id.

Eversource agrees with Ms. Machie that the easement boundary likely does run along her southern property line. Tr. 1, at 39-41. The easement is shown as slightly off the property line on the May 29th plan because Eversource did not survey the property line to create the plan; rather, a GIS overlay (which is not 100%

ornamental vegetation on the south side of the front yard and within Ms. Machie's front yard viewshed. All vegetation in that location that has a mature height of 15 feet must be removed because it will be within the wire zone of the New Line Extension. Exh. DPU-V-7; Exh. LM-6; Tr. 1, at 102, 121-23. Ms. Machie's concerns include visual impact resulting from both the presence of Structure #2 and removal of the ornamental vegetation, reduced privacy from Mendall Road due to the vegetation removal, and the proximity of the conductors to her house vis-à-vis EMF impacts. Exhs. M-1; LM-11; Tr. 1, at 226-27.

Ms. Machie first raised concerns about the location of Structure #2 in the summer of 2023 during the early stages of Project development, at which time the Company committed to evaluating the possibility of relocating Structure #2. Tr. 1, at 31-34; Exh. LM-1. The options the Company considered at that time are discussed below. Ultimately, the Company concluded that the proposed location best minimizes environmental impacts and costs, while meeting the Project need. Tr. 1, at 32.

A. Options Evaluated

Prior to filing its Petition, the Company evaluated several options for relocating Structure #2. Exh. LM-1. Later, during discovery and during the evidentiary hearing, the Company was asked about the feasibility of other possible solutions to potentially address Ms. Machie's concerns. In all, the Company evaluated seven options including various structure relocations and conductor types. Exhs. DPU-PA-1; DPU-PA-2; DPU-PA-5; RR-EFSB-3; RR-EFSB-4; RR-

accurate) was used to show the property line. Id. Her property boundary was not surveyed because the purpose of the plan was not to establish her property boundary, but to show the location of the easement in relation to an encroachment (Ms. Machie's fence). Id. The plan itself states that Ms. Machie's property boundary is an "approximate property line." Id. This does not change the accuracy of the location of the easement on the survey or as staked, which is based on a concrete monument and call sign. Id.

EFSB-6; Tr. 1, at 79-82, 147-59. As demonstrated below, the proposed location remains the optimal location for Structure #2.

1. Option 1: Relocate Structure #2 to the west of Mendall Road

Option 1 would shift Structure #2 from the Company's easement on Ms. Machie's property to the Company's easement on 284 Mendall Road, which is located on the west side of Mendall Road opposite Ms. Machie's property. Exhs. DPU-PA-2; DPU-PA-5; Tr. 1, at 79-80, 88-89, 95-106. This alternative is not feasible because the distance between the relocated Structure #2 and Structure #3 would exceed the maximum allowable conductor span; thus, an additional structure would need to be installed between the relocated Structure #2 and Structure #3. Exhs. DPU-PA-2; DPU-PA-5; Tr. 1, at 88-89. Importantly, neither the relocated Structure #2 nor the additional structure would be adjacent to a corresponding structure on Line 114, resulting in additional accessibility and maintenance impacts over the long term.

Moreover, while this option would lessen the visual prominence of Structure #2 for Ms. Machie (it would still be in her front yard viewshed, but farther away), the visual prominence of the relocated structure would be increased for the abutter at 284 Mendall Road, albeit in the side yard viewshed.[30] Id.; see also Tr. 1, at 106.

[30] Ms. Machie contends the Company informed her that it would need to consult with the owners of 284 Mendall Road to locate the structure on that property. See, e.g., Exhs. M-1; LM-1. That is not accurate. Where the Company has existing easement rights to construct, operate, and maintain electric transmission facilities, it does not need to consult with or obtain further permission from landowners. The Company sent both abutter notices by first class mail to the residents of 284 Mendall Road and mailed them a notice about the open house, but did not directly engage with the owners of 284 Mendall Road because it already has an easement on that property and, furthermore, the Company is not planning to construct a structure on that easement. Exhs. EV-3, Attachment A, Entry #73; EV-5. Tr. 1, at 97-99. The Company determined before filing the Petition that moving the structure to its easement at 284 Mendall Road would present significant technical challenges and increase Project costs and, therefore, the Company did not pursue the potential relocation of Structure #2 to that location. Exhs. LM-1; DPU-PA-1. The Company will work with the owners of 284 Mendall Road, as it will with all other abutters, to address any concerns that may arise during construction and operation of the Project. Exhs. DPU-G-7; DPU-V-1; LM-1; LM-18; LM-18(1).

Finally, this option would not preserve the majority of the ornamental plantings in the easement in Ms. Machie's front yard because the conductors for the New Line Extension still will pass above this location. Once the New Line Extension is constructed, the ornamental plantings that would exceed 15 feet at mature height would need to be removed because they would be within the wire zone of the new conductors. Exhs. DPU-PA-2; DPU-PA-5.

The cost of this option to customers, including the addition of one structure, is estimated to be $400,000 plus an order of magnitude estimate of $115,000 for additional design, environmental permitting, outreach, and civil engineering. Id.; see also Tr. 1, at 106; Exh. RR-EFSB-2.

2. Option 2: Shift Structure #2 within 30 feet of Mendall Road

Option 2 would shift Structure #2 up to 30 feet closer to the east side of Mendall Road, which would require moving Structure #3 towards Mendall Road by at least an equal amount to maintain acceptable span distances. Exhs. DPU-PA-1; DPU-PA-5; Tr. 1, at 80. This option may introduce certain complexities, such as proximity to Mendall Road, to a distribution line located along the east side of the road, and to a wetland for placement of structures, Tr. 1, at 76-78, 93-95. While this option may lessen slightly the prominence of Structure #2 in Ms. Machie's viewshed, most of the ornamental vegetation would still need to be removed to protect the conductors, and the conductors would remain at the same distance to the house. Exhs. DPU-PA-1; DPU-PA-5. On April 23, 2025, the Company staked the location of Structure #2 if it was moved 30 feet closer to Mendall Road along the centerline of the new line conductors to provide a visual for the Machies' consideration. Exh. RR-EFSB-10. Ms. Machie responded that although she would prefer that Structure #2 not be located in her front yard, relocation of the structure at the staked location 30 feet closer to Mendall Road would be better than the proposed location. Id. The Company is

amenable to this relocation of Structure #2. Tr. 1, at 231-32. There are no costs associated with this relocation because the +/- 30 feet is a negligible shift that does not change structure foundation design or change environmental impacts. Exhs. DPU-PA-5; RR-EFSB-2.

3. Option 3: Relocate Structure #2 beyond fenced backyard

Option 3 would move Structure #2 beyond the fenced backyard of Ms. Machie's property, closer to Structure 3. Exh. DPU-PA-2. As with Option 1, such a relocation would necessitate the construction of an additional structure on the west side of Mendall Road to maintain span lengths. Id. Accordingly, it would result in the same shift of visual prominence of a structure from one abutter to another, result in the same operational and maintenance issues because the relocated Structure #2 and the additional structure are not aligned with corresponding Line 114 structures, still require the removal of the ornamental vegetation, and increase ratepayer costs by approximately $400,000 plus an order of magnitude estimate of $115,000 for additional design, environmental permitting, outreach, and civil engineering costs. Id.; Exhs. DPU-PA-5; RR-EFSB-2; Tr. 1, at 80-81.

4. Option 4: Relocate Structure #2 to rear of Ms. Machie's property

Option 4, Ms. Machie's preferred location, would move Structure #2 east along the ROW toward the rear of Ms. Machie's property. Exhs. DPU-PA-1; DPU-PA-5; Tr. 1, at 81. This would place Structure #2 directly in a wetland resource area; however, Structure #3, which is proposed in a wetland, would need to be moved further east to maintain span lengths with the relocated Structure #2 and, thus, Structure #3 would be moved out of the wetland. To maintain the span length between Structure #1 and the relocated Structure #2, Structure #2 would need to be 30 feet taller, which would require it to be custom fabricated and supported on a drilled shaft reinforced concrete foundation. Exhs. DPU-PA-1; DPU-PA-5; Tr. 1, at 75-76, 83-86. While this option would

completely remove Structure #2 from Ms. Machie's front yard viewshed, it would not negate the need to remove the ornamental vegetation from the easement area on Ms. Machie's property. Exhs. DPU-PA-1; DPU-PA-5. Importantly, this option would introduce maintenance complexity (i.e., specialized equipment to access the much taller structure), remove the benefit of having Structures #2 and #3 adjacent to Line 114 structures, increase the visual prominence of the relocated Structure #3 to other abutters, and add approximately $700,000 to the cost of the Project plus an order of magnitude estimate of $115,000 for additional design, environmental permitting, outreach, and civil engineering (which includes costs associated with performing required geotechnical borings to design the Structure #2 foundation. Exhs. DPU-PA-1; DPU-PA-5; RR-EFSB-2; Tr. 1, at 83-86.

5. Option 5: Shift Structure #2 towards the corresponding Line 114 structure

Option 5 would shift Structure #2 south and closer to Line 114, which would reduce the visual prominence of the structure in Ms. Machie's viewshed and shift the wire zone of the New Line Extension such that some of the ornamental vegetation could remain. However, this option is not feasible as it would bring the New Line Extension too close to Line 114 and cause the Line 114 conductors to violate clearance requirements under blowout conditions. Exh. DPU-PA-3; Tr. 1, at 81. It is not feasible to relocate the Line 114 structures further south to address this clearance issue as that would place the Line 114 structures outside of the Company's easement. Exhs. DPU-PA-5, DPU-PA-9. The Company would need to acquire additional easement rights from approximately seven abutting property owners, which would add cost and affect the Project construction schedule. Exh. DPU-PA-5. This option would cost an estimated additional $15 million compared to the Project.[31] Exhs. DPU-PA-5, DPU-PA-9.

[31] The estimated costs for additional design, environmental permitting, outreach, and civil engineering are included in the order of magnitude estimated cost of $15 million. Exh. RR-EFSB-2.

6. Option 6: Underground a portion of the New Line Extension

Option 6 would place the New Line Extension underground between Structures #1 and #3, thereby eliminating Structure #2. Exhs. DPU-PA-3; DPU-PA-5; Tr. 1, at 81-82. While this option would eliminate Structure #2 from Ms. Machie's viewshed, it would require that Structure #2 be moved to the west of Mendall Road and that both it and Structure #3 be replaced by larger overhead-to-underground transition structures, which would increase the visual prominence of these structures in the viewshed of other property owners, impact wetlands due to duct bank installation, and result in additional cost to ratepayers estimated to be $20 million.[32] Exhs. DPU-PA-3; DPU-PA-5; Tr. 1, at 86.

7. Option 7: Use of Aluminum Composite Core Conductor

At the Siting Board's request, the Company evaluated the feasibility of using an aluminum composite core conductor ("ACCC") rather than the Company's proposed use of aluminum conductor steel supported ("ACSS") for portions of the New Line Extension to potentially allow for greater span distance between certain structures and, thus, to eliminate the need for Structure #2. Tr. 1, at 138-162. The Company was asked to consider using ACCC in the following three scenarios: (a) between Structure #1 and Structure #3; (b) between Structure #2 and Structure #3 if Structure #2 is moved west of Mendall Road and Structure #3 is moved east of the wetland; and (c) for the entire length of the New Line Extension. As discussed below, use of ACCC is either not feasible, or not warranted. Exhs. EFSB-RR-3; EFSB-RR-4; EFSB-RR-5; EFSB-RR-6.

The Company predominantly utilizes ACSS, which is a High Temperature Low Sag ("HTLS") conductor, as the typical conductor type for conductor installations across its service territory because of its current carrying capability, low sag and high temperature characteristics.

[32] The estimated costs for additional design, environmental permitting, outreach, and civil engineering are included in the order of magnitude estimated cost of $20 million. Exh. RR-EFSB-2.

Exh. EFSB-RR-5. By using ACSS conductor consistently throughout its service territory, the Company can efficiently and consistently stock standard spare material, making it a cost-effective solution that provides the benefits of HTLS conductor. Id. ACSS has been used extensively in the industry and has a long history of in-service installation. Id.

ACCC conductors are also HTLS conductors, but use a composite core, rather than a steel support core, to reduce sag. Exh. EFSB-RR-5. ACCC conductor is well-suited for long span applications where fixed width constraints do not exist, or where there are long, straight, unobstructed areas and wide rights-of-way, which are more prevalent in sparsely populated regions and areas with limited resource areas. Id. ACCC conductors are not particularly well suited for the types of ROWs in the Company's service district, which are typically narrow with angles and obstacles (such as road crossings, wetlands, flood zones, unsuitable terrain, limited property rights) that dictate structure locations and, thus, span lengths. Id. Thus, because the potential benefit of using ACCC and other composite core technologies to increase span lengths cannot be realized in the Company's service territory, the increased cost of ACCC conductor is not justified. Id. In fact, the Company has used composite core conductors in only two unique applications, both involving the replacement of existing conductor on existing infrastructure that faced practical challenges for replacement where long (approximately 1,600 foot), unobstructed spans across the Connecticut River were not constrained by the width of an easement. Id.

Here, installing ACCC conductor between Structures #1 and #3 would not achieve the desired effect of eliminating Structure #2. Exh. RR-EFSB-3. This is because, using similar design parameters as the proposed ACSS conductor, the maximum span for an equivalent weight and diameter ACCC conductor would be approximately 800 feet. Id. If Structure #3 is moved east of the wetland to avoid additional wetland impacts, the span between Structure #1 and Structure #3

would be approximately 1,450 feet, which would exceed the 800-foot span horizontal blowout clearance limits within the Company's easement, even under the maximum tension permitted.[33] Exh. RR-EFSB-3.

For the same reason, installing ACCC between Structures #2 and Structure #3 with Structure #2 relocated to the west side of Mendall Road and Structure #3 relocated east of the wetland is not feasible. Exh. RR-EFSB-4. The span length between Structure #2 and Structure #3 would be approximately 1,100 feet which, as discussed above, exceeds the 800-foot maximum distance between structures to avoid horizontal blowout.[34] Id.

Finally, for the reasons described above, the Company has never used ACCC or other composite core technologies for construction of a new overhead transmission line, and there would be no net benefit to using it for the New Line Extension. Exh. RR-EFSB-5. Although structure heights may be slightly reduced along the length of the New Line Extension if using ACCC conductor of the same weight and diameter compared to the proposed ACSS, the structure design and layout would remain largely as proposed for the ACSS conductor. Exh. RR-EFSB-6. Thus, it is unlikely that span lengths would substantially increase to significantly reduce the number of structures needed. While the ACCC conductor would have more conducting aluminum than the ACSS and, therefore, would reduce per unit resistance, the proposed ACSS conductor has been optimized to limit blowout on the line and already provides low resistance. Id. Therefore, any further reduction in per unit resistance achieved by using ACCC conductor would not result in any appreciable increase in operating efficiency. Id. Finally, the cost of installing ACCC conductor for

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[33] Notably, even if Structure #3 remained in its proposed location in the wetland, the span between Structure #1 and Structure #3 would exceed 800 feet. Exh. RR-EFSB-3.

[34] Again, even if Structure #3 remained in its proposed location in the wetland, the span between Structure #1 and Structure #3 would exceed 800 feet. Exh. RR-EFSB-4.

the entire length of the Project would primarily be attributed to the cost of the conductor itself which, for an ACCC conductor of equivalent diameter and weight to the proposed ACSS, would result in a net Project cost increase of approximately $1.5 million, inclusive of the cost benefit of reduced structure heights along the length of the New Line Extension. Id. Notably, use of ACCC conductor for the entire length of the New Line Extension still would not allow for the elimination of Structure #2. Exhs. RR-EFSB-3; RR-EFSB-4.

8. Conclusion

Based on the above, the proposed location for Structure #2 best meets the Project need while minimizing impacts and cost. As proposed, Structure #2 is the same approximate design and height as the other New Line Extension structures and is adjacent to the corresponding structure on Line 114, which will reduce operational and maintenance complexities compared to the other options considered. It is also optimally located to maintain proper clearance from Line 114 to reduce conductor blowout.

While some of the alternative locations would result in reducing the prominence of Structure #2 in Ms. Machie's front yard viewshed, locating the structure west of Mendall Road would increase the prominence of the structure in the side yard viewshed of that abutter and potentially others who live on Mendall Road. Similarly, relocating Structure #3 to maintain span lengths for various options could impact viewshed of other abutters. Also, alternative locations will not significantly reduce or eliminate the need to remove the ornamental vegetation from Ms. Machie's property because, regardless of the location of Structure #2, the vegetation will be in the wire zone of the new conductors.

Finally, use of ACCC conductor instead of ACSS in this portion of the ROW will not eliminate the need for Structure #2 because span lengths would be greater than the maximum 800-

foot span distance using similar design parameters as the proposed ACSS conductor. Use of ACCC for the entire New Line Extension would also not be appropriate because it would still utilize similar individual structure designs and layout in the ROW, but at a substantially higher cost compared to use of ACSS.

B. Outreach with and Status of Discussions with Ms. Machie

Since the summer of 2023, the Company has worked collaboratively with Ms. Machie to address her concerns regarding Structure #2. Exhs. DPU-V-6; LM-10; LM-19; LM-20; LM-21; EV-9; Tr. 1, at 31-35. Ms. Machie and Company representatives have met in person on numerous occasions, have corresponded by email and text message, and have recently established monthly in-person meetings. Id.; Tr. 1, at 31-34.

Initial discussions focused on the feasibility of relocating Structure #2. Tr. 1, at 32. As discussed above, the Company evaluated several options for relocating the structure. Once the Company concluded that the proposed location was the best alternative, the focus of the discussions shifted to reasonable mitigation measures to limit potential impacts resulting from the Project. The following summarizes those efforts to date.

There is currently a fence installed by Ms. Machie's predecessor-in-interest within the Company's easement. The Company has determined that the fence does not need to be relocated as a result of Project construction assuming Structure #2 remains at its proposed location (or within a 30-foot radius of it); however, the Company advised Ms. Machie that a license would be required for the fence to remain within the easement. Tr. 1, at 34-35. Ms. Machie filed a license application with Eversource, which is currently under review.[35] Exh. EV-9; see also Tr. 1, at 34-35. Eversource

[35] The Company monitors land use within its ROWs to ensure that landowners are not using their land within the ROWs in a way that would impact the safety and reliability of its transmission system. Exh. DPU-G-6. If a non-permitted use/structure is found or occurring within the Company's ROW that is inconsistent with

anticipates that a draft conditional license agreement for the existing chain-link fence will be prepared in the coming weeks, which will permit the existing fence to remain in its current location at this time. Tr. 1, at 34-35.

The Company has identified incompatible vegetation within the easement that must be removed by October 31, 2025, and has agreed to provide reasonable funds (once bids are provided) for Ms. Machie's landscape contractor to relocate the incompatible vegetation outside of the easement area. Exhs. LM-5; LM-14; LM-19; EV-9; Tr. 1, at 30-31, 113-14.

The Company continues to work with Ms. Machie to create a landscape design plan and an overall mitigation agreement that will address the visual impacts resulting from the location of Structure #2 as proposed and the removal of the ornamental vegetation, and to restore privacy from Mendall Road. Tr. 1, at 113-14. This is an iterative process that will continue after the vegetation is removed, in conjunction with the Company's landscape designer and Ms. Machie, so that actual impacts can be addressed. Id. The landscape design plan will be implemented by Eversource contractors. Id.

VII. THE COMPANY MEETS THE STANDARDS FOR THE GRANT OF ZONING EXEMPTIONS PURSUANT TO G.L. c. 40A, § 3

To obtain exemptions from the Zoning Bylaw, the Company must: (1) qualify as a public service corporation; (2) demonstrate that its present or proposed use of the land or structure is reasonably necessary for the public convenience or welfare; and (3) establish that it requires exemptions from the relevant zoning enactment. As set forth below, the record demonstrates that the Company has satisfied all criteria for the grant of the requested exemptions.

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the Company's ability to operate and maintain its transmission line, then the Company will require the landowner to remove/discontinue it. Id. If such use or structure does not interfere with the Company's operation and maintenance of its transmission lines, it may continue in the Company's discretion upon acceptance of a License Application from the landowner. Exhs. LM-21; LM-21(1); DPU-G-6; DPU-G-7; EV-9.

A. Eversource Is a Public Service Corporation.

A "public service corporation" is defined in relevant part in G.L. c. 40A, § 1A, as amended by St. 2024, c. 239, § 36, as:

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

Eversource is an "electric company" as defined in G.L. c. 164, § 1, meaning, it is "a corporation organized under the laws of the commonwealth for the purpose of . . . selling, transmitting, distributing, transmitting and selling, or distributing and selling, electricity within the commonwealth." NSTAR Electric Company d/b/a Eversource Energy, EFSB 17-02/D.P.U. 17-82/17-83, at 194 (2019) ("Eversource Sudbury-Hudson"). As such, Eversource qualifies as a public service corporation for the purposes of G.L. c. 40A, § 3 and, therefore, is entitled to seek zoning exemptions pursuant to G.L. c. 40A, § 3. Id.

B. The Project Is Reasonably Necessary for the Public Convenience and Welfare.

In determining whether a present or proposed use is reasonably necessary for the public convenience or welfare, the Siting Board balances the interests of the general public against the local interest. Save the Bay, at 680; Town of Truro v. Department of Public Utilities, 365 Mass. 407 (1974); Eversource Mid Cape at 100; Eversource Oak Bluffs at 12-13; Eversource Westfield at 5; NSTAR Electric Hyannis Junction at 5-7. The Siting Board undertakes "a broad and balanced consideration of all aspects of the general public interest and welfare and not merely [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"). When reviewing a petition for a zoning exemption, the Siting Board considers the public effects of the requested exemption in the state as a whole and upon the territory served by the petitioner. Save the Bay, at 685; New York Central Railroad, at 592; Eversource Mid Cape at 100; Eversource Sudbury-Hudson at 195.

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 present or proposed use and any alternatives or alternative sites identified; (2) the need for, or public benefits of, the present or proposed use; and (3) the environmental impacts or any other impacts of the present or proposed use. Eversource Mid Cape at 100-01; Eversource Sudbury-Hudson at 195. The Department then balances the interests of the general public against local interests and determines whether the present or proposed use of the land or structures is reasonably necessary for the convenience or welfare of the public. Eversource Mid Cape at 101; Eversource Sudbury-Hudson at 195. The record in this proceeding demonstrates that the Project is reasonably necessary for the public convenience and welfare.

1. The Project Is Needed.

The Project is consistent with the EPS upgrades identified and approved by the Department in the M-F CIP Proposal proceeding. For the reasons discussed in Section V. A., the Siting Board should find under G.L. c. 164, § 72 that the Project is reasonably necessary for the public convenience or welfare to: (1) maintain a reliable electric system under applicable standards and criteria, (2) enable the Group Study DG facilities to safely interconnect and operate, (3) enable future DG applicants to interconnect, and (4) permit future load growth due to electrification.

The Department and Siting Board's well-established precedent provides that the public interest analysis required by G.L. c. 164, § 72 is analogous to the Department and Siting Board's analysis for the "reasonably necessary for the convenience or the welfare of the public" standard

under G.L. c. 40A, § 3. NSTAR Electric Company, D.P.U. 13-126/13-127, at 40-41 (2014); New England Power Company, EFSB 97-3, at 75-76 (1998). Accordingly, to the extent that the Company demonstrates that the Project satisfies the statutory requirements under G.L. c. 164, § 72, it also satisfies the public convenience and welfare standard under G.L. c. 40A, § 3.

2. The Company Evaluated Appropriate Alternatives.

As described in detail in Section V.B., the Company evaluated potential alternatives to the Project that could address the identified need for the Project. The Company considered a "no build" approach, non-wires alternatives, and transmission design and route alternatives to the Project, including both underground and overhead route alternatives. After due consideration of the alternatives, the Company concluded that the Project is the approach that best balances reliability, cost, and environmental impact.[36]

3. The Environmental Impacts of the Project Have Been Minimized.

As detailed in Section V.C., above, the Company conducted a comprehensive analysis of the environmental impacts of the Project and has appropriately minimized and mitigated those impacts while also balancing considerations of safety, design standards, cost, and reliability.

For the foregoing reasons, the Siting Board should find that the Project is reasonably necessary for the convenience and welfare of the public.

[36] The Company did not consider an alternative site for a new substation because the M-F Order approved the PS upgrades proposed in the Company's M-F CIP proposal, which included the Crystal Spring Substation Expansion. A petitioner is not required to demonstrate that a project site is the best possible alternative, nor must the Siting Board consider and reject every possible alternative site presented. Eversource Mid Cape at 100, n.82; Eversource Sudbury-Hudson at 195, n.173. Rather, the availability of alternative sites, the efforts necessary to secure them, and the relative advantages and disadvantages of those sites are matters of fact bearing solely upon the main issue of whether the preferred site is reasonably necessary for the convenience or welfare of the public. Martarano v. Department of Public Utilities, 401 Mass. 257, 265 (1987); New York Central Railroad, at 591; Eversource Mid Cape at 100, n.82; Eversource Sudbury-Hudson at 195, n.173.

C. The Project Requires Individual and Comprehensive Zoning Exemptions.

Construction and operation of certain components of the Substation Expansion may be construed to be inconsistent with certain provisions of the Zoning Bylaw, which, in that case, would require local zoning relief. The Project, however, is needed in the immediate time frame to provide reliable transmission service and to increase capacity of the electric system in the area to facilitate the interconnection of the numerous DG projects. To allow for the timely and efficient construction of the Project, Eversource is seeking both individual and comprehensive zoning exemptions from the operation of the Zoning Bylaw because of the uncertainty in obtaining local zoning relief and the potential for adverse interpretations, delay, burden, and undue expense associated with the local permitting process and potential appeals. As discussed in this section, the Company has determined that certain zoning exemptions from the Zoning Bylaw are required to construct and operate the Project. In addition, as described below, the Company has met the requirement to consult with local officials in affected municipalities.

1. Standard of Review

In determining whether an exemption from a particular provision of a zoning ordinance is "required," the Department looks to whether the exemption is necessary to allow construction or operation of the project as proposed. Eversource Oak Bluffs at 14; Eversource Westfield at 6. The petitioner must identify the individual zoning provisions applicable to its project and establish that an exemption from each of the provisions is required. Id. The Department and the Siting Board have previously stated that:

> 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 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.

Eversource Oak Bluffs at 14; Eversource Westfield at 6-7 (quoting New York Cellular Geographic Service Area, Inc., D.P.U. 94-44, at 18 (1995)). Applicants are encouraged to consult with local zoning officials prior to seeking zoning exemptions under G.L. c. 40A, § 3. Eversource Oak Bluffs at 65; Eversource Westfield at 53.

2. The Company Consulted with the Mattapoisett Building Inspector Prior to Seeking Zoning Exemptions.

Company representatives met with the Mattapoisett Building Inspector on March 18, 2024. Exhs. EV-1, at 10; DPU-Z-1; DPU-Z-1(1). At this meeting, the Company expressed its intent to seek individual and comprehensive zoning exemptions pursuant to G.L. c. 40A, § 3 rather than to seek local zoning relief. Exhs. EV-1, at 10; DPU-Z-1; DPU-Z-1(1). The Company explained the difference between the two types of zoning exemptions and the process for seeking them, including the procedural safeguards regarding notice, public comment, and participation and intervention opportunities. Exhs. EV-1, at 10; DPU-Z-1; DPU-Z-1(1). The Company summarized its zoning review, provided a table showing the Town's dimensional requirements and the existing and expanded Substation's compliance with those requirements, and a list of the sections of the Mattapoisett Zoning Bylaw with which the Substation Expansion may not comply and, therefore, zoning exemptions would be sought. Exhs. EV-1, at 10; DPU-Z-1; DPU-Z-1(1). The Building Inspector did not express any concerns or opposition to the Company's plan to seek zoning exemptions for the Substation Expansion. Exhs. EV-1, at 10; DPU-Z-2.

3. Individual Zoning Exemptions Are Needed for the Project.

According to the Zoning Map, Town of Mattapoisett, Massachusetts, dated November 1, 1967, the Substation Site, located on Company-owned property at 26R Crystal Spring Road, is in the Rural Residence 80 ("RR80") Zoning District and the Mattapoisett River Aquifer Protection

Overlay District. Exh. EV-1, at 53. Exemptions are needed for the following provisions of the Zoning Bylaw for the efficient and timely construction of the Project.

a. Extension of Preexisting Nonconforming Use

Public utility/substation use is not allowed as-of-right or by special permit in the RR80 Zoning District; however, the Substation is likely a pre-existing non-conforming use.[37] Exh. EV-1, at 53. While preexisting nonconforming uses are grandfathered, substantial extensions of nonconforming uses require a special permit from the Mattapoisett Board of Appeals per Sections 3.1.2 and 3.1.2.1 of the Zoning Bylaw. Id. Given the scope of the Substation Expansion, it is likely the Board would view it as a substantial extension of the existing Substation and a special permit would be required. Id. To grant a special permit, the Board of Appeals would need to find that the Substation Expansion is not substantially more detrimental to the neighborhood than the existing Substation. Section 3.1 does not provide any standards to guide the Board of Appeals in making this finding. Moreover, it is not clear whether the standards in Section 7.2.2 that apply to review of new special permit uses also apply to special permits to extend nonconforming uses. If they do apply, they are subjective. For example, Section 7.2.2.2 provides that special permits shall be granted only where the Board of Appeals finds that a proposed project's benefits to the Town of Mattapoisett "will outweigh any adverse effects on the Town or the vicinity in view of the particular characteristics of the site and of the proposal in relation to the site." While the Zoning Bylaw lists several factors to be considered in making this finding, there are no standards for how the Board of Appeals should weigh these factors. Exh. EV-1, at 54. The Zoning Bylaw also does

[37] The Crystal Spring Substation was constructed in 1966. Exh. EV-1, at 53. Neither the Town nor the Company has any record of the Company having obtained local zoning relief to construct the Substation. Id. Similarly, the Department has no record of having granted zoning exemptions. Id. Accordingly, the Substation was likely lawfully constructed in compliance with the use and dimensional requirements of the Zoning Bylaw in effect at the time. Id.

not define the terms "benefits" or "adverse effects," which would therefore risk that such "benefits" or "adverse effects" of the Project would not be determined on an objective basis. Id. Without clear guidance, these terms are subjective, and the outcome of the Board's review would be uncertain. Id. Moreover, the grant of a special permit is discretionary and, even if granted, a special permit would be susceptible to appeal. Id. Given the uncertainty in obtaining a special permit, and the potential for adverse interpretations, delay, burden, and undue expense associated with the local permitting process and any appeals, the Company seeks an exemption from the requirement in Section 3.1 to obtain a special permit for extension of a preexisting nonconforming use.

Alternatively, if the Board does not agree that the Substation is a preexisting nonconforming use, the Substation Expansion would be a prohibited use and a use variance would be required. Per Section 7.2.3, the Zoning Board of Appeals is authorized to grant use variances, but only where it specifically finds that owing to circumstances relating to the soil conditions, shape, or topography of such land and especially affecting such land but not affecting generally the zoning district in which it is located, a literal enforcement of the provisions of the Zoning Bylaw would involve substantial hardship, financial or otherwise, to the petitioner or appellant, and that desirable relief may be granted without substantial detriment to the public good and without nullifying or substantially derogating from the intent or purpose of the Zoning Bylaw. It is difficult, if not impossible, to demonstrate unique conditions relating to soil conditions, shape, or topography of a particular parcel of land in connection with the use. Moreover, variances are a legally disfavored form of relief and, even if granted, are susceptible to appeal.[38] Because of the

[38] The Company characterizes variances as "legally disfavored" because the SJC has ruled that that they are to be issued sparingly and only if all of the statutory prerequisites have been met. Norcross v. Board of Appeal of the Building Department of the City of Boston, 255 Mass. 177, 185 (1926) ("[i]t is only in rare instances

legal uncertainty in obtaining variances, especially use variances, and the potential for adverse interpretations, delay, burden, and undue expense associated with the permitting process and appeals therefrom, the Company seeks an exemption from the need to obtain a use variance for the Substation Expansion.

b. Substation Use in the Mattapoisett River Aquifer Protection Overlay District

The Substation Site is located in the Mattapoisett River Aquifer Protection Overlay District. Exh. EV-1, at 55. Per Sections 9.2 and 9.4 of Article 9 of the Zoning Bylaw, substation use is not allowed as-of-right or by special permit in the overlay district; thus, a use variance would be required for the Substation Expansion. Id. at 55-56. In addition, Section 9.3.16 explicitly prohibits the rendering impervious of more than 15 percent of the size, or 2,500 square feet, whichever is greater, of any lot, unless an artificial recharge system for excess runoff, which will not degrade ground water quality, is provided. Id. at 56. The Project will create approximately 4,278 square feet of impervious area due to construction of foundations and buildings. Id. As discussed above, it is difficult, if not impossible, to meet the conditions for the grant of a use variance. Therefore, to avoid the uncertainty of obtaining a variance, and because of the potential for adverse interpretations, delay, burden, and undue expense associated with the permitting process and appeals therefrom, the Company seeks an exemption from the need to obtain use variances to comply with the provisions in Article 9. Id.

and under exceptional circumstances that relaxation of the general restrictions established by the statute ought to be permitted. The power granted is only for the relief of specific instances, peculiar in their nature"). This holding has been consistently reiterated in decisions of the courts regarding the issuance of variances. Guiragossian v. Board of Appeals of Watertown, 21 Mass. App. Ct. 111 (1985).

c. Structure Height

The Company would require variances from the maximum height requirement for four shielding masts and two line-terminal bridges required for the Substation Expansion. These structures are proposed to be approximately 65 feet high, which exceeds the maximum height of 35 feet per Section 6.3.3 of the Zoning Bylaw. Exh. EV-1, at 56. As discussed above, it is difficult, if not impossible, to meet the conditions for the grant of a variance. Therefore, to avoid the uncertainty of obtaining the height variances, and because of the potential for adverse interpretations, delay, burden, and undue expense associated with the permitting process and potential appeals, the Company seeks an exemption from the maximum height requirement in Section 6.3.3 of the Zoning Bylaw. Id.

d. Site Plan Approval

Section 3.9 of the Zoning Bylaw provides the thresholds and requirements for projects that require site plan approval. The Substation Expansion triggers one such requirement - all new or modified nonresidential development that increases gross floor area more than 1,000 square feet requires site plan review by the Mattapoisett Planning Board. Exh. EV-1, at 56-57. The standard for approval of a site plan requires the Planning Board to make subjective determinations about whether a proposed project has: (1) minimized the volume of cut and fill, the number of trees removed, the length of removed stone walls, the area of wetland vegetation displaced, the extent of stormwater flow increase from the site, soil erosion, and the threat of air or water pollution; (2) maximized pedestrian and vehicular safety and convenience within the site and egressing from it; (3) minimized obstruction of scenic views; and (4) minimized visual impacts. Exh. EV-1, at 57. Notwithstanding these conditions, the Company must have the discretion to design the Project and site layout in a manner that is consistent with established utility standards to ensure its reliable

operation and notably, such technical engineering and electrical issues are typically beyond the general scope of site plan review. Id. Moreover, site plan approval could result in burdensome or restrictive conditions being placed on the Substation Expansion. Id. Accordingly, the Company is seeking an exemption from the requirement in Section 3.9 of the Zoning Bylaw to obtain site plan approval for the Substation Expansion.

e. Sign Usage

To ensure compliance with Section 3.5 of the Zoning Bylaw, which regulates signage, the Company would need to obtain variances. Exh. EV-1, at 57-58. Specifically, Section 3.5 of the Zoning Bylaw regulates signs in residential districts, and the types of signs the Company will post in connection with the Project are not explicitly listed as allowed under the Zoning Bylaw. Id. at 57. The Company plans to post the following signs as part of the Project: (1) at the access road gate, a 14-inch-by-10-inch station identification sign and a 14-inch-by-10-inch warning/no trespassing sign; (2) on the Substation fence, at various intervals, 14-inch-by-10-inch danger signs, 14-inch-by-10-inch hard hat area signs, and 7-inch-by-10-inch warning/no trespassing signs. Id. As discussed above, it is difficult, if not impossible, to meet the conditions for the grant of a variance. Therefore, to avoid the uncertainty of obtaining the variances for the placement of the necessary signs, and because of the potential for adverse interpretations, delay, burden, and undue expense associated with the permitting process and potential appeals, the Company seeks an exemption from any signage restrictions applicable to the Project under Section 3.5 of the Zoning Bylaw.

f. Parking Zoning Exemption Required: Section 3.3 of the Zoning Bylaw

The Zoning Bylaw provides certain parking requirements for allowed uses. Zoning Bylaw § 3.3. There are no parking requirements provided for substations because substation use is not

explicitly allowed in any zoning district in Mattapoisett. The Substation is an unmanned facility and will continue to be unmanned after construction of the Project. Exh. EV-1, at 58. Although there will be no designated parking spaces provided on the Substation Site, Company vehicles will be on site sporadically, mostly for inspection and maintenance activities, and there will be ample room for parking. Id. While no explicit parking requirements are provided in the Zoning Bylaw for prohibited uses, Mattapoisett could impose parking requirements for the Substation Expansion via site plan review or otherwise. Id. To ensure that the Project complies with the Zoning Bylaw, without the need to seek a variance from any such parking requirements, the Company seeks an exemption from any parking requirements imposed on the Project. Id. As discussed above, it is difficult, if not impossible, to meet the conditions for the grant of a variance. An exemption from Section 3.3 of the Zoning Bylaw would avoid the uncertainty of obtaining the variance from any parking requirements that may be imposed, as well as the potential for adverse interpretations, delay, burden and undue expense associated with the permitting process and appeals therefrom. Id.

Summarized below are the exemptions the Company seeks to construct, operate and maintain the Project in Mattapoisett within the four-year construction window:

Bylaw Provision	**Local Zoning Relief**	**Description of Zoning Relief Required**
Section 3.1 Preexisting Nonconforming Use	Special Permit	A Special Permit is required in connection with the extension of a preexisting nonconforming use and the Zoning Board of Appeal's finding that the Substation Expansion would not be more detrimental to the neighborhood than the existing Substation. Special permits are discretionary and can be conditioned and appealed.
Section 5.7	Use Variance	Section 5.7 does not list public utility or substation use as allowed as-of-right or by special permit. A

Bylaw Provision	Local Zoning Relief	Description of Zoning Relief Required
Use in RR80 Zoning District		use variance would be needed for the Substation Expansion if it is not considered a preexisting nonconforming use. Variance criteria are difficult if not impossible to meet, especially for use. Variances are a legally disfavored form of relief and, even if granted, are susceptible to appeal.
Article 9 Uses in Mattapoisett River Aquifer Protection Overlay District	Use Variance	The Substation Site is in the Mattapoisett River Aquifer Protection Overlay District where public utility/substation uses are not allowed. In addition, the creation of more than 2,500 square feet of impervious area is prohibited and the Project will create approximately 4,278 square feet of impervious area due to Substation foundations and buildings. Variance criteria are difficult if not impossible to meet, especially for use. Variances are a legally disfavored form of relief and, even if granted, are susceptible to appeal.
Section 6.3.3 Structure height	Variances	Six structures proposed at 65 feet in height exceed the maximum structure height of 35 feet. Variance criteria are difficult if not impossible to meet, especially for use. Variances are a legally disfavored form of relief and, even if granted, are susceptible to appeal.
Section 3.9 Site Plan Review	Site Plan Approval	The Substation Expansion will result in an increase in gross floor area of more than 1,000 square feet, triggering site plan review by the Mattapoisett Planning Board. The standards are subjective, and the Company must be free to design the substation in accordance with established utility standards to ensure the reliable construction and operation of the substation.
Section 3.5 Signs	Variances	The Zoning Bylaw provides sign regulations only for uses that are permitted. Because substation use is prohibited, it is unclear what sign restrictions apply to the Project. The proposed signs are identification, danger and warning signs that must be placed at the Substation. Variance criteria are difficult if not impossible to meet, especially for

Bylaw Provision	Local Zoning Relief	Description of Zoning Relief Required
		use. Variances are a legally disfavored form of relief and, even if granted, are susceptible to appeal.
Section 3.3 Parking	Variance	Section 3.3 provides off-street parking requirements for allowed uses. As the proposed use is preexisting nonconforming, or prohibited, it is unclear what parking standards would be applied to the Project. The Substation will be unmanned after the expansion project and there is ample space on the Site for parking Company vehicles. Variance criteria are difficult to meet, and variances are a legally disfavored form of relief and if granted are susceptible to appeal.

4. Comprehensive Zoning Exemptions Are Needed for the Project.

The grant of a comprehensive zoning exemption is based on the specifics of each case. Eversource Oak Bluffs at 67; NSTAR Electric Company d/b/a Eversource Energy and New England Power Company d/b/a National Grid, EFSB 15-04/D.P.U. 15-140/15-141, at 150 (2018) ("Eversource/NEP Woburn-Wakefield"); NSTAR Electric Hyannis Junction at 34. The Siting Board will consider a request for comprehensive zoning relief when issuance of a comprehensive exemption is imminently needed to avoid substantial public harm. Eversource Oak Bluffs at 67; Eversource/NEP Woburn-Wakefield at 150; NSTAR Electric Hyannis Junction at 35.

In addition, the Department and the Siting Board have considered other factors in determining whether to grant a comprehensive exemption, including, but not limited to, whether: (1) the project is needed for reliability purposes; (2) the project is time sensitive; (3) there are multiple municipalities involved that could have conflicting zoning provisions that might hinder the uniform development of a large project spanning these communities; (4) the project proponent

has actively engaged the communities and responsible officials to discuss the applicability of local zoning provisions and address local concerns; and (5) the communities affected by the project do not oppose the issuance of a comprehensive zoning exemption. Eversource Oak Bluffs at 69; Eversource/NEP Woburn-Wakefield at 150.

Comprehensive zoning exemptions are necessary even where individual zoning exemptions are granted. This is because an individual zoning exemption relates to specific provisions in the Zoning Bylaw currently in effect that have the potential to conflict or be inconsistent with, prevent, delay or obstruct the construction or operation of the Project. Exh. EV-1, at 61. On the other hand, a comprehensive zoning exemption goes beyond the provisions in the current Zoning Bylaw to exempt the Project from any future zoning enactment that comes into effect that has the potential to jeopardize the Project (in the same manner described above for individual zoning exemptions).[39] Id. In this manner, the two types of zoning exemptions work in tandem to ensure that the Project would be constructed as approved by the Siting Board without undue delay. Id. at 61-62.

As described in this brief, the Project satisfies the standards for granting a comprehensive zoning exemption. First, as described in more detail in Section V.A., the Project is needed to: (1) maintain a reliable electric system; (2) enable the Group Study DG facilities to safely interconnect and operate; (3) allow future DG applicants to interconnect; and (4) accommodate future load growth due to electrification. The Project is imminently needed to comply with D.P.U.

[39] A comprehensive zoning exemption is also necessary regarding provisions currently in effect because zoning bylaws and ordinances are rarely written with unique energy infrastructure facilities in mind. The lack of clearly defined and specific regulation of electric infrastructure in the Zoning Bylaw, and the vague and subjective terms and provisions of the Zoning Bylaw result in an imprecise, at best, application of the zoning provisions to the Project. The Company interprets the provisions of zoning ordinances and bylaws conservatively, in the hope that it is requesting individual zoning exemptions for all of the provisions that could conceivably be said to apply to a project. The grant of a comprehensive exemption removes any reasonable doubt as to the ability of the Project to move forward without violating any current terms of the Zoning Bylaw.

20-75-B and D.P.U. 22-47, which established a four-year construction window for the Project that began in January 2023 and concludes in January 2027. See also Exh. DPU-N-4. The Company was required to demonstrate in its CIP proposal that the components of the construction timeline within the Company's control could be completed within this four-year period. The Company has made all commercially reasonable efforts to avoid undue delay in designing the Project and preparing and filing its Petition, all of which have occurred within 16 months of the start of the construction window. Finally, the Company maintains active and productive relationships with municipal officials in Mattapoisett, who, to date, have not expressed any objection to the Company's pursuit of zoning exemptions relating to the Project. Exh. EV-1, at 10-11. A comprehensive zoning exemption from the operation of the Zoning Bylaw would ensure the timely construction of the Project, which will directly benefit customers and DG developers for whom these facilities are being constructed.

5. Conclusion on Zoning Exemptions

For the foregoing reasons, the Company requests that, pursuant to G.L. c. 40A, § 3, the Siting Board determine that construction of the proposed modifications to the Crystal Spring Substation is reasonably necessary for the convenience and welfare of the public, and that the substation site in Mattapoisett, the uses to be made of it, and the structures to be built and maintained thereon by Eversource shall be individually and comprehensively exempted from the operation of the Zoning Bylaw, to the extent applicable.

VIII. CONCLUSION

For the foregoing reasons, Eversource respectfully requests that the Department grant the requested individual and comprehensive exemptions from the operation of the *Zoning By-Laws of*

the Town of Mattapoisett pursuant to G.L. c. 40A, § 3 and approve the construction of proposed transmission lines pursuant to G.L. c. 164, § 72.

Respectfully submitted,

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