

**COMMONWEALTH OF MASSACHUSETTS
ENERGY FACILITIES SITING BOARD**

Petition of NSTAR Electric Company)
d/b/a Eversource Energy for Zoning Exemptions)
from the Operation of the Zoning Bylaws of the) EFSB 25-02
Towns of Plymouth and Wareham Pursuant to)
G.L. c. 40A, § 3)

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

Submitted by:

Catherine J. Keuthen, Esq.
Cheryl A. Blaine, Esq.
Keegan Werlin LLP
One Cranberry Hill, Suite 304
Lexington, MA 02421
(617) 951-1400

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TABLE OF CONTENTS

- I. INTRODUCTION..... 1**
- II. PROCEDURAL HISTORY 3**
 - A. Public Notice Requirements 3
 - B. Site Visit and Public Comment Hearing..... 4
 - C. Intervention and Participation..... 4
 - D. Evidentiary Hearing and Evidentiary Record 4
- III. PROJECT SUMMARY..... 4**
 - A. West Pond Substation Expansion in Plymouth..... 5
 - B. Tremont Substation Expansion in Wareham 6
 - C. The Company’s Robust Agency and Community Outreach Fosters Public Input . 7
 - D. Project Construction Schedule and Costs 10
- IV. STANDARD OF REVIEW FOR THE GRANT OF ZONING EXEMPTIONS 11**
 - A. Eversource Is a Public Service Corporation. 12
 - B. The Company Has Established that the Substation Expansions Are Needed for Public Convenience and Welfare..... 13
 - C. The Project Best Meets the Identified Need Compared to a Range of Possible Alternatives. 29
 - D. The Company Has Appropriately Avoided or Minimized Environmental Impacts and Proposed Appropriate Measures to Mitigate Unavoidable Environmental Impacts..... 32
 - E. The Substation Expansions Require Individual and Comprehensive Zoning Exemptions. 51
- VI. THE PROJECT MEETS ALL STANDARDS IN G.L. c. 164, § 69H..... 69**
 - A. The Project Provides a Reliable, Resilient and Clean Supply of Energy Consistent with The Commonwealth's Climate Change and Greenhouse Gas Reduction Policies and Requirements..... 69
 - B. The Project Has Been Designed To Avoid, Minimize Or Mitigate Environmental Impacts And Negative Health Impacts To The Extent Practicable. 71
 - C. The Project Complies with Energy, Environmental, Land Use, Labor, Economic Justice, Environmental Justice and Equity and Public Health and Safety Policies of The Commonwealth, Its Subdivisions and Its Municipalities..... 72

D.	The Project Will Be Constructed In A Manner That Avoids Or Minimizes Costs. 75	
E.	Due Consideration Has Been Given To The Findings And Recommendations Of Local Governments.	75
F.	The Company has given due consideration to advanced conductors, advanced transmission technologies, grid enhancement technologies, non-wires or non- pipeline alternatives and other alternatives to avoid or minimize expenditures. ...	76
G.	The Project Will Increase the Capacity of the System to Interconnect Large Electricity Customers, Electric Vehicle Supply Equipment, Clean Energy Generation, Clean Energy Storage or Other Clean Energy Generation Sources Or Will Facilitate the Electrification of the Building and Transportation Sectors. ...	77
H.	The Company Gave Due Consideration to Any Cumulative Burdens on Host Communities and Efforts that Must Be Taken to Avoid or Minimize or, if Impacts Cannot Be Avoided or Minimized, Effort to Mitigate Such Burdens.	77
VII.	CONCLUSION	78

I. INTRODUCTION

On February 21, 2025, NSTAR Electric Company d/b/a Eversource Energy (“Eversource” or the “Company”) filed a petition with the Energy Facilities Siting Board (the “Siting Board”) pursuant to the provisions of G.L. c. 40A, § 3 requesting that it grant individual and comprehensive zoning exemptions from the operation of the *Town of Plymouth Zoning Bylaw* (“Plymouth Zoning Bylaw”) and the *Zoning By-Law of the Town of Wareham, Massachusetts* (“Wareham Zoning Bylaw”) in connection with the expansion of two Eversource substations: (1) West Pond Substation located at 0 Federal Furnace Road in Plymouth (“West Pond Substation Expansion” and “West Pond Substation Site”); and (2) Tremont Substation located at 4 North Carver Road Extension in Wareham (“Tremont Substation Expansion” and “Tremont Substation Site”) (together, the “Substation Expansions” or the “Project”).

The Project is a component of Eversource’s Capital Investment Project (“CIP”) that was submitted to the Department of Public Utilities (“Department”) for review in accordance with the Department’s directives in its Order on Provisional System Planning Program, D.P.U. 20-75-B (2021) (“Provisional Program”). 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 also known as distributed energy resources “DER”) currently in the interconnection queue that have not been able to move forward because of the high cost of interconnection.¹ Order on Provisional System Planning Program, D.P.U. 20-75-B, at 2.

¹ DG/DER facilities are facilities that must apply under a Distribution Company’s Standards for the Interconnection of Distributed Generation Tariff, regardless of whether the interconnection facility actually generates electricity, including certain types of solar and energy storage systems. Order on Provisional System Planning Program, D.P.U. 20-75-B at 1. DER and DG are used interchangeably herein.

Pursuant to the Provisional Program, Eversource filed a petition with the Department on April 29, 2022 seeking approval of a CIP proposal for portions of the Company’s transmission system that include all or parts of the Towns of Plymouth, Carver, Wareham, Rochester, Marion, Bourne, Sandwich, Plympton, and Kingston (the “Plymouth Area”) (“Plymouth Group CIP”), which was docketed as D.P.U. 22-54. The Plymouth Group CIP identified various upgrades and additions, including the Substation Expansions, that are necessary to safely interconnect DG resources (including those currently in the interconnection queue and future DG projects) to the Company’s EPS in the Plymouth Area (“Plymouth Group Upgrades”). The Department approved the Plymouth Group CIP, subject to certain modifications, in NSTAR Electric Company d/b/a Eversource Energy, D.P.U. 22-54 (2024) (the “Plymouth Order”).

To ensure expeditious implementation of upgrades proposed and approved in CIPs, the Department imposed a four-year deadline within which transmission companies must permit, construct and bring into operation approved upgrades. Order on Provisional System Planning Program, D.P.U. 20-75-B, at 39. For the Plymouth Group Upgrades, including the Substation Expansions, that four-year deadline concludes on June 24, 2028.² The Company has used its resources efficiently and made all commercially reasonable efforts to avoid undue delays in designing the Substation Expansions and preparing and filing the Petition, all of which occurred within nine months of the start of the four-year period (“construction window”). Exh. EV-1, at 4-5. The Company estimates it will take approximately 24 months to complete construction of the

² In D.P.U. 20-75-B, 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.” Order on Provisional System Planning Program, D.P.U. 20-75-B, at 39, n.41. The Department approved the Plymouth Group CIP with the issuance of a Final Order on June 4, 2024. G.L. c. 25, § 5 provides a 20-day window to file a petition for appeal with the Department. No petitions for appeal were filed with the Department and, accordingly, the Plymouth Order became final at the conclusion of the 20-day appeal period, on June 24, 2024. Four years from that date establishes the required end date of the construction window – June 24, 2028.

Substation Expansions once construction commences, which provided, at the time of the filing, approximately 15 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 to complete the procurement process.

The Project satisfies the standards for the grant of exemptions pursuant to 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 of the Project and the grant of the requested zoning exemptions under G.L. c. 40A, § 3 to support timely completion of the Project within the four-year construction window established in D.P.U. 20-75-B. The Project also meets the standards for Siting Board approval pursuant to G.L. c. 164, § 69H.

II. PROCEDURAL HISTORY

A. Public Notice Requirements

On July 11, 2025, the Siting Board issued a Notice of Adjudication/Notice of Public Comment Hearings (the "Notice") with an accompanying letter prescribing mailing, posting and publication requirements for the Notice (the "Publication Letter"). The Notice established: (1) public comment hearing dates of August 5, 2025, in Wareham and Plymouth, and (2) a deadline of August 19, 2025, for filing petitions for leave to intervene and for limited-participant status in the adjudicatory proceeding, and written comments. The Company complied with all the publication, posting, and service requirements set forth in the Publication Letter and subsequent instructions from the Presiding Officer. Exh. EV-5.

B. Site Visit and Public Comment Hearing

The Siting Board conducted a site visit at the Tremont Substation and a public comment hearing in Wareham on August 5, 2025. The public comment hearing was held in person and virtually at 12:00 p.m. at Wareham Town Hall.

The Siting Board also conducted a site visit at the West Pond Substation and a public comment hearing in Plymouth on August 5, 2025. The public comment hearing was held in person and virtually at 7:00 p.m. at the West Elementary School in Plymouth.

C. Intervention and Participation

No petitions to intervene or to participate in the evidentiary hearing were filed and no written comments were submitted.

D. Evidentiary Hearing and Evidentiary Record

The Siting Board conducted the evidentiary hearing on January 22, 2026. The Company presented a total of eight witnesses for cross examination by Siting Board staff:

- Christopher Lombardi, Eversource Project Director
- Keith Jones, Eversource Principal Engineer, Distribution System Planning
- John Zicko, Eversource Director of Capital Projects Engineering
- Nick Forzono, Eversource Lead Engineer
- Patrick Fitzgerald, Eversource Engineering Manager with Substations Solutions
- James Clancy, Eversource Senior Environmental Specialist
- Maxwell Payeur, Eversource Supervisor of Project Engagement/Southeast Massachusetts
- Jeremy Tremper, Burns & McDonnell, Assistant Construction Manager

Approximately 105 exhibits were entered into the evidentiary record, including the Petition and its attachments, responses to information and record requests, and hearing exhibits.

III. PROJECT SUMMARY

The Project consists of the expansions of the Tremont and West Pond Substations as described below.

A. West Pond Substation Expansion in Plymouth

The West Pond Substation Site consists of two Company-owned adjacent parcels of land that together comprise approximately eight acres. Exh. EV-1, at 5. The existing West Pond Substation is located on the smaller parcel (approximately 2.4 acres) and the existing fenced station yard is approximately 0.8 acres. Id. Outside of the fenced yard, the West Pond Substation Site consists of maintained transmission corridor.

The expanded fenced yard of the West Pond Substation Expansion will be approximately 2.5 acres and will straddle both parcels. Exh EV-1, at 5. Most of the expansion will be to the north of the existing Substation yard. Id. at 6. The West Pond Substation Expansion will be conducted in phases so that the Substation will not be taken out of service during construction. Id. at 5. After the new equipment is installed, existing foundations, equipment, and enclosures that are not proposed to remain in place will be removed. Id. The area surrounding the existing Substation will be graded to support the expansion, and approximately 0.3 acres of trees will be removed as part of the site preparation and grading work. Id. The minimal tree removal will not appreciably decrease the tree buffer that exists between the Substation and adjacent properties. Id.

In designing the West Pond Substation Expansion, the Company considered the equipment that must be installed, the working space needed around each piece of equipment, and the construction sequence. Exh. EV-1, at 5-6. The size of the Substation yard is dictated by the need to accommodate the safe installation of the new transmission and distribution equipment, while allowing for future operations and maintenance to be conducted safely. Id.

Consistent with the Plymouth Order, the scope of work for the West Pond Substation Expansion includes the following:

- Replace two 50 MVA transformers with three 75 MVA transformers, each with passive secondary containment.

- Install a 115 kV six-breaker ring bus.
- Replace one open-air 23 kV bus with walk-in metal clad, double-bus, double-breaker switchgear (one existing 23 kV bus will remain and one will be replaced, Exh. EFSB-CM-1).
- Install two new capacitor banks for a total of three (one of the two existing capacitor banks will remain in place and the other existing capacitor bank will be removed).
- Install a new relay and control enclosure (approximately 58 feet long, 26 feet wide, 14 feet tall).
- Install new drainage structures, as appropriate.
- Install approximately 1,400 feet of galvanized chain link mesh fence of similar height to existing fence around the expanded substation.

Exh. EV-1, at 6. In addition to the above, the Company will relocate four existing transmission line structures from the West Pond Substation Site to the adjacent transmission right-of-way (“ROW”) to accommodate the Substation Expansion.³ Id.

B. Tremont Substation Expansion in Wareham

The Tremont Substation Site consists of two adjacent Company-owned parcels of land that together comprise approximately 2.7 acres. Exh. EV-1, at 7. The Tremont Substation is located on the larger, approximately 2.1-acre parcel numbered 4 North Carver Road Extension, and the existing fenced station yard is approximately 1.8 acres. Id.

The slightly expanded fenced yard of the Tremont Substation Expansion will be approximately 2.1 acres, with the yard extending onto the adjacent smaller parcel numbered 8 North Carver Road Extension. Exh. EV-1, at 7. This small extension of the station yard will be to the north of the existing Substation and will accommodate the addition of new equipment. Id. The Substation will not be taken out of service during the construction of the expanded station. Id. After the new equipment is installed, existing foundations, equipment, and enclosures that are not

³ The Plymouth Group Upgrades include in-kind replacement of approximately 13 transmission structures and possibly one new transmission structure on Lines 132 and 133, which connect the Brook Street Substation in Plympton with the West Pond Substation. Plymouth Order at 20. These transmission structures are on the transmission ROW not on the West Pond Substation Site and are not within the scope of work for which the Company seeks the exemptions requested herein. Zoning relief is not required for this work on the ROW.

proposed to remain in place will be removed. Id. The area surrounding the existing Substation will be graded to support the expansion. No trees will be removed as part of the Substation Expansion. Id. The expansion is required to accommodate the safe installation of the new equipment, while keeping Eversource customers reliably energized during the construction. Id.

Consistent with the Plymouth Order, the scope of work for the Tremont Substation Expansion includes the following:

- Replace one 28 MVA transformer and one 22.4 MVA transformer with three 75 MVA transformers, each with passive secondary containment.
- Replace two existing 23 kV buses with two new walk-in metal-clad switchgear enclosures (Exh. EFSB-CM-1).
- Install three new capacitor banks.
- Install approximately 150 feet of galvanized chain link mesh fence of similar height to existing fence around the expanded substation.

Exh. EV-1, at 8.

C. The Company's Robust Agency and Community Outreach Fosters Public Input

Eversource has prepared a detailed outreach plan specific to the West Pond and Tremont Substation Expansions that is designed to engage the community, foster public participation, and solicit feedback from stakeholders. Exh. EV-1, at 10; Exh. EV-1(I). The Company's comprehensive community project engagement approach is to inform abutters, municipal officials, and community organizations about anticipated Project plans and solicit feedback and input as the Project is further developed. Id. The Company is committed to working closely with municipal officials in Plymouth and Wareham and with abutters to both the West Pond and Tremont Substations to provide transparent, proactive communication during permitting, construction and operation of the substations. Exh. EV-1, at 8.

The Company's initial outreach efforts were aimed at briefing local officials on the need for the Substation Expansions, the anticipated schedule, potential impacts, and the permitting and

siting processes, including opportunities for public input (Exh. EV-1, at 8):

Plymouth: The Company met with Town of Plymouth municipal officials on November 18, 2024, to present an overview of work to be performed in Plymouth, including the West Pond Substation Expansion and the ROW structure replacements, and explicitly discussed its plan to seek individual and comprehensive exemptions pursuant to G.L. c. 40A § 3 in lieu of seeking local zoning relief. Exh. EV-1, at 9; Exh. EFSB-G-2(2). A follow up meeting with Town officials was held on January 7, 2025, to further discuss the Substation Expansion and plans. Id.

Wareham: During the fall of 2024, prior to filing the Petition, the Company reached out to municipal officials in Wareham to discuss the Company's proposed expansion of the Tremont Substation, including visiting town hall and emailing various municipal officials. Exh. EV-1, at 10; Exh. EFSB-G-2(1). The Company left information about the Tremont Substation Expansion and its purpose with administrative staff at Town Hall and included such information in the email correspondence. Id. The Company did not hear back from any municipal officials regarding this outreach. Id. On December 16, 2024, the Company sent an email to the Building Inspector specifically notifying him that the Company intended to seek zoning exemptions in lieu of seeking local zoning relief for the work proposed at Tremont Substation. Exh. EV-1, at 10. Neither the Building Inspector, nor any other municipal official, has expressed concerns with the Company's plans to seek zoning exemptions for the Tremont Substation Expansion. Id.

More recently, the Company initiated communications with the Towns regarding construction work hours, and the Company will work with Town officials to establish mutually agreeable times prior to the start of construction. Exh. RR-EFSB-2.

As it does with all its projects, the Company took a community-based approach to its outreach efforts in Wareham and Plymouth by evaluating how the potential benefits and impacts of the work to be done would affect those communities and using information from publicly available data resources and conversations with community members, community-based organizations, and other stakeholders to inform outreach efforts on the two Substation Expansion projects. Exh. EFSB-G-3. For both the West Pond Substation and Tremont Substation scopes, the

Company performed initial door-to-door field outreach in January and February 2025, respectively. Id.; Exh. EFSB-G-2(3).

The Company held open houses in Wareham on May 21, 2025, and in Plymouth on May 13, 2025. Exh. EFSB-G-3. The Company tailored the open houses based on feedback from these communities during its initial outreach efforts:

Wareham: Wareham residents shared concerns about billing and affordability. Exh. EFSB-G-3. With this feedback and the fact that Tremont Substation is located in an Environmental Justice community based on income, the Company brought resources from its Environmental Justice, Billing Assistance, and Energy Efficiency teams to support the open house. Id. At the open house, the Company shared information about and responded to questions related to Tremont Substation Expansion. Id. In addition, the Environmental Justice team provided a presentation and answered questions about how the electric grid and billing works. Id. The Company's Billing Assistance and Energy Efficiency team met with community members who were in attendance and had expressed an interest in getting billing support or exploring energy efficiency options. Id. The Company addressed concerns of several community members who had attended the open house by providing them with information about billing and payment plans. Id.

Plymouth: The feedback received from Plymouth residents for West Pond Substation was limited, with one question about visual screening from a neighbor. Exh. EFSB-G-3. Because the initial outreach for West Pond Substation did not reveal any concerns about billing and energy affordability, and because the West Pond project is not in an EJ community, no representatives from the Billing Assistance, Energy Efficiency, or Environmental Justice teams attended the Plymouth open house. Id. Questions and comments were limited to the West Pond Substation Expansion (i.e., no one asked questions about billing support). Id.

The Company communicated with community-based organizations in Plymouth and Wareham to provide information about the proposed Substation Expansions. Exh. EFSB-G-2(3).

The Company will continue its outreach in both Plymouth and Wareham during the permitting and siting process and will maintain a focused communication program throughout construction, including outreach to municipal officials and abutters regarding construction staging, laydown and traffic management plans, as such details become available. Exh. EV-1, at 10-11. To facilitate communication, in all its outreach materials, including mailings, the website, and at all

community events for the Project, Eversource included its toll-free number for Massachusetts Projects and an email address for Massachusetts projects. Id.

D. Project Construction Schedule and Costs

The Company estimates that once permitting is completed and construction commences, it will take approximately 24 months to complete construction of the Tremont and West Pond Substation Expansions. Exh. EV-1, at 6, 8; Exh. EFSB-G-5. The Company's objective is to complete the Project no later than June 2028 to meet the four-year construction window established in D.P.U. 20-75-B and the Plymouth Order. Id.

The West Pond Substation Expansion is estimated to cost approximately \$61.4 million, and the Tremont Substation Expansion is estimated to cost approximately \$37.5 million, both of which are planning grade estimates with an anticipated level of accuracy of +25/-25 percent.⁴ Exh.

⁴ The transmission costs of the Project will be recovered via Local Service charges under Schedule 21-ES (Part B) to the ISO New England Open Access Transmission Tariff. Exh. EFSB-C-3; Exh. RR-EFSB-4. The wholesale customer that is responsible for paying for most of these costs is the Company's electric distribution company (NSTAR Electric). Id. Other NSTAR Electric wholesale customers who take local service, including, but not limited to, Massport (0.88 %), Nantucket Electric Company (0.50%), the Massachusetts Bay Transportation Authority (0.55%), and Concord Municipal Light Plant (0.13%), will also be responsible for paying for a portion of these costs. Id. Utilizing the load percentages above to allocate the Project cost results in approximately \$50.4 million of the Project costs being allocated to NSTAR Electric and \$1.05 million to all other wholesale customers. Exh. RR-EFSB-4. The wholesale transmission costs allocated to NSTAR Electric will be passed on to its distribution customers in Plymouth and Wareham through the retail transmission charge that is calculated in accordance with the Company's Transmission Cost Adjustment tariff, M.D.P.U. No. 48 and billed to retail customers monthly based on their respective monthly kWh usage. This is the same way that NSTAR Electric passes on wholesale transmission costs to distribution customers in other towns as well. Exh. RR-EFSB-4.

The distribution cost associated with the Plymouth Group Upgrades is included within the total estimated cost for the Project. Exh. EFSB-C-2. In accordance with the Plymouth Order, approximately 56% of distribution upgrades costs for the Plymouth CIP will be covered by interconnecting DG applicants, and 44% of the distribution upgrade costs will be covered from ratepayers. Exh. EFSB-C-1. The distribution line work necessary to connect the Plymouth Group DER will result in an additional cost of approximately \$70.5 million. Exh. EFSB-C-2.

⁵EFSB-C-7. These estimates include costs for engineering, project management, siting, permitting, materials, construction, and testing.⁶ Id.; Exh. EFSB-C-7.

IV. STANDARD OF REVIEW FOR THE GRANT OF 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, EFSB 19-06/D.P.U. 19-142/19-143, at 98 (2022) (“Eversource Mid Cape”); 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”).

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 Mid Cape at 98; Eversource Oak Bluffs at 11; Eversource Westfield at 3.

⁵ The Petition incorrectly stated that the Tremont Substation Expansion is estimated to cost approximately \$37.5 million. Exh. EV-1. At 7. The \$37.5 million estimate is the estimated cost of only the distribution work at Tremont Substation and does not include the \$3.5 million estimated cost of the transmission work at Tremont Substation. Accordingly, the total estimated cost of the Tremont Substation Upgrades is \$41.1 million. Exh. EFSB-C-7.

⁶ The Project cost does not include the 115 kV Line 132 upgrades. Exh. EFSB-C-2. The original estimated cost of the Line 132 reconductoring and structure replacements was approximately \$22.73 million but further development in the transmission line design has resulted in a reduction in the Line 132 scope and this work was recently re-estimated at a cost of approximately \$14.61 million. Id.; Exh. EFSB-C-5.

Third, the petitioner must establish that it requires the requested zoning exemption from the zoning ordinance or bylaw. Eversource Mid Cape at 98; Eversource Oak Bluffs at 11; Eversource Westfield at 3-4.

V. EVERSOURCE SATISFIES THE CRITERIA FOR THE GRANT OF ZONING EXEMPTIONS

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.” As such, because Eversource is an electric company that owns and operates facilities to provide electric service, 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. See Eversource Mid Cape at 100; see also NSTAR Electric Company d/b/a Eversource Energy, EFSB 17-02/D.P.U. 17-82/17-83, at 194 (2019) (“Eversource Sudbury-Hudson”).

B. The Company Has Established that the Substation Expansions Are Reasonably Necessary for the Public Convenience and Welfare.

1. Standard of Review

In determining whether the present or proposed use is reasonably necessary for the public convenience or welfare, the Department must balance the interests of the general public against the local interest. Save the Bay, 366 Mass. at 680; Town of Truro, 365 Mass. at 407. Specifically, the Department is empowered and required to undertake “a broad and balanced consideration of all aspects of the general public interest and welfare and not merely [make an] examination of the local and individual interests which might be affected.” New York Central Railroad v. Department of Public Utilities, 347 Mass. 586, 592 (1964) (“NY Central Railroad”). When reviewing a petition for a zoning exemption under G.L. c. 40A, § 3, the Department is empowered and required to consider the public effects of the requested exemption in the State as a whole and upon the territory served by the applicant. Save the Bay, 366 Mass. at 685; NY Central Railroad, 347 Mass. at 592.

Therefore, when making a determination as to whether a petitioner’s present or proposed use is reasonably necessary for the public convenience or welfare, the Department examines: (1) the need for, or public benefits of, the present or proposed use; (2) the present or proposed use and any alternatives or alternative sites identified; and (3) the environmental impacts or any other impacts of the present or proposed use. The Department then balances the interests of the general public against the local interest and 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 100-01; Eversource Oak Bluffs at 13; Eversource Westfield at 6.

When demonstrating the need for a proposed transmission facility based on reliability considerations, a petitioner applies its established planning criteria for construction, operation, and maintenance of its transmission and distribution system. NSTAR Electric Company d/b/a

Eversource Energy, EFSB 22-03/ D.P.U. 22-21, at 15 (2024) (“Eversource Cambridge”); Eversource Mid Cape at 10; Eversource Sudbury Hudson at 15. Compliance with the applicable planning criteria can demonstrate a “reliable” system. Eversource Cambridge at 15; Eversource Mid Cape at 10; New England Power Company d/b/a National Grid, EFSB 19-04/D.P.U. 19-77/19-78, at 10 (2021) (“NEP Beverly Salem”).

To determine whether new electric infrastructure is needed, the Siting Board: (1) examines the reasonableness of the Company’s system reliability planning criteria; (2) evaluates whether the Company uses reviewable and appropriate methods for assessing system reliability over time based on system modeling analyses or other valid reliability indicators; and (3) determines whether the relevant transmission and distribution system meets these reliability criteria over time under normal conditions and under certain contingencies, given existing and projected loads. Eversource Cambridge at 16; Eversource Mid Cape at 10; NEP Beverly Salem at 10; see also Town of Sudbury v. Energy Facilities Siting Board, 487 Mass. 737, 748-749 (2021) (“Town of Sudbury”).

When a petitioner’s analysis of system reliability and facility requirements is driven, at least in part, by load projections, the Siting Board reviews the underlying load forecast. Eversource Cambridge at 16; Eversource Mid Cape at 10; Eversource Sudbury Hudson at 15. The Siting Board requires that forecasts be based on substantially accurate historical information and reasonable statistical projection methods that include an adequate consideration of conservation and load management. Eversource Cambridge at 16; Eversource Mid Cape at 10; Eversource Sudbury Hudson at 15. To ensure that this standard has been met, the Siting Board requires that forecasts be reviewable, appropriate, and reliable. Eversource Cambridge at 16; Eversource Mid Cape at 10; Eversource Sudbury Hudson at 15. A forecast is reviewable if it contains enough information to allow a full understanding of the forecast method; a forecast is appropriate if the method used to

produce the forecast is technically suitable to the size and nature of the company to which it applies; and a forecast is considered reliable if its data, assumptions and judgments provide a measure of confidence in what is most likely to occur. Eversource Cambridge at 16; Eversource Mid Cape at 10-11; Eversource Sudbury Hudson at 15.

In making its need determination, the Siting Board is also guided by recent precedent from SJC, which underscores the importance of the Siting Board’s statutory mandate to ensure a reliable supply of electricity:

State law makes it clear that the residents of the Commonwealth simply cannot be exposed to foreseeable and avoidable power outages. See St. 1997, c. 164, § 1 (h) (Electric Utility Restructuring Act) (“reliable electric service is of utmost importance to the safety, health, and welfare of the commonwealth’s citizens and economy”). See also St.1997, c. 164, § 1 (a) (“electricity service is essential to the health and well-being of all residents of the commonwealth, to public safety, and to orderly and sustainable economic development”). If government and industry fail to properly plan and act to timely address our energy needs, enormous suffering can result.

Town of Sudbury, 487 Mass. at 749.

As described in the following sections, the Company amply demonstrates a clear and compelling need for the Substation Expansions to address system reliability, including for the interconnection of DG, in accordance with well-established standards and precedent. Because the record shows that need for the Project on balance outweighs identifiable adverse local impacts associated with its construction and operation, the Project is reasonably necessary for the convenience or welfare of the public.

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

The Company must operate its transmission and distribution systems in compliance with

the following planning and engineering standards.

Reliability standards and criteria developed by the North American Electric Reliability Corporation (“NERC”), the Northeast Power Coordinating Council (“NPCC”) and the Independent System Operator-New England (“ISO-NE”) require that transmission operators design, test and operate their systems to withstand representative contingencies and plan and implement system additions and upgrades to address the identified inadequacies. Exh. EV-1, at 19-20. These standards provide limits for voltages and loading and 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.

Eversource’s Transmission System Design and Analysis Guideline (“TSDAG”) describes the current standards, criteria, and assumptions used for planning the Eversource transmission system in New England, which are consistent with the criteria established for the interconnected bulk power system by the Federal Energy Regulation Commission, NERC, NPCC, and ISO-NE, all requiring 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).⁷ Exh. EV-1, at 20.

Eversource’s Bulk Distribution Substation Assessment Procedure, known as SYS-PLAN 010, 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

⁷ “N-1” refers to loss of a single transmission element and is a contingency planning standard that requires, for situations in which Company EPS equipment is out of service, that customers do not lose electric service. N-1-1 refers to a second contingency following an initial contingency.

performance of the Company's supply systems is gauged, and how these assessments are conducted. Exh. EV-1, at 20; Exh. EV-1(J).

Eversource's 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 and 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 DER, system modeling criteria, load forecasting, system study methodologies, and modeling assumptions. Exh. EV-1, at 20-21; Exh. EV-1(K). The DSPG includes procedures for evaluating N-1 contingencies applied to bulk substation equipment and substation distribution tie-lines to assure that in the event of the loss of any one of the applicable EPS equipment components, customers would not lose electric service. Id. at 21.

The Eversource tariff, "Standards for Interconnection of Distributed Generation" M.D.P.U. No. 55A ("DG Interconnection Tariff"), sets forth the process and requirements for the interconnection of DER into Eversource's electric power grid. 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. Exh. EV-1, at 21.

The Eversource Distributed Energy Resources Planning Guide ("DERPG") describes the planning criteria and analyses used to study the impacts of DG seeking to interconnect to the Company's EPS and that ensure that DG does not degrade the safety, performance or reliability of the EPS. Exh. EV-1, at 21.

3. The Project is Needed to Maintain a Reliable Energy Supply in the Plymouth Area.

a. The Existing Transmission and Distribution System

Seven substations supply approximately 67,400 customers in the Plymouth Area, which includes all or parts of the Towns of Plymouth, Carver, Wareham, Rochester, Marion, Bourne, Sandwich, Plympton, and Kingston: (1) West Pond Substation #737 in Plymouth, (2) Tremont Substation #713 in Wareham, (3) Wareham Substation #714 in Wareham, (4) Valley Substation #715 in Plymouth, (5) Manomet Substation #721 in Plymouth, (6) Kingston Substation #735 in Kingston, and (7) Brook Street Substation #727 in Plympton (the “Plymouth Group Substations”). Exh. EV-1, at 16. The Plymouth Group Substations all tie into each other at the 23 kV distribution level and provide distribution backup in the event of contingencies. *Id.* They all have heavy penetrations of existing online DG and large queues of DG applicants. Exh. EV-1, at 16-17 and Table 1. The Plymouth Group Substations collectively serve 229 MW of native customer peak load.⁸ Plymouth Order at 19. Currently, there is a total of 202 MW of installed ground-mounted large DG (*i.e.*, facilities larger than 15 kW) and 35 MW of rooftop (small) DG connected to these substations. *Id.* at 17.

West Pond Substation serves approximately 18,200 customers in parts of the Towns of Plymouth, Carver, Plympton, and Kingston. Currently, West Pond Substation consists of two 115/23 kV, 30/40/50 [56] megavolt ampere (“MVA”) transformers. Exh. EV-1, at 17. West Pond Substation has a total capacity of 112 MVA, firm capability of 66 MVA (N-1 scenario for loss of one transformer), and load carrying capacity (“LCC”) of 87 MVA (which is the station’s firm capability of 66 MVA plus 21 MVA transfer capability). Exh. EV-1 at 17. Actual peak load at

⁸ Native customer load is used herein to identify wholesale and retail power customers as distinguished from interconnecting distributed generation facilities.

West Pond Substation in 2024 was 63 MVA, which is 95% of the station's total firm capability. Exh. EV-1, at 17, Table 2. The ten-year load forecast (2024-2033) for West Pond Substation (Summer, 90/10 extreme weather) projects increases in load from 67.5 MVA in 2025 to 72.2 MVA in 2033. Id.

Tremont Substation serves approximately 7,400 customers in parts of the Towns of Wareham, Carver, and Marion. Currently, Tremont Substation consists of one 115/23 kV, 12/16/20 [22.4]⁹ transformer (Transformer #1) and one 15/20/25 [28] MVA transformer (Transformer #2), which are approximately 55 years old. Exh. EV-1, at 18. Tremont Substation has a total capacity of 50 MVA, firm capability of 23.0 MVA (N-1 for loss of one bank), and 44.5 MVA LCC (which is the station's firm capability of 23 MVA plus 21.5 MVA transfer capability). Id. Actual peak load at Tremont Substation in 2024 was 21.6 MVA, which is 94% of the station's total firm capability. Id. and Table 3. The ten-year load forecast (2024-2033) for Tremont Substation (Summer, 90/10 extreme weather) projects increases in load from 28.8 MVA in 2025 to 30.0 MVA in 2033. Id.

b. The Plymouth Group Study Demonstrated that Upgrades Are Needed to Safely and Reliably Interconnect DG to the Company's Transmission System in the Plymouth Area.

The Company analyzed system constraints and upgrades in the Plymouth Area ("Plymouth Group Study") because the addition of DG to or between any of the seven substations in the Plymouth Group could have impacts on other parts of the EPS in the Plymouth Area. Exh. EV-1, at 22; Exh. EFSB-PA-1. The Plymouth Group Study evaluated the existing system to determine how the interconnection of the DG projects that have applied to interconnect to the Company's system in the Plymouth Area ("Group Study DG") would affect the Company's transmission and

⁹ The number in brackets represents the top nameplate rating of the transformer in MVA.

distribution system in that area and what upgrades would be necessary to enable the interconnected DG facilities to remain online under N-1 distribution and transmission contingencies.¹⁰ Id. at 23. The primary focus was to evaluate the expected impacts of Group Study DG on the system's steady state voltage and loading, voltage flicker, fault current contribution, and interaction with voltage control equipment, and to assess the risk of potential problems for loss of mains detection in the event of islanding conditions. Id.

The Plymouth Group Substations are highly saturated with DG (a total of 237 MW is currently connected) and Tremont, West Pond, and Wareham Substations all have zero MW of available bulk substation hosting capacity.¹¹ Exh. EV-1, at 23. In addition, 229 MW of summer peak native customer load is connected to the Plymouth Group Substations. Of this total, West Pond Substation summer peak native load is approximately 63 MW and Tremont Substation summer peak native load is 21.6 MW. Id. Group Study DG applicants propose to connect to each of the Plymouth Group Substations and to 23 kV circuits that directly back up the West Pond and Tremont Substations. Id.

Approximately 34 MW of ground-mounted DG is currently connected to West Pond Substation while, at the time of the Group Study, 33 MW of Group Study DG projects had applied to be connected to West Pond Substation. Exh. EV-1, at 24. The Plymouth Group Study determined that Group Study DG could not be connected to West Pond Substation because, when

¹⁰ The Plymouth Group Study DG initially consisted of an additional 123 MW from 39 DG projects, but two projects, totaling five MW, withdrew prior to the issuance of the Plymouth Order. The remaining approximately 117 MW of DG in the Group Study consisted of 37 different facilities from 16 applicants. Plymouth Order at 13.

¹¹ Bulk station hosting capacity is the amount of distributed generation 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.

combined with the approximately 63 MW of native load and the existing connected DG, the total of 67 MW would far exceed the capacity of the station (66 MVA). Id.

Approximately 39 MW of ground-mounted DG is currently connected to Tremont Substation while, at the time of the Group Study, 31 MW of Group Study DG projects had applied to be connected to Tremont Substation. Exh. EV-1, at 24. The Plymouth Group Study determined that Group Study DG could not be connected to Tremont Substation because the existing connected DG already exceeded the capacity of the station (21 MVA). Id.

c. Plymouth Group Study Results Demonstrate that the Existing Transmission and Distribution Systems Are Not Sufficient to Interconnect DG Resources.

The Plymouth Group Study identified multiple 23 kV distribution capacity and voltage issues, which demonstrate that under specific N-1 contingencies, the Company cannot connect the in-queue Group Study DG without residual load loss in the Plymouth area.^{12,13} Exh. EV-1, at 25. This would violate SYS-PLAN 010 criteria, which require that: (1) the transmission system supplying distribution bulk substations be designed such that that no single transmission contingency event results in loss of customer load; and (2) 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. Id. In addition, the loss of both existing and anticipated DG during specific single contingencies also would violate Section 3.5 of the TSDAG,

¹² The results of the Plymouth Group Study are summarized in the Plymouth Interconnection Impact Study, dated May 4, 2022.

¹³ Residual load loss refers to all gross load that is no longer served after the operation of all existing automatic load restoration schemes.

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. Id.

With the interconnection of Group Study DG, both existing 50 MVA transformers at West Pond Substation would be loaded to 143% of their nameplate capacity under an N-1 contingency, which would be in violation of the DSPG. Exh. EV-1, at 26. In addition, the West Pond Substation transformers would be thermally overloaded under N-1 contingency scenarios in violation of Section 4.11.3 of SYS PLAN 010. Id.

For certain contingencies affecting West Pond Substation, the existing 63 MW summer peak and forecasted native load served out of the Substation could be transferred via 23 kV ties to Kingston Substation, Manomet Substation, Brook Street Substation, and Tremont Substation; however, all existing DG on the tied lines would be tripped offline. Exh. EV-1, at 26. Existing and proposed DG cannot be backed up by these four Substations, all of which also have substantial online and Group Study DG, because there would be a potential for mutual thermal, steady state voltage, voltage flicker, islanding, and transient overvoltage (“TOV”) constraints that could lead to unreliable or unsafe operation of the electric power system. Id.

With the interconnection of Group Study DG, the existing 28 MVA transformer at Tremont Substation would be loaded at 118% of its nameplate capacity under N-0 conditions (normal operation) and at 373% of its nameplate capacity under an N-1 contingency, which would be in violation of the DSPG. Exh. EV-1, at 26. Similarly, the existing 22.4 MVA transformer at Tremont Substation would be loaded at 121% of its nameplate capacity under normal N-0 condition and at 299% of its nameplate capacity under an N-1 contingency, which would be in violation of the DSPG. Id. In addition, with the interconnection of Group Study DG, the Tremont Substation transformers would be thermally overloaded under both N-0 conditions and N-1 contingency

scenarios in violation of Section 4.11.3 of SYS PLAN 010. Id.

For certain contingency outages affecting Tremont Substation, the existing 21.6 MW summer peak and forecasted native load served out of the Substation could be carried in-part by transferring some load via 23 kV ties to West Pond Substation and Wareham Substation; however, all existing DG on the tie lines would be tripped offline. Exh. EV-1, at 27. Existing and proposed DG could not be backed up by the Wareham and West Pond Substations, both of which also have substantial online and Group-Study DG, because there would be a potential for mutual thermal, steady state voltage, voltage flicker, islanding, and TOV constraints that could lead to unreliable or unsafe operation of the electric power system. Id.

In summary, the Plymouth Group Study identified additional system limitations caused or aggravated by Group Study DG interconnections, including:

- (1) Thermal overloads in the event of an N-1 contingency on the 115 kV system affecting West Pond Substation, which violates Section 3.5, Consequential Load Loss Guidelines;
- (2) Heavy loading issues on upgraded transformers at West Pond Substation under an N-1 contingency, which violates SYS PLAN 010, Section 4.11.3 Contingency Conditions, Loss of a Bulk Distribution Supply Transformer;
- (3) Thermal overloads on distribution feeders connected to West Pond Substation under normal conditions in violation of DSPG, Section 2.3.1, Loading Limits for Conductors used in the Distribution System;
- (4) DER facilities sending power back to substation transformers (reverse flow) where adequate ground fault overvoltage protection is not available;
- (5) Thermal capacity constraints or voltages in excess of the maximum allowable, which can cause damage to utility and/or customer equipment;
- (6) Potential risk of islanding or TOV;
- (7) Excessive fault current on the distribution system, which can cause damage to utility and/or customer equipment; and
- (8) Voltage flicker (rapid changes in system voltages which affects the quality of power for customers) violations and excessive tap operations.

Ex. EV-1, at 27.

The limitations described in (4) through (8) above constitute violations of various sections of the Eversource DERPG, including: (1) Section 6.1, steady-state thermal and voltage criteria;

(2) Section 6.3, Rapid Voltage Change and Voltage Flicker criteria; (3) Section 6.5, Transformer Power Capability; (4) Section 6.6, 3V0 Assessment (Transmission Ground Fault Protection; (5) Section 6.4, Transient Overvoltage and transient analysis; and (6) Section 6.10, Short Circuit Evaluations. Exh. EV-1, at 28.

d. Recent Developments Confirm the Need for the Project.

Following the issuance of the Plymouth Order, there have been changes in the interconnection request queues, including the total number of requests and the requested capacity, for both the Tremont and West Pond Substations. Exhs. EFSB-N-2; EFSB-N-3; EFSB-G-1. The fact that some projects that were initially part of the DG Study Group have since withdrawn from the interconnection queue does not diminish the need for the Substation Expansions.¹⁴ Exhs. EV-1, at 24-25, EFSB-N-3. To the contrary, despite some modest attrition, interconnection interest at both substations has remained consistently strong following the initial Group Study. Id. Notably, the number of DER projects seeking interconnection at Tremont and West Pond Substations and the amount of associated MW have increased since the completion of the Group Study, including projects from the Group Study that remain active, projects that are currently being studied in the Plymouth Group Phase 2 study and projects that are in queue behind the projects in both group studies. Exh. EFSB-N-3(1). The queue indicates that there is an actual increase in interest in interconnecting DER in the Plymouth Area. Tr. 1, at 30-31.

There are now 27 active applicants, totaling approximately 80 MW of DER projects, in the original Group Study and in a “Round 2” Plymouth Group Study that is in progress. Exhs. EFSB-N-2, EFSB-N-3. In addition, there are 24 DER projects in queue beyond Round 2, seeking to interconnect approximately 24 MW at West Pond Substation. Id. Thus, a total of approximately

¹⁴ The withdrawals reflect typical queue dynamics, as developers reassess project viability and commercial timelines. Exh. EFSB-N-3.

104 MW of DER projects are online or are requesting interconnection to West Pond Substation, which is approximately 160% the capacity of the station (66 MVA). Id.

At Tremont Substation, there are now 13 active interconnection requests totaling approximately 41 MW of DER projects, in both the original Group Study and in the Round 2 Plymouth Group Study that is currently in progress. Exhs. EFSB-N-2, EFSB-N-3. In addition, DER projects in queue beyond Round 2 are seeking to interconnect approximately 11 MW at Tremont Substation. Thus, a total of 52 MW of DER projects are online or are requesting interconnection to Tremont Substation, which is more than double the capacity of the station (21 MVA). Id.

Accordingly, recent trends demonstrate that while modest attrition has occurred, sustained interconnection demand continues at both Substations and the imminent need for the Project remains. Id.; Exh. EFSB-G-1.

e. The Substation Expansions Are Needed for the Safe and Reliable Operation of the Transmission System.

If Eversource does not address the impacts of interconnecting additional DG to interconnected substations in high DG saturated areas, it would result in degradation in service quality for all customers and prolonged outages for DGs in the area, which would undermine the Commonwealth's plans for the short and long-term reduction of greenhouse gas emissions through development of solar capacity. Exh. EV-1, at 28. Without construction of the Project and other required system improvements, the interconnection of Group Study DG would result in violations of Eversource planning standards under certain N-1 contingencies. DG that is interconnected to the Company's EPS in the Plymouth area would be tripped offline and remain offline until the primary transmission system is restored, in violation of the Company's planning standards. Id.

To avoid thermal overloads and the loss of load and DG under N-1 contingencies, the

Company identified various upgrades and additions that are necessary to safely interconnect the Group Study DG (i.e., the Plymouth Group Upgrades). Exh. EV-1, at 29. Using Eversource Distribution Planning Criteria, other internal guides and standards for system design and equipment application, and industry standards, the Company identified the following EPS upgrade projects needed to interconnect the Group Study DG:

- Upgrade four existing substation transformers: one at Tremont Substation,¹⁵ one at Wareham Substation, and two at West Pond Substation).
- Add a new switchgear and duct bank getaway cable at each of the Tremont and West Pond Substations.
- Install a 115 kV ring bus at West Pond Substation.
- Upgrade distribution lines (overhead and underground) at the Tremont, Wareham, and West Pond Substation distribution systems.
- Add 20 new distribution feeders at the Tremont (seven), West Pond (six), Valley (two), Kingston (three), and Brook Street (two) Substations.¹⁶

Plymouth Order at 19; EV-1, at 29.¹⁷ The Plymouth Group Upgrades, including the Substation Expansions, are needed to enable DG facilities to safely interconnect and operate and for the Company to maintain a reliable EPS. Id. The Plymouth Group Upgrades will provide for the interconnection of proposed Group Study DG projects, as well as additional large DG capacity to

¹⁵ Based upon the potential for thermal overloads in violation of the DERPG at Tremont Substation under N-1 conditions prior to the addition of Group Study DG, Transformer #2 and its associated switchgear will be upgraded as a capital project and the cost therefore is not included in the Plymouth CIP. Exh. EV-1, at 29 n.18.

¹⁶ This Petition relates only to the work at West Pond and Tremont Substations. The Company will pursue any permitting required for the work at the other Plymouth Group Substations separately, as needed. No approvals from the Department or the Siting Board appear to be required for the upgrades at Wareham Substation. Exh. EV-1, at 29 n. 19.

¹⁷ Twenty additional overhead distribution feeders are necessary to interconnect future DG facilities beyond the Plymouth Group Study DG up to the full enabled capacity for Large DG (380 MW), including seven out of Tremont, six out of West Pond, two out of Valley, three out of Kingston, and two out of Brook Street Substations. Plymouth Order at 20. Connection of the Plymouth Group Study DG also will require upgrades to the transmission line between Brook Street and West Pond Substations and line work associated with the transformer upgrades at Tremont Substation Id.

connect both DG projects currently in the interconnection queue post the Plymouth Group Study as well as future large DG. Plymouth Order, at 18.

The Department approved the Plymouth CIP (including the Substation Expansions described herein) and found that the Plymouth Group Upgrades are reasonably based on the EPS upgrades identified in the Plymouth Group Study and that the proposed EPS upgrades and cost estimates are reasonable. Plymouth Order, at 101-102.

The Substation Expansions 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 30. This system reliability need is immediate, and a solution must be implemented so that the Company can fulfill its obligation to interconnect DG while maintaining reliability for its existing customers. Id.

f. The Substation Expansions Will Result in Additional Benefits

In addition to the ability to safely interconnect DG to the Eversource EPS, the Plymouth Group Upgrades (including the Substation Expansions) will also benefit distribution customers by improving reliability and enabling future electrification that is needed to meet the Commonwealth's 2050 Decarbonization Goals. Exh. EV-1, at 30. The Plymouth Group Upgrades are expected to improve the reliability of all existing and future customers. For example, new distribution lines proposed under this solution can be used to create new distribution circuit ties with the overall goal of reducing customer count by zones, which reduces the number of customers affected by feeder or line outages. Id. Furthermore, additional capacity that is needed to

accommodate the Group Study DG also provides additional distribution load capacity for customers. Id.

The Plymouth Group Upgrades also will result in electric system reliability improvements for several EJ communities in the Plymouth Group Study area. Exh. EV-1, at 31. The Plymouth Group Upgrades will result in an approximately 264% increase in annual energy served from renewable sources in the electric system, supplying approximately 21,989 EJ-population customers. Id. Currently, approximately 337 GWh of energy in the Plymouth Group Study area is supplied from renewable resources on an annual basis, while after the upgrades are constructed, approximately 892 GWh of energy will be generated from renewable resources. Id.

g. Conclusion on Need

Based on the above, the Project is needed so that existing customer demand and proposed interconnecting DG demand can be served. Exh. EV-1, at 31. By facilitating the interconnection of distributed generation facilities that help meet the Commonwealth's clean energy goals, the Project furthers the state's critical objectives of having a reliable and resilient electric supply, at a reasonable cost to customers and distributed generation developers and promoting the development of energy resources that are consistent with emission reduction goals. Exh. EFSB-G-9. The Project will not only interconnect DG, but will also enable electrification of heating and transportation, both of which support the Commonwealth's decarbonization objectives. Id. Timely achievement of these energy policies is entirely consistent with the statutory standard of public convenience and the public interest. Id. By addressing imminent DG interconnection cost allocation concerns, the Project is reasonably necessary for the benefit of the public convenience and welfare. Id.

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

Eversource considered several solutions to resolve the above-discussed violations to determine the approach that best balances reliability, cost, and environmental impact. Exh. EV-1, at 31. The evaluation involved a combination of engineering judgment, modeling, and simulation to iteratively determine appropriate design changes, and technology and equipment application that would enable safe, reliable interconnection. Id. Solutions that were more costly, unproven or not technically viable were rejected in favor of solutions that could be counted on to reliably integrate as much DG as possible in a cost-effective manner. Id.

1. No Build Alternative

A no-build approach would have no direct environmental or cost implications; however, it would also not increase hosting capacity for the Plymouth Group Substations and, therefore, would not result in the ability to connect DG nor enable the Company to reliably meet demand in the event of certain contingencies. Exh. EV-1, at 33. Accordingly, this approach was dismissed from further consideration. Id.

2. The Preferred Alternative (the Project)

To address thermal loading violations on substation transformers and distribution circuits, Eversource proposes to upgrade or add new facilities to the West Pond and Tremont Substations, as described above (the “Preferred Alternative”). Exh. EV-1, at 32. The Preferred Alternative also includes reconductoring Line #132 between Brook Street and West Pond Substations and the replacement of one 50 MVA transformer with a new 75 MVA transformer at Wareham Substation. Id. The new facilities and upgrades will allow the Group Study DG to connect and operate under both normal and emergency (N-1) conditions and will create additional headroom for future DER due to the use of standard equipment sizes. Id.

Eversource determined that the Plymouth Upgrades will enable 368 MVA of large DGs and 22 MVA of rooftop DGs to be reliably interconnected, 245 MVA more than the current large Group Study DG. Exh. EV-1, at 32.

3. Non-Wire Alternatives

Non-wire alternatives (“NWAs”) may use a combination of energy efficiency and demand response programs, new DG, and new energy storage facilities to defer or avoid the underlying need for a transmission or distribution project. NWAs 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 electric customers to be served with the existing transmission and distribution infrastructure. Exh. EV-1, at 33.

Here, however, the Project is needed to reliably serve the proliferation of existing and proposed solar and battery energy storage system projects, including the Group Study DG. Exh. EV-1, at 33. A substantial package of substation and distribution upgrades, including the Substation Expansions, is required to interconnect the Group Study DG because the existing transmission and distribution facilities in the Plymouth Group Study area do not have sufficient system hosting capacity. Id. Due to the sheer number and size of the interconnecting facilities, implementation of an NWA would not address the thermal overloads and other violations that would occur if these DG projects were connected to the existing system. Id. Accordingly, NWAs are not a solution to the identified need nor viable alternatives to the proposed Project but rather are dependent on it and therefore, were eliminated from further consideration. Id.

4. Substation Alternative

The Company evaluated the feasibility of constructing a new 115/23 kV bulk distribution substation at a different location to interconnect some of the Group Study DG; however, this

alternative was not viable for several reasons. Exh. EV-1, at 34. First, due to the size of the area served by the substations in the Plymouth Group Study (roughly 236 square miles across five towns) and the disparate locations of the 39 Group Study DG projects, there is no single potential location for a new bulk distribution substation to connect each of the DG projects. Id. Therefore, a “new substation alternative” would require the construction of multiple substations. Exh. EFSB-C-4. In addition to the construction and equipment costs associated with constructing multiple substations, the cost for such an alternative would include the purchase of multiple additional land parcels, extensive environmental permitting, and multiple additional transmission line projects that would far exceed the cost of the proposed Project. Id. Because it is not a practical option, the Company has not determined the cost of such a “new substation alternative.” Id. Even if construction of multiple new substations in the Plymouth area were a viable alternative to the West Pond Substation Expansion, a new substation in Plymouth would not avoid the complete package of required upgrades for the Tremont and Wareham Substations. Exh. EV-1, at 34. For these reasons, the Substation Alternative was not further investigated. Id.

5. Conclusion on Alternatives

Eversource’s objective throughout the study process was to identify a technically optimal and viable solution that, given the applicable standards and criteria, would cost-effectively enable the safe, reliable interconnection of the Group Study DG and maintain quality of service for all customers, native load and DG alike. Exh. EV-1, at 35. A range of traditional and emerging solutions were tested and recommended to resolve project needs, accounting for existing and approved DG, load impacts and system constraints. Id.; Tr. 1, at 16-17. The Plymouth Group Upgrades are the only cost-effective combination of alternatives that will effectuate the substation

and distribution capacity increases that are necessary to allow DG interconnections within the Plymouth Group Study area, within the four-year implementation timeline. Id.

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

Eversource conducted a detailed analysis of the environmental resources in the vicinity of the West Pond and Tremont Substation Expansions and has proposed measures to minimize unavoidable impacts to these resources from the construction and operation of the Substation Expansions. Exh. EV-1, at 35. Eversource’s analysis demonstrates that the Substation Expansions will achieve an appropriate balance among environmental impacts, reliability, and cost. Id.

1. Construction Activities and Methods

The Substation Expansions will be constructed in full compliance with the National Electric Safety Code (“NESC”), 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 projects.¹⁸ Exh. EV-1, at 35-38.

Construction Schedule and Hours – The Substation Expansions are each anticipated to require approximately 24 months to complete construction. Exh. EV-1, at 35. The Company proposes that the construction hours will be between 7:00 a.m. to 7:00 p.m., Monday through Friday, and from 9:00 a.m. to 5:00 p.m. on Saturdays, when daylight and weather conditions allow,

¹⁸ During construction, the areas that are under construction but not in service and outside of the existing Substation fences will be secured by temporary fences similar to other construction sites. Exh. EFSB-S-2. The areas under construction that contain in-service equipment are secured by the existing substation perimeter fence that meets or exceeds the requirements of the NESC and are accessible only with a qualified escort. Id. Once constructed, the first line security device will be the substation perimeter fence, which will meet or exceed NESC requirements. In addition, security cameras will be located around the substation. Id. Cyber security measures will include card readers on doors and access points, and firewalls on communication links. Id.

which are consistent with the Towns' general bylaw provisions. Id.; Exh. EFSB-G-4. The Company has initiated communications with the Towns and is confident that work hours mutually agreeable to all parties will be achieved. Exh. RR-EFSB-2. In limited circumstances, some work tasks (such as cable splicing, concrete pouring, transformer filling), once started, will require continuous operation until completion and may need to be completed, on a limited basis, outside of normal working hours (including evenings, Sundays, and holidays). Exh. EV-1, at 35. The Company will provide notification to the Towns should the need for continuous operation and extended work hours arise. Id.

West Pond Substation Construction Sequencing - The fenced area of the existing West Pond Substation is approximately 34,900 square feet. Exh. EV-1, at 36. As part of the Substation Expansion, the Substation will be expanded to the north and south by approximately 74,000 square feet, resulting in a new Substation footprint of approximately 108,900 square feet. Id. Construction of the West Pond Substation Expansion will be conducted as follows so as not to disrupt substation operation: (1) site clearing and preparation including tree removal, grubbing, grading, slope stabilization measures, construction of staging and laydown areas and gravel access road construction or improvements; (2) fence expansion; (3) replacement of existing transmission line structures and re-energization of the lines; (4) installation of the first new transformer, ring bus, circuit breakers, switchgear, and control enclosure not impacting the existing Substation operation and including below grade conduits, grounding and foundations; (5) energization of first new transformer and cutover of distribution circuits to new switchgear; (6) installation of temporary mobile transformer (if required for system reliability); (7) demolition of first existing transformer; (8) installation of second new transformer including below grade conduits, grounding and foundations, and energization of transformer; (9) demolition of existing second transformer;

(10) installation of third new transformer including below grade conduits, grounding and foundations, and energization of transformer; and (11) site stabilization and site restoration work. Id. at 36-37. Some of these activities will overlap to the extent that the site conditions allow. Id. at 37.

Tremont Substation Construction Sequencing - The fenced area of the existing Tremont Substation is approximately 78,000 square feet. Exh. EV-1, at 37. As part of the Substation Expansion, the Substation will be expanded to the southwest by approximately 13,500 square feet, resulting in a new substation footprint of approximately 91,500 square feet. Id. The Tremont Substation Expansion will be conducted as follows so as not to disrupt substation operation:

- (1) site clearing and preparation including grubbing, grading, slope stabilization measures, construction of staging and laydown areas and gravel access road construction or improvements;
- (2) substation fence expansion;
- (3) construction of first new transformer, construction of new switchgear for the new transformer that does not impact the existing Substation operation, and construction of associated below grade conduits, grounding and foundations;
- (4) energization of the first new transformer and the associated new switchgear that was installed in (3) above;
- (5) demolition of the existing transformer;
- (6) construction of second new transformer and associated below grade conduits, grounding and foundations;
- (7) completion of new switchgear that is needed for the new transformers discussed in sections (3) and (6) above, energization of the second new transformer, and cutover of distribution circuits to new switchgear;
- (8) demolition of the existing transformer and installation of third new transformer and associated new switchgear, below grade conduits, grounding and foundations;
- (9) energization of third new transformer;
- (10) cutover of distribution circuits to new switchgear; and
- (11) site stabilization and site

restoration work. Id. Some of these activities will overlap to the extent that the site conditions allow. Id.

Mobilization and Laydown - Prior to the start of construction, Eversource's contractor will identify a marshaling/storage yard near each Substation, which is typically an existing contractor's yard or unused space at a commercial or industrial facility, for temporary offices, sanitation facilities, dumpsters, and containers specifically for collection and recycling shipping material and scrap metals. Exh. EV-1, at 37-38.

Erosion and Sediment Controls - Following mobilization, erosion and sediment ("E&S") controls will be installed in accordance with Eversource's BMP Manual. Exh. EV-1, at 38. Depending on site specific factors, E&S controls could include straw bales, silt fence, compost filter tubes and/or straw wattles or other measures prescribed in accordance with applicable environmental permit requirements. Id. In accordance with Eversource's BMP Manual, to protect wildlife, no welded plastic or mesh E&S controls will be utilized, rather all wattles and blankets shall be constructed of biodegradable (coir or cotton) materials. Id.

Compliance Monitoring – During and following Project 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. Exh. EV-1, at 38. Monitoring will be provided in accordance with the requirements of regulatory approvals issued for the Project, including the U.S. Environmental Protection Agency ("USEPA") Stormwater Construction General Permit, which requires the development of a Stormwater Pollution Prevention Plan for the Substation Expansions. Id.

Construction Safety – The Company’s contract with the construction contractor will include a requirement for a site-specific construction safety plan, copies of which are kept on-site during construction. Tr. 1, at 70-71. In addition, there will be on-site daily safety tailboard meetings that must be attended by every worker who will be on-site that day to discuss the day’s activities and safety concerns. Id. at 71.

2. Evaluation of Environmental Impacts for West Pond Station

Land Use – The West Pond Substation Site is bordered to the south and west by significant tree buffer, ranging in width from approximately 200 to 300 feet. Exh. EV-1, at 38. There are residential neighborhoods beyond the tree buffer. Id. To the north and east, the Substation Site is bordered by an Eversource transmission corridor; similarly, there is a tree buffer between the ROW and residential neighborhoods. Id. In total, approximately 3.5 acres of land will be disturbed by the West Pond Substation Expansion, including approximately 0.3 acres of tree removal. Id. at 39. This estimate includes approximately 0.8 acres of previously developed land occupied by the existing West Pond Substation facility.¹⁹ Id. at 39.

The balance of the land in this location is generally occupied by gravel access roads and existing transmission line ROW. Exh. EV-1, at 39. There are no anticipated permanent changes to abutting land uses associated with construction of the Substation Expansion, which is consistent with the existing and surrounding utility infrastructure and current land uses. Id. While construction may result in temporary impacts to abutting property owners, operation of the upgraded Substation will not cause significant, permanent impacts. Id.

¹⁹ For West Pond Substation, the total estimated area of excavation and fill is approximately three acres. The estimated volume of fill material on the site is approximately 1,600 cubic yards. Exh. EFSB-L-3. The estimated volume of cut material on the site is approximately 5,500 cubic yards, which means the site will have a net reduction in soil on site of approximately 3,900 cubic yards. Id. Where feasible, the Company will attempt to balance the net cuts and fills and reuse as much suitable materials as possible as fill during Project construction to minimize earth removal from the Substation Site. This also reduces the total truck traffic for soil removal and disposal. Id.

Wetland and Water Resources – There are no wetlands or water resources on or adjacent to the West Pond Substation parcel. Exh. EV-1, at 39. During construction, appropriate sediment and erosion control, spill prevention, and response measures will be implemented, and these controls will be closely monitored and maintained. Id. To avoid potential impacts to groundwater from spills of fuel or hydraulic oil related to the construction equipment, Eversource will require its contractors to adhere to the BMPs regarding storage and handling of oil and potentially hazardous materials during construction of the Substation Expansion. Id. Construction equipment will be properly inspected, maintained and operated to reduce the chances of spill occurrences of petroleum products. Id.

During construction, oils (hydraulic oil); greases (lubricating); and construction equipment fuels (gasoline and diesel) may be used in varying quantities. Exh. EV-1, at 40. The Company and its contractors are required to always have spill kits available in the event of inadvertent release of these substances. Id. To minimize the risk of environmental impacts associated with potential spills, contractors are required to inspect vehicles and equipment daily. Id. Eversource maintains a 24-hour-per-day/7-day-a-week spill response program in the event of an inadvertent release. Id. Spill response will initially include assessing, controlling, and containing the spill. Spill containment for the types of materials indicated generally includes utilization of spill kit materials such as absorbent socks or booms, application of granular absorbent material and absorbent pads. Subsequent cleanup would include collection of all spill-impacted media in bags or drums for disposal in accordance with applicable regulations. Id.

The new transformers will include 110 percent passive secondary containment, which is consistent with the NESC (ANSI C2) and the Guide for Containment of Oil Spills in Substations (IEEE 980). Exh. EV-1, at 40. 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.

Regarding herbicide application during operation of the expanded Substation, the Company will periodically apply herbicides within and outside of the West Pond Substation fence. Exh. EFSB-W-1; Exh. EFSB-W-2. Notably, the Company contracts with licensed companies to chemically treat and control vegetation within and outside of its substation fences, including the existing West Pond Substation, which practice will be continued after the Substation Expansion. Id. Moreover, all herbicides used by the vendors are approved by the Massachusetts Department of Agriculture for use near water sources. Id. These procedures will mitigate any impacts from the application of herbicides during the operation of the expanded Substation. Id.

Flood Zone – The West Pond Substation Site is not located within any mapped Flood Zone. Exh. EV-1, at 40.

Visual – The primary viewpoint from which the Substation Expansion may be observed is from Federal Furnace Road. While the viewshed from the road will be different, the Substation Expansion will be a continuation of the existing Substation use and overall will not significantly alter the visual characteristics. Exh. EV-1, at 40-41; Exh. EV-1(L).

The Substation and expansion area are largely surrounded by trees/forested areas on the remaining three sides. Exh. EV-1, at 41. Vegetation removal will not significantly alter this natural buffer. Id. The nearest residential abutters beyond the buffer to the southeast and west of the Substation Site are approximately 230 feet and 275 feet, respectively. Id. The nearest abutting property beyond the buffer to the northeast is approximately 360 feet away from the expanded station footprint. Id. As with the view from the road, the Substation Expansion and ancillary

facilities represent a continuation and expansion of the existing use and will not significantly alter the visual characteristics of the area. Id.

Upon completion of Project construction, the Company will notify all owners of property abutting the West Pond Substation in writing of the option to request that the Company provide mitigation on the abutter's property. Exh. EV-1, at 41. The Company will meet with all property owners who have responded within six months of receipt of the Company's written notification.²⁰ Id. The Company will evaluate whether and the extent to which the property owner's view has materially changed due to construction of the Project and, as appropriate, will develop, in consultation with the property owner, a mitigation plan and will provide reasonable and feasible screening on the abutter's property, which may include shrubs, trees, window awnings and fences, provided that operating and maintenance requirements for the Substation are met.²¹ Id.

Noise – The Company will use construction methods and equipment, where appropriate, to reduce construction noise, including use of the quietest equipment possible to perform the work, foundation designs that minimize the amount of excavation required and maximize preassembly of components off site. Exh. EV-1, at 41-42. As noted above, the Company expects that construction will be conducted using a six-day per week work schedule to minimize the duration of the Project and associated construction impacts. Id. Because the Project involves work on an existing power system that serves customers, there may be times that work will need to occur

²⁰ The Company generally uses six months as a benchmark for receiving feedback from the property owners so that it can complete the assessments and provide visual mitigation, where appropriate, in a timely fashion. There is flexibility to extend the time where warranted. Tr. 1, at 74-76.

²¹ The Company received feedback related to visual impacts from an abutter who lives diagonally across the road from West Pond Substation. Exh. EFSB-V-1. The abutter requested plantings on their property to screen views of the Substation and asked if the plantings could be installed prior to construction to mitigate views of the actual construction. Id. While the Company typically provides visual mitigation only after a project is complete, in this instance, the Company coordinated the planting of two arborvitaes on the neighbor's property to mitigate potential viewshed impacts during construction, which were installed on October 22, 2025. Id.

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

The existing West Pond Substation operates with two 50 MVA transformers, which will be replaced with three new, state-of-the-art 75 MVA transformers, each with a maximum design sound output of 61 dBA. Exh. EV-1, at 42. The Company conducted a sound level assessment to determine potential sound level impacts associated with the operation of the West Pond Substation with the new transformers in operation, which included measurement of 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 regulations and noise policy of Massachusetts Department of Environmental Protection (“MassDEP”).²² Id.; Exh. EV-1(M). The MassDEP noise policy 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. Id. The sound level assessment demonstrated that, under the current design, operation of the Substation Expansion will not result in sound level increases greater than 10 dBA above ambient conditions nor are pure tone conditions expected to occur.²³ Id. at 43. Therefore, the Substation Expansion will comply with all applicable regulations and policies. Id.

²² The sound level assessments did not consider the scenario where all the transformers at either West Pond or Tremont Substations would be operating at 75 MVA at the same time because that is not a potential operating condition. Exh. EFSB-NO-1. The firm capacity of each of the Substations (the capacity with one transformer unavailable) is 150 MVA. Id. If all transformers were operating at the same time at either West Pond or Tremont Substations (225 MVA), it would exceed the firm capacity of those stations. Id.

²³ The sound level assessment relied on sound measurements taken at two locations that are at or near the Substation Site property line, the sound output (both broadband and spectral) from the proposed equipment, and the proposed equipment location. Exh. EFSB-NO-2. While the results in the sound level assessment show that the calculations indicate a pure tone at residential receptors, the calculations are not based on the actual equipment that will be installed at the Substation and sound level measurements taken at a location other than the sensitive receptor (i.e., the sensitive receptors are farther from the Substation). Id. Thus, the results showing a pure tone at the receptors is only a prediction based on ambient sound measurements that are not at the location of sensitive receptors. Id. Because the sensitive receptors are farther from the location where the ambient sound data used in the assessment were collected, it is not known whether the sensitive

Air Quality – The potential for air quality impacts is limited to construction activities, namely fugitive dust from disturbed soil surface areas and emissions from construction equipment and motor vehicles. Exh. EV-1, at 43. If necessary, dust generated from earthwork and other construction activities will be controlled by spraying with water and using anti-tracking pads 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. Id. Disturbed areas will be stabilized with temporary measures until permanent stabilization can be achieved (e.g., placing stone or gravel, erosion control blankets, seed covered with straw). Id.

Eversource will direct its construction 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). Exh. EV-1, at 43. Eversource uses ultra-low sulfur diesel (“ULSD”) fuel in its own diesel-powered construction equipment, which has a maximum sulfur content of 15 parts per million as opposed to low sulfur diesel fuel that 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. Finally, 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 with certain exceptions. Id. at 44.

receptors will actually experience a pure tone. Id. If the Company receives any complaints regarding noise from the Substation once it is in operation, the Company has had considerable experience in mitigating pure tones and will take action to do so (e.g., adjustment of transformer taps, placing vibration isolators under the transformer, construction of sound barriers, and introduction of masking frequency sounds, or some combination thereof). Id. The Company is confident that if pure tone conditions exist during operation of the expanded Substation, it will provide mitigation such that the MassDEP noise guideline for pure tones is met. Tr. 1, at 83.

There will be no air impacts resulting from operation of the expanded Substations. Notably, SF₆ gas is currently contained within the gas circuit breakers of the existing Substations and will be contained within the new gas circuit breakers that will be installed at the expanded West Pond Substation. Exh. EFSB-A-1. The new 115 kV gas circuit breakers for West Pond Substation are designed to have a maximum leak rate of 0.1% per year. Id. The circuit switchers for both the West Pond Substation and the Tremont Substation as well as the existing 23 kV gas circuit breakers at West Pond are filled and sealed at the factory and are not intended to be opened once in service and typically do not need to be replaced due to gas leakage. Id. The Company provides training for SF₆ Gas Handling and Reclamation Cart Training, SF₆ Gas Management, SF₆ Safety, and SF₆ Regulatory Training. Id. SF₆ is shipped in cylinders approved by the Department of Transportation and is handled in accordance with the gas and equipment manufacturers' work practices. Id. New SF₆ equipment is filled by Eversource or by contractor personnel working under Eversource supervision. Eversource personnel have been trained by the equipment manufacturer and follow the equipment filling instruction guide. Id. If gas needs to be added to the equipment once in operation, trained Eversource employees perform this task following the manufacturer's instruction guide. Id. The equipment is filled during installation and is not opened until maintenance is required, at which time the SF₆ gas is captured into a gas cart. Id. When equipment is retired, the SF₆ gas is recovered and reclaimed by a vendor, minimizing atmospheric releases. Id.

Construction Traffic – Ordinarily, construction vehicles will be working within the Substation site and only limited entry and exiting of these vehicles will occur onto Federal Furnace Road. Exh. EV-1, at 44; Tr. 1, at 94-96. However, the Project will require access from local roads during construction for delivery of materials or equipment, which will be planned during off-peak

traffic hours. Id. There may also be situations when Federal Furnace Road must be temporarily blocked for a short time to accept supplies, move larger pieces of equipment onto the Substation site, or to facilitate underground distribution line installation across the road. Id. These situations will be infrequent and for a short duration and a police detail will be used to control traffic. Id.; Exh. EFSB-T-1; Exh. EFSB-T-2. The Company will coordinate with the Town of Plymouth to ensure that construction traffic impacts are minimized. Id.

Waste, Debris, and Contaminated Soil – There are no mapped MassDEP Tier Classified 21E sites or properties with activity and use limitations within one-quarter mile of West Pond Substation. Exh. EV-1, at 44. The nearest MassDEP mapped site is approximately 1,600 feet southeast of the Substation. Id. In the event contaminated soil, contaminated groundwater or other regulated materials are encountered during construction, soils/groundwater will be managed pursuant to the Utility Related Abatement Measure provisions of 310 C.M.R. § 40.00 (the Massachusetts Contingency Plan, “MCP”). Id. Eversource will contract with a Licensed Site Professional as necessitated by conditions encountered, consistent with the requirements of the MCP. Id. Any materials to be removed from the Substations during construction of the Substation Expansions that are characterized by MassDEP as waste ban materials, in accordance with 310 C.M.R. § 19.017(3), will not be disposed in landfills. Materials will be recycled to the extent practicable. Id.

EMF – The Company’s internal analysis showed that the power flows before and after the Project (i.e., for both Substation Expansions) will not change substantially, and the nominal line voltages will not change. Exh. EFSB-EMF-1. While the fence lines for the two substations are changing, the magnetic fields rapidly diminish beyond the fence. Id.; Tr. 1, at 97-99. This is the case both before and after the work proposed for the Substation Expansions. Id. Additionally,

abutters are at such distances from the expanded Substation fencelines, that the magnetic fields from the Substations will be indistinguishable from background levels. Id. Therefore, there are no meaningful changes to electric and magnetic fields resulting from the Substation Expansions. Id.

Archaeological and Historical Resources – Eversource’s cultural resource consultant, The Public Archaeology Laboratory, Inc. (“PAL”), performed cultural resource due diligence for the West Pond Substation Expansion in December 2024. Exh. EV-1, at 45. PAL reviewed the Massachusetts Historical Commission’s (“MHC”) Inventory of Historic and Archaeological Assets of the Commonwealth and performed a pedestrian walkover to assess archaeological sensitivity. Id. The Company filed a Project Notification Form with the MHC on March 18, 2025, and submitted the *Intensive (Locational) Archeological Survey* to MHC on July 21, 2025. Exh. EFSB-L-2. There were no substantive comments or concerns from MHC and the process is complete. Id.

Areas of Critical Environmental Concern – West Pond Substation Site is not within or nearby any Area of Critical Environmental Concern. Exh. EV-1, at 45.

Protected Open Space and Article 97 Lands – West Pond Substation Site is not within Protected Open Space or on Article 97 Lands. Exh. EV-1, at 45.

State-Listed Species and Habitat – West Pond Substation Site is not located within any Natural Heritage and Endangered Species Program Priority and Estimated Habitat areas. Exh. EV-1, at 46.

Safety - The Substation Expansion will be constructed in full compliance with the National Electric Safety Code (“NESC”), 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, BMPs, final engineering plans, and the conditions specified in permits and approvals obtained for the projects.²⁴ Exh. EV-1, at 35-38.

In addition, the Company has an Emergency Response Plan (“ERP”) that applies to all its substations and the Company’s response to emergency situations at West Pond or Tremont Substations would comply with that plan. Exh. EFSB-S-3; Exh. EFSB-S-4. Importantly, the Company maintains a system control center that will dispatch personnel and equipment to the scene of any unplanned event to coordinate first response actions. Id. In addition, the Company has provided extensive first responder training in all municipalities that host its substations. Id.

Climate Considerations – To ensure that it safeguards its valuable assets, the Company seeks to address Project vulnerabilities to climate change through a comprehensive internal review using the best available data on related hazards, including sea level rise, extreme weather conditions, and flooding. Exh. EFSB-G-7. The Company uses this data to inform design decisions and mitigate potential vulnerabilities to climate-related hazards at specific project locations. Id. The Company is also proactive in its engagement with local government agencies to obtain input on projects and to help ensure the project does not exacerbate any climate-related hazards in the community. Id.

The Company utilized the ResilientMass Action Team Climate Resilience Design Standard Tool (“RMAT”) for the West Pond Substation Expansion. Exh. EFSB-G-12. The results show that West Pond Substation has (1) a low risk of Sea Level Rise/Storm Surge and Extreme Precipitation

²⁴ During construction, the areas that are under construction but not in service and outside of the existing Substation fences will be secured by temporary fences similar to other construction sites. Exh. EFSB-S-2. The areas under construction that contain in-service equipment are secured by the existing substation perimeter fence that meets or exceeds the requirements of the NESC and are accessible only with a qualified escort. Id. Once constructed, the first line security device will be the substation perimeter fences, which will meet or exceed NESC requirements. In addition, security cameras will be located around both substations. Id. Cyber security measures will include card readers on doors and access points, and firewalls on communication links. Id.

– Riverine Flooding; and (2) a high risk of both Extreme Precipitation – Storm Water Flooding and Extreme Heat. Id. To mitigate any high-water conditions from extreme precipitation, Eversource has designed a stormwater management system for the West Pond Substation Expansion in accordance with the MassDEP Stormwater Management Standards that will minimize the impacts of stormwater flooding. Id. To manage the impacts from extreme heat, Eversource has specified equipment for the West Pond Substation Expansion that has a maximum operating temperature of +40° C (104° F) at full load. Id.

3. Evaluation of Environmental Impacts for Tremont Substation

Land Use – The Tremont Substation is located on a Company-owned, approximately 2.1-acre parcel at the dead end of North Carver Road Extension in Wareham. Exh. EV-1, at 46. The Substation abuts North Carver Road Extension to the east, beyond which is active ROW and cranberry bogs, other land owned by Eversource to the north (beyond which is Interstate Route 495), west (beyond which is active ROW and cranberry bogs) and south (beyond which is Doty Street). Id. Eversource operates a training center and fleet vehicle facility on the parcels abutting the Substation. Id. In total, approximately 0.2 additional acres of land will be disturbed by the Tremont Substation Expansion.²⁵ Id. No tree removal is expected to be required as a part of the work at this substation. Id. The balance of the land in this location is occupied by paved and gravel access roads. Id. at 47. There are no anticipated permanent changes to abutting land uses associated with construction of the Substation Expansion, which is consistent with the existing and

²⁵ The total estimated area of excavation is approximately 1 acre (no fill at site). Exh. EFSB-L-3. The estimated volume of cut material on the site is approximately 1,000 cubic yards, which means the site will have a net reduction in soil on site of approximately 1,000 cubic yards. Id. Where feasible, the Company will attempt to balance the net cuts and fills and reuse as much suitable materials as possible as fill during Project construction to minimize earth removal from the Project site, which will reduce the total truck traffic for soil removal and disposal. Id.

surrounding utility infrastructure and current land uses. Exh. EV-1, at 46. The Substation infrastructure is not anticipated to interfere with any residential, business, or public facilities. Id.

Wetland and Water Resources - The Tremont Substation parcel does not contain freshwater wetlands or waterways. Exh. EV-1, at 47. During construction, the same sediment and erosion control, spill prevention and response measures will be implemented as described above for West Pond Substation, where necessary. Id. As with the West Pond Substation Expansion, the new transformers installed at Tremont Substation will include 110 percent passive secondary containment that 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.

The Company adheres to the same herbicide application protocols for the Tremont Substation as described above for the West Pond Substation, including the use of licensed contractors and Massachusetts Department of Agriculture-approved herbicides, which ensures consistent vegetation management practices and environmental safeguards across both substations. Exh. EFSB-W-1; Exh. EFSB-W-2.

Flood Zone – The Tremont Substation Site is not located within any mapped Flood Zone. Exh. EV-1, at 47.

Visual – The primary viewpoint from which the Tremont Substation Expansion could be observed is from the North Carver Road Extension, which ends at a cul-de-sac just east of the Substation. Exh. EV-1, at 47; Exh. EV-1(N). Cranberry bogs are adjacent to the east side of North Carver Road Extension and Route 495 is north. Exh. EV-1, at 47. The Tremont Substation Site is largely surrounded to the south and west by Eversource-owned property, including vehicle parking and employee training facilities. Id. On all sides, the Substation Expansion will represent a continuation and expansion of the existing Substation use and overall will not significantly alter

the visual characteristics of the area. Id. The Company will use the same process for assessing visual impacts as for West Pond Substation, as described above, and will consider the potential impact on affected homeowners and will offer appropriate and reasonable off-site screening to those whose view has materially changed due to construction of the Project. Exh. EV-1, at 48.

Noise – The Company will use construction methods and equipment, where appropriate, to reduce construction noise, as described above for West Pond Substation. Exh. EV-1, at 48. The Company also expects to use a six-day per week work schedule. Id.; Exh. RR-EFSB-2. The existing Tremont Substation operates with one 28 MVA transformer and one 22.4 MVA transformer, which will be replaced with three new state-of-the-art 75 MVA transformers, each with a maximum design sound output of 61 dBA. Exh. EV-1, at 48; Exh. EV-1(O). As shown in the sound level assessment, under the current design, operation of the Substation Expansion will not result in sound level increases greater than 10 dBA above ambient conditions nor are pure tone conditions expected to occur. Exh. EV-1, at 48. Therefore, the Substation Expansion will comply with all applicable regulations and policies. Id.

Air Quality – As with West Pond Substation, air quality impacts are temporary and limited to the fugitive dust from disturbed soil surface areas and emissions from construction equipment and motor vehicles, all of which will be managed as described above. Exh. EV-1, at 48. Eversource will direct its contractors for the Tremont Substation Expansion to retrofit any diesel-powered non-road construction equipment and will comply with the state’s anti-idling provisions and ULSD fuel will be used for the construction vehicles. Id. Also, as noted for the West Pond Expansion, there will be no air quality impacts during operation of the expanded Substation.

Construction Traffic – Ordinarily, construction vehicles will be working within the Substation Site and only limited entry and exiting of these vehicles will occur onto North Carver

Road Extension. Exh. EV-1, at 48. To the extent practicable, delivery of materials or equipment will be planned during off-peak traffic hours. Id. While there may also be situations during construction when North Carver Road Extension 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, these situations will be infrequent and for a short duration and should not result in traffic impacts as North Carver Road Extension is a dead-end road with other Eversource owned and operated facilities located thereon. Id. at 48-49. A police detail will be used to control traffic if requested by the Town. Exh. EFSB-T-1. The Company will coordinate with the Town of Wareham to ensure that construction traffic impacts are minimized. Id.

Waste, Debris, and Contaminated Soil – The two MassDEP sites (release locations) in the general vicinity of the Tremont Substation were opened due to: (1) a release of hydraulic oil from a vehicle maintenance lift; and (2) the management of petroleum-impacted sediment and groundwater during the decommissioning of a subsurface utility. Exh. EV-1, at 49. Remedial actions at both sites included excavation and offsite disposal of impacted materials. Id. Post-excavation confirmatory soil and groundwater sample results were evaluated by Licensed Site Professionals in accordance with the MCP (310 CMR 7.00 et seq.) who concluded the remedial actions were sufficient to achieve a level of no significant risk at both sites. Id.; Exh. EFSB-S-1.

As with the West Pond Expansion, in the event contaminated soil, contaminated groundwater or other regulated materials are encountered on the Substation Site during soils/groundwater will be managed in accordance with the MCP. Exh. EV-1, at 49. Any materials to be removed from the Substation during construction of the Substation Expansion that are

characterized by MassDEP as waste ban materials, in accordance with 310 C.M.R. § 19.017(3), will not be disposed in landfills. Id. Materials will be recycled to the extent practicable. Id.

Electric and Magnetic Fields – As noted above for the West Pond Substation Expansion, the Company’s internal analysis showed that the power flows before and after the Project (i.e., for both Substation Expansions) will not change substantially, and the nominal line voltages will not change. Exh. EFSB-EMF-1; Tr. 1, at 97-99. Accordingly, there are no meaningful changes to electric and magnetic fields resulting from the Substation Expansions. Id.

Archaeological and Historical Resources – PAL performed cultural resource due diligence for the Tremont Substation Expansion in December 2024 and concluded that the Substation Site has no/low archaeological sensitivity and recommended that no further cultural resource investigations are warranted. Exh. EV-1, at 50.

Areas of Critical Environmental Concern – Tremont Substation Site is not within any Areas of Critical Environmental Concern. Exh. EV-1, at 50.

Protected Open Space and Article 97 Lands – Tremont Substation Site is not within any Protected Open Spaces or on Article 97 Lands. Exh. EV-1, at 50.

State-Listed Species and Habitat – Tremont Substation Site is not within Priority and Estimated Habitat areas. Exh. EV-1, at 50.

Safety – As noted above, the Project will be constructed in accordance with all NESC standards, best utility practices, BMPs, and Company practices. In addition, the Company has an ERP that will guide the Company’s response to emergency situations at Tremont Substation. Exh. EFSB-S-3.

Climate Considerations – As discussed above, the Company seeks to address Project vulnerabilities to climate change through a comprehensive internal review using the best available

data on related hazards, including sea level rise, extreme weather conditions, and flooding. Exh. EFSB-G-7. The Company utilized the RMA2 tool for the Tremont Substation Expansion. Exh. EFSB-G-12. The results show that Tremont Substation has: (1) a low risk of Extreme Precipitation – Riverine Flooding; (2) a moderate risk of Sea Level Rise/Storm Surge; and (3) and a high risk of both Extreme Precipitation – Stormwater Flooding and Extreme Heat. To mitigate any high-water conditions from extreme precipitation, Eversource designed stormwater management systems for the Tremont Substation Expansion in accordance with the MassDEP Stormwater Management Standards to minimize the impacts of stormwater flooding. *Id.* As there is less than one acre of disturbance for the Tremont Substation Expansion, additional stormwater management design is not required. *Id.* Notably, the Substation Expansion does not add any impervious area to the Tremont Substation Site and, therefore, stormwater run-off will not increase as a result of the Project. Tr. 1, at 100. To manage the impacts from extreme heat, Eversource has specified equipment for the Tremont Substation Expansion that has a maximum operating temperature of +40° C (104° F) at full load. Exh. EFSB-G-12.

Conclusion on Environmental Impacts - The environmental impacts associated with the Project are *de minimis* and/or temporary in nature and will be minimized to the maximum extent practical. Exh. EV-1, at 50.

E. The Substation Expansions Require Individual and Comprehensive Zoning Exemptions.

1. Standard of Review

In determining whether an exemption from a particular provision of a zoning bylaw is “required,” the Siting Board looks to whether the exemption is necessary in order to allow

construction or operation of the petitioner's project as proposed. See Eversource Mid Cape at 102; Eversource Oak Bluffs at 14; Eversource Westfield at 6.

It is a petitioner's burden to identify the individual zoning provisions applicable to the project and then to establish on the record that exemption from each of those provisions is required:

The Company is both in a better position to identify its needs, and has the responsibility to fully plead its own case . . . The Department fully expects that, henceforth, all public service corporations seeking exemptions under 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 requested exemptions.

New York Cellular Geographic Service Area, Inc., D.P.U. 94-44, at 18 (1995); Eversource Mid Cape at 102-03; Eversource Oak Bluffs at 14; Eversource Westfield at 6-7.

As described in more detail below, the construction and operation of the West Pond and Tremont Substation Expansions are, or may be construed to be, inconsistent with certain provisions in the Plymouth and Wareham Zoning Bylaws, respectively, which would require local zoning relief.²⁶ However, the Substation Expansions are 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 expanded West Pond and Tremont Substations, Eversource is seeking both individual and comprehensive zoning exemptions from the operation of the Plymouth and Wareham Zoning Bylaws 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 appeals therefrom.

²⁶ There have been no amendments of the Plymouth and Wareham Zoning Bylaws nor any refinements of the Project design since the filing of the Petition that require updates to the individual zoning exemptions requested by the Company for the West Pond and Tremont Substation Expansions. Exh. EFSB-Z-1.

2. The Company's Outreach with Plymouth and Wareham Zoning Officials

The Plymouth Director of Inspectional Services attended both meetings with Plymouth municipal officials on November 18, 2024, and January 7, 2025. Exh. EV-1, at 9. At each meeting, the Company presented the attendees with the list of provisions in the Plymouth Zoning Bylaw from which the Company believed local zoning relief was needed for the West Pond Substation Expansion and made clear that the Company intended to seek zoning exemptions from the Siting Board in lieu of seeking local zoning relief. Id.; Exh EV-1(G). The Director of Inspectional Services did not raise any issues with the list of zoning relief, nor with the Company's plan to seek the zoning exemptions requested in its Petition. Exh. EV-1, at 9.

The Company made several attempts (by email correspondence and visits to Wareham Town Hall) to meet with the Building Inspector in Wareham, to no avail. Exh. EV-1, at 10; Exh. EFSB-G-11. By email dated December 16, 2024, the Company explicitly provided the Building Inspector with the list of the zoning relief it believed was needed for the Tremont Substation Expansion and made clear that the Company intended to seek zoning exemptions from the Siting Board in lieu of seeking local zoning relief. Exh. EV-1(H). The Building Inspector did not reply back nor did he raise any issues regarding the Company's plan to seek the zoning exemptions requested in its Petition. Exh. EV-1, at 10.

3. Zoning Exemptions Are Needed for West Pond Substation Expansion

After a review of the Plymouth Zoning Bylaw, the following paragraphs summarize the individual zoning exemptions that are required for the efficient and timely construction of the West Pond Substation Expansion. Exh. EV-1, at 52-63; Exh. EV-1(A).

Substation Use in R-25 Medium Lot Residential Zoning District. The West Pond Substation Expansion will be located on two adjacent Company-owned parcels of land on Federal

Furnace Road in Plymouth. Exh. EV-1, at 52; Exh. EV-1(C). The parcels are in the R-25 Medium Lot Residential zoning district where substation use is allowed by special permit. Exh. EV-1, at 52.

Some of the standards for granting a special permit are subjective (and were likely not developed with necessary energy infrastructure in mind), the grant of a special permit is discretionary, and a special permit could contain burdensome or restrictive conditions that could impede the Company from constructing the West Pond Substation Expansion in accordance with applicable state and industry standards. Exh. EV-1, at 52-53. In addition, Section 203-10 provides that all uses authorized by special permit shall conform to all minimum lot, setback and open space requirements and all maximum bulk, height and coverage requirements of the district in which they are proposed. As discussed below, the West Pond Substation Expansion does not comply with rear setback and height requirements and, accordingly, does not satisfy the conditions in Section 203-10 for the grant of a special permit. Id. at 53. Moreover, the process of obtaining a special permit, as well as an appeal of the special permit, if granted, could further delay the construction and operation of the expanded West Pond Substation. Id. Such delay would be contrary to the public interest because timely construction of the West Pond Substation Expansion is necessary to provide reliable service and to increase capacity of the electric system in the area to facilitate the interconnection of DG projects. Id.

Because of the legal uncertainty in obtaining special permits, the potential for burdensome or restrictive conditions, the possibility of delay, and the burden and undue expense associated with the permitting process and appeals therefrom, the Company seeks an exemption from the special permit requirements of the Plymouth Zoning Bylaw, Use Table, R-25 Medium Lot Residential District, Section E, Industrial Use Code 16 (Utility Plants and Substations).

Zoning Permit. Sections 202-1 and 202-2 of the Plymouth Zoning Bylaw require an applicant to obtain a Zoning Permit from the Town of Plymouth Building Commissioner which, according to Section 201-3, is a prerequisite to apply for a Building Permit. Per Section 202-1, the Building Commissioner cannot issue a Zoning Permit unless the proposed work conforms with the provisions of the Plymouth Zoning Bylaw. Because the West Pond Substation Expansion will not conform with certain provisions of the Zoning Bylaw, as set forth below, the Company would not be able to obtain a Zoning Permit and, thus, the Company seeks an exemption from the requirement to obtain a Zoning Permit.

Substation Use in Aquifer Protection Overlay District (“APOD”). The Substation Site is in “Area 3” of the APOD, a recharge area that includes contributing areas to significant Recreational Water Bodies that are contiguous or noncontiguous to recreational lakes, water bodies or tributaries. Section 206-1 of the Plymouth Zoning Bylaw regulates uses in the APOD and lists uses and activities that are allowed, allowed by special permit, and prohibited in Area 3 of the APOD. Two activities, at a minimum, are or may be applicable to the Company’s construction and operation of the West Pond Substation Expansion and, therefore, require a special permit:

- (1) Line Reference 5.e. provides that a special permit is required in Area 3 of the APOD for permanent removal, or re-grading of the existing soil cover, which results in a finished grade at a level less than five feet above the historical high groundwater, except 10 feet for earth removal as specified in Section 203-2(C)(4)(i).²⁷

²⁷ The Company had indicated in its Petition that geotechnical work was underway that would enable the Company to determine whether the finished grade will comply with the requirements of the APOD. Exh. EV-1, at 54. However, there are no USGS groundwater monitoring wells located at the West Pond Substation and no historical groundwater elevations could be located for the Substation Site. Exh. EFSB-Z-2. Therefore, the Company cannot confirm that the finished grade will be more than five feet above the historical high groundwater. Id. Notably, however, geotechnical analysis borings at the Substation were completed in Q1-2025, which included eight borings located within the existing and proposed fence line boundaries. Id. The observed groundwater elevations at the borings ranged from 144.4 feet at borehole BH-06 to 159.2 feet at BH-04. Id. The proposed preliminary design finished grade elevation at the BH-4 location is approximately 166 feet, 6.8 foot above the observed groundwater elevation of 159.2 feet. Id. The 6.8-foot difference represents the closest proposed preliminary design ground elevation to observed groundwater elevation. Id. The proposed grades at all other boring hole locations are greater than 6.8 feet above observed groundwater

- (2) Line Reference 21 provides that a special permit is required for the application of pesticides, including herbicides, insecticides, fungicides, and rodenticides, in Area 3 of the APOD for non-domestic or non-agricultural uses in accordance with state and federal standards.²⁸

As discussed above, some of the standards for granting a special permit are subjective, the grant of a special permit is discretionary, and a special permit could contain burdensome or restrictive conditions that could impede the Company from constructing and/or operating the West Pond Substation Expansion in accordance with applicable state and industry standards. Because of the legal uncertainty in obtaining special permits, the potential for burdensome or restrictive conditions, the possibility of delay, and the burden and undue expense associated with the permitting process and appeals therefrom, the Company seeks an exemption from Section 206-1 of the Plymouth Zoning Bylaw.

Structure Height. Two transition line terminal structures that will be constructed within the expanded West Pond Substation yard will be approximately 60 feet tall and exceed the maximum height of 35 feet for structures in the R-25 Medium Lot Residential zoning district. The Use Table, at Section E, Industrial, Use Code 17 (Utility line, pole or other support structure above 40 feet), allows the height of utility structures to exceed 40 feet upon the grant of a special permit. Because of the legal uncertainty in obtaining special permits, the potential for burdensome or restrictive

elevations. Id. While the results of geotechnical work confirm that the finished grade will be greater than five feet above the observed groundwater elevations on the Substation Site, an exemption from this provision is still required as the Company has no way to confirm the same regarding the historical ground water elevations. Id. The Company will install new drainage structures, as necessary, to manage stormwater runoff from the expanded footprint of the Substation Expansions and will provide passive secondary containment for the new transformers, both of which are measures protective of the groundwater. Exh. EV-1, at 54.

²⁸ The Company contracts with licensed companies to chemically treat and control vegetation within its substations, including the existing Substation. Exh. EV-1, at 54. This practice will continue once the expanded West Pond Substation is in operation. Id. All herbicides used by the Company's contractors are approved by the Massachusetts Department of Agriculture for use near water sources. Based on the above, exemptions from operation of the APOD requirements will not result in impacts to the aquifer. Id.

conditions, the possibility of delay, and the burden and undue expense associated with the permitting process and appeals therefrom, the Company seeks an exemption from the maximum height limitation and the special permit requirement in the Dimensional and Use Tables relating to the height of the terminal structures.

Rear Yard Setback. According to the Dimensional Table, the minimum rear yard setback in the R-25 Medium Lot Residential zoning district is 40 feet. Exh. EV-1, at 56. In one portion of the rear yard, structures will be located approximately 27 feet from the adjacent lot line, and a dimensional variance would be required to ensure that the location of the structure in the rear yard setback complies with the Dimensional Table. Id.

To grant a variance, the Plymouth Zoning Board of Appeals would need to find all of the following in accordance with G.L. c. 40A, § 10 and Section 202-5 of the Plymouth Zoning Bylaw: (a) circumstances exist relating to soil conditions, shape or topography of the particular parcel or structure that do not affect generally the zoning district in which the parcel or structure is located; (b) a literal enforcement of the provisions of the bylaw would involve substantial hardship to the applicant and there is a nexus between the special circumstance and the hardship; and (c) the relief requested may be granted without substantial detriment to the public good and without nullifying or substantially derogating from the intent or purpose of the bylaw. The courts have held that no one is entitled to a variance, and that they are to be granted sparingly. See Damaskos v. Board of Appeal of Boston, 359 Mass. 55, 61 (1971). As a result, variances can be notoriously difficult to obtain. By virtue of the statutory requirements, while the grant of a variance would require detailed findings by the Zoning Board of Appeals, less would be required for a denial. See Gamache v. Acushnet, 14 Mass.App.Ct. 215, 220 (1982). It would be difficult, if not impossible, to demonstrate the existence of unique conditions relating to soil conditions, shape or topography of

the Substation Site that generally do not affect the rest of the R-25 Medium Lot Residential zoning district and failure to meet even one of the criteria would doom the grant of a variance. See Kirkwood v. Board of Appeals of Rockport, 17 Mass.App.Ct. 423, 428 (1984). Moreover, variances are a legally disfavored form of relief. See, e.g., Cornell v. Board of Appeals of Dracut, 453 Mass. 888, 895 (2009); Planning Board of Nantucket v. Board of Appeals of Nantucket, 15 Mass.App.Ct. 733, 738 (1983). Finally, even if granted, variances are susceptible to legal challenge and the courts undertake review of variances on a *de novo* basis and would need to make independent findings of fact. See, e.g., Kirkwood, 17 Mass.App.Ct. at 426-27.

Because of the legal uncertainty in obtaining 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 rear yard setback requirement in the Dimensional Table.

Natural Features Conversion. Per Section 203-2B of the Plymouth Zoning Bylaw, the cutting of trees larger than six inches in diameter or clearing of trees three or more feet in height from any area larger than 3,000 square feet is prohibited, except as authorized by a Zoning Permit and subject to several requirements. An area larger than 3,000 square feet will be cleared of vegetation in connection with the expansion, mostly toward the existing transmission corridor to the north of the existing Substation. Exh. EV-1, at 57. This area consists primarily of smaller brush and shrubs; nonetheless, to ensure compliance with the above-mentioned tree-cutting limitations, the Company seeks a variance from these requirements. Id. Because of the legal uncertainty in obtaining variances, and the potential for adverse interpretations, delay, burden and undue expense associated with the permitting process and appeals, as discussed more fully above, the Company

seeks exemption from the requirements pertaining to natural features conversion in Section 203-2 of the Plymouth Zoning Bylaw.

Earth Removal. Section 203-2C regulates earth removal activities. Among other requirements that the West Pond Substation Expansion may not meet is the requirement in: (a) Section 203-2B.4.i. that the maximum depth of excavation shall be no closer than ten feet above the highest historical groundwater level; and (b) Section 203-2B-4.vi. that excavation or depositing of excavated material shall not be made within 50 feet of any lot line and no excavation depth of greater than 15 feet shall be made within 100 feet of any lot line and that, for excavation sites in or directly abutting certain zoning districts including the R-25 Medium Lot Residential zoning district, excavation shall not occur within 200 feet of the project's property lines, which shall include a 100-foot vegetated natural buffer. Exh. EV-1, at 58. The West Pond Substation Expansion will include excavations within 50 feet of lot lines, particularly along the western edge of the Substation Expansion where property line setbacks are less than 27 feet. Id. There will also be new equipment and foundations within 200 feet of property lines, which will require excavation during construction. Id.

While the conditions and safeguards required in this section can be reduced or waived by special permit from the Zoning Board of Appeals, special permits are discretionary and the bylaw authorizes the Board to deny an earth removal special permit for several reasons, including those that require subjective conclusions such as whether the earth removal would be a detriment or nuisance to nearby landowners, would create unsafe conditions on or off the property, would constitute excessive disturbance to the site's natural landscape, is not in compliance with any of the provisions of the earth removal regulation, etc. Because of the legal uncertainty in obtaining special permits and the possibility of denial, the potential for burdensome or restrictive conditions,

the possibility of delay, and the burden and undue expense associated with the permitting process and appeals therefrom, as discussed above, the Company seeks an exemption from the requirements of Section 203-2C regarding earth removal activities.

Off-Street Parking. Section 203-7 of the Plymouth Zoning Bylaw regulates off-street parking. Section 203-7A.1 provides that off-street parking spaces and necessary maneuvering areas shall be required in all zoning districts according to the ratios established under Subsection K. No ratios are provided for public utility/substation use and, therefore, it is unclear what parking requirements will apply to the Substation. Section 203-7 provides other requirements, such as screening, landscaping, paving, and size of parking areas. To the extent that these provisions apply to the West Pond Substation Expansion, the existing station is unmanned, and the expanded station will remain so. Exh. EV-1, at 59. Parking of Company vehicles will only be needed for periodic inspections. Id. While there will be no delineated parking spaces within the Substation yard, there will be adequate off-street parking at the Substation Site for all activities at the Substation. Id. A variance would be required from Section 203-7 to ensure that the West Pond Substation Expansion is consistent with the parking requirements. As noted above, it is difficult to meet the requirements for a variance, and the grant of variances is susceptible to challenge. Because of the legal uncertainty in obtaining variances, and the potential for adverse interpretations, delay, burden and undue expense associated with the permitting process and appeals therefrom, Eversource seeks an exemption from any parking requirements that could be imposed per Section 203-7.

Site Plan Approval. Section 203-15 provides the thresholds and requirements for projects requiring site plan review; essentially, all developments that require building and zoning permits from the Building Commissioner require site plan review, except for uses or structures for which a required special permit or variance has been obtained. This section provides that a site plan can

be denied due to noncompliance with the Zoning Bylaw. There are no other standards for approval or denial of a site plan. As noted above, the West Pond Substation Expansion does not comply with several provisions of the Zoning Bylaw and would require special permits and variances that may not be granted; accordingly, site plan approval likely would be denied.

In addition to the futility of attempting to obtain site plan approval, the Company must have the discretion to design the West Pond Substation Expansion layout in a manner that is consistent with established utility standards to ensure its reliable operation. Exh. EV-1, at 59-60. Such technical engineering and electrical issues are typically beyond the general scope of local site plan review. Id. Moreover, site plan approval can be conditioned and could result in burdensome or restrictive conditions being placed on the construction of the station expansion. Accordingly, the Company is seeking exemption from the requirement in Section 203-15 to obtain site plan approval for the West Pond Substation Expansion.

To avoid ambiguities in the interpretation of the Plymouth Zoning Bylaw and the need to seek special permits, use and dimensional variances and site plan approval, the Company seeks the exemptions summarized below to construct, operate and maintain the West Pond Substation Expansion in Plymouth:

Bylaw Provision	Local Zoning Relief	Why Exemption is Needed
Use Table R-25 Medium Lot Residential District Section E, Industrial Use Code 16 (Utility Plants and Substations)	Special Permit	A Special Permit is required to expand the existing West Pond Substation to an adjacent Company-owned parcel. The standards for granting a special permit are subjective, the grant of a special permit is discretionary, and a special permit could contain burdensome or restrictive conditions that could impede the Company from constructing the West Pond Substation Expansion in accordance with applicable state and industry standards. In addition, Section 203-10 provides that all uses authorized by special permit shall conform to all setback and height requirements, which the expansion does not.

Bylaw Provision	Local Zoning Relief	Why Exemption is Needed
		Because of the legal uncertainty in obtaining special permits, the potential for burdensome or restrictive conditions, the possibility of delay, and the burden and undue expense associated with the permitting process and appeals therefrom, the Company seeks an exemption from the special permit requirements of the Plymouth Zoning Bylaw, Use Table.
Section 206-1 Table of Uses allowed in Aquifer Protection Overlay District (APOD)	Special Permit for permanent removal or re-grading of existing soil cover. Special permit for herbicide use.	Because of the legal uncertainty in obtaining special permits, the potential for burdensome or restrictive conditions, the possibility of delay, and the burden and undue expense associated with the permitting process and appeals therefrom, the Company seeks an exemption from the requirements of Section 206-1 regarding uses in the APOD.
Sections 202-1, 202-2	Zoning Permit	The Zoning Permit is a prerequisite to the issuance of a Building Permit and cannot be issued where work does not conform with the Zoning Bylaw. The Company would not be able to obtain a Zoning Permit without obtaining all other required zoning relief which, as noted herein, has the potential for burdensome conditions, and undue delay and expense. Accordingly, the Company seeks an exception from this provision.
Use Table R-25 Medium Lot Residential District Use Code Industrial 17 (Code 17 (Utility line, pole or other support structure above 40')	Special Permit	Two transition line terminal structures will exceed the maximum height limit and while the Company could seek a special permit that would authorize the proposed height of the structures, because of the legal uncertainty in obtaining special permits, the potential for burdensome or restrictive conditions, the possibility of delay, and the burden and undue expense associated with the permitting process and appeals therefrom, the Company seeks an exemption from the maximum height limitation and the special permit requirement in the Dimensional and Use Tables relating to the height of the terminal structures.
Use Table R-25 Medium Lot Residential District Rear yard setback	Variance	A structure will be placed in the rear yard setback of an adjacent Town-owned lot that is part of the transmission corridor. A variance would be required to place the structure within 27 feet of the lot line. It would be difficult to meet the statutory requirements for the grant of a variance. Because of the legal uncertainty in obtaining 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 rear yard setback requirement in the Dimensional Table.
Sections 203-2B and 203-2C	Variances and special permits	These provisions of the Zoning Bylaw have numerous requirements regarding excavation, soil removal and

Bylaw Provision	Local Zoning Relief	Why Exemption is Needed
<p>Natural Features Conversion and Earth removal</p>		<p>regrading, and tree removal that would require the grant of variances and special permits.</p> <p>It would be difficult to meet the statutory requirements for the grant of a variance. Because of the legal uncertainty in obtaining 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 requirement to seek a variance from any provision in Sections 203-2B and 203-2C of the Zoning Bylaw.</p> <p>Because of the legal uncertainty in obtaining special permits, the potential for burdensome or restrictive conditions, the possibility of delay, and the burden and undue expense associated with the permitting process and appeals therefrom, the Company seeks an exemption from the requirements in Sections 203-2B and 203-2C to seek special permits.</p>
<p>Section 203-7 Off-street parking</p>	<p>Variance</p>	<p>Parking ratios are not provided for public utility/substation use. To ensure that the project complies with any parking requirements that may be imposed (for an unmanned substation), the Company seeks an exemption from any such requirements. It would be difficult to meet the statutory requirements for the grant of a variance. Because of the legal uncertainty in obtaining 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 requirement to seek a variance from any provision in Sections 203-2B and 203-2C of the Zoning Bylaw.</p>
<p>Section 203-15 Site plan review</p>	<p>Site plan approval</p>	<p>Site plan approval will be denied if a project does not comply with zoning. Because the Substation Expansion requires zoning relief that it has not obtained, site plan approval would not be granted. Moreover, the Company must have the discretion to design the substation expansion consistent with utility standards and the technical and engineering issues involved are beyond the scope of typical site plan review. Accordingly, the Company seeks an exemption from any requirement to obtain site plan approval per Section 203-15.</p>

4. Zoning Exemptions Are Needed for Tremont Substation Expansion

After a review of the Wareham Zoning Bylaw, the following paragraphs summarize the individual zoning exemptions that are required for the efficient and timely construction of the Tremont Substation Expansion. Exh. EV-1, at 64-67; Exh. EV-1(B).

Substation Use in the Commercial Strip Zoning District. The Tremont Substation Site is on Company-owned property on North Carver Road Extension in Wareham. The existing Substation is likely a grandfathered use. Exh. EV-1, at 64. However, the Tremont Substation Expansion will expand the Substation Site onto an adjacent Company-owned parcel located in the same underlying zoning district that is not grandfathered for substation use. Id.; Exh. EV-1(E). Because substation use is prohibited in this zoning district, a use variance would be needed to expand the Substation onto the adjacent parcel. Exh. EV-1, at 64.

The Wareham Board of Appeals is authorized to grant variances for use, but only if the following criteria found in G.L. c. 40A, § 10 and Section 1471 of the Wareham Zoning Bylaw are met: (a) circumstances exist relating to soil conditions, shape or topography of the particular parcel or structure that do not affect generally the zoning district in which the parcel or structure is located; (b) a literal enforcement of the provisions of the bylaw would involve substantial hardship to the applicant and there is a nexus between the special circumstance and the hardship; and (c) the relief requested may be granted without substantial detriment to the public good and without nullifying or substantially derogating from the intent or purpose of the bylaw. As discussed above, variances are sparingly granted and, even if granted, are susceptible to legal challenge. See, e.g., Kirkwood, 17 Mass.App.Ct. at 426-27. Because of the legal uncertainty in obtaining 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 use

prohibitions in the Table of Principle Use Regulations found in Section 320 of the Zoning Bylaw for the Substation Expansion.

Off-Street Parking. Article 9 of the Wareham Zoning Bylaw regulates off-street parking. Section 920 provides a Table of Parking Regulations that provides the minimum number of parking spaces required per use. Public utility use is not listed as a category in the Table of Parking Regulations. Section 910 provides that the number of parking spaces required for any use not listed in a category in the table shall be determined by the Building Inspector. Article 9 provides other requirements such as screening, landscaping, paving, and size of parking areas. To the extent that these provisions apply to the Tremont Substation Expansion, the existing station is, and the expanded station will remain unmanned. Exh. EV-1, at 65. Parking of Company vehicles will only be needed for periodic inspections. Id. While there will be no delineated parking spaces within the Substation yard, there will be adequate off-street parking at the Substation Site for all activities at the Substation. Id. at 66. A variance would be required from Article 9 to ensure that the Substation Expansion complies with the minimum required parking requirements. As noted above, it is difficult to meet the requirements for a variance, and the grant of variances is susceptible to challenge. Because of the legal uncertainty in obtaining variances, and the potential for adverse interpretations, delay, burden and undue expense associated with the permitting process and appeals therefrom, Eversource seeks an exemption from any parking requirements that could be imposed per Article 9.

To avoid ambiguities in the interpretation of the Wareham Zoning Bylaw and the need to seek local zoning relief, the Company seeks the exemptions summarized below to construct, operate and maintain the Tremont Substation Expansion in Wareham:

Bylaw Provision	Local Zoning Relief	Why Exemption is Needed
Principle Use Regulations Section 320	A use variance for expansion of the Substation onto the adjacent Eversource-owned parcel.	The criteria for granting a use variance are difficult to meet. Because of the legal uncertainty in obtaining 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 prohibitions in the Table of Principle Use Regulations found in Section 320 of the Wareham Zoning Bylaw that prohibits “Public utility” uses in the CS zoning district.
Article 9 Off-street parking	Variance	<p>Parking ratios are not provided for public utility uses. To ensure that the Project complies with any parking requirements that may be imposed for the unmanned substation, the Company seeks an exemption from any such requirements and the need to seek a variance.</p> <p>It would be difficult to meet the statutory requirements for the grant of a variance. Because of the legal uncertainty in obtaining 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 requirement to seek a variance from any provision in Article 9 of the Zoning Bylaw.</p>

5. The Substation Expansions Require Comprehensive Zoning Exemptions to Avoid Substantial Public Harm

The Company respectfully requests a comprehensive exemption from the operation of the Plymouth and Wareham Zoning Bylaws with respect to the West Pond and Tremont Substation Expansions. The grant of a comprehensive zoning exemption is based on the specifics of each case. Eversource Mid Cape at 109; New England Power Company d/b/a National Grid, EFSB 19-04/D.P.U. 19-77/19-78, at 126-27 (2021) (“NEP Beverly Salem”); Eversource Sudbury-Hudson at 215. 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. Id.

The Siting Board and the Department have cited additional factors as relevant in making a determination 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.²⁹ Eversource Mid Cape at 109-10; NEP Beverly Salem at 126-27; Eversource Sudbury-Hudson at 215.

The grant of a comprehensive zoning exemption is necessary even where individual zoning exemptions are granted, as the two types of zoning exemptions serve distinct needs. First, because zoning bylaws and ordinances are rarely written with unique energy infrastructure facilities in mind, many zoning bylaws and ordinances lack clearly defined and specific regulation of electric infrastructure, and the sometimes vague and subjective terms and provisions in zoning bylaws and ordinances result in imprecise, at best, application of the zoning provisions to electric infrastructure. 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; however, the grant of a comprehensive exemption removes any reasonable doubt as to the ability of a project to move forward without violating any current terms of the zoning bylaws and ordinances. In addition, individual zoning exemptions relate to specific provisions in the zoning enactments *currently* in effect that have the potential to conflict or be inconsistent with, prevent, delay or obstruct the construction or operation of an infrastructure project. A comprehensive zoning exemption goes beyond the provisions in the current zoning bylaws (from which an individual zoning exemption

²⁹ Not all factors must be met for the grant of a comprehensive exemption. See e.g., NSTAR Electric Company d/b/a Eversource Energy, EFSB 14-04/D.P.U. 14-153/14-154, at 163 (2017), where a comprehensive exemption was granted when, as is the case here, only one municipality was involved.

may be granted), to exempt the proposed project from any *future* zoning enactment that comes into effect that has the potential to jeopardize its construction. In this manner, the two types of zoning exemptions work in tandem to ensure that meritorious energy facilities like the Substation Expansions are constructed as approved by the Siting Board without undue delay.

As described herein, the Substation Expansions satisfy the Siting Board's and the Department's standards for the grant of comprehensive zoning exemptions. First, as described in more detail herein, the Substation Expansions are needed to: (1) maintain a reliable electric system; (2) enable the Group Study DG facilities in the Plymouth Area to safely interconnect and operate; (3) allow future DG applicants in the Plymouth Area to interconnect; and (4) accommodate future load growth due to electrification. Exh. EV-1, at 68-69. The Substation Expansions are imminently needed because DER facilities in the interconnection queue cannot currently interconnect into the existing transmission. Id. They are also imminently needed to comply with the Department's decisions in D.P.U. 20-75-B and D.P.U. 22-54 as discussed herein, which established a four-year construction window for the Substation Expansions that began in June 2024 and concludes in June 2028. Id. The Company was required to demonstrate in its CIP proposal for the Plymouth Area that the components of the construction timeline within the Company's control could be completed within this four-year window. Id. The Company has made all commercially reasonable efforts to avoid undue delays in designing the Substation Expansions, and preparing and filing this Petition, all of which have occurred within nine months of the start of the construction window. Id. Finally, the Company maintains active and productive relationships with municipal officials in Plymouth and Wareham; to date, no officials in these towns have expressed any objection to the Company's pursuit of zoning exemptions from the Siting Board in this proceeding relating to the Substation Expansions. Id.

In sum, a comprehensive zoning exemption from the operation of the Plymouth and Wareham Zoning Bylaws would ensure the timely construction of the important Substation Expansions, which will provide benefits directly to customers and the DG developers in the Plymouth Area for whom these facilities are being constructed.

6. 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 Substation Expansions is reasonably necessary for the convenience and welfare of the public, and that the Substation Sites in Plymouth and Wareham, the uses to be made of them, and the structures to be built and maintained thereon by Eversource shall be individually and comprehensively exempted from the operation of the Zoning Bylaws, to the extent applicable.

V. THE PROJECT MEETS ALL STANDARDS IN G.L. C. 164, § 69H

Section 69H of G.L. c. 164 (“Section 69H”) was amended in 2024 to require the Siting Board to make explicit findings that energy facilities avoid, minimize or mitigate environmental and health impacts to ensure a “reliable, resilient and clean supply of energy” that directly aligns with the Commonwealth's 2050 net-zero carbon emission goals. The following demonstrates the Project’s compliance with the standards in Section 69H.

A. The Project Provides a Reliable, Resilient and Clean Supply of Energy Consistent with the Commonwealth's Climate Change and Greenhouse Gas Reduction Policies and Requirements.

The Project meets this standard. First, the very purpose of the Project is to ensure that the Company’s transmission system in the Plymouth Area is robust enough to support the interconnection of DER. As discussed herein, the Project is a component of the Company’s CIP for the Plymouth Area that was submitted to the Department in compliance with the Provisional Program. See Order on Provisional System Planning Program, D.P.U. 20-75-B, at 42 (requiring

implementation of the Provisional Program); Plymouth Order at 167 (approving the CIP for the Plymouth Group Study); Exh. EV-1, at 4-5. The goal of the Provisional Program is to ensure the expeditious installation of electric power system upgrades to enable the construction of emissions-free solar and energy storage system projects currently in the interconnection queue that have not been able to move forward because of the high cost of interconnection. Exh. EV-1, at 2. The Plymouth Group CIP identified the Substation Expansions as necessary upgrades to safely interconnect DG resources (including both those currently in the interconnection queue and future DG projects) to the Company's EPS in the Plymouth Area. The Department approved the Plymouth Group CIP, subject to certain modifications, in the Plymouth Order. In addition, the Plymouth Group CIP is included within the Eversource Electric Sector Modernization Plan ("ESMP"), approved by the Department in NSTAR Electric Company d/b/a Eversource Energy, D.P.U. 24-10/D.P.U. 24-11/D.P.U. 24-12 (2024) ("ESMP Order"). The ESMP has overarching goals of a clean energy transition, promoting clean energy enablement, enabling future electrification, improving resiliency in the face of climate change, and energy decarbonization. ESMP Order at 15, 159-187.

Second, the Company has demonstrated that there will be no greenhouse gas or other emissions resulting from the operation of the expanded Substations. Air quality impacts during construction are modest and limited and will be mitigated. Exh. EV-1, at 43, 48; Exh. EFSB-A-1. For example, fugitive dust will be controlled by water spraying, using anti-tracking pads, and regular sweeping. Exh. EV-1, at 43. 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) will be retrofitted with USEPA-verified emission control devices. Exh. EV-1, at 43. Ultra-low sulfur diesel fuel will be used in the Company's diesel-powered construction equipment and the anti-

idling statute and regulations will be followed. Exh. EV-1, at 43. The new gas circuit breakers will be designed to have a maximum SF₆ leak rate of 0.1% per year; moreover, they will be filled and sealed at the factory and any refilling is performed by trained Eversource employees. Exh. EFSB-A-1.

Third, the Company has demonstrated that the Project is consistent with the Commonwealth's climate change policies. Notably, the very purpose of the Provisional Program and the Company's Plymouth Area CIP, of which the Project is a part, is to further the interconnection of clean renewable energy facilities. At the same time, the Company ensures that it safeguards its valuable assets by addressing Project vulnerabilities to climate change through a comprehensive internal review using the best available data on related hazards, including sea level rise, extreme weather conditions, and flooding. Exh. EFSB-G-7. This was confirmed in this proceeding by the Company's use of the RMAT tool for both Substation Expansions. Exh. EFSB-G-12. For both Substation Expansions, the Company has designed appropriate stormwater management systems to ensure the minimization of impacts from stormwater flooding in order to mitigate any high-water conditions from extreme precipitation. *Id.* To manage the impacts from extreme heat, Eversource has specified equipment for both Substation Expansions that has maximum operating temperature of +40° C (104° F) at full load. *Id.*

B. The Project Has Been Designed to Avoid, Minimize or Mitigate Environmental Impacts and Negative Health Impacts to the Extent Practicable.

The Petition provides a complete description of the potential for environmental impacts and the measures the Company will take to avoid, minimize or mitigate them. Exh. EV-1, at 38-50. In short, there will be no air, wetland or water supply impacts at either Substation resulting from the Project. *Id.* There are no Areas of Critical Concern or archeological resources within the vicinity of either Substation Site and neither Substation Site is in a floodplain. *Id.* Operation of the

expanded Substations will meet all state and local noise policies and guidelines, and the Company will offer off-site visual mitigation to nearby property owners whose view has materially changed as a result of the Project. Id. Construction impacts will be minimal and mitigated to the extent practicable. Exh. EV-1, at 35-38; Tr. 1, at 71. The Project also will not result in any negative or adverse health impacts. As the Petition and the Company's responses to information requests demonstrate, there will be no air or water quality impacts, and the Substation Expansions will not result in increased exposure to EMF. EV-1, at 38-50; Tr. 1, at 20.

C. The Project Complies with Energy, Environmental, Land Use, Labor, Economic Justice, Environmental Justice and Equity and Public Health and Safety Policies of the Commonwealth, Its Subdivisions and Its Municipalities.

Regarding energy policies, the Project is consistent with the Department's approval of the Plymouth Group CIP, and the Petition demonstrates the need for the Project to ensure interconnection of DER. Exh. EV-1, at 14-31.

Regarding environmental policies, the Petition demonstrates the Project's compliance with all applicable state and local environmental statutes, regulations and policies. Exh. EV-1, at 38-50; Tr. 1, at 24-25. Regarding the West Pond Substation Expansion, there are no habitat of any species of concern within at least a quarter mile of the Substation, there are no wetlands or waterways close enough to the Substation to have any effect on those waterways and if there was an inadvertent release of fluid from any piece of equipment, the Company will have extensive spill containment in place to minimize any impacts to the waterways. Tr. 1, at 24. Regarding Tremont Substation, the expansion will be into an existing parking area so the Project will convert impervious surface to less-impervious surface. Tr. 1, at 25. While there are wetlands within a few hundred feet of the Substation Site, the Project is not within Conservation Commission jurisdiction under the Wetlands Protection Act. Id. As at West Pond Substation, any inadvertent release will

be caught by secondary containment. Id. The Company will implement its erosion and sedimentation control plan as part of the construction of the Tremont Substation Expansion. Id.

Regarding land use policies, the Substation Expansions are consistent with the Company's current use of the Substation Sites. The Project will not have an adverse effect on land use in the vicinity of the Substations. Exh. EV-1, at 38-39, 46-47, 52-69.

Regarding labor policies, the Company will use in-house union labor to the extent practicable and will comply with all labor laws. Tr. 1, at 25. For activities that must be performed by outside labor, the Company's contracts will conform with all applicable labor laws. Id.

Regarding economic justice, the Project is consistent with notions of economic justice because it ensures the provision of reliable electric service to all customers throughout the Company's electric system (including here in the affected communities), without regard to economic status and in a non-discriminatory manner. Exh. EFSB-G-3; Tr. 1, at 26-27. The Company proposes new electric infrastructure where it is needed to reliability serve electric load on a non-discriminatory basis, thereby providing everyone with same opportunity to have electricity and participate in Commonwealth's clean energy goals. Tr. 1, at 26-27.

Regarding environmental justice and equity, the West Pond Substation Expansion is not within an EJ population. The Tremont Substation is in an Environmental Justice community based on income. Exh. EV-1, at 8. The purpose of the expansion projects at West Pond Substation and Tremont Substation are to interconnect new renewable energy resources, create future capacity to accommodate electrification, and improve reliability of the regional transmission grid. By completing this work, the Company is contributing to the provision of a clean and healthy environment for all people in the Commonwealth. Additionally, Eversource's outreach efforts are focused on meaningful involvement of all stakeholders in the Project. Efforts to meaningfully

involve stakeholders are characterized by Eversource's focus on outreach that enables two-way communication and collaboration with stakeholders. Exh. EFSB-G-3. The Company has established feedback channels, gone door-to-door to discuss the Project with nearby residents, mailed notifications to property owners within a quarter mile of each site, and held in-person community meetings to share information and solicit feedback. Id. It used feedback received in those forums to guide future outreach efforts and to address individual concerns and impacts. Id. For example, the Company tailored its open houses based on comments from residents during the initial outreach where Wareham residents had shared concerns about billing and affordability. Id.

Regarding public safety, the Substation Expansions will be constructed in full compliance with the NESC, good utility practice, and in accordance with the Company's specifications, BMPs, final engineering plans, and the conditions specified in permits and approvals obtained for the Substation Expansions. Exh. EV-1, at 35-38; Tr. 1, at 19. During construction, areas under construction that contain in-service equipment will be secured by the existing substation perimeter fence that meets or exceeds the requirements of the NESC and are accessible only with a qualified escort. Exh. EFSB-S-2; Tr. 1, at 21. During operation, the first line security device will be the Substation perimeter fences, which will meet or exceed NESC requirements. Exh. EFSB-S-2. Cyber security measures will include card readers on doors and access points, and firewalls on communication links. Id.; Tr. 1, at 21. The Company's ERP will apply to both Substation Expansions. Exhs. EFSB-S-3, EFSB-S-4. The Company maintains a system control center that will dispatch personnel and equipment to the scene of any unplanned event to coordinate first response actions. Id. The Company has provided extensive first responder training in all municipalities that host its substations. Id.

Regarding public health, the Company operates transmission facilities in every municipality in its service territory, in proximity to residential and nonresidential uses, and there have not been demonstrated public health impacts from these facilities. Tr. 1, at 20. There will be no air emissions associated with the operation of the Substation Expansions and all applicable sound policies will be met. Tr. 1, at 20. Finally, because of the nature of the equipment and the layout of the facility, the electric and magnetic fields at the Substations will be attenuated to background at the Substation fence lines and, accordingly, there will be no public health impacts from EMF exposure. Id.

D. The Project Will Be Constructed in a Manner that Avoids or Minimizes Costs.

The Company proactively designs its projects to achieve an appropriate balance of environmental impacts and cost. Exh. EV-1, at 3, 22, 30, 31, 35. All costs incurred in furtherance of the Project are subject to regulatory review to ensure that they are prudently incurred. Upgrade costs in the CIP filing were minimized to remain below the \$500/kW allowable threshold in the Plymouth Order at 25. The Plymouth Group Study identified a mutual upgrade package that permitted the elimination of a third transformer at Wareham Substation #714 and to transfer DG to Tremont #713 that reduced upgrade costs. Plymouth CIP costs ended up at \$224/kW. Id.

E. The Company Duly Considered the Findings and Recommendations of Local Governments.

To date, the Towns have not provided any recommendations about the Project. The Company will continue its outreach with both Towns as the Project progresses and will endeavor to consider any recommendations of Town officials.

F. The Company Duly Considered Advanced Conductors, Advanced Transmission Technologies, Grid Enhancement Technologies, Non-Wire or Non-Pipeline Alternatives and Other Alternatives to Avoid or Minimize Expenditures.

Regarding advanced conductors and transmission technologies, as part of the West Pond Substation Expansion, the Company is upgrading Line 132, a 115-kV line from the Brook Street Substation to West Pond Substation by replacing the existing conductor with a steel-supported conductor, which is considered an advanced conductor type. Tr. 1, at 16. The Project itself is prompted by the need to interconnect non-wires alternatives, such as DG facilities. See Order on Provisional System Planning Program, D.P.U. 20-75-B, at 2. While the upgrade to Line 132 is not part of Project, it is part of the Plymouth Group Upgrades and is necessary to support enablement of DG out of West Pond Substation. Tr. 1, at 16 (referencing an existing 115 kV line as not part of the Project).

The Group Study Report for the Plymouth Group identified that Volt/Var Optimization (“VVO”) was required for the West Pond Substation Expansion. Tr. 1, at 16. VVO is an advanced grid management strategy that simultaneously controls voltage levels and reactive power across an electrical distribution system to improve efficiency, reduce energy consumption, minimize power losses, and maintain customer voltages within allowable limits. Tr. 1, at 17. As discussed at the evidentiary hearing, Eversource plans to deploy VVO is authorized as part of its 2022-2025 Grid Modernization plan (D.P.U. 24-10). Id.; ESMP Order at 88.

In addition to the infrastructure upgrades required at West Pond and Tremont Substations to accommodate the DG interconnections, an expansion of the Company’s Distribution Energy Resource Management (“DERMS”) system will be required. Tr. 1, at 17. DERMS is a control room tool to manage, monitor, and dispatch DER based on real-time system conditions, and is a foundational platform capability intended to increase the efficiency and effectiveness of DER

integration and to enable the use of DER as a grid asset. Tr. 1, at 18. The Company plans to expand DERMS investments as part of its grid modernization plan. Id.; ESMP Order at 170, 177.

G. The Project Will Increase the Capacity of the System to Interconnect Large Electricity Customers, Electric Vehicle Supply Equipment, Clean Energy Generation, Clean Energy Storage or Other Clean Energy Generation Sources or Will Facilitate the Electrification of the Building and Transportation Sectors.

As a DER project, the Project inherently complies with this standard.

H. The Company Duly Considered any Cumulative Burdens on Host Communities and Efforts that Must Be Taken to Avoid or Minimize or, if Impacts Cannot Be Avoided or Minimized, Effort to Mitigate Such Burdens.

The Project will not result in any meaningful cumulative burdens on the two host communities and potential impacts have been avoided, minimized or mitigated to the extent practicable: (1) there will be no air, water quality or wetland impacts resulting from the Project; (2) there will be no change in power loads at the Substations and, accordingly, no increase in electric and magnetic fields resulting from the operation of the Substation Expansions; (3) the Substation Expansions are not within a mapped flood zone and there are no ACECs near the Substations; (4) archeological resources will not be impacted; (5) construction noise will comply with state and local standards; (6) the Company will work with municipal officials in both Plymouth and Wareham to minimize traffic impacts during construction; (7) the Substation Expansions are a continuation of the existing uses of the Substation Sites and the Company will work with abutters who experience a material adverse change to their viewshed as a result of the Project and, as appropriate, will develop a mitigation plan and will provide reasonable and feasible screening on the abutter's property; and (8) the Project will not be a burden on the Town's infrastructure (i.e., water, sewer, etc.). Exh. EV-1, at 38-50; Tr. 1, at 24-25.

Based on the above, the Company has demonstrated that the Project complies with the standards set forth in Section 69H.

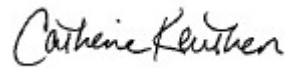
VI. CONCLUSION

For the foregoing reasons, Eversource respectfully requests that the Department grant the requested individual and comprehensive exemptions from the operation of the zoning bylaws of the Towns of Plymouth and Wareham pursuant to G.L. c. 40A, § 3.

Respectfully submitted,

**NSTAR ELECTRIC COMPANY d/b/a
EVERSOURCE ENERGY**

By its attorneys,



Catherine J. Keuthen, Esq.
Cheryl A. Blaine, Esq.
Keegan Werlin LLP
One Cranberry Hill, Suite 304 Lexington,
MA 02421
(617) 951-1400

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