

STATE OF NEW HAMPSHIRE

BEFORE THE PUBLIC UTILITIES COMMISSION

PETITION FOR EXEMPTION FROM TOWN OF BETHLEHEM
ZONING ORDINANCE, ART. II, PART D, UNDER RSA 674:30, III
DOCKET NO. DE 24-XXX

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
D/B/A EVERSOURCE ENERGY

DIRECT TESTIMONY OF
SAMUEL D. HARRIS

June 21, 2024

1 **I. INTRODUCTION**

2

3 **Q. Please state your name.**

4 A. My name is Samuel D. Harris.

5 **Q. Mr. Harris, please provide your title and business address.**

6 A. I am a Senior Project Manager with Transmission Construction Management for
7 Eversource Energy Service Company. My business address is 13 Legends Drive in
8 Hooksett, New Hampshire.

9 **Q. Mr. Harris, please describe your responsibilities at Eversource Energy.**

10 A. I perform activities required to manage project development for electric
11 transmission projects for Public Service Company of New Hampshire, d/b/a
12 Eversource Energy (“Eversource” or the “Company”), including presenting the
13 details of PSNH transmission projects to municipal bodies and regulatory agencies,
14 as well as to the ISO New England (“ISO-NE”) Planning Advisory Committee
15 (“PAC”).

1 **Q. Please describe your educational and professional background.**

2 A. I received an Associate of Science degree in Civil Engineering Technology from
3 Springfield Technical Community College in 2005 and a Bachelor of Science
4 degree in Architecture from Wentworth Institute of Technology in 2009. Prior to
5 joining Eversource, I was employed as a Project Manager with Henkels & McCoy
6 and Utility Line Management in California from 2010 to 2018. Since joining
7 Eversource, I have held positions as both Project Manager and Senior Project
8 Manager of Transmission Construction Management.

9

10 **Q. Have you previously testified before the Commission?**

11 A. No, I have not testified previously before the Commission.

12

13 **II. PURPOSE OF TESTIMONY**

14

15 **Q. What is the purpose of your testimony?**

16 A. The purpose of my testimony is to support the Company’s petition for the grant of
17 an exemption under RSA 674:30, III from the operation of the Bethlehem, New
18 Hampshire (“Town”) Zoning Ordinance, Article II, Part D, enacted under RSA
19 Chapter 674 (“Ordinance”). More specifically, Eversource is requesting that the
20 Ordinance’s forty (40) foot height limitation applied to all buildings and structures
21 within the Town be waived in regard to Eversource’s need to perform an asset
22 condition maintenance project on its 115,000 volt (115 kilovolts or “115kV”) X178
23 and U199 Lines (“Lines”) occupying existing Rights-of-Way within the Town. I
24 will review the background of that reliability-based transmission project and how it
25 meets the applicable standards for finding that it is reasonably necessary for the
26 convenience or welfare of the public, based on standards that may be relevant to the
27 Commission, and therefore is entitled to be granted an exemption from the
28 Ordinance under RSA 674:30, III.

29 **Q. Please provide a list of attachments to your testimony.**

30 A. SDH-1 Bethlehem Planning Board Minutes May 22, 2024 Meeting

31 SDH-2 Eversource’s Presentation to Bethlehem Planning Board

32 **III. PROJECT DESCRIPTION AND BACKGROUND**

1 **Q. Please describe the Company’s planned upgrade project involving the Lines.**

2 A. For background, the portion of the X178 Line within the Town was constructed in
3 the early 1950s and reconstructed in 1969, comprising 95 wood H-Frame structures,
4 occupying a 265-foot-wide electric transmission Right-of-Way through
5 substantially the entirety of its 7.34 mile long footprint in Bethlehem. The portion
6 of the U199 Line within the Town (0.39 mile long) was constructed in 1971,
7 comprising 5 wood H-Frame structures occupying a separate existing 150-foot-wide
8 electric transmission Right-of-Way. Eversource plans to replace the 100 existing
9 wooden H-frame structures on the X178 and U199 Lines with 99 weathering steel
10 equivalent H-frame structures. In conjunction with the structure replacements,
11 Eversource also plans to replace the existing aging conductors with new conductors
12 and replace the shield wire with Optical Ground Wire (“OPGW”). The line rating
13 will remain at 115kV. All of the existing wood structures within the X178 and
14 U199 Lines’ Rights-of-Way in the Town exceed the 40-foot height restriction under
15 the Ordinance.

16
17 **Q. Why does Eversource need to replace the structures and upgrade the Lines?**

18 A. Eversource conducts a rigorous annual inspection program to monitor the status of
19 its transmission infrastructure, and recent physical inspections and engineering
20 analysis of the Lines revealed that many of the existing wooden structures are in
21 need of replacement due to their age, woodpecker damage, insect damage, and pole
22 rot. Other factors which supported performing a full rebuild instead of selective
23 structure replacement include the interest in minimizing scheduled outages for
24 maintenance work, specialized resource limitations and achieving efficient
25 deployment of resources in locations along much of the Lines’ Rights-of-way where
26 access is challenging owing to mountainous topography and certain remote
27 locations. Selective structure replacement of only the most degraded structures
28 would ultimately require repeated entry into the Rights-of-Way for additional
29 needed replacements, as the remaining structures’ inspection ratings decline, which
30 is more disruptive to the environment, abutters and host communities compared to a
31 full rebuild. In addition, pursuant to updates to the National Electrical Safety Code
32 (“NESC”) standards adopted since the Lines were originally constructed, all of the
33 replacement structures must increase in height to varying degrees over the heights

1 of the existing wooden structures to be in compliance with current safety clearance
2 criteria, and also are influenced, in part, to counteract uplift conditions, and
3 accommodate industry and Eversource best practices for transmission line design to
4 accommodate needs for vegetation maintenance and facility maintenance and repair
5 access. As a result, all of the replacement structure heights will exceed the 40-foot
6 height limitation under the Ordinance.

7

8 **Q. Please describe how the Ordinance applies to the planned replacement of the**
9 **structures and upgrades to the Lines.**

10 A. The Town's Ordinance at Article II, Part D, states: "No building or structure shall
11 be greater than forty (40) feet in height from the average finished grade." This
12 height limitation is not limited to only certain zoning districts and would apply to
13 the entirety of the X178 and U199 Lines' Rights-of-Way in the Town. The height
14 limitation has been included in the Ordinance since 1985. However, RSA 674:30, I
15 authorizes a municipal planning board, in pertinent part, to "waive any requirement
16 contained in an ordinance, code, or regulation for any unoccupied structure which is
17 less than 200 square feet in area, which is necessary for the furnishing of utility
18 service for the public health, safety, or general welfare, and for which the utility's
19 siting options are limited by virtue of said structure being a physically integrated
20 component of the utility's transmission or distribution apparatus."

21

22 **Q. Did the Company request a waiver from the Town Planning Board of the 40-**
23 **foot height limitation under the Ordinance in connection with the planned**
24 **replacement of the structures and upgrade of the Lines.**

25 A. Yes. On May 22, 2024, at a duly noticed public hearing before the Bethlehem
26 Planning Board, Eversource presented an application for a waiver of the
27 Ordinance's 40-foot height limitation for the X178 and U199 projects within the
28 Town. Minutes of that public hearing are included as Attachment SDH-1. At that
29 meeting, the Company explained in detail the need and justification for the structure
30 height increases, including case studies of the factors accounting for structure
31 height increases in two locations that were experiencing among the greatest height
32 increases, as well as an overview of the extensive public outreach undertaken by
33 Eversource in the year preceding the public hearing. A copy of Eversource's
34 presentation to the Town Planning Board is included as Attachment SDH-2.

1 Questions from the Planning Board and members of the public were answered by
2 Eversource's team, which consisted of representatives from Engineering, Project
3 Management, Project Services, Community Relations, and Legal. Eversource
4 specifically addressed the RSA 670:30, I waiver criteria, demonstrating that the
5 structures are an essential part of the New Hampshire transmission system which
6 ultimately serves Town residents, as well as electric customers statewide and
7 regionally, and, as such are necessary for the public health, safety, and general
8 welfare. The Lines' continued reliability of service requires periodic replacement,
9 typical of all transmission lines and especially lines such as these with 50+ year old
10 wood structures that have been identified as in need of replacement. Each existing
11 and replacement structure is an unoccupied structure whose footings occupy
12 considerably less than the 200 square feet in area limit required by the waiver
13 statute (footings measure 4 feet by 4 feet and replacement structures have either 2
14 footings in the case of H-Frames or 3 footings in the case of dead-end structures);
15 and the Lines are physically integrated and constrained components of Eversource's
16 transmission system that are restricted to the Rights-of-Way which have existed
17 since 1969 and 1971, respectively, and for which Eversource's siting options are
18 limited.

19
20 **Q. Did the Town Planning Board grant the waiver requested by the Company?**

21 A. No. Upon closing the public hearing on May 22nd, the Planning Board chair made a
22 motion to deny the waiver applied for by Eversource. There was no discussion
23 among the Planning Board as to the applicability of the statutory waiver criteria or a
24 review of the X178 or U199 projects' scope or detailed justification. The Planning
25 Board moved to a vote to deny the requested waiver, which was approved with 5 in
26 favor of the denial and 1 opposed. See Attachment SDH-1, Page 3.

27
28 **Q. Do the projects require approval from the New Hampshire Site Evaluation
29 Committee ("SEC")?**

30 A. No. Eversource does not need to receive approval from the New Hampshire SEC
31 under RSA 162-H in order to complete the planned maintenance of rebuilding the
32 two Lines. The Company acknowledges that the towns of Easton and Bethlehem
33 have filed a petition requesting that the SEC take jurisdiction over the X178 Line
34 project. However, the Company disagrees with those petitioners' arguments that

1 the projects amount to sizeable changes or additions and will be filing an objection
2 to their petition. The Company meanwhile continues to seek needed local, State
3 and federal permits and approvals for this work, including requests for zoning
4 relief, as in this particular circumstance in Bethlehem, to maintain the project
5 schedule and preserve the outages that have been scheduled through ISO-NE and
6 the equipment and labor resources which have been coordinated, to ensure the
7 timely and efficient completion of the projects.

8

9 **IV. STANDARDS FOR RSA 674:30, III EXEMPTION**

10 **Q. Please explain the basis for granting the Company an exemption from the 40-**
11 **foot height limitation included in the Ordinance under RSA 674:30, III.**

12 A. It is my understanding that RSA 674:30, III authorizes the Commission to grant
13 exemptions from municipal land use denials for public utility property if it is found
14 that “the present or proposed situation of the structure in question is reasonably
15 necessary for the convenience or welfare of the public . . .” I also understand that
16 the policy basis for the Commission’s exemption authority is “ensure that a variety
17 of conflicting local interests will not impede services provided by public utilities to
18 consumers, particularly in other municipalities, to the detriment of the best interests
19 of the public as a whole.” And I understand that the Commission may consider a
20 number of factors in making a decision regarding a particular exemption request,
21 including: (1) locus suitability; (2) physical character of the uses in the
22 neighborhood; (3) proximity of the site to residential development; (4) effect on
23 abutters; (5) relative advantages and disadvantages to the public convenience; (6)
24 whether other, equally serviceable sites are reasonably available; and (7) whether
25 injury to abutters can be minimized by physical requirements.

26

27 **Q. How does Eversource’s planned replacement of transmission support**
28 **structures and upgrades of the Lines meet the standards you have referenced?**

29 A. Locus Suitability: The portion of the X178 Line within the Town of Bethlehem was
30 constructed in 1969, comprising 95 wood H-Frame structures, occupying an
31 existing electric transmission Right-of-Way. The portion of the U199 Line within
32 the Town of Bethlehem was constructed in 1971, comprising 5 wood H-Frame
33 structures occupying an existing electric transmission Right-of-Way. All of the

1 existing wood structures within the X178 and U199 Lines' Rights-of-Way in the
2 Town of Bethlehem exceed the Ordinance's 40-foot height restriction. As such,
3 there is long-standing precedent for and expectation among the public for
4 transmission structures at these locuses which exceed the 40-foot height limitation.
5 Physical character of the uses in the neighborhood. The land through which the
6 X178 and U199 Rights-of-Way pass within the Town of Bethlehem are
7 substantially comprised of sparsely populated unimproved woodland and
8 wilderness areas which have supported electric transmission use that is non-
9 conforming in respect to the 40-foot height limitation since 1969 and 1971,
10 respectively for the projects. Although structure heights are increasing as a result of
11 the projects, those increases have been minimized as much as practical while
12 complying with the NESC clearance requirements and should not affect the
13 physical character of the lands abutting those Rights-of-Way. Moreover, the
14 Projects are permitted through New Hampshire Department of Environmental
15 Services' Wetlands and Alteration of Terrain Programs, and as such, shall be
16 subject to conditions and best management practices which minimize and mitigate
17 impacts to natural resources and, therefore, by extension, minimize impacts to the
18 physical character of surrounding property.

19 Proximity of the site to residential development. Much of the land through which
20 the X178 and U199 Rights-of-Way pass within the Town is substantially comprised
21 of sparsely populated unimproved woodland and wilderness areas. The closest
22 residential abutters to the X178 and U199 Rights-of-Way are located in the vicinity
23 of: Profile Road/Route 18 (X178 Line ROW - nearest residence 180 feet from
24 existing structure 423), Rocks Edge Road (X178 Line ROW - nearest residence
25 210 feet from existing structure 453), Route 302 (X178 Line ROW - nearest
26 residence 90 feet from existing structure 456), Stoney Acres Drive (X178 Line
27 ROW - nearest residence 380 feet from existing structure 466), Millers Run (X178
28 Line ROW - nearest residence 150 feet from existing structure 455), and Briar Hill
29 Road (X178 Line ROW - nearest residence 190 feet from existing structure 511).
30 Additional detail on proximity to residences in correlation to structure height
31 increases is included in the presentation to the Bethlehem Planning Board, included
32 here as Attachment B, at Appendix A to said presentation.

33 Effect on abutters. Effects on abutters will be minimal because the Lines have
34 existed in their current locations within the existing transmission Rights-of-Way for

1 many decades. Except for the period of project construction, there will be no
2 increase in the amount of traffic or activity within those Rights-of-Way from what
3 abutters have historically experienced with less routine maintenance including
4 inspections of aging infrastructure and fewer unplanned emergency replacements.
5 Relative advantages and disadvantages to the public convenience. The public
6 necessity for a resilient and functional electric transmission system substantially
7 outweighs any potential impact occasioned by the required increased structure
8 heights.

9 Whether other, equally serviceable sites are reasonably available. No other options
10 for these two high voltage transmission lines exist, given that they are physically
11 integrated components of the electric transmission system serving New Hampshire
12 and are occupying Rights-of-Way which have existed since the 1969 and 1971,
13 respectively. Equally serviceable sites are not reasonably available given the
14 complexity – if not impossibility – of siting new transmission Rights-of-Way in the
15 current regulatory environment and the challenges of acquiring the requisite
16 extensive property rights.

17 Whether injury to abutters can be minimized by physical requirements. The
18 projects have been designed to minimize structure height increases to the greatest
19 extent practicable, balancing abutters’ aesthetic considerations with public policy
20 interests in utilizing current conductor and OPGW technology to meet load
21 demands, improve system resiliency and enhance restoration, while satisfying
22 current NESC clearance requirements. Even if those factors were not taken into
23 account, and the Lines were rebuilt using the same materials and outdated
24 technology, the existing structures exceed the Ordinance’s height limitation and
25 could not be replaced without an exemption granted under RSA 674:30, III.

26 **V. CONCLUSION**

27 **Q. Does the Company believe that the planned transmission projects described in**
28 **the petition and in your testimony meet the standards for the Commission to**
29 **grant an exemption under RSA 674:30, III?**

30 **A.** Yes. In light of the foregoing, the Company believes the Commission is warranted
31 in finding that the Lines replacement and upgrade project’s exceedance of the 40-
32 foot height limitation under the Ordinance is “reasonably necessary for the

1 convenience or welfare of the public,” taking into account the suitability of the
2 project location and local interests, and accordingly is entitled to be granted an
3 exemption from that provision of the Ordinance under RSA 674:30, III.

4

5 **Q. Does that complete your testimony?**

6 **A.** Yes, it does.