

STATE OF NEW HAMPSHIRE

Intra-Department Communication

DATE: January 19, 2023

AT (OFFICE): NH Dept. of Energy

FROM: Gary Raymond GMR
Utility Analyst IV – Division of Enforcement

SUBJECT: CRE 2023-001 Eversource Energy
Application for License to Construct and Maintain Electric Lines Over and
Across Public Waters in Concord, New Hampshire
Staff Recommendation

TO: Jared Chicoine, Commissioner, Department of Energy
Christopher Ellms, Jr., Deputy Commissioner, Department of Energy

CC: Thomas Frantz, Director of Regulatory Support Division
Paul Kasper, Director, Enforcement Division
Elizabeth Nixon, Director-Electric Regulatory Support Division
Andrew Harmon, Hearings Examiner, Enforcement Division

Review by the Division of Enforcement (DOE) of the above application consisted of the following elements:

- Application contents, replacement application contents, and history;
- Applicable State statutes;
- Review of the existing crossing(s) previously licensed by the PUC, if any;
- Review of land ownership of existing pole structures;
- Review of NESC code requirements as described in Puc 300;
- Review of public need and public impact, including applicability of other State regulations; and
- Conclusions and Recommendations.

1. Application contents and history.

On January 12, 2023, Public Service New Hampshire d/b/a Eversource Energy (Eversource, ES or the Company) filed an application for a license pursuant to RSA 371:17 to construct and maintain the Eversource C189 Line, an existing 115 kV transmission line, over and across public water in Concord, New Hampshire.

In order to meet the requirements for reasonable service to the public, Eversource is proposing a structure replacement project to replace existing wood structures with weathering steel

equivalents. The structures at the public water crossing will be renumbered; original Structures 79 through 87 will be renumbered to 22 through 30.

In 2017, two structures at the subject crossing, Structures 84 and 85 (new Structures 27 and 28), were replaced from wood to weathering steel without obtaining a license owing to an oversight.

The conductor cable clearance requirements pursuant to the National Electrical Safety Code (NESC) based on the design conditions at 285 deg F. have been met. This scenario was the governing condition which yielded the greatest sag and lowest clearance. Pursuant to NESC, the minimum clearance for a 115kV line is 30.1 feet for water areas suitable for sailboating including lakes, ponds, reservoirs, tidal waters, rivers, streams, and canals with an unobstructed surface area of 20 to 200 acres. The actual minimum heights over the public water are depicted in Exhibits 2 to 4 submitted by ES and exceed the respective minimum requirements. Staff verified the computed sags with SAG 10 commercial software using inputs as stated in the application.

Wire specifications and loading conditions to establish maximum sag for the crossing span that is the subject of this application are indicated on Profile View and Cable Schedule of Exhibits 2 to 4 submitted by ES. Per the requirements of the 2012 NESC (Table 232-1 note 18), the 10-year flood elevation should be used to determine the minimum height requirements. However, FEMA Flood Insurance Maps do not exist for Turtle Town Pond. A water elevation analysis determined that EL. 321' is a conservative flood elevation of Turtle Town Pond to establish safe clearance measurements. Turtle Town Pond EL. 321' was used in 2008 under DE 08-054 (order # 24,859) and will be utilized for the C189 Crossing over Turtle Town Pond.

The location of the public water crossing that is the subject of this application is depicted on the Overview Map attached hereto as Exhibit 1 submitted by ES, and the DOE Map attached to this recommendation.

The C189 Line crosses the public waters of Turtle Town Pond in the city of Concord between original structures 79 to 87 (new structure numbers 22 to 30), which span begins approximately 75 feet southeast from where the C189 Line crosses Appleton Street, which is approximately 4,200 feet west to the intersection of Appleton Street and Cemetery Street. The public water crossing extends northwest approximately 3,272 feet to the northwest side of Oak Hill Road and coincides with the edge of Turtle Town Pond based on the flood elevation (EL 321') used for establishing safe clearances. At this location, the C189 Line crosses Oak Hill Road approximately 950 feet southwest to the intersection of Oak Hill Road and Irving Drive.

The location of Structures 22 to 30 in this application creates a total span of 3,747.3 feet with a span of 3,102.5 feet crossing Turtle Town Pond.

The following table provides the summary of this application with the crossing to include structure numbers, types, spans, ES design criteria, and NESC compliance.

Department of Energy Enforcement Division Summary Table

Eversource C189 – Waterbody Crossing Details							
Existing Structure #	New Structure #	Structure Type	Span (Pole to Pole)	Span Distance (feet)	Minimum NESC Table 232-1 Clearance (ft.)	ES Vertical Design Clearance (ft.)	Complies with NESC Table 232-1 (Y/N)
79	22	Type ST-1 Steel CL-H9	22-23	542.3	30.1	42.1	Y
80	23	Type ST-1 Steel CL-H9	23-24	549.8	30.1	41	Y
81	24	Type ST-1 Steel CL-H9	24-25	420.9	30.1	46.4	Y
82	25	Type ST-1 Steel CL-H9	25-26	322.6	30.1	48.8	Y
83	26	Type ST-1 Steel CL-H9	26-27	456.8	30.1	40.9	Y
84	27	Type SRAX Steel CL-H3	27-28	478.3	30.1	39.3	Y
85	28	Type SRAX Steel CL-H3	28-29	455.3	30.1	41.7	Y
86	29	Type ST-1 Steel CL-H9	29-30	521.3	30.1	47.3	Y
87	30	Type ST-1 Steel CL-H9					

2. New Hampshire statute referenced in application (as modified by N.H. House Bill 1258 on August 22, 2022).

371:17 Licenses for New Poles – Whenever it is necessary, in order to meet the reasonable requirements of service to the public, that any public utility should construct a pipeline, cable, or conduit, or a line of poles or towers and wires and fixtures thereon, over, under or across any of the public waters of this state, or over, under or across any of the land owned by this state, modify a previously licensed installation, or license a previously constructed installation, it shall apply to the department of energy for a license to construct and maintain the same. For the purposes of this section, “public waters” are defined to be all ponds of more than 10 acres, tidewater bodies, and such streams or portions thereof as the department of energy may prescribe. Every corporation and individual desiring to cross any public water or land for any purpose herein defined shall apply to the department of energy for a license in the same manner prescribed for a public utility. The department of energy may condition any license issued under this paragraph in any manner necessary to assure that the license may be exercised without substantially affecting the public rights in public waters or state-owned lands. Using a non-adjudicative process, the department of energy may reject incomplete or improperly filed applications, and shall, also using non-adjudicative process, issue or deny the license within 90 days of receiving a complete application and all information subsequently requested of an applicant.

371:17 Licenses for New Poles (eff. Aug. 20, 2022)

3. Review of existing license(s) and permissions previously granted by the PUC for this location over and across public waters in Concord, New Hampshire.

The public water crossing at Turtle Town Pond (aka Turtle Pond) that is the subject of this application was previously licensed as the V-182 Line in 2008 under DE 08-064-22 (Order No. 24,859). The V182 Line was bifurcated in 2017, and the section of line with the subject crossing was renamed the C189 Line.

Turtle Town Pond is listed under the category “Ponds and Lakes” in the Official List of Public Waters (OLPW). The entire list of public waters can be accessed through the following web link:

<https://www.des.nh.gov/sites/g/files/ehbemt341/files/documents/olpw.pdf>

Eversource asserts that a New Hampshire Department of Environmental Services (NHDES) Statutory Permit by Notification (SPN), and a Shoreland Permit Notification (PBN) will be required for temporary impacts associated with the structure replacements described in this application and will be obtained prior to commencement of construction. A NHDES wetland permit (DES # 2016-00700) was obtained for the impacts associated with the prior replacement of Structures 84 and 85 (renumbered 27 and 28).

The U.S. Army Corps of Engineers (ACOE) does not regulate the subject portion of Turtle Town Pond as navigable waters. As a result, a crossing permit from ACOE is not required.

4. Review of land ownership of proposed pole structures.

In its application, Eversource specifies that the structure replacement work will be accomplished within existing right-of-way easements, thereby mitigating impacts and concerns of property owners affected by the project scope.

5. Review of NESC code requirements as described in Puc 300.

The Enforcement Division staff reviewed the specifications related to the structure replacements of this crossing project as described in the application, attachments, and all supplemental support documents and corrections filed by the Company and found them to be in conformance with N.H. Admin. Rule Puc 306 and applicable sections of NESC C2-2012.

6. Review of public need and public impact.

The C189 Line is an integral part of Eversource’s existing electric transmission system in New Hampshire. The crossing location identified in the application is in the city of Concord, New

Hampshire. The Company asserts in its application that the existing crossing will be exercised without substantially affecting public rights in the identified public water in New Hampshire.

The Enforcement Division staff verified that minimum safe line clearances above the public water will be maintained at all times and determined that public use and enjoyment of the public water will not be diminished in any material respect as a result of the proposed project.

7. Enforcement Division Recommendation:

Based on the results of its review of the application, attachments, and all other supporting documents, the Enforcement Division recommends that the Department:

- 1) Find that the license Eversource requests in this docket may be exercised without substantially affecting the public rights in public water; and
- 2) Grant Eversource a license to construct and maintain electric lines pursuant to RSA 371:17 and Puc 306.01, over and across public water in the city of Concord, New Hampshire as specified in the application.

Attachment:

Turtle Pond - CRE 2023-001 Eversource Crossing



Public Water as shown above in Map identified in the application and engineering drawings as State of New Hampshire and located in Concord. The project will require the Department to grant a license for the 115 kV transmission line from Structure 22 northwest to Structure 30. This crossing spans 3,747.3 feet with 3,102.5 feet crossing public waters of Turtle Town Pond.



Prepared by:
NH Department of Energy
Enforcement Division



1. This map contains imagery from https://nhgeodata.unh.edu/nhgeodata/services/ImageServices/NH_2015_1ft_RGB/ImageServer/WMServer?
 2. R.O.W. data obtained from <https://gis.concordnh.gov/arcgis/publicwebgis/>