

STATE OF NEW HAMPSHIRE

Intra-Department Communication

DATE: August 24, 2022

AT (OFFICE): NH Dept. of Energy

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

SUBJECT: CRE 2022-019 Eversource Energy
Petition for License to Construct and Maintain Electric Lines Over and Across
Public Water and State-Owned Land in Dover, 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 petition consisted of the following elements:

- Petition contents, replacement petition 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. Petition contents and history.

On July 27, 2022, Public Service New Hampshire d/b/a Eversource Energy (Eversource, ES or the Company) filed a petition for a license pursuant to RSA 371:17 to construct and maintain the Eversource R169 Line, an existing 115kV transmission line, over and across public water and State-owned land in Dover, New Hampshire.

On August 15, 2022, Eversource filed a replacement petition as requested by staff to account for clarification and amendments to the original petition.

On August 22, 2022, Eversource filed an updated replacement petition as requested by staff to account for clarification and amendments to the original petition.

The proposed project is to replace Structures 24, 25, 26 and 27 over and across State-owned land and the Cocheco River with weathering steel equivalents that will be located within 10' of the current structure locations. As part of its ongoing asset condition inspection program, Eversource has determined that the remaining wood structures that are part of this petition, Structures 20, 21, 22, 23 and 28 at the State-owned land and Cocheco River crossing spans, remain in good reliable condition and will not be changed or replaced. The three existing phase conductors, the static wire, and ADSS wire at the crossing spans, with the specifications and configuration shown on the Cable Schedules and Structure Details on Exhibits 2, 3, and 4 that are the subject of this petition, shall remain unchanged while performing the structure replacements.

The conductor cable clearance requirements were met using the National Electrical Safety Code (NESC) based on the design conditions at 32 deg F with ½" Ice for all crossings within this petition. This scenario was the governing condition, which yielded the greatest sag and lowest clearance. Only 15.5 feet clearance is required by the NESC Table 232-1 for other areas traversed by vehicles such as cultivated, grazing, forest and orchard lands, industrial sites, commercial sites, etc. Only 37.5 feet clearance is required by the NESC Table 232-1 for water areas suitable for sail boating including lakes, ponds, reservoirs, tidal waters, rivers, streams, and canals with an unobstructed surface area of over 2000 acres.

Wire specifications and loading condition to establish maximum sag for the crossing span that is the subject of this petition are as indicated on Profile View and Cable Schedule of Exhibits 2, 3, and 4 submitted by ES. The water clearances are taken from the projected 100-year flood levels. This is more conservative than the 10-year flood levels allowed by the NESC (note 18 to Table 232-1). The 100-year flood elevation for Cocheco River was derived from FEMA's National Flood Hazard Layer.

The locations of the State-owned land and public water crossings, which are the subject of this petition, are depicted on the Overview Map attached hereto as Exhibit 1 submitted by ES and DOE Maps 1 & 2 attached to this recommendation.

The R169 Line crosses State-owned land in the city of Dover between Structures 20 and 28, commencing along the northwest edge of McKone Lane where the R169 Line crosses McKone Lane. The crossing is located approximately 1,200 feet east from the intersection of McKone Lane and Henry Law Ave. The span continues northwesterly approximately 1,017 feet to a private driveway encompassed by Dover assessor Map K-1-A-0 where said private driveway bisects the State-owned land span. The State-owned land span resumes on the westerly side of the driveway and continues northwesterly approximately 2,101 feet to the southwest bank of the Cocheco River.

The R169 Line crosses the Cocheco River in the city of Dover between Structures 27 and 28, commencing along the southwestern bank of the Cocheco River, approximately 3,000 feet northwest from where the line crosses McKone Lane. The road crossing is approximately 1,200 feet east from the intersection of McKone Lane and Henry Law Ave. The span continues

northwesterly over the Cocheco River approximately 508 feet to an Eversource-owned property that fronts the Cocheco River to the east and is southwest of the residential neighborhood on Gerry's Lane.

The location of Structures 20 to 28, in this petition creates a total span of 4,017.4 feet with a span of 3,119.1 feet crossing State-owned land.

The location of Structures 27 and 28 creates a total span of 508.4 feet, with a span of 220 feet over and across the Cocheco River.

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

Department of Energy Enforcement Division Summary Table

Eversource R169 - State Land and Waterbody Crossing Details					
Structures	Type	Span Distance (feet)	Minimum NESC Table 232-1 Clearance (ft.)	ES Vertical Design Clearance (ft.)	Complies with NESC Table 232-1 (Y/N)
20-21	20 - 74.4' Wood WT-1 CL H3 21 - 68.5' Wood WT-1 CL H3	477.9	15.5	33	Y
21-22	21 - 68.5' Wood WT-1 CL H3 22 - 65.5' Wood WT-1 CL H3	289.1	15.5	25.5	Y
22-23	22 - 65.5' Wood WT-1 CL H3 23 - 75' Wood WT-1 CL H3	294.8	15.5	23.7	Y
23-24	23 - 75' Wood WT-1 CL H3 24 - 93.5' Steel ST-1 CL H9	640.7	15.5	33	Y
24-25	24 - 93.5' Steel ST-1 CL H9 25 - 93.5' Steel ST-1 CL H9	587.3	15.5	38.6	Y
25-26	25 - 93.5' Steel ST-1 CL H9 26 - 73' Steel ST-1 CL H9	558.6	15.5	18.4	Y
26-27	26 - 73' Steel ST-1 CL H9 27 - 79' Steel ADS-1 CL H3	660.6	15.5	20.4	Y
27-28 Water	27 - 79' Steel ADS-1 CL H3 28 - 120.2' Wood WA-1 CL H3	508.4	37.5	68.5	Y

2. New Hampshire statute referenced in petition (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 these locations over and across public water and State-owned land in Dover, New Hampshire.

The public water crossing at the Cocheco River that is included in this petition was originally constructed in 1953 and rebuilt in 2002. The public water crossing at the Cocheco River that is included in this petition was most recently licensed in 2001 under DE 01-233 (Order No. 23,860) in conjunction with a project to rebuild the line in 2002; in 2002 the premises comprising the State-owned land that is the subject of this petition was not in state ownership.

In Dover, from the Juncture of unnamed 3rd order stream in New Durham, the Cocheco River is listed under the category “Public Rivers and Streams” 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) wetland Statutory Permit by Notification (SPN) and Shoreland Permit by Notification (PBN) will be required for temporary impacts associated with the structure replacements and will be obtained prior to commencement of construction.

The U.S. Army Corps of Engineers (ACOE) does regulate the subject portion of the Merrimack River as navigable waters and the scope of work discussed in this petition at the subject public water crossing will be licensed via Self-Verification under the ACOE New Hampshire

Programmatic General Permit #4. Licensing will be accomplished prior to commencement of the maintenance project.

4. Review of land ownership of proposed pole structures.

In its petition, Eversource specifies that the new poles and conductors to be licensed pursuant to this petition, will be located across public waters and State-owned land in Dover, New Hampshire. The structure replacement work will be accomplished within existing Eversource 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 pole replacements of this crossing project as described in the petition, 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 R169 Line is an integral part of Eversource's existing electric transmission system in New Hampshire. The crossing locations identified in the petition are in the town of Dover, New Hampshire. The Company asserts in its petition that the existing crossings will be exercised without substantially affecting public rights in the identified State-owned land and public water.

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

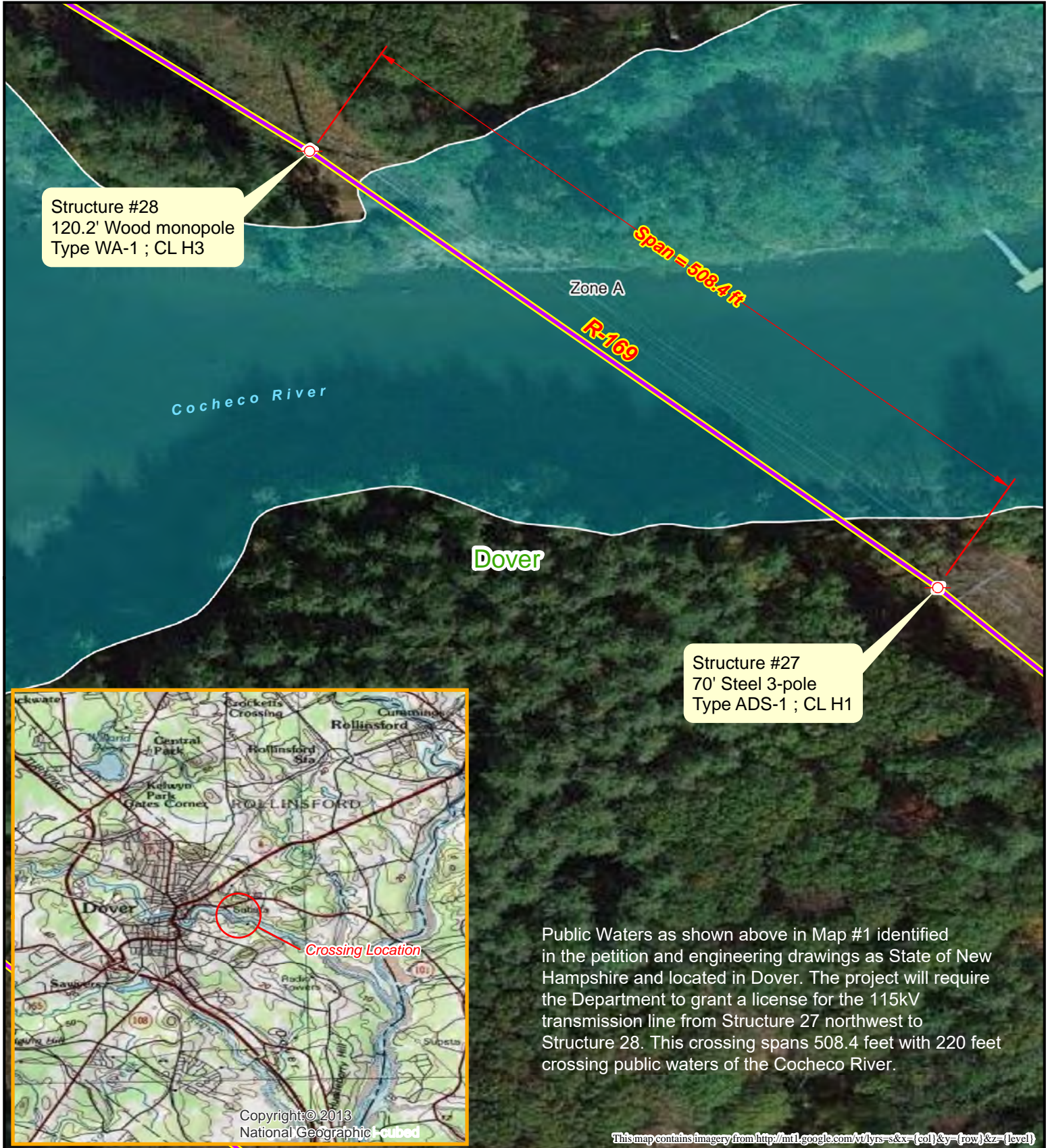
7. Enforcement Division Recommendation:

Based on the results of its review of the petition, 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 State-owned land and public waters; 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 waters and State-owned land in Dover, New Hampshire as specified in the petition.

Attachments:

Cocheco River - CRE 2022-019 Eversource Crossing - Map 1



Public Waters as shown above in Map #1 identified in the petition and engineering drawings as State of New Hampshire and located in Dover. The project will require the Department to grant a license for the 115kV transmission line from Structure 27 northwest to Structure 28. This crossing spans 508.4 feet with 220 feet crossing public waters of the Cocheco River.

	Utility Structure	Flood Hazard Zones
	115 kV Line	Regulatory Floodway
		1% Annual Chance Flood Hazard
		0.2% Annual Chance Flood Hazard



	Prepared by: NH Department of Energy Enforcement Division Safety Bureau

NH State Land (Dept of Fish & Game) - CRE 2022-019 Eversource Crossing - Map 2



Pole to Pole	Span	Length (ft)
#20 to #21	Span A	477.9
#21 to #22	Span B	289.1
#22 to #23	Span C	294.8
#23 to #24	Span D	640.7
#24 to #25	Span E	587.3
#25 to #26	Span F	558.6
#26 to #27	Span G	660.6
#27 to #28	Span H	508.4
Total Span #20 - #28		4,017.4

State Land Crossed = 3,119.1 ft



- Utility Structure
- State Land Parcel
- 34.5 kV Lines
- Town Parcel
- 115 kV Lines



Prepared by:
NH Department of Energy
Enforcement Division
Safety Bureau

This map contains imagery from <http://mt1.google.com/vt/lyrs=s&x={col}&y={row}&z={level}>