

# STATE OF NEW HAMPSHIRE

## Intra-Department Communication

**DATE:** September 10, 2021

**AT (OFFICE):** NH Dept. of Energy

**FROM:** Kenneth Walsh *KGW*  
Utility Analyst IV – Division of Enforcement

**SUBJECT:** Docket DE 21-122 Eversource Energy  
Petition for License to Construct and Maintain Electric Lines Over and Across  
State Owned Land in Exeter and Brentwood, New Hampshire  
Division of Enforcement, **Safety Bureau Recommendation**

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

**CC:** Thomas Frantz, Director of Regulatory Division  
Richard Chagnon, Regulatory Division  
Lynn Fabrizio, Division of Enforcement  
Randall Knepper, Division of Enforcement  
Paul Kasper, Division of Enforcement

The Division of Enforcement's review of the above petition consisted of the following elements:

- Petition contents and history;
- Applicable State statute;
- Review of the existing crossing(s) previously licensed by the PUC;
- 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 June 17, 2021, Public Service New Hampshire d/b/a Eversource Energy (Eversource, or the Company) filed a petition for a license pursuant to RSA 371:17 to construct and maintain the Eversource H141 Line, an existing three phase 115kV transmission line that crosses over two separate State land parcels owned by the New Hampshire Department of Transportation in Exeter and New Hampshire Fish and Game in Brentwood, respectively. The existing crossings over State land were not previously licensed for unknown reasons, including the possibility that the land may not have been owned by the State at the time of line construction.

This proposed project will replace (9) wood structures with weathered steel structures. The existing (3) conductors, (1) static wire, and (1) OPGW grounding and communications cable will be transferred to the new structures.

The existing (3) ACSR 336.4 26/7 kcmil conductors will be transferred to the new structures. The existing 7#8 Alumoweld static wire and 84-fiber OPGW cable will be transferred to the new structures and vertically attached above the conductors. Conductor cable clearances are based on National Electrical Safety Code (NESC) conditions at 285 degrees Fahrenheit for all crossings included in this petition. This governing scenario yielded the greatest sag and lowest clearance. A minimum 20.1 foot clearance is required by NESC Table 232-1 for areas traversed by vehicles, including cultivated, grazing, forest, and orchard lands, industrial sites, commercial sites, etc., such as the land at issue here. The Safety Bureau verified the computed sags with SAG 10 commercial software using inputs stated in the petition.

The scope of this project begins in Exeter at Structure # 175 where the H141 Line crosses Route 27/Epping Road approximately 1,500 feet from the entrance to Exeter High School. The H141 Line then extends southwest over State land to Structures #176 and 177. The H141 Line then continues southwest into Brentwood with the second State land crossing beginning at Structure #182 along the east side of Pine Road and ending at Structure #189.

The Exeter land crossing spans 906.2 feet between Structures #175 and #177 with 356 feet spanning State owned land. The Brentwood land crossing spans 3,719.2 feet between Structures #181 and #189 with 2,910.9 feet spanning State-owned land. See Department of Energy Maps 1 and 2, attached.

The following table provides a summary of this petition with all crossings, including structure numbers and types, spans, Eversource design criteria, and NESC compliance:

**Division of Enforcement Summary Table**

Eversource H141 Line- State Land Crossings						
Structure	Type	Span (Pole to Pole)	Distance (feet)	Minimum NESC Table 232-1 Clearance (ft.)	Eversource Vertical Design Clearance (ft.)	Complies with NESC Table 232-1 (Y/N)
175	41.8' steel 2 pole, T, CLH1	175-176	243.2	20.1	39.9	Y
176	46.3' steel 2 pole, T, CLH1					
177	46.3' steel 2 pole, T, CLH1	176-177	663	20.1	25.5	Y
181	36.7' wood 2 pole, A, CLH1	181-182	347.4	20.1	39.1	Y
182	37.3' steel 2 pole, T, CLH1					
183	42.3' steel 2 pole, T, CLH1	182-183	345.9	20.1	41.4	Y
184	42.3' steel 2 pole, T, CLH1	183-184	476.2	20.1	43.9	Y
185	38.6' steel 2 pole, T, CLH1	184-185	313	20.1	41.3	Y
186	42.3' steel 2 pole, T, CLH1	185-186	593.7	20.1	24.7	Y
187	42.3' steel 2 pole, T, CLH1	186-187	500.3	20.1	24.4	Y
188	46.1' steel 2 pole, T, CLH1	187-188	506.9	20.1	32.9	Y
189	38.6 steel 2 pole, T, CLH1	188-189	635.8	20.1	31.4	Y

**2. New Hampshire statute referenced in petition (as modified by N.H. House Bill 2 on June 3, 2021)**

RSA 371:17 Licenses for New Poles (2021, 91:260, eff. July 1, 2021)

**3. Review of existing license(s) and permissions previously granted by the PUC for the petition crossing locations over State owned land in Exeter and Brentwood**

The State owned land crossing spans in Exeter and Brentwood were not previously licensed. Eversource asserts that environmental impacts from this project will require permits from the NH Department of Environmental Services and that the Company will obtain these prior to commencing work.

**4. Review of land ownership of proposed pole structures**

In its petition, Eversource specifies that the structures and wires to be replaced pursuant to this petition cross state owned land in Exeter and Brentwood, New Hampshire.

**5. Review of NESC code and Puc 300 rule requirements**

The Safety Bureau reviewed the specifications related to the design and re-construction of this crossing project as described in the petition, the attachments, and all supplemental support documents, 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 H141 transmission line is an integral part of Eversource's electric transmission system in the Exeter-Brentwood area of 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 located in Exeter and Brentwood.

The Safety Bureau verified that minimum safe line clearances above the land will be maintained at all times, and determined that public use and enjoyment of the State owned land will not be diminished in any material respect as a result of the proposed overhead line crossings.

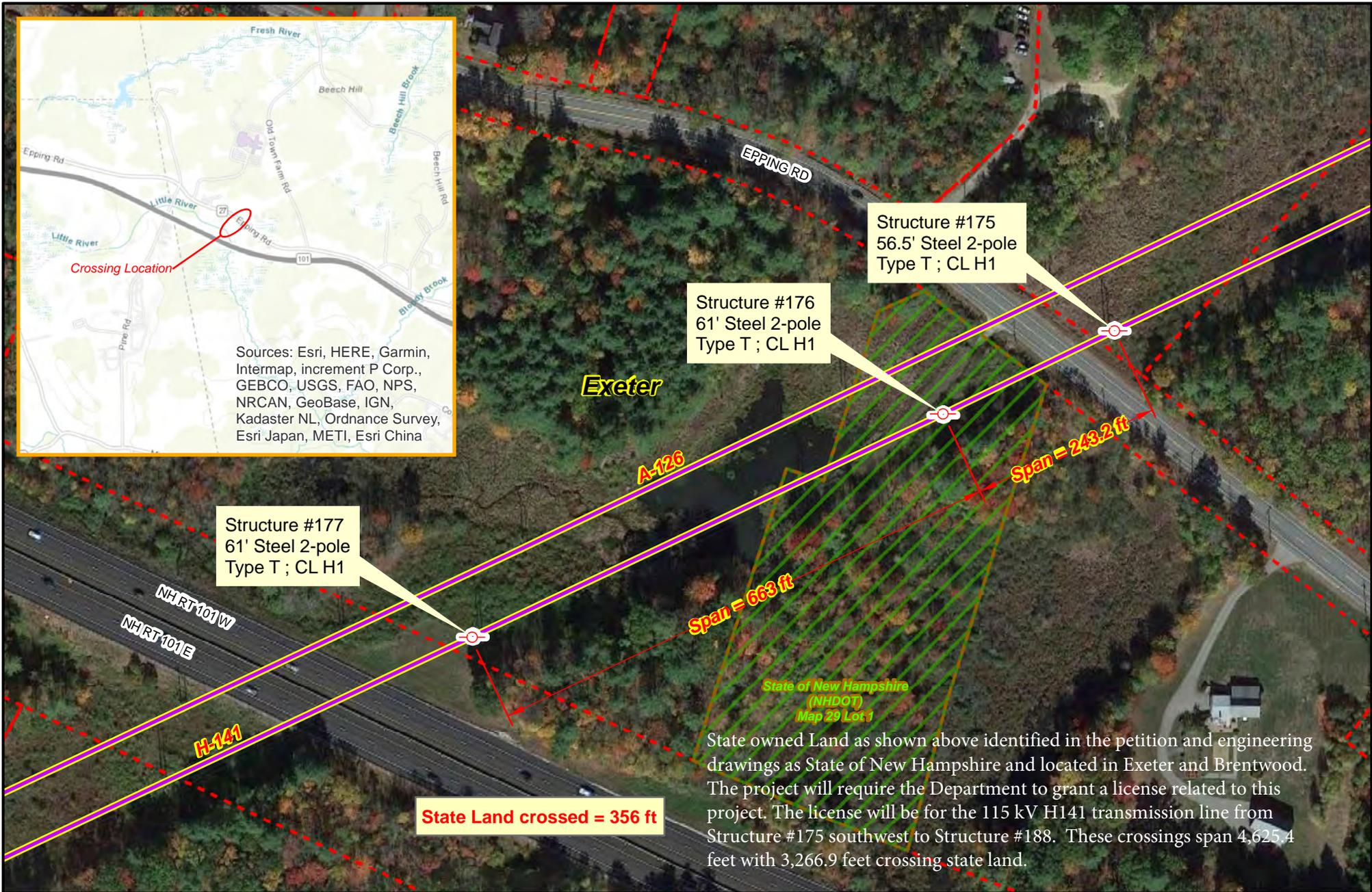
**Safety Bureau Recommendation:**

Based on the results of its review of the petition, its attachments, and all other supporting documents filed to this docket, the Safety Bureau recommends that the Department:

- 1) Find that the license Eversource requests in this docket may be exercised without substantially affecting public rights in State owned land; and
- 2) Grant Eversource a license to construct and maintain electric lines and optical ground wire cables over and across State owned land in Exeter and Brentwood, New Hampshire, as specified in the petition.

Attachments

# State Land (NHDOT) - DE 21-122 EVERSOURCE Crossing - Map 1



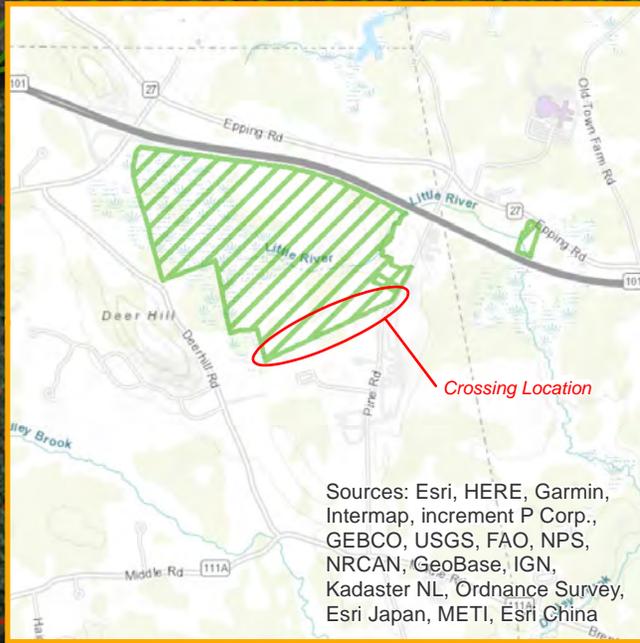
-  Utility Pole
-  State Land Parcel
-  115 kV Lines
-  Town Parcel



Prepared by:  
NH Department of Energy  
Enforcement Division - GIS Section



# State Land (Dept of Fish & Game) - DE 21-122 EVERSOURCE Crossing - Map 2



State of NH - Dept of Fish and Game - Pine Rd Site consists of:  
Map 203 Lot 36  
Map 205 Lot 9  
Map 205 Lot 8

State of NH - Dept of Fish and Game - Pine Rd Site  
Map 203 Lot 36

Structure #181  
44.7' Wood 2-pole  
Type A ; CL H1

Structure #182  
43.3' Steel 2-pole  
Type T ; CL H1

Structure #183  
54.6' Steel 2-pole  
Type T ; CL H1

Structure #184  
54.6' Steel 2-pole  
Type T ; CL H1

Structure #185  
50.8' Steel 2-pole  
Type T ; CL H1

Structure #186  
54.6' Steel 2-pole  
Type T ; CL H1

Structure #187  
54.6' Steel 2-pole  
Type T ; CL H1

Structure #188  
58.3' Steel 2-pole  
Type T ; CL H1

Structure #189  
50.8' Steel 2-pole  
Type T ; CL H1

State Land crossed = 2,910.9 ft

Structures	Span (in feet)
181 to 182	347.4
182 to 183	345.9
183 to 184	476.2
184 to 185	313.0
185 to 186	593.7
186 to 187	500.3
187 to 188	506.9
188 to 189	635.8
<b>Total Span</b>	<b>3,719.2</b>

Utility Pole   
 State Land Parcel  
 115 kV Lines   
 Town Parcel



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