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

- Petition contents, resubmitted 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 May 28, 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 D121 Line, which is an existing three phase 115kV transmission line that crosses State land in Hooksett owned by the New Hampshire Department of Transportation in Manchester and public waters in Manchester.

On August 26, 2021, Eversource filed a corrected petition accounting for new survey information to validate property ownership.
On September 15, 2021, Eversource filed a second replacement petition to account for a minor error on a footnote reference.

The existing crossings over State land and public water was not previously licensed for unknown reasons, according to the petition.

This proposed project is to replace (1) existing pole-top shield wire with OPGW communications wire along with adding (1) OPGW communications wire. The (3) existing transmission conductors and (1) existing ADSS communications wire will remain unchanged. With the exception of Structure #127, which was replaced from wood to weathered steel in 2017 without a license, all structures will remain unchanged.

Common to all these noted structures, existing conductors consist of (3) ACSR 795 36/1 kcmil conductors. One existing shield wire will be replaced with (1) 48 fiber optical ground wire (OPGW) and (1) new 144 fiber OPGW will be added with both being vertically attached above the conductors. The existing ADSS communications wire between Structure #126 and #127 shall remain unchanged.

The conductor cable clearance requirements were met using the National Electrical Safety Code (NESC) based on the design conditions at 285 deg F. (392 deg F. for Black Brook crossing) for all crossings within this petition. This scenario was the governing condition, which yielded the greatest sag and lowest clearance. Only 16.1 feet clearance is required by the NESC Table 232-1 for spaces and ways subject to pedestrians or restricted traffic only. Only 18.6 feet clearance is required by the NESC Table 232-1 for water areas not suitable for sail boating. Staff verified the computed sags with SAG 10 commercial software using inputs as stated in the petition.

The scope of this project begins at Structure #81 in a largely undeveloped area between Interstate 293 and Hackett Hill Road in Hooksett, approximately 5,500 feet south from where the D121 Line crosses Hackett Hill Road. The D121 Line then heads in a southerly direction to Structure #93. The D121 Line continues southwest crossing Black Brook in Manchester between Structure #126 and #127, which is approximately 585 feet southwest from where the D121 Line crosses over Dunbarton Road.

The land crossing spans 2,713.8 feet between Structures #81 and #87 with 2,244.3 feet spanning State owned land. See Safety Map #1.

The land crossing spans 2,012.1 feet between Structures #88 and #93 with 1,674.9 feet spanning State owned land. See Safety Map #2.

The Black Brook crossing spans 557.2 feet between Structures #126 and #127 with 220.8 feet spanning public waters. See Safety Map #3.

The following table provides the summary of this petition with all crossings to include structure numbers, types, spans, ES design criteria, and NESC compliance:
## Dept. of Energy Safety Bureau Summary Table

### Eversource D121 Line - Waterbody & State Land Crossings

<table>
<thead>
<tr>
<th>Structure</th>
<th>Type</th>
<th>Span (Pole to Pole)</th>
<th>Distance (feet)</th>
<th>Minimum NESC Table 232-1 Clearance (ft.)</th>
<th>ES Vertical Design Clearance (ft.)</th>
<th>Complies with NESC Table 232-1 (Y/N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>81</td>
<td>45.4' wood 2 pole, A, CL3</td>
<td>81-82</td>
<td>476.8</td>
<td>16.1</td>
<td>23.3</td>
<td>Y</td>
</tr>
<tr>
<td>82</td>
<td>46.1' wood 2 pole, A, CL3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>83</td>
<td>45.0' wood 2 pole, A, CL3</td>
<td>82-83</td>
<td>502.8</td>
<td>16.1</td>
<td>19.3</td>
<td>Y</td>
</tr>
<tr>
<td>84</td>
<td>44.5' wood 2 pole, A, CL3</td>
<td>83-84</td>
<td>526.0</td>
<td>16.1</td>
<td>16.2</td>
<td>Y</td>
</tr>
<tr>
<td>85</td>
<td>45.0' wood 2 pole, A, CL3</td>
<td>84-85</td>
<td>396.3</td>
<td>16.1</td>
<td>20.1</td>
<td>Y</td>
</tr>
<tr>
<td>86</td>
<td>50.5' wood 2 pole, A, CL3</td>
<td>85-86</td>
<td>447.8</td>
<td>16.1</td>
<td>22.8</td>
<td>Y</td>
</tr>
<tr>
<td>87</td>
<td>45.5' wood 2 pole, A, CL3</td>
<td>86-87</td>
<td>364.1</td>
<td>16.1</td>
<td>41.3</td>
<td>Y</td>
</tr>
<tr>
<td>88</td>
<td>61.0' steel 2 pole, T, CLH1</td>
<td>88-89</td>
<td>273.5</td>
<td>16.1</td>
<td>33.6</td>
<td>Y</td>
</tr>
<tr>
<td>89</td>
<td>52' steel 2 pole, P, CLH1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>90</td>
<td>43.0' wood 2 pole, A, CL3</td>
<td>89-90</td>
<td>322.4</td>
<td>16.1</td>
<td>22.7</td>
<td>Y</td>
</tr>
<tr>
<td>91</td>
<td>50.5' wood 2 pole, A, CL3</td>
<td>90-91</td>
<td>410.5</td>
<td>16.1</td>
<td>22.6</td>
<td>Y</td>
</tr>
<tr>
<td>92</td>
<td>45.3' wood 2 pole, A, CL3</td>
<td>91-92</td>
<td>519.8</td>
<td>16.1</td>
<td>23.6</td>
<td>Y</td>
</tr>
<tr>
<td>93</td>
<td>45.7' wood 2 pole, A, CL3</td>
<td>92-93</td>
<td>485.9</td>
<td>16.1</td>
<td>20.7</td>
<td>Y</td>
</tr>
<tr>
<td>126</td>
<td>51.0' wood 2 pole, A, CL3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>127</td>
<td>56.5' steel 2 pole, SRC-3, CLH1</td>
<td>126-127</td>
<td>557.2</td>
<td>18.6</td>
<td>21.0</td>
<td>Y</td>
</tr>
</tbody>
</table>

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

3. **Review of existing license(s) and permissions previously granted by the PUC for these locations of the State owned land in Hooksett and public waters in Manchester.**

The State owned land crossing span in Hooksett and public water crossing span in Manchester was not previously licensed.

In Manchester, Black Brook from the juncture of Purgatory Brook in Goffstown 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:


Eversource asserts that environmental impacts from the broader scope of this project beyond the State-owned land and public water crossing that will require permits from the NH Department of Environmental Services and that the Company will obtain these before commencing work.

The U.S. Army Corps of Engineers does not regulate the subject portions of Black Brook as navigable waters.

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

In its petition, Eversource specifies that the previously replaced and unlicensed structure and wires to be replaced pursuant to this petition cross State owned land in Hooksett and public waters in Manchester, New Hampshire.

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

The Safety Bureau reviewed the specifications related to the design and re-construction 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 D121 transmission line is an integral part of Eversource’s existing electric transmission system in New Hampshire. The crossing locations identified in the petition are in Hooksett and Manchester. The Company asserts in its petition that the existing crossings will be exercised without substantially affecting public rights in the identified State land located in Hooksett and public waters in Manchester.

The Safety Bureau verified that minimum safe line clearances above the land and public waters will be maintained at all times, and determined that public use and enjoyment of the State
owned land and public waters 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, attachments, and all other supporting documents, the Safety Bureau 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, install, operate, and maintain electric lines and communication cables pursuant to RSA 371:17 and Puc 306.01, over and across State owned land in Hooksett and public waters in Manchester, New Hampshire, as specified in the petition.

Attachments
State owned Land as shown above in Map #1 identified in the petition and engineering drawings as State of New Hampshire and located in Hooksett. The project will require the Department to grant a license related to this project. The license will be for the 115 kV D121 transmission line from Structure #81 south to Structure #87. These crossings span 2,713.8 feet with 2,244.3 feet crossing state land.
State Land (NHDOT) - DE 21-111 Eversource Crossing - Map 2

Structure #88
61’ Steel 2-pole
Type T ; CL H1

Structure #89
52’ Steel 3-pole
Type P ; CL H1

Structure #90
43’ Wood 2-pole
Type A ; CL 3

Structure #91
50.5’ Wood 2-pole
Type A ; CL 3

Structure #92
45.3’ Wood 2-pole
Type A ; CL 3

Structure #93
45.7’ Wood 2-pole
Type A ; CL 3

State Land Crossed = 1,674.9 feet

State owned Land as shown above in Map #2 identified in the petition and engineering drawings as State of New Hampshire and located in Hooksett. The project will require the Department to grant a license related to this project. The license will be for the 115 kV D121 transmission line from Structure #88 southwest to Structure #93. These crossings span 2,012.1 feet with 1,674.9 feet crossing state land.
Public Waters as shown above in Map #3 identified in the petition and engineering drawings as State of New Hampshire and located in Manchester. The project will require the Department to grant a license related to this project. The license will be for the 115 kV D121 transmission line from Structure #126 southwest to Structure #127. This crossing spans 557.2 feet with 220.8 feet crossing public waters.