

STATE OF NEW HAMPSHIRE

Intra-Department Communication

Date: July 24, 2023

At (Office): NH Dept. of Energy

From: Bryan J. Flynn B J F
Compliance Officer IV – Enforcement Division

Subject: **CRE 2023-014** Unitil Energy Systems
Application for License to Construct and Maintain Electric Lines Over and
Across Public Water 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 of Enforcement Division
Elizabeth Nixon, Director of Electric Regulatory Support Division
Andrew Harmon, Hearings Examiner, Enforcement Division

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

- Application contents, revised application contents, and history;
- Applicable State statutes;
- Review of the existing crossing(s) previously licensed by the PUC, if any;
- Review of land ownership and 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
- Recommendations

1. Application Contents and History

On June 1, 2023, Unitil Energy Systems, Inc. (Unitil, UES), filed an application for a license pursuant to RSA 371:17 to construct and maintain a portion of the Unitil 38 Line. The UES 38 Line is an existing 34.5 kV distribution circuit located in the City of Concord, New Hampshire. The focus of said application is a single public-water crossing at the Merrimack River. Enforcement Division staff has reviewed the contents of the application, exhibits, and all submitted supporting documents.

In its application, Unitil attests that in order to meet the requirements for reasonable service to the public, it is necessary to install new steel structures on the east and west sides of the Merrimack River, spanning from Structures 26 to Structure 27. The existing wood three-pole structures are being replaced with steel H-frame equivalents to allow for the replacement of the existing 556 KCMIL wire with 795 KCMIL wire. The wire is being replaced due to age and condition. The new crossing will consist of two (2) OHSW (overhead shield wire), three (3) 795 AAC phase wires, and one (1) 795 AAC neutral wire. Unitil proposes these improvements with the intention of more efficient and economical maintenance and repairs, as well as improved reliability to the City of Concord area residents and businesses.

A USGS Locus map has been provided as Exhibit 1 by UES to indicate the location of the existing crossing. The proposed reconducted crossing of public water is located approximately 1,300 ft southeast of the US Route 202 and Route 4 bridge crossing, and approximately 1,290 feet northwest of Hazen Drive in Concord.

- The designed location of the replacement structures creates an 865-foot crossing span from Structure 26 to 27, with a 517-foot span crossing public water.

The following table provides a summary of pertinent details included in the application to include structure numbers, types, spans, minimum NESC clearance, design clearance at flood level, and NESC compliance:

Unitil Energy Systems 38 Line Merrimack River Crossing Span Design Details proposed CRE 2023-014						
Structure Number	Structure Type	Measured Span	Distance (Feet)	Minimum NESC Table 232-1 Clearance (Feet)	UES Design Clearance (Feet)	Complies with NESC Table 232-1
26	75' Steel H-frame Deadend	26-27	865	20.5	34.3	Y
27	60' Steel H-frame Deadend					

2. New Hampshire statute referenced in application (modified by NH House Bill 1258, 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.

3. Review of existing license(s) and permissions previously granted by the State of New Hampshire, including additional permitting requirements, for this crossing over public water in Concord, New Hampshire

The UES 38 Line public water crossing at the Merrimack River, which is the subject of the application, was previously licensed by the Public Utilities Commission (PUC) in 1972 under Docket # DE6154, Order # 10,497.

A New Hampshire Department of Environmental Services (NHDES) Wetlands Statutory Permit-By-Notification (SPN) and NHDES Shoreland Permit-By-Notification (PBN) will be required for temporary and permanent wetland and shoreland impacts associated with the reconductoring.

The U.S. Army Corps of Engineers (ACOE) regulates the referenced part of the Merrimack River as navigable waters. Replacement work discussed in the application which takes place at the referenced location is covered through a Self-Verification process under ACOE New Hampshire Programmatic General Permit #4, provided that there will be no decrease in existing clearances, which is the intent of the work, conveyed in the application.

As per the Comprehensive Shoreland Protection Act (RSA 483-B:4, XVI(c)), the jurisdictional section of the Merrimack River to be licensed in Concord is designated “from the confluence of the Winnepesaukee and Pemigewasset Rivers in Franklin to Garvin Falls in Bow”. The entire list of “Public Rivers and Streams” can be accessed through the following link:

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

Part 2, "Public Rivers and Streams" is a partial listing of this set of common law waters. The current list is primarily based on the listing of rivers that fall under the jurisdiction of the CSPA.

4. Review of land ownership at proposed pole structures

Proposed utility pole structures and replacement work will be located within the existing Utility right-of-way, thereby mitigating any impacts to any concerned property owners affected by the project scope. A list of abutters is provided by UES.

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

The reconducted crossing of the 38 Line over public water, shown on the attached Plan and Profile Drawings (exhibit 2), has been designed and will be constructed in accordance with the National Electrical Safety Code (NESC).

Unitil shall own, maintain, and operate the reconducted crossing in accordance with the NESC table 232-1, over waters suitable for sail boating with an unobstructed surface area less than 20 acres, at a height no less than 20.5 feet. The minimum height with respect to the FEMA 500-year flood level as well as the surface level is depicted on exhibit 2. This exceeds the 10-year level required by NESC.

The Enforcement Division reviewed the specifications regarding the replacement work and proposed structures and found them to be in conformance with N.H. Admin. Rule PUC 306. The minimum clearance requirements pursuant to NESC table 232.1 ground level, and the FEMA 10-year flood level have been met. The Enforcement Division verified the depicted sag clearances using Sag10 commercial software with the data inputs provided in the application. The wire specifications and loading condition used to establish maximum sag for the crossing span are as indicated on the profile view and cable schedule of exhibit 2, provided by UES.

6. Review of public need and public impact

The Unitil 38 Line is a distribution circuit providing electricity to the residents and businesses of the Concord area. Unitil asserts in the submitted application that the license to maintain and construct the public water crossing, if approved, shall be exercised without substantially affecting public rights regarding the identified public water in New Hampshire.

Enforcement Division staff verified that minimum safe clearances above public water will be maintained and therefore determines that public use and enjoyment of said water will not be diminished in any respect as a result of the proposed project.

7. Enforcement Division Recommendations

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 Unutil requests in the application may be exercised without substantially affecting the public rights in public water; and
2. Grant Unutil 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.







Map Attachment:

Merrimack River - CRE 2023-014 Unitil Crossing - Line 38

Map illustrates the Merrimack River crossing of the UES 38 Line in Concord, New Hampshire. The project requires a license to be granted by the Department of Energy for the portion of the 34.5kV line which spans 865 feet from Structure 26 east to Structure 27. As identified in the application and engineered drawings, 517 feet of the referenced span crosses over public waters.



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

	Utility Structure		Elev. Contour
	34.5 kV Line	Flood Hazard Zones  Regulatory Floodway  1% Annual Chance Flood Hazard  0.2% Annual Chance Flood Hazard	



Prepared by:
NH Department of Energy
Enforcement Division

