

BEFORE THE
NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION

DE 19-_____

PETITION OF VERMONT TRANSCO LLC FOR LICENSE TO CONSTRUCT AND MAINTAIN A FIBER OPTIC CABLE ACROSS THE CONNECTICUT RIVER AND SUGAR RIVER IN THE CITY OF CLAREMONT, NEW HAMPSHIRE.

Vermont Transco LLC, a Vermont limited liability company (“VT Transco” or “Petitioner”), acting by and through its attorneys at Downs Rachlin Martin PLLC, respectfully petitions the New Hampshire Public Utilities Commission (“Commission”) pursuant to RSA 371:17-a for a license to construct and maintain a new fiber optic cable over public waters owned by the State of New Hampshire, specifically sections of the Connecticut River and the Sugar River in Claremont, NH. In support of this Petition, VT Transco states as follows:

1. VT Transco operates the bulk transmission system through most of Vermont, serving the delivery needs of Vermont’s distribution utilities, including Green Mountain Power Corporation (“GMP”). VT Transco also serves some areas in New Hampshire, and interconnects with New England’s regional power grid.
2. VT Transco is engaged in ongoing efforts to install multiple lines of fiber optic cable throughout Vermont to allow for improved communication between electrical transmission and distribution facilities. These telecommunication facilities improve the reliability of the grid for VT Transco’s transmission needs as well as for Vermont distribution utilities. Telecommunication is critical in managing energy resources, due to the increasing dynamics of the electric energy grid, particularly as an increasing number of renewable generation facilities are brought on line in northern New England. The proposed fiber optic cable installation as described in this petition is a critical component of that work.

3. The proposed project involves the installation of an All-Dielectric Self-Supporting (“ADSS”) aerial communications fiber optic cable from VT Transco’s Ascutney Substation (located in Weathersfield, VT), along VT Transco’s existing K149 Transmission Line, to an existing Green Mountain Power Sub-Transmission Line (located in Claremont, NH), terminating on the western most K149 Line structure, adjacent to an existing Switching Structure operated by Eversource (also located in Claremont, NH) (as described further below, the “Project”).
4. In support of this Petition, VT Transco is providing the following exhibits: Exhibit 1 [Orthophoto]; Exhibit 2 [Easements and Original Drawings]; Exhibit 3 [OHW Profiles]; Exhibit 4 [National Flood Hazard Mapping]; Exhibit 5 [K149 CT River and Sugar River Crossing Summary]; and Exhibit 6 [Affidavit of William F. McNamara].
5. The Project will involve crossing the Connecticut River between Weathersfield, VT and Claremont, NH, as well as the Sugar River in Claremont, NH. A proposed plan showing the Project is attached as Exhibit 1. The existing K149 line is shown on Exhibit 1 in red and the existing GMP Sub-Transmission lines are shown in green. The new fiber optic cable will be installed on the existing K149 structures from the Ascutney Substation to structure 26. The existing K149 Transmission Line and the new fiber optic cable will continue to run parallel to the K174 transmission line, also shown on Exhibit 1 in black.
6. GMP’s Ascutney substation is located in Weathersfield, VT and interconnects VT Transco’s electric transmission network in central Vermont, as well as to certain GMP sub-transmission assets situated on the New Hampshire side of the Connecticut River such as the High Bridge Substation.
7. VT Transco’s ownership of the K149 Transmission Line along the route where the Project is proposed is by virtue of four separate easements granted to Vermont Electric Power

Company, Inc. (“VELCO”), and which were later transferred to VT Transco through a corporate reorganization in 2006. Copies of the easement deeds are attached as Exhibit 2.

8. The Project will not require VT Transco to install support structures in new locations: instead, the fiber cable will be attached to existing and weatherworn, to-be-replaced VT Transco structures at the locations shown as 11 through 26 on Exhibit 1.
9. The proposed river crossings will be entirely aerial, with the fiber optic cable strung below the existing conductors having a minimum clearance of 23.2’ above the ordinary high water level (“OHW”) over the Connecticut River and 42.2’ over the Sugar River. Exhibit 5.
10. The proposed fiber optic line will span the Connecticut River between VT Transco’s existing K149 transmission line Structures 14 and 15. Structure 14 is on the Vermont side of the Connecticut River and consists of a 105 foot double cross-braced structure. Structure 15 is on the New Hampshire side of the Connecticut River and consists today of a 100-foot tall double cross-braced structure. Exhibit 3.
11. Although Structure 15 does not require any additional improvements to support the proposed fiber optic line, it is scheduled to be replaced later this year as part of VT Transco’s normal upkeep cycle for aging, weather worn structures. The structure replacement work is currently scheduled to occur prior to the installation of the proposed fiber optic line. As such, the clearance and span references included with this notification reflect design conditions after the Structure 15 replacement.
12. The location of the pole structures creates a span of 1,650 feet over the Connecticut River.
13. The Ordinary High Water (“OHW”) elevation of the Connecticut River at this location is approximately 305’ above mean sea level (“AMSL”). Exhibits 3-5.
14. The existing transmission line at this location has a clearance of 33.1’ above OHW with a low sag elevation of 338.1’ AMSL. Exhibits 3-5.

15. The proposed fiber line will have a clearance of 23.2' with a proposed low sag elevation of 328.2'. Exhibits 3-5.
16. The proposed line will span the Sugar River between VT Transco existing Structures 19 and 20 in Claremont, New Hampshire. Exhibit 1. Structure 19 consists of a 70 foot high single cross-braced structure. Structure 20 on the opposite side of the Sugar River consists of an 80-foot double cross-braced structure. Again, these structures are already in use for the existing transmission line, as shown on Exhibit 3. Both structures were replaced in 2018 as part of condition-based replacement in VT Transco's maintenance schedule.
17. The location of the pole structures creates a 733' long span over the Sugar River.
18. The Ordinary High Water ("OHW") elevation of the Sugar River at this location is 305.5'. Exhibit 5.
19. The existing transmission line at this location has a clearance of 47.1' above OHW with a low sag of 352.6' AMSL. Exhibit 5.
20. The proposed fiber optic line will have a clearance of 42.2' with a proposed low sag of 347.7'. Exhibit 5.
21. The proposed Connecticut River crossing is within approximately five feet of federal clearance guidelines as outlined in 33 CFR 322.5(i)(3).
22. During periods when boating activity on the Connecticut River can reasonably be expected, clearances to the proposed fiber line will greatly exceed the federal guidelines. The clearance and low sag elevation noted in Exhibit 3 reflect the fiber line carrying a significant coating of ice, at an ambient temperature of 32 degrees Fahrenheit, during the infrequent occurrence of the OHW elevation being reached. The difference between the iced fiber line sag amount, and that which would be present during reasonable periods of expected boating-related river uses, is over 30 feet. This translates to a total clearance between the fiber line and river of

greater than 53 feet during reasonable active boating periods. VT Transco will construct, maintain, and operate the clearance of the wire crossing over the rivers at a height no less than is required by the 2017 National Electrical Safety Code, as confirmed by VT Transco's responsible officer. Exhibit 6.

23. The 100-year flood levels were established based on FEMA flood zone maps for both the Connecticut River and the Sugar River using the maps shown as Exhibit 4. The 100-year flood elevation for the Sugar River in the area of the line crossing is 319.9 feet. The low-sag of the proposed fiber optic cable is 347.7 which equates to a clearance of 27.8 feet.
24. Installation of the fiber optic cable will involve no dredging, nor use of other heavy equipment in either river. At no time will the flow of the rivers be diverted or altered for the project.
25. It is not anticipated that abutters on either side of the Connecticut River or the Sugar River will be affected, as the project involves a fiber optic cable being installed to run parallel to an existing high voltage line crossing for which VT Transco has easements.
26. The work is anticipated to commence in September 2019, and will be completed in a series of efforts over the course of several weeks. The actual schedule will be dependent on the weather and availability of work crews and material.
27. The actual installation of the fiber optic cable river crossing is anticipated to require two to three hours to run the cable, and approximately half a day to ensure that the cable sag is optimized. During the installation period, VT Transco will have line workers strategically placed along the route at specific points to monitor and prevent against low sag, including the river crossings. The work will be scheduled for a weekday to reduce the potential for high marine traffic, in the event a portion of the Connecticut River or Sugar River needs to be temporarily restricted. Apart from this potential brief period, the use and enjoyment by the

public of the Connecticut River and the Sugar River will not be diminished in any material respect as a result of the project.

28. Except for the installation period as described in Paragraph 27 above, the rights granted by the license sought in this petition can be exercised by VT Transco without affecting the rights of the public to use the waters of the Connecticut River and the Sugar River or the property of the State. Moreover, the use and enjoyment by the public of the rivers and the property of the State will not be diminished.
29. All of the property rights necessary to construct and maintain the fiber optic cable are consistent with rights already held by Petitioner. Exhibits 2, 6. Consequently, no taking of private property or other acquisition of rights is required for this purpose. No pole attachment license is needed for the river crossing with any New Hampshire utility.
30. In addition to this petition, VT Transco will be submitting a Section 10 Permit Application and Notification of Utility Work to the U.S. Army Corps of Engineers for The Project.
31. VT Transco has also contacted the New Hampshire Department of Environmental Services (“DES”) and the New Hampshire Division of Historic Resources (“DHR”) in 2018 regarding maintenance work on this line and ROW corridor. DES has confirmed that there are no rare, threatened or endangered species in the vicinity where the structures are located. Similarly, DHR confirmed that there are no identified archeology resources that would be affected by the work.
32. The Project, once completed, will allow for constant, accurate communication between substations and operational control centers, thereby increasing control of power flows within the VT Transco bulk transmission system, as well as ensuring optimal functioning of GMP’s sub-transmission and distribution system.

WHEREFORE, VT Transco respectfully requests that the Commission:

- A. Find that the proposed license for construction and maintenance of the fiber optic cable may be exercised without substantially affecting public rights in State waters;
- B. Grant VT Transco a license to cross the Connecticut River and the Sugar River in the locations and for the purposes described above;
- C. Issue an order *nisi* and orders for its publication; and
- D. Grant such other and further relief as the Commission may determine to be just and reasonable and consistent with the public interest.

Respectfully submitted,

VERMONT TRANSCO LLC

By its Attorneys,

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