

## DEPARTMENT OF THE ARMY PERMIT

Permittee Champlain VT, LLC d/b/a TDI New England

Permit No. NAE-2013-2689

Issuing Office New England District

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

### Project Description:

Place fill in and perform work within waters of the United States in conjunction with the construction of 154.2 miles of a new 1,000-MW, high-voltage direct current (DC) electric transmission line from the international U.S.-Canada border in Alburgh to the existing Coolidge Substation in Cavendish, Vermont. The transmission line will be a bipole line consisting of two transmission cables - one positively charged and the other negatively charged. Approximately 97.3 miles of the line will be installed underwater in Lake Champlain and about 56.9 miles will be installed underground within roadway and railroad right-of-ways (ROW). This work will temporarily impact about 5.93 acres of waters of the United States and permanently impact about 2.5 acres of waters of the United States.

### DESCRIPTION OF WORK CONTINUED ON PAGE 4.

### Project Location:

Lake Champlain, Otter Creek, Black River, various intermittent and perennial streams and adjacent wetlands in Alburgh, Benson, West Haven, Fair Haven, Castleton, Ira, West Rutland, Rutland, Clarendon, Shrewsbury, Wallingford, Mount Holly, and Ludlow, Vermont.

### Permit Conditions:

#### General Conditions:

1. The time limit for completing the work authorized ends on January 29, 2021. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

**Special Conditions:**

1. The permittee shall ensure that a copy of this permit is at the work site (and the project office) authorized by this permit whenever work is being performed, and that all personnel with operational control of the site ensure that all appropriate personnel performing work are fully aware of its terms and conditions. The entire permit shall be made a part of any and all contracts and sub-contracts for work that affects areas of Corps jurisdiction at the site of the work authorized by this permit. This shall be achieved by including the entire permit in the specifications for work. The term "entire permit" means this permit (including its drawings, plans, appendices and other attachments) and also includes permit modifications.

**(Special conditions continued on Page 4)**

**Further Information:**

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

☒ Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

☒ Section 404 of the Clean Water Act (33 U.S.C. 1344).

☐ Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1415).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

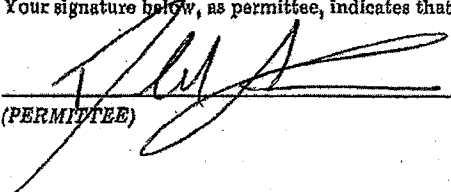
d. Design or construction deficiencies associated with the permitted work.

- e. Damage claims associated with any future modification, suspension, or revocation of this permit.
4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.
5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:
- a. You fail to comply with the terms and conditions of this permit.
  - b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).
  - c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 325.4 and 325.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

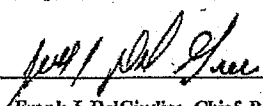
6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

  
(PERMITTEE)

Feb 5, 2016  
(DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

  
Frank J. DelGiudice, Chief, Permits & Enforcement Branch C  
For Christopher J. Barron  
Colonel, Corps of Engineers  
District Engineer

29 January 2016  
(DATE)

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

\_\_\_\_\_  
(TRANSFeree)

\_\_\_\_\_  
(DATE)

**(Description of Work continued from page 1)**

The construction of a new converter station in Ludlow, Vermont, which will convert the electric power from DC to alternating current (AC), will not impact waters of the United States. The proposed work involves the following:

**a. UNDERWATER CABLE INSTALLATION**

The proposed underwater Lake Champlain cable route will enter the lake about 0.5 mile south of the U.S.-Canada border in Alburgh, Vermont and will exit the lake in Benson, Vermont. The cables will be installed in the transition areas between aquatic and terrestrial portions of the project by using horizontal directional drilling (HDD). A sheet-pile cofferdam or receiver casing will be used in the lake at the transition point from HDD to plowing to facilitate construction and to minimize turbidity. In depths less than 150' (MWL) the two cables will be bundled and laid together in the same trench about 4 feet below the lake bottom using a jet plow or a shear plow. Debris on the lake bottom in this portion of the route will be cleared using various types of grapnels. Both plowing processes will be conducted using a specially designed cable barge and towed plow device that simultaneously lays and embeds the transmission cables in the trench. At the 21 locations where the transmission cables cross existing utility lines or bedrock, they will be laid over the existing utility line or bedrock with protective articulating concrete mats placed over the cable crossing. A total of approximately 108,560 sq. ft. (2.5 acres) of lake bottom will be impacted by the concrete mats. In depths greater than 150 feet the cables will be laid on the lake bottom without burial or protection and are expected to settle an average of 1 foot below the lake bottom.

**b. UNDERGROUND CABLE INSTALLATION**

With the exception of two privately owned parcels along the lake in Alburgh and Benson, the transmission line will be installed within existing town and state roadway and railroad ROWs. The overland segment consists of a 12' wide permanent project corridor centered on the transmission line alignment. The two cables will be installed side-by-side in a trench approximately 4' wide by 6' deep. Approximately 195,711 sq. ft. (4.5 acres) of wetlands and approximately 62,493 sq. ft. (1.43 acre) of stream bottom will be temporarily impacted by the trench, cofferdams, sidecast material and construction mats. Trenches in which the pipe will be installed will be backfilled with low thermal resistive backfill (when necessary) and indigenous material, with contours restored. The project will cross 147 perennial, intermittent and ephemeral streams. All temporary fills will be removed in their entirety upon project completion and disposed of at an upland, non-wetland location. Tree clearing within the work area will occur in about 84,758 sq. ft. (1.95 acre) of wetlands, with about 52,731 sq. ft. (1.21 acre) being allowed to grow back.

The purpose of the project is to deliver renewable power from Canada into Vermont and the markets operated by the New England Independent System Operator (ISO-NE).

This authorization is made in accordance with the attached plans, in 229 sheets, entitled "TDI-NE" (dated "March 31, 2015", revised "June 10, 2015" and "August 4, 2015"), and "New England Clean Power Link" (dated "09/19/14", last revised "3/30/15").

## **Special Conditions (continued from page 2)**

If the permit is issued after the construction specifications but before receipt of bids or quotes, the entire permit shall be included as an addendum to the specifications. If the permit is issued after receipt of bids or quotes, the entire permit shall be included in the contract or sub-contract as a change order. The term "entire permit" includes permit amendments. Although the permittee may assign various aspects of the work to different contractors or sub-contractors, all contractors and sub-contractors shall be obligated by contract to comply with all environmental protection provisions of the entire permit, and no contract or sub-contract shall require or allow unauthorized work in areas of Corps jurisdiction.

2. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.
3. In order to mitigate for the loss of aquatic habitat, the permittee shall make a payment of \$56,726.00 to the Ducks Unlimited – Vermont In-Lieu Fee (ILF) Program. Work shall not begin until you have received confirmation that the payment has been received. Checks must be payable to "Ducks Unlimited, Inc." and mailed to the attention of Michelle Burdick, Ducks Unlimited, 1220 Eisenhower Place, Ann Arbor, MI 48108. All checks must have the Corps permit number on the memo line. The ILF amount is only valid for a period of one year from the date on the authorization letter. After that time, the project would need to be reevaluated and a new amount determined.
4. The permittee shall complete and return the enclosed Compliance Certification Form within one month following the completion of the authorized work.
5. Adequate sedimentation and erosion control devices, such as geotextile silt fences or other devices capable of filtering the fines involved, shall be implemented and properly maintained to minimize impacts during construction. These devices must be removed upon completion of work and stabilization of disturbed areas. The sediment collected by these devices must also be removed and placed upland, in a manner that will prevent its later erosion and transport into a waterway or wetland.
6. No temporary fill (e.g., access roads, cofferdams) may be placed in waters or wetlands unless specifically authorized by this permit. When temporary fill is authorized in a wetland, it must be placed on geotextile fabric laid on existing wetland grade. The slope of all temporary fills must be stabilized to prevent erosion, through such means as placing weighted geotextile fabric on the slope. The temporary fill shall be completely removed upon completion of the project, and shall be placed upland in a manner that will prevent its later erosion and transport to a waterway or wetland. The temporary fill area shall be restored to its approximate original contours (but not higher).

**Special Conditions continued on Page 6**

### Special Conditions (continued from Page 5)

7. All excess material shall be disposed of at an upland, non-wetland site.
8. Only clean fill shall be used.
9. All contractors' equipment shall be cleaned so as to contain no observable soil or vegetation prior to work in wetlands and waterways to prevent the spread of invasive species. The terrestrial project area shall be monitored annually during early July for five years following construction completion for the following nuisance aquatic species: Common reed (*Phragmites australis*), Purple loosestrife (*Lythrum salicaria*), Smooth and Common buckthorns (*Frangula alnus*, *Rhamnus cathartica*), Russian and Autumn olives (*Elaeagnus angustifolia* and *E. umbellata*), and Multiflora rose (*Rosa multiflora*). Specimens that are determined to be present from project activities shall be hand-pulled and destroyed before being allowed to establish.
10. Except where stated otherwise, reports, drawings, correspondence and any other submittals required by this permit shall be marked with the words "Permit No. NAE-2013-2689" and shall be addressed to "Policy Analysis/Technical Support Branch (PATS), CENAE-R, U.S. Army Corps of Engineers, 696 Virginia Road, Concord, MA 01742-2751", with a complete copy furnished to: "U.S. Army Corps of Engineers, Vermont Project Office, 11 Lincoln Street, Room 210, Essex Junction, VT 05452". Documents which are not marked and addressed in this manner may not reach their intended destination and do not comply with the requirements of this permit.
11. The Stipulations of the attached Programmatic Agreement (PA) between the U.S. Department of Energy (DOE) and the Vermont State Historic Preservation Officer (VTSHPO) shall be complied with where waters of the U.S. are being impacted by the debris clearing, shear/jet plowing, cofferdams, trench, sidecast material and temporary mats, and the adjacent work in the upland that would not occur but for the work authorized in this permit.
12. There shall be no cutting of any identified potential roost trees for the Indiana bat (*Myotis sodalis*) in waters of the U.S. that are being impacted by the trench, sidecast material and temporary mats, and the adjacent work in the upland that would not occur but for the work authorized in this permit. Should cutting of identified roost trees be required to occur in these areas, the permittee shall conduct acoustic surveys in accordance with the U.S. Fish and Wildlife Service's (USFWS) 2015 Range-Wide Indiana Bat Summer Survey Guidelines (Survey Guidelines), and further consultation with the USFWS will occur.
13. There shall be no tree clearing for all other trees greater than 3" DBH between April 15 and August 31 of any year in waters of the U.S. that are being impacted by the trench, sidecast material and temporary mats, and the adjacent work in the upland that would not occur but for the work authorized in this permit. If clearing of potentially suitable habitat cannot occur during this time of year, acoustic presence/absence surveys in accordance with the Survey Guidelines shall be conducted, and further consultation with the USFWS will occur.

Special Conditions continued on Page 7.

## **Special Conditions (continued from Page 6)**

14. No later than one year prior to the commencement of in-water construction of the cable installation, the permittee shall provide to the Corps of Engineers, Vermont Project Office and the U.S. Coast Guard (USCG) Sector Northern New England (SECNNE), Waterways Management Division, 2 Monument Square, Suite 200, Portland, ME, 04101, a Navigation Risk Assessment (NRA) and Anchor Snag Manual (ASM) for comment and written approval. The USCG and Corps shall provide any comments on the NRA and ASM to the permittee within 45 days of receipt. The NRA shall include, but not be limited to:
- a. Records of consultation with the USCG SECNNE and Lake Champlain maritime industry representatives, including operators of ferries. This consultation shall cover the process to inform vessel operators of the transmission cable route, burial depths and location of protective barriers to prevent anchor fouling;
  - b. An overview of how the proposed project would impact the USCG's ability to execute its missions, as well as the project's impact on traditional users of the waterway, which include commercial ferry operations and recreational boaters; and
  - c. Identification of the risk of anchor snags based on data including the largest vessels known to transit along the power cable project route, sediment along the route and typical weather along the route.

The ASM shall identify appropriate protocols for addressing anchor snags, and the location of protective barriers to prevent anchor fouling.

Upon receipt of the final NRA and ASM to the Vermont Project Office and USCG, written approval shall be provide within thirty days.

15. The permittee shall coordinate all in-water construction activities within navigable waters with SECNNE.
16. At least thirty (30) days prior to the start of the project construction or in-water survey work, the permittee shall provide notification of this work to SECNNE and the USCG's First District for inclusion in the Local Notice to Mariner via [LNLM@uscg.mil](mailto:LNLM@uscg.mil) or faxed to (617) 223-8291. A copy of this notification shall be provided to the Vermont Project Office. This written notification shall include: company name, point of contact, phone number, and email addresses, type of work, waterway and location where the work will be done, latitude and longitude of the work area (degrees, minutes, thousandths of seconds), work start and stop dates and hours of operation, equipment on scene, passing arrangements/time to move vessels to not impede navigation, VHF radio channel monitored, disposal site (if used), and the National Oceanic and Atmospheric Administration (NOAA) chart numbers for the area.
17. Bi-weekly construction schedules shall be provided to the Vermont Project Office and USCG SECNNE (for work in Lake Champlain) starting at least one week prior to commencement of the work on the schedule and continue until the construction of the project is complete. These bi-weekly updates shall include the current status and any changes to the construction project.

**Special Conditions continued on Page 8.**



### **Special Conditions (continued from Page 7)**

18. If there is a need to move any federal channel marker buoys, SECNNE shall be contacted a minimum of thirty (30) days in advance of the date the buoys are needed to be moved. These buoys moves and temporary relocation positions shall be identified during the NRA process.
19. The project shall not be installed in a special anchorage area, or in a special anchorage area being proposed through the rulemaking process at the time the permit is issued.
20. At least once every five (5) years after installation, the permittee shall provide inspection reports of the subaqueous portion of the transmission line to the Vermont Project Office and SECNNE for review. The inspections shall be done by divers or remotely operated vehicles and inspections shall be done in accordance with manufacturer's specifications to ensure equipment integrity and protection (e.g., appropriate burial depth, concrete mats) are maintained. The inspections shall focus on verifying the depth of cable burial, condition of infrastructure protection measures, and identifying areas where protection of the transmission line or the environment could be compromised.
21. National Ocean Service (NOS) has been notified of this authorization. You must notify NOS and this office in writing to initiate nautical chart modifications in areas where the cables are laid and where protective barriers are installed and to be identified as "Obstructions". This notification shall be accomplished at least two weeks before you begin work and upon completion of the activity authorized by this permit. Your notification of completion must include a drawing which certifies the location and configuration of the completed activity (a certified permit drawing may be used). Send NOS submittals to: Department of Commerce, NOAA; National Ocean Service, Nautical Data Branch; N/CS26, Station 7331; 1315 East-West Highway; Silver Spring, MD 20910; or email: [seth.williams@noaa.gov](mailto:seth.williams@noaa.gov).
22. Disposal site(s) for temporary fills and for any excess material shall not be used without prior written approval from the Vermont Project Office.
23. The permittee shall appoint an environmental monitor who shall not be subject to the authority of the resident engineer, design consultant, contractor or others associated with the design and construction of the project; shall have unrestricted access to the construction site(s); and shall be required to report directly to the chief executive officer of the permittee organization. The purpose of appointing a monitor is to help ensure compliance with the terms and conditions of the permit, and the monitor shall work with the resident engineer toward that end. The monitor is to observe, report and recommend and shall not have authority over activities or personnel. Before the start of any permitted work, the name, affiliation, résumé and contact information of this monitor shall be provided to the Vermont Project Office for written approval. The monitor shall report any non-compliance and the proposed resolution to the Vermont Project Office within 48 hours of the occurrence. The monitor shall provide bi-weekly reports to the Corps until the final Compliance Certification Form is submitted to the Vermont Project Office. The bi-weekly reports shall summarize the

**Special Conditions continued on Page 9.**



### **Special Conditions (continued from Page 8)**

status of construction, the condition of the site, the general weather conditions and shall report any erosion, sedimentation or pollution problems and how they were corrected, along with recommendations on how to prevent similar problems in the future. The monitor shall immediately report any problems to the permittee's Resident Engineer(s), who shall take immediate steps to correct those problems. The monitor shall immediately report any unauthorized discharges of dredged or fill material in waters of the U.S. to the Vermont Project Office and the Resident Engineer(s), and the latter shall take immediate steps to correct those problems. This monitor(s) shall be on-site at all times during construction to ensure that the conditions of the Corps of Engineers permit are adhered to.

24. A pre-construction conference between the permittee, their contractors, environmental monitor and a representative of the Vermont Project Office shall be held on-site prior to the commencement of construction activities authorized under this permit.
25. A bi-weekly inspection report outlining construction status, erosion control measures in place at the time, new measures undertaken subsequent to the prior report, and erosion problems encountered and how resolved shall be submitted to the Vermont Project Office during construction. This report shall be submitted no later than ten days after the completion of each inspection interval.
26. All areas of wetlands and/or waters, which are disturbed during construction, except those authorized herein for permanent impact, shall be restored to their approximate original elevation (but not higher) and condition by careful protection, and/or removal and replacement, of existing soil and vegetation. In addition, if upland clearing, grubbing, or other construction activity results in, or may result in, soil erosion with transport and deposition into a wetland or waterway, devices such as geotextile silt fences, sediment trenches, etc., shall be installed and properly maintained to minimize such impacts during construction. These devices must be removed upon completion of work and stabilization of disturbed areas. The sediment collected by these devices must also be removed and placed upland, in a manner that will prevent its later erosion and transport to a waterway or wetland.
27. The permittee shall provide the Vermont Project Office with a set of as-built plans within six months of the completion of construction.