

May 31, 2018

VIA ELECTRONIC FILING

Ms. Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426

**Re: NERC Full Notice of Penalty regarding Connecticut Light & Power Company,
FERC Docket No. NP18-_-000**

Dear Ms. Bose:

The North American Electric Reliability Corporation (NERC) hereby provides this Notice of Penalty¹ regarding Connecticut Light & Power Company (CL&P), NERC Registry ID# NCR07044,² with information and details regarding the nature and resolution of the violation³ discussed in detail in the Settlement Agreement attached hereto (Attachment A), in accordance with the Federal Energy Regulatory Commission's (Commission or FERC) rules, regulations, and orders, as well as NERC's Rules of Procedure including Appendix 4C (NERC Compliance Monitoring and Enforcement Program (CMEP)).⁴

NERC is filing this Notice of Penalty with the Commission because Northeast Power Coordinating Council, Inc. (NPCC) and CL&P have entered into a Settlement Agreement to resolve all outstanding issues arising from NPCC's determination and findings of a violation of FAC-003-4 R2.

¹ *Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards* (Order No. 672), III FERC Stats. & Regs. ¶ 31,204 (2006); *Notice of New Docket Prefix "NP" for Notices of Penalty Filed by the North American Electric Reliability Corporation*, Docket No. RM05-30-000 (February 7, 2008). See also 18 C.F.R. Part 39 (2018). *Mandatory Reliability Standards for the Bulk-Power System*, FERC Stats. & Regs. ¶ 31,242 (2007) (Order No. 693), *reh'g denied*, 120 FERC ¶ 61,053 (2007) (Order No. 693-A). See 18 C.F.R § 39.7(c)(2).

² CL&P was included on the NERC Compliance Registry as a Distribution Provider and Transmission Owner (TO) on June 21, 2007.

³ For purposes of this document, each violation at issue is described as a "violation," regardless of its procedural posture and whether it was a possible, alleged, or confirmed violation.

⁴ See 18 C.F.R § 39.7(c)(2) and 18 C.F.R § 39.7(d).

3353 Peachtree Road NE
Suite 600, North Tower
Atlanta, GA 30326
404-446-2560 | www.nerc.com

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According to the Settlement Agreement, CL&P admits the violation, and has agreed to the assessed penalty of one hundred twenty thousand dollars (\$120,000), in addition to other remedies and actions to mitigate the instant violation and facilitate future compliance under the terms and conditions of the Settlement Agreement.

Statement of Findings Underlying the Violation

This Notice of Penalty incorporates the findings and justifications set forth in the Settlement Agreement executed April 5, 2018, by and between NPCC and CL&P. The details of the findings and basis for the penalty are set forth in the Settlement Agreement and herein. This Notice of Penalty filing contains the basis for approval of the Settlement Agreement by the NERC Board of Trustees Compliance Committee (NERC BOTCC).

In accordance with Section 39.7 of the Commission's regulations, 18 C.F.R. § 39.7 (2018), NERC provides the following summary table identifying each violation of a Reliability Standard resolved by the Settlement Agreement. Further information on the subject violation is set forth in the Settlement Agreement and herein.

* Violation(s) Determined and Discovery Method								
*SR = Self-Report / SC = Self-Certification / CA = Compliance Audit / SPC = Spot Check / CI = Compliance Investigation								
NERC Violation ID	Standard	Req.	VRF/VSL	Applicable Function(s)	Discovery Method*	Violation Start-End Date	Risk	Penalty Amount
NPCC2017018215	FAC-003-4	R2	High/High	TO	SR 8/21/2017	6/24/2017	Moderate	\$120,000

CL&P is an investor-owned, retail electric service company. CL&P owns approximately 1,660 miles of 115 kV transmission line and approximately 480 miles of 345 kV transmission line. CL&P is a subsidiary of Eversource Energy Service Company (Eversource).

FAC-003-4 R2 - OVERVIEW

On August 21, 2017, CL&P submitted a Self-Report stating it was in violation of FAC-003-4 R2. On June 24, 2017, an A-phase to ground Fault occurred on the Frost Bridge to Southington 329 transmission line (345 kV). The line tripped and reclosed in five seconds as designed, avoiding a Sustained Outage. An investigation led to confirmation that an encroachment into the Minimum Vegetation Clearance Distance (MVCD) occurred from vegetation within the right-of-way (ROW), causing the fault.⁵ CL&P

⁵ NPCC determined that it was highly likely, based on the evidence, that the encroachment led to a vegetation contact.

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allowed vegetation, in particular, a hedge of hemlocks, to grow underneath the line because of a contract with the residential property owner dating back to 1997. CL&P initially executed several of these contracts in the 1990's for herbicide restrictions and, in some cases, to allow property owners to maintain trees at or below a company-designated height—specifically where landscaped trees are within the company's ROWs. The contract requires that vegetation "shall be kept at or below 15 ft.," which is outside of the MVCD. These contracts were restricted to CL&P and were not part of the vegetation management programs for CL&P's affiliates within Eversource.

After investigating the issue, CL&P determined that due to a transcription error on the arborist's inspection schedule map, the arborist did not perform the scheduled 2017 aerial inspection. Additionally, a foot inspection during the start of 2017 also failed to identify the problem. The contractor who performed the foot inspection stated that he saw a flag (ribbon) hanging on one of the trees of this hedge and believed that CL&P had already tagged this area and was aware of the situation.

Although the residential contract permitted CL&P to trim trees as a means to manage vegetation, the contract also permitted tree species that, under CL&P's vegetation management program, would otherwise not be permitted to grow within the ROW.

This violation posed a moderate risk to the reliability of the bulk power system (BPS). CL&P was unaware of the encroachment into the MVCD until the Fault on the transmission line. A scheduled aerial inspection never occurred, and a foot patrol inspection failed to identify this issue properly. NPCC determined there was an absence or failure of the controls in place to prevent an encroachment.

Nevertheless, the vegetation contact did not result in a Sustained Outage. Dual high-speed Protection Systems operated as designed and cleared the Fault in three cycles at Southington substation and eight cycles at Frost Bridge substation. Automatic reclosing operated as designed, restoring the line to service in five seconds, limiting any impact to the 345 kV system. In addition, the momentary loss of the line did not result in an exceedance of the System Operating Limits (SOLs).

CL&P was performing two aerial inspections per year on its other lines, reducing the potential for other encroachments. CL&P reviewed its vegetation management records and did not identify any other transcription errors.

CL&P submitted its Mitigation Plan to address the referenced violation.

To identify the scope of the violation, CL&P reviewed its spring inspection logs to ensure no other facilities were missed. CL&P also patrolled or inspected all transmission ROWs and lines associated

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with NERC facilities and determined there were no other vegetation issues. To mitigate this violation, CL&P completely removed the hemlock hedge. To prevent recurrence of this violation, CL&P performed the following activities:

1. counseled the arborist involved in the transcription error and performed a lessons learned all-hands meeting with its arborists;
2. updated technical specifications related to reporting of vegetation conditions and its inspection practices. This includes the addition of a documented sign-off process;
3. installed Eversource-wide software that accommodates planning and implementation of annual work performance, budgets, vendors, schedules, work orders, work in progress, work site location, crew performance and job site inspections, and reporting capabilities; and
4. developed a residential contract-specific maintenance and inspection program.

In addition, CL&P has reduced by almost half the number of vegetation-related contracts with residential customers since the vegetation contact in this case. Attachment B includes a detailed description of the mitigation activities CL&P took to address this violation. A copy of the Mitigation Plan is included as Attachment D.

CL&P certified that it had completed all mitigation activities. NPCC verified that CL&P had completed all mitigation activities as of January 29, 2018. Attachments A and E provide specific information on CL&P's completion of the activities.

Regional Entity's Basis for Penalty

According to the Settlement Agreement, NPCC has assessed a penalty of one hundred twenty thousand dollars (\$120,000) for the referenced violation. In reaching this determination, NPCC considered the following factors:

1. CL&P admitted to, and accepted responsibility for, the violation;
2. the instant violation constitutes CL&P's first occurrence of violation of the subject NERC Reliability Standard;
3. CL&P had an internal compliance program at the time of the violation, which NPCC considered a neutral factor, as discussed in Attachment B;

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4. CL&P self-reported the violation;
5. CL&P was cooperative throughout the compliance enforcement process;
6. there was no evidence of any attempt to conceal a violation nor evidence of intent to do so;
7. the violation posed a moderate and not a serious or substantial risk to the reliability of the BPS, as discussed in Attachment B; and
8. there were no other mitigating or aggravating factors or extenuating circumstances that would affect the assessed penalty.

After consideration of the above factors, NPCC determined that, in this instance, the penalty amount of one hundred twenty thousand dollars (\$120,000) is appropriate and bears a reasonable relation to the seriousness and duration of the violation.

Statement Describing the Assessed Penalty, Sanction or Enforcement Action Imposed⁶

Basis for Determination

Taking into consideration the Commission's direction in Order No. 693, the NERC Sanction Guidelines and the Commission's July 3, 2008, October 26, 2009 and August 27, 2010 Guidance Orders,⁷ the NERC BOTCC reviewed and approved the terms of the Settlement Agreement on May 8, 2018. In approving the terms of the Settlement Agreement, the NERC BOTCC reviewed the applicable requirements of the Commission-approved Reliability Standards and the underlying facts and circumstances of the violation at issue.

For the foregoing reasons, the NERC BOTCC approved the Settlement Agreement and believes that the assessed penalty of one hundred twenty thousand dollars (\$120,000) is appropriate for the violation and circumstances at issue, and is consistent with NERC's goal to promote and ensure reliability of the BPS.

⁶ See 18 C.F.R. § 39.7(d)(4).

⁷ *North American Electric Reliability Corporation*, "Guidance Order on Reliability Notices of Penalty," 124 FERC ¶ 61,015 (2008); *North American Electric Reliability Corporation*, "Further Guidance Order on Reliability Notices of Penalty," 129 FERC ¶ 61,069 (2009); *North American Electric Reliability Corporation*, "Notice of No Further Review and Guidance Order," 132 FERC ¶ 61,182 (2010).

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Pursuant to 18 C.F.R. § 39.7(e), the penalty will be effective upon expiration of the 30-day period following the filing of this Notice of Penalty with FERC, or, if FERC decides to review the penalty, upon final determination by FERC.

Attachments to be Included as Part of this Notice of Penalty

The attachments to be included as part of this Notice of Penalty are the following documents:

1. Settlement Agreement by and between NPCC and CL&P executed April 5, 2018, included as Attachment A;
2. Disposition of Violation, included as Attachment B;
3. CL&P's Self-Report for FAC-003-4 R2 dated August 21, 2017, included as Attachment C;
4. CL&P's Mitigation Plan designated as NPCCMIT013274 submitted October 2, 2017, included as Attachment D;
5. CL&P's Certification of Mitigation Plan Completion submitted April 4, 2018, included as Attachment E; and
6. NPCC's Verification of Mitigation Plan Completion dated April 5, 2018, included as Attachment F.

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Notices and Communications: Notices and communications with respect to this filing may be addressed to the following:

<p>Edward A. Schwerdt*</p> <p>Northeast Power Coordinating Council, Inc. President and Chief Executive Officer 1040 Avenue of the Americas, 10th Floor New York, NY 10018-3703 (212) 840-1070 eschwerdt@npcc.org</p> <p>Kristin McKeown*</p> <p>Northeast Power Coordinating Council, Inc. General Counsel 1040 Avenue of the Americas, 10th Floor New York, NY 10018-3703 (212) 840-1070 kmckeown@npcc.org</p> <p>Damase Hebert*</p> <p>Northeast Power Coordinating Council, Inc. Director, Enforcement 1040 Avenue of the Americas, 10th Floor New York, NY 10018-3703 (212) 840-1070 dhebert@npcc.org</p> <p>Duncan MacKay*</p> <p>Eversource Energy Deputy General Counsel 107 Selden Street Berlin, CT 06037 (860) 665-3495 Duncan.mackay@eversource.com</p>	<p>Sonia C. Mendonça*</p> <p>Vice President, Deputy General Counsel, and Director of Enforcement North American Electric Reliability Corporation 1325 G Street N.W. Suite 600 Washington, DC 20005 (202) 400-3000 (202) 644-8099 – facsimile sonia.mendonca@nerc.net</p> <p>Edwin G. Kichline*</p> <p>Senior Counsel and Director of Enforcement Oversight North American Electric Reliability Corporation 1325 G Street N.W. Suite 600 Washington, DC 20005 (202) 400-3000 (202) 644-8099 – facsimile edwin.kichline@nerc.net</p> <p>Leigh Anne Faugust*</p> <p>Counsel North American Electric Reliability Corporation 1325 G Street N.W. Suite 600 Washington, DC 20005 (202) 400-3000 (202) 644-8099 – facsimile leigh.faugust@nerc.net</p>
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Mary Ellen Paravalos*
Eversource Energy
VP – ISO, Siting and Compliance
247 Station Drive
Westwood, MA 02090
Maryellen.paravalos@eversource.com
(781) 441-8738

Vicki O’Leary*
Eversource Energy
Directory – Reliability Compliance
107 Selden Street
Berlin, CT 06037
Vicki.o’leary@eversource.com
(860) 665-3625

*Persons to be included on the Commission’s service list are indicated with an asterisk. NERC requests waiver of the Commission’s rules and regulations to permit the inclusion of more than two people on the service list.

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Conclusion

NERC respectfully requests that the Commission accept this Notice of Penalty as compliant with its rules, regulations, and orders.

Respectfully submitted,

/s/ Leigh Anne Faugust

Sonia C. Mendonça
Vice President, Deputy General Counsel,
and Director of Enforcement
Edwin G. Kichline
Senior Counsel and Director of
Enforcement Oversight
Leigh Anne Faugust
Counsel
North American Electric Reliability
Corporation
1325 G Street N.W.
Suite 600
Washington, DC 20005
(202) 400-3000
(202) 644-8099 - facsimile
sonia.mendonca@nerc.net
edwin.kichline@nerc.net
leigh.faugust@nerc.net

cc: Connecticut Light & Power Company
Northeast Power Coordinating Council, Inc.

Attachments

Attachment A

Settlement Agreement by and between NPCC and CL&P

Executed April 5, 2018

**SETTLEMENT AGREEMENT
OF
NORTHEAST POWER COORDINATING COUNCIL, INC.
AND
CONNECTICUT LIGHT AND POWER COMPANY**

I. INTRODUCTION

1. Northeast Power Coordinating Council, Inc. ("NPCC"), and The Connecticut Light and Power Company ("CL&P") enter into this Settlement Agreement ("Agreement") to resolve all outstanding issues arising from a preliminary and non-public assessment resulting in NPCC's determination and findings, pursuant to the North American Reliability Corporation ("NERC") Rule of Procedure, of one violation.

Reliability Standard	Requirement	NPCC Tracking No.	NERC Tracking No.
FAC-003-4	R2	NPCC2017-201400	NPCC2017018215

2. CL&P admits to the violation it self-reported to NPCC and has agreed to the proposed penalty of \$120,000 in addition to other remedies and actions to mitigate the violation and to ensure future compliance under the terms and conditions of the Agreement.

II. STIPULATION

3. The facts stipulated herein are stipulated solely for the purpose of resolving, between NPCC and CL&P, the matters discussed herein and do not constitute stipulations or admissions for any other purpose. NPCC and CL&P hereby stipulate and agree to the following:

Background

4. See Section I of the Disposition document (Attachment A) for a description of CL&P.

Violation of NERC Reliability Standard

5. On August 21, 2017, CL&P submitted a self-report to NPCC that it had an apparent issue under FAC-003-4.
6. See Section III of the Disposition document (Attachment A) for the description of the violation.

III. PARTIES' SEPARATE REPRESENTATIONS

Statement of NPCC and Summary of Findings

7. NPCC determined that CL&P was in violation of FAC-003-4 R2 because CL&P did not manage vegetation to prevent an encroachment into the minimum vegetation clearance distance (MVCD) of a 345 kV transmission line. The encroachment likely caused a vegetation contact observed in Real-time. The CL&P system operated appropriately and as designed, and did not cause a Sustained Outage.
8. NPCC agrees this Agreement is in the best interest of the parties and in the best interest of Bulk Power System (BPS) reliability.

Statement of CL&P

9. CL&P admits the facts set forth and agreed to by the parties for purposes of this Agreement constitute a violation of the Standard and Requirement listed in the table above.
10. CL&P has agreed to enter into this Agreement with NPCC to avoid extended litigation with respect to the matters described or referred to herein, to avoid uncertainty, and to effectuate a complete and final resolution of the issues set forth herein. CL&P agrees this Agreement is in the best interest of the parties and in the best interest of BPS reliability.

IV. MITIGATING ACTIONS, REMEDIES AND SANCTIONS

11. NPCC and CL&P agree that CL&P has completed the mitigating actions and NPCC has verified the completion of the mitigating actions set forth in Section V of the Disposition document identified as Attachment A. The Mitigating Actions, Remedies and Sanctions are discussed in detail in the respective Disposition document (Attachment A).
12. NPCC considered the specific facts and circumstances of the violation and CL&P's actions in response to the violation in determining a proposed penalty that meets the requirement in Section 215 of the Federal Power Act that "[a]ny penalty imposed under this section shall bear a reasonable relation to the seriousness of the violation and shall take into consideration the efforts of an entity to remedy the violation in a timely manner."¹ The factors considered by NPCC in the determination of the appropriate penalty are set forth in Sections III and VI of the Disposition document (Attachment A).

¹16 U.S.C. §824o(e)(6) (2017).

13. Based on the above factors, as well as the mitigation actions and preventative measures taken, CL&P shall pay \$120,000 to NPCC as set forth in this Agreement. CL&P shall remit the payment to NPCC via check, or by wire transfer to an account to be identified by NPCC within thirty days after the Agreement is either approved by the Federal Energy Regulatory Commission (Commission) or by operation of law. NPCC shall notify NERC, and NERC shall notify the Commission, if the payment is not timely received. If CL&P does not remit the payment by the required date, interest payable to NPCC will begin to accrue pursuant to the Commission's regulations at 18 C.F.R. §35.19a(a)(2)(iii) from the date that payment is due, and shall be payable in addition to the payment.
14. Failure to make a timely penalty payment or to comply with any of the terms and conditions agreed to herein, or any other conditions of this Agreement shall be deemed to be either the same alleged violations that initiated this Agreement and/or additional violations and may subject CL&P to new or additional enforcement, penalty or sanction actions in accordance with the NERC Rules of Procedure. CL&P shall retain all rights to defend against such additional enforcement actions in accordance with NERC Rules of Procedure.

V. ADDITIONAL TERMS

15. The signatories to the Agreement agree that they enter into the Agreement voluntarily and that, other than the recitations set forth herein, no tender, offer or promise of any kind by any member, employee, officer, director, agent or representative of NPCC or CL&P has been made to induce the signatories or any other party to enter into the Agreement.
16. NPCC shall report the terms of all settlements of compliance matters to NERC. NERC will review the settlement for the purpose of evaluating its consistency with other settlements entered into for similar violations or under other, similar circumstances. Based on this review, NERC will either approve the settlement or reject the settlement and notify NPCC and CL&P of changes to the settlement that would result in approval. If NERC rejects the settlement, NERC will provide specific written reasons for such rejection and NPCC will attempt to negotiate a revised settlement agreement with CL&P including any changes to the settlement specified by NERC. If a settlement cannot be reached, the enforcement process shall continue to conclusion. If NERC approves the settlement, NERC will (i) report the approved settlement to the Commission for the Commission's review and approval by order or operation of law, and (ii) publicly post this Settlement Agreement.
17. This Agreement shall become effective upon the Commission's approval of the Agreement by order or operation of law as submitted to it or as modified in a manner acceptable to the parties.
18. CL&P agrees that this Agreement, when approved by NERC and the Commission, shall represent a final settlement of all matters set forth herein and CL&P waives its

right to further hearings and appeal, unless and only to the extent that CL&P contends that any NERC or Commission action on the Agreement contains one or more material modifications to the Agreement. NPCC reserves all rights to initiate enforcement, penalty or sanction actions against CL&P in accordance with the NERC Rules of Procedure in the event that CL&P does not comply with the Mitigation Plans and compliance program agreed to in this Settlement Agreement. In the event CL&P fails to comply with any of the stipulations, remedies, sanctions or additional terms, as set forth in this Agreement, NPCC will initiate enforcement, penalty, or sanction actions against CL&P to the maximum extent allowed by the NERC Rules of Procedure, up to the maximum statutorily allowed penalty. Except as otherwise specified in this Agreement, CL&P shall retain all rights to defend against such enforcement actions, also according to the NERC Rules of Procedure.

19. CL&P consents to the use of NPCC's determinations, findings, and conclusions set forth in this Agreement for the purpose of assessing the factors, including the factor of determining the company's history of violations, in accordance with the NERC Sanction Guidelines and applicable Commission orders and policy statements. Such use may be in any enforcement action or compliance proceeding undertaken by NERC and/or any Regional Entity; provided, however, that CL&P does not consent to the use of the specific acts set forth in this Agreement as the sole basis for any other action or proceeding brought by NERC and/or NPCC, nor does CL&P consent to the use of this Agreement by any other party in any other action or proceeding.
20. Each of the undersigned warrants that he or she is an authorized representative of the entity designated, is authorized to bind such entity and accepts the Agreement on the entity's behalf.
21. The undersigned representative of each party affirms that he or she has read the Agreement, that all of the matters set forth in the Agreement are true and correct to the best of his or her knowledge, information and belief, and that he or she understands that the Agreement is entered into by such party in express reliance on those representations; provided, however, that such affirmation by each party's representative shall not apply to the other party's statements of position set forth in Section III of this Agreement.
22. The Agreement may be signed in counterparts.
23. This Agreement is executed in duplicate, each of which so executed shall be deemed to be an original.

Agreed to and accepted

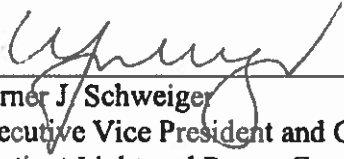


Edward A. Schwerdt

President & CEO

Northeast Power Coordinating Council, Inc.

4/5/18
Date


Name Werner J. Schweiger
Title: Executive Vice President and Chief Operating Officer
The Connecticut Light and Power Company

4/5/18
Date

Attachment B
Disposition of Violation

DISPOSITION OF VIOLATION

Registered Entity
Connecticut Light & Power Company

NERC Registry ID
NCR07044

Regional Entity
Northeast Power Coordinating Council

NERC Violation ID
NPCC2017018215

I. REGISTRATION INFORMATION

Applicable Registered Functions to the Violation
(BOTTOM ROW INDICATES REGISTRATION DATE):

BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	RSG	TO	TOP	TP	TSP
	X										X			
	6/21/2007										6/21/2007			

* VIOLATION APPLIES TO SHADED FUNCTION

Description of the Registered Entity

The Connecticut Light and Power Company (“CL&P” or “Company”) is an investor-owned, retail electric service company whose common stock is owned by Eversource Energy (“Eversource”). CL&P was registered as a Transmission Owner and Distribution Provider in NPCC at the time of the violation.¹ CL&P owns approximately 1,660 miles of Transmission Line at or above 115 kV, including approximately 480 miles of 345 kV Transmission Line.

Eversource, through several subsidiaries, including CL&P, owns and operates Transmission, Distribution, Generation, and Natural Gas systems for more than 3.5 million combined electric and gas customers.

II. STANDARD AND REQUIREMENT

The Purpose of FAC-003-4 states:

To maintain a reliable electric transmission system by using a defense- in-depth strategy to manage vegetation located on transmission rights of way (ROW) and minimize encroachments from vegetation located adjacent to the ROW, thus preventing the risk of those vegetation-related outages that could lead to Cascading outages.

¹ Effective January 1, 2018, CL&P’s functional registration was transferred to Eversource Energy Service Company.

R2. Each applicable Transmission Owner and applicable Generator Owner shall manage vegetation to prevent encroachments into the MVCD of its applicable line(s) which are not either an element of an IROL, or an element of a Major WECC Transfer Path; operating within its Rating and all Rated Electrical Operating Conditions of the types shown below [Violation Risk Factor: High] [Time Horizon: Real-time]:

2.1. An encroachment into the MVCD, observed in Real-time, absent a Sustained Outage, ...

III. VIOLATION INFORMATION

Standard	Req	VRF	VSL	Regional ID#	NERC ID#
FAC-003-4	R2.	High	VSL-Moderate	NPCC2017-201400	NPCC2017018215

Violation Description

On June 24, 2017 at 13:41, an A-phase to ground Fault occurred on the Frost Bridge to Southington 329 Transmission Line (345kV). The line tripped and reclosed in 5 seconds as designed. An investigation led to a later confirmation that an encroachment into the MVCD likely occurred from vegetation within the ROW, thereby causing the Fault.

Investigation

The investigation began on June 24, 2017, when an Eversource Transmission Supervisor was dispatched to investigate after a property owner reported an electrical disturbance to the company. The Transmission Supervisor contacted a TVM Manager, who arrived on site at approximately 16:00 on June 24, 2017. The TVM Manager observed some burned tree tops in the hemlock hedge that runs approximately 150 feet directly under the outer phase of the 329 line. The TVM Manager estimated, by visual observation that the conductor was approximately 4-5 feet above the top of the trees hedge. The 329 line was taken out of service on June 24, 2017 and the trees were trimmed downed approximately 6-7 feet.

It was the TVM Manager's preliminary conclusion there was a lightning strike that hit the line and flashed over to the trees under the conductor and faulted to ground.

However, a further review of the relay and digital fault recording data for the 329 Line indicated the disturbance was the result of a high impedance fault, which is most commonly associated with a vegetation contact. The relay vendors, GE and Schweitzer, confirmed that the terminal relay oscillography for this incident showed a fault consistent with a vegetation contact as the relays recorded large resistive impedances.

Cause of the Violation

Vegetation, in particular a hedge of hemlocks, was allowed to grow underneath the 329 Line because of an agreement ("In Lieu of Agreement" or "ILO") with the residential property owner. ILOs were initially created in the 1990's as part of the Company's efforts to accommodate customer needs, and allowed some property owners to maintain certain vegetation within the easement, which are predominantly the customer's property, at or

below a height designated by the Company. The ILO agreement requires that vegetation "shall be kept at or below 15 ft." which is well below the minimum vegetation clearance distance (MVCD). The property where this vegetation contact occurred had an ILO agreement for the hemlock hedge executed in 1997.

Eversource's TVM procedures require an annual aerial inspection of all Transmission Lines subject to FAC-003-4. The TVM practice has been to perform two inspections each year. The last vegetation aerial inspection performed on the 329 Line was completed on August 24, 2016. During the August 24, 2016 inspection, there were no identified vegetation conditions requiring corrective actions on the 329 Line.

The first aerial inspection for 2017 was scheduled for the spring. A review of the inspection log showed Line 329 was inspected on April 3, 2017. However, when a request was made for the inspection report to determine whether any other conditions were found on the 329 Line during the inspection, it was determined that the April 3, 2017 line inspection of the 329 Line was in fact not performed due to a transcription error on the Transmission Arborist's inspection schedule map. More specifically, after the aerial inspections occurred, the Arborist updating the inspection log from the day's aerial inspections inadvertently copied and pasted an inspection date in the 329 Line row of the inspection log.

Therefore, CL&P did not perform the first scheduled aerial inspection for 2017. This inspection, if performed, may have noted the hemlock hedge under the conductor and required a further ground inspection. TVM's failure to properly update the inspection log allowed this area to go uninspected, allowing the vegetation to continue to grow, and eventually resulting in a Fault.

Finally, the 329 Line is within a right-of-way that is part of the CT-23 brush maintenance project for 2017. The CT-23 brush maintenance project required an additional inspection be performed. The annual brush maintenance contracts include a provision that requires the line clearance contractor to perform a foot inspection of all spans during the first 4 months of the year and provide a list on any potential vegetation problems to TVM. During the 2017 foot patrol inspection, the contractor did submit a few locations on other sections of the 329 Line covered by the CT-23 brush maintenance project, but the location of where the vegetation contact occurred was not reported as being a problem requiring further investigation or mitigation. The contractor stated that they saw a flag (ribbon) hanging on one of the trees of this hedge and believed that CL&P had already tagged this area and was aware of the situation.

Reliability Impact Statement

This violation posed a moderate risk to the reliability of the bulk power system and did not pose a serious or substantial risk to the reliability of the bulk power system. The management of the vegetation for the 329 Line was not fully controlled. Canadian Hemlock trees were growing within the right-of-way and directly underneath the 329 Line, which is a 345 kV Transmission Line. Those Canadian Hemlock trees were permitted to

grow within the right-of-way because CL&P had an ILO with the property owner. Those trees encroached into the MVCD to a point where the investigation suggests that a flashover occurred. At the time of the occurrence, CL&P had a total of 232 ILOs with property owners. Although the ILOs permit CL&P to trim trees as a means to manage vegetation, the ILOs also permit tree species that, under CL&P's vegetation management program, would otherwise not be permitted to grow within the right-of-way.

An aerial inspection of the 329 Line scheduled for April 3, 2017 did not occur. This was due to a transcription error. CL&P reviewed its vegetation management records and did not identify any other transcription errors. Still, the potential for additional transcription errors, however slight, did exist at the time of the vegetation contact.

The foot patrol inspection did not identify this area of the 329 Line as an area to be addressed. In particular, the contractor was confused or mislead by a flag or ribbon hanging on one of the trees in this hedge. At the time of the violation, there was a potential for other flags or ribbons to be misclassified as already marked for tree trimming.

CL&P was unaware of the encroachment into the MVCD until the Fault on the 329 Line occurred.

However, the likely vegetation contact did not result in a Sustained Outage. The Fault was mitigated by dual high speed protection systems operating as designed, clearing the Fault in 3 cycles at Southington substation and 8 cycles at Frost Bridge substation. Automatic reclosing operated as designed, restoring the line to service in five seconds, limiting any impact to the 345 kV system. The momentary loss of the 329 Line did not result in an exceedance of the System Operating Limits (SOLs). Additionally, CL&P was performing two aerial inspections per year, which reduces the potential for encroachments into the MVCD.

Compliance History

NPCC considered CL&P's FAC-003 R2 compliance history and determined there were no relevant instances of noncompliance.

Additional Information

IS THERE A SETTLEMENT AGREEMENT YES ☒ NO ☐

WITH RESPECT TO THE VIOLATION(S), REGISTERED ENTITY

NEITHER ADMITS NOR DENIES IT (SETTLEMENT ONLY)	YES	<input type="checkbox"/>
ADMITS TO IT	YES	<input checked="" type="checkbox"/>
DOES NOT CONTEST IT (INCLUDING WITHIN 30 DAYS)	YES	<input type="checkbox"/>

WITH RESPECT TO THE ASSESSED PENALTY OR SANCTION, REGISTERED ENTITY

ACCEPTS IT/ DOES NOT CONTEST IT

YES ☒

IV. DISCOVERY INFORMATION

METHOD OF DISCOVERY

SELF-REPORT	<input checked="" type="checkbox"/>
SELF-CERTIFICATION	<input type="checkbox"/>
COMPLIANCE AUDIT	<input type="checkbox"/>
COMPLIANCE VIOLATION INVESTIGATION	<input type="checkbox"/>
SPOT CHECK	<input type="checkbox"/>
COMPLAINT	<input type="checkbox"/>
PERIODIC DATA SUBMITTAL	<input type="checkbox"/>
EXCEPTION REPORTING	<input type="checkbox"/>

DURATION DATE(S) The day of the violation contact - 6/24/2017

DATE DISCOVERED BY OR REPORTED TO REGIONAL ENTITY 8/21/2017

IS THE VIOLATION STILL OCCURRING YES ☐ NO ☒
IF YES, EXPLAIN

REMEDIAL ACTION DIRECTIVE ISSUED YES ☐ NO ☒
PRE TO POST JUNE 18, 2007 VIOLATION YES ☐ NO ☒

V. MITIGATION INFORMATION

<u>Mitigation Plan Received</u>	<u>Is Formal</u>	<u>Mitigation Plan Accepted</u>
<u>Date</u>	<u>Required?</u>	<u>Date (By Region)</u>
<u>10/02/2017</u>	<u>Y</u>	<u>10/05/2017</u>

FOR FINAL ACCEPTED MITIGATION PLAN:

MITIGATION PLAN NO.	NPCCMIT013274
DATE SUBMITTED TO REGIONAL ENTITY	10/2/2017
DATE ACCEPTED BY REGIONAL ENTITY	10/5/2017
DATE APPROVED BY NERC	10/27/17
DATE PROVIDED TO FERC	10/27/17

IDENTIFY AND EXPLAIN ALL PRIOR VERSIONS THAT WERE ACCEPTED OR REJECTED, IF APPLICABLE

Not applicable

MITIGATION PLAN COMPLETED YES ☒ NO ☐

EXPECTED COMPLETION DATE 1/31/2018

EXTENSIONS GRANTED	N/A
ACTUAL COMPLETION DATE	1/29/2018
DATE OF CERTIFICATION LETTER	1/29/18
CERTIFIED COMPLETE BY REGISTERED ENTITY AS OF	4/4/18
DATE OF VERIFICATION LETTER	4/5/18
VERIFIED COMPLETE BY REGIONAL ENTITY AS OF	4/5/18

ACTIONS TAKEN TO MITIGATE THE ISSUE AND PREVENT RECURRENCE

1. The line was taken out of service on 6/24/17 at 17:52 and the hemlock tree hedge was trimmed down approximately 6-7 feet on 6/24/17. The hemlock hedge was completely removed on 9/26/17.
2. The Arborist involved in the transposition error was counseled on 6/26/2017. An “All Hands” meeting with TVM Arborists was held to on 7/12/17 to discuss the lessons learned of this issue. The TVM Manager discussed the errors and missed opportunities, TVM procedures, and contractor responsibilities.
3. TVM reviewed the spring inspection logs and determined that the 329 Line was the only facility that was missed during that round of inspections. This review was conducted on 6/26/2017.
4. The 329 Line was foot patrolled in its entirety and completed on 7/21/17 with no other vegetation issues found.
5. By 8/30/17, inspection of vegetation in the wire zone on NERC lines associated with ILOs were inspected and no MVCD violations were found.
6. By 11/1/17, all remaining transmission right-of-ways associated with NERC facilities were foot patrolled.
7. To ensure that each Transmission Line scheduled for an inspection is actually inspected and completed, a documented sign off process was instituted and became part of the inspection procedure effective 9/30/17.
8. Technical specifications for contractors were revised to explicitly require the reporting of all conditions where vegetation appears to present a risk to the transmission system regardless of whether the vegetation may be flagged (ribboned). The pre-bid meetings were completed on 11/01/17.
9. CL&P amended its current inspection practice of performing two aerial inspections each year on NERC facilities. CL&P replaced one aerial inspection with a ground inspection for NERC facilities. The TVM Maintenance Standard 6.60B “VM Patrol &

Inspection Program,” was revised on 11/1/17 to require all NERC facilities to be inspected from the ground each spring beginning in 2018.

10. Refresher training has been provided to all TVM personnel, with a lessons learned publication regarding assessing and managing vegetation conditions during the inspection process. Refresher training was completed on 12/14/17.
11. A peer review process has been formalized among TVM to ensure program consistency. A peer review process guide was documented and reviewed with TVM arborists on 12/14/17. In addition, peer review process will be incorporated into annual performance plans for TVM arborists, beginning in 2018
12. WorkStudio software - Eversource is currently in the process of installing an enterprise-wide software WorkStudio 8.6 and it was placed into production on January 28, 2018. The new automated system will accommodate planning and implementation of annual work to be performed, budgets, vendors, schedules, work orders, work in progress, work site location, crew performance and job site inspections and reporting capabilities.
13. A maintenance and inspection program was developed specifically for the ILOs. The program requires an annual review and site inspection of the property while an ILO is in effect, and removal of vegetation not consistent with TVM specifications. The program became effective on February 1, 2018.

**LIST OF EVIDENCE REVIEWED BY REGIONAL ENTITY TO EVALUATE
COMPLETION OF MITIGATION PLAN (FOR CASES IN WHICH MITIGATION IS
NOT YET COMPLETED, LIST EVIDENCE REVIEWED FOR COMPLETED
MILESTONES)**

1. Tree Trimmed

Tree_Trimmed.JPG
329 Line trip and reclose and de and re energization graph.docx
Invoice 329 Emerg.pdf

2. Arborist Counseled

Email_Record_Arborists_Counseled.pdf

3. Review of 2017 Inspection Logs

Connecticut NERC Inspections Update Form - 2017.xlsx
Email_Record_Inspection_Logs.pdf

4. All Hands Meeting

TVM All-Hands meeting notes.docx

5. Foot Patrol 329 line

Connecticut NERC Inspections Update Form - 2017.xlsx

6. ILO Review

ILOs_Reviewed_7-25-17.docx

7. Remove Hemlock Hedge

After_Removal_1_9-26-18.JPG

After_Removal_2_9-26-18.JPG

Before_Removal_1_9-26-2018.JPG

Hedge_Removed_Attestation_9-27-18.pdf

Invoice 329 Removal.pdf

8. Revise Maintenance Specs

2018 Eversource Energy Rights-of-Way Section III FINAL.pdf

2018 Section III Appendix 2 - Danger Tree Report .pdf

Pre-Bid Invite.pdf

PreBid Meeting1 TD VM ROW.pdf

9. Document Sign Off Process

6.60B - TRANS VM PATROL INSPECTION 3203 - Rev. 1.pdf

Ground Patrol Sign Off 2017.pdf

10. Enhanced Annual Inspection Strategy

6.60B_TVM_Patrol_and_Inspection_Program.pdf

11. All NERC facilities Foot Patrolled

2017 FALL CT NERC Foot Patrol.pdf

NERC Inspections Sign Off Forms.pdf

Corrective Action29893Fall2017Foot PatrolInspections.pdf

12. Refresher Training

TVM Refresher Training Plan_12-15-2018.pdf

TVM Refresher Training Session Final_12-15-2018.pdf

TVMRfresherTrainingSessionAttendance_12-15-2018.pdf

13. Formalize Peer Review

Peer Review Process Guide Rev 0 Final.pdf

14. WorkStudio software

6.60B - TRANS VM PATROL INSPECTION 3203 - Rev. 1.pdf

WorkStudioApprova email.pdf

WorkstudioProduction.pdf

Goffstown F162 Line.pdf

15. ILO Maintenance Program

6.60I - TVM ALTERNATE MAINTENANCE AGREEMENTS .pdf

In addition to the mitigating actions in the Mitigation Plan described above, CL&P has taken steps to eliminate ILOs where possible. A review of records was performed after the event which indicated a total of 232 ILO agreements were in place on June 2017.

The Company field inspected and initially prioritized existing ILO's for vegetation in the wire zone and has moved aggressively to eliminate incompatible vegetation. By December 31, 2017, 55 of the locations had been eliminated, including all in the wire zone. Since January 1, 2018, the Company has eliminated an additional 46 locations. As of February 23, 2018, there are 131 locations with ILO agreements.

In accordance with Eversource Maintenance Program 6.60I, "Alternate Maintenance Agreements," all of these locations will be inspected annually by the Transmission Arborists until they are eliminated. These locations must be visited by May 31st of each year until they are eliminated.

- Locations found to be in compliance with the ILO agreement and not posing any immediate threat to the facilities, will have associated vegetation scheduled for removal in the coming year, in coordination with the property owner.
- In instances where the vegetation has not been not maintained in accordance with the ILO agreements, the removal will be scheduled as soon as possible.

In order to aggressively eliminate these conditions working with property owners, the Company has authorized the Transmission Arborists the ability to offer reasonable mitigation plantings of compatible species or installation of fencing to the property owner.

Finally, the Company will not create any new alternate maintenance agreements with private property owners to allow noncompatible species within the ROW. This position is reflected in the above referenced 6.60I. This position has been communicated across the Company, and VM leadership has attended meetings with Operations teams to explain and reinforce the expectations.

VI. PENALTY INFORMATION

TOTAL ASSESSED PENALTY OR SANCTION OF ONE-HUNDRED AND TWENTY THOUSAND DOLLARS (\$120,000) FOR ONE VIOLATION OF RELIABILITY STANDARD.

(1) REGISTERED ENTITY'S COMPLIANCE HISTORY

PREVIOUSLY FILED VIOLATIONS OF ANY OF THE INSTANT
RELIABILITY STANDARD(S) OR REQUIREMENT(S) THEREUNDER
YES ☐ NO ☒

LIST VIOLATIONS AND STATUS

None; including affiliates of CL&P.

ADDITIONAL COMMENTS

None

PREVIOUSLY FILED VIOLATIONS OF OTHER RELIABILITY
STANDARD(S) OR REQUIREMENTS THEREUNDER

YES ☒ NO ☐

LIST VIOLATIONS AND STATUS

CL&P had one previous filed violation of another NERC Reliability Standard requirement in the NPCC Region. A Find, Fix, Track, and Report covering a violation of PRC-005-1 R2 was posted to the NERC webpage on December 30, 2013.

NPCC determined that CL&P's prior compliance history should not serve as a basis for aggravating the penalty because the prior violations are unrelated to the FAC-003-4 R2 violation at issue in this enforcement action.

In addition, CL&P's affiliates have other previously filed violations of other NERC Standards and Requirements in the NERC Region.² NPCC determined that CL&P's affiliate's prior compliance history should not serve as a basis for aggravating the penalty because the prior violations are unrelated to the FAC-003-4 R2 violation at issue in this enforcement action.

ADDITIONAL COMMENTS

Not applicable.

(2) THE DEGREE AND QUALITY OF COOPERATION BY THE REGISTERED ENTITY (IF THE RESPONSE TO FULL COOPERATION IS "NO," THE ABBREVIATED NOP FORM MAY NOT BE USED.)

FULL COOPERATION YES ☒ NO ☐
IF NO, EXPLAIN

(3) THE PRESENCE AND QUALITY OF THE REGISTERED ENTITY'S COMPLIANCE PROGRAM

IS THERE A DOCUMENTED COMPLIANCE PROGRAM?

² FERC Docket Numbers and FFT Dates for previously filed violations:

- a. NSTAR Electric Company: NP13-51 (August 30, 2013), FFT publicly posted (July 31, 2013), FFT publicly posted (December 29, 2016);
- b. Public Service Company of New Hampshire: NP11-133 (February 28, 2011);
- c. Western Massachusetts Electric Company: NP13-51 (August 30, 2013).

YES ☒ NO ☐ UNDETERMINED ☐
EXPLAIN

CL&P operates as a subsidiary of Eversource Energy (“Eversource”) and follows Eversource’s NERC Reliability Compliance Program, which has been in place since 2006. At the time of the violation, the sixth revision of the program was effective. The purpose of the NERC Reliability Compliance Program is to, inter alia, ensure Eversource’ registered entities consistently meet reliability compliance requirements through institutionalizing processes that ensure all standards and rules are met, review and comply with all applicable reliability standard, follow formalized procedures for preparing NERC, NPCC, and other reliability compliance filings, and ensure all key functional areas of Eversource affected by reliability standards are engaged and knowledgeable about compliance requirements.

Eversource has a Reliability Compliance department that is empowered to oversee and assist all of its Registered Entities ensure compliance with all applicable reliability requirements. Eversource has a series of procedures to help adhere to industry regulatory compliance standards and improve performance around compliance. The Reliability Compliance department works directly with leadership and Subject Matter Experts and collaborates with legal, internal audits, enterprise risk management and corporate risk committees. Based on Eversource’s risk management controls, NPCC has approved Eversource for self-logging.

Although Eversource has a very good compliance program, NPCC did not consider the program as a mitigating or aggravating factor in determining the penalty. The absence and/or failure of the controls in place to prevent an encroachment in this case did not warrant mitigation of the penalty. On the other hand, the presence of a good compliance program did not warrant an aggravation.

EXPLAIN SENIOR MANAGEMENT’S ROLE AND INVOLVEMENT WITH RESPECT TO THE REGISTERED ENTITY’S COMPLIANCE PROGRAM, INCLUDING WHETHER SENIOR MANAGEMENT TAKES ACTIONS THAT SUPPORT THE COMPLIANCE PROGRAM, SUCH AS TRAINING, COMPLIANCE AS A FACTOR IN EMPLOYEE EVALUATIONS, OR OTHERWISE.

Eversource has active participation and support from Officers and Senior Management. In particular, participation and support is provided by the Chief Compliance Officer, CIP Senior Manager, Chief Information Officer, Vice President for Reliability Compliance, Vice President Internal Audit, Chief Information Security Officer, and Operations Officers Leadership.

(4) ANY ATTEMPT BY THE REGISTERED ENTITY TO CONCEAL THE VIOLATION(S) OR INFORMATION NEEDED TO REVIEW, EVALUATE OR INVESTIGATE THE VIOLATION.

YES ☐ NO ☒
IF YES, EXPLAIN

(5) ANY EVIDENCE THE VIOLATION(S) WERE INTENTIONAL (IF THE RESPONSE IS "YES," THE ABBREVIATED NOP FORM MAY NOT BE USED.)

YES ☐ NO ☒
IF YES, EXPLAIN

(6) ANY OTHER MITIGATING FACTORS FOR CONSIDERATION

YES ☒ NO ☐
IF YES, EXPLAIN

CL&P accepted responsibility for the apparent violations it affirmatively self-reported to NPCC.

(7) ANY OTHER AGGRAVATING FACTORS FOR CONSIDERATION

YES ☐ NO ☒
IF YES, EXPLAIN

(8) ANY OTHER EXTENUATING CIRCUMSTANCES

YES ☐ NO ☒
IF YES, EXPLAIN

Although there were no extenuating circumstances specific to this violation or specific to Eversource, the penalty for this violation represents the significant importance NPCC places on vegetation management, particularly with respect to FAC-003 violations.

EXHIBITS:

SOURCE DOCUMENT
CL&P Self-Report dated 8/21/2017.

MITIGATION PLAN
CL&P Mitigation Plan submitted on 10/2/2017.

CERTIFICATION BY REGISTERED ENTITY
CL&P Certification of Completed Mitigation Plan dated 1/29/2018.

VERIFICATION BY REGIONAL ENTITY
This Disposition document serves as NPCC's Verification of Mitigation Plan Completion.

OTHER RELEVANT INFORMATION:

NOTICE OF ALLEGED VIOLATION AND PROPOSED PENALTY OR
SANCTION ISSUED

DATE: OR N/A ☒

SETTLEMENT REQUEST DATE

DATE: 10/12/2017 OR N/A ☐

NOTICE OF CONFIRMED VIOLATION ISSUED

DATE: OR N/A ☒

SUPPLEMENTAL RECORD INFORMATION

DATE(S) OR N/A ☒

REGISTERED ENTITY RESPONSE CONTESTED

FINDINGS ☐ PENALTY ☐ BOTH ☐ DID NOT CONTEST ☒

HEARING REQUESTED

YES ☐ NO ☒

DATE

OUTCOME

APPEAL REQUESTED

Attachment C

CL&P's Self-Report for FAC-003-4 R2
Dated August 21, 2017

This item was submitted by Timothy Reyher (timothy.reyher@eversource.com) on 8/21/2017

Please note that the circumstances under which an Entity would submit a Scope Expansion form are different from what would require a new Self-Report. Please review the material in [this link](#) to see clarifying information and examples of these differences before continuing with this form.

FORM INFORMATION

Registered Entity: Connecticut Light & Power Company

NERC Registry ID: NCR07044

JRO ID:

CFR ID: CFR00093 with CTMEEC, CFR00109 with UI

Entity Contact Information: William Temple

REPORTING INFORMATION

Applicable Standard: FAC-003-4

Applicable Requirement: R2.

Applicable Sub Requirement(s): 2.1.

Applicable Functions: TO

Has a Possible violation of this standard and requirement previously been reported or discovered: No

Has this Possible Violation previously been reported to other Regions: No

Date Possible Violation was discovered: 6/24/2017

Beginning Date of Possible Violation: 6/24/2017

End or Expected End Date of Possible Violation: 6/24/2017

Is the violation still occurring? No

Provide detailed description and cause of Possible Violation:

On 6/24/17 at 12:41 p.m. an A-phase to ground fault occurred on the Frost Bridge to Southington 329 transmission line (345kV). The line tripped and reclosed in 5 seconds as designed. An Eversource Transmission line supervisor was dispatched to investigate after a property owner reported an electrical disturbance to the company.

The Eversource Manager Transmission Vegetation Management (TVM) arrived on site at approximately 16:00 on 06/24/2017 and observed some burned tree tops in the hemlock hedge that runs approximately 150 feet directly under the outer phase of the 329 line. The TVM manager estimated, by visual observation, that the conductor was approximately 4-5 feet above the top of the trees hedge. The line was taken out of service on 6/24/17 and the trees were trimmed downed approximately 6-7 feet. It was the supervisor's preliminary conclusion that there was a lightning strike that hit the line and flashed over to the trees under the conductor and faulted to ground.

A review of the relay and digital fault recording data for the 329 Line showed that the disturbance was the result of a high impedance fault which is most commonly associated with a vegetation contact. The relay vendors, GE and Schweitzer, confirmed that the terminal relay oscillography for this incident shows a fault consistent with vegetation contact as the relays recorded large resistive impedances.

Eversource TVM procedures require an aerial inspection each year on all NERC regulated lines. The TVM practice has been to perform two inspections each year. The last vegetation aerial inspection performed on the 329 line was on 8/24/16. No vegetation conditions requiring corrective actions were identified during that inspection. The first aerial inspection for 2017 was scheduled for the spring. A review of the inspection log showed the line was inspected on 4/3/17. However, when a request was made for the inspection report to find out whether any other conditions were found on this line during that inspection, it was determined that the line inspection was not performed due to a transcription error on the Transmission Arborist's inspection schedule map. After the aerial inspections, the Arborist was updating the inspection log from the day's aerial inspections and inadvertently copied and pasted an inspection date in the 329 line row of the inspection log.



The 329 line is within a right-of-way that is part of the CT-23 brush maintenance contract for 2017, which is in addition to the annual inspection schedule. One of the contractual requirements is for the line clearance contractor to perform a foot inspection of all spans during the first 4 months of the year and provide a list on any potential vegetation problems to TVM. During this year's foot inspection, the contractor did submit a few locations on other sections of the project but the location of the event was not reported as being a problem requiring company attention. The contractor stated that they saw a flag (ribbon) hanging on one of the trees of this hedge and believed that Eversource had tagged this hedgerow and was aware of the situation.

Causal Information:

The root cause of this issue is that the first aerial inspection for 2017 scheduled for this past spring was not performed. The inspection could have noted trees under the conductor that would require a ground inspection to determine their proximity to the line. TVM's failure to properly update the inspection log allowed this area to go uninspected, allowing the vegetation to continue to grow resulting in a fault.

A contributing cause was the failure by the brush control contractor's foot patrol to identify vegetation conditions of the 329 line. Although the contractor did provide a few locations of concern on other areas of the line, they stated that they did not report the location where the event occurred as there was a flag (ribbon) hanging on one of the trees and they believed that Eversource had tagged this hedgerow and were aware of the situation.

Are Mitigating Activities in progress or completed? Yes

 An informal Mitigation Plan will be created upon submittal of this Self-Report with mitigating activities. If you would like to formalize that Mitigation Plan, please contact the Region. 

If Yes, Provide description of Mitigating Activities:

Yes,

The line was taken out of service on 6/24/17 at 17:52 and the hemlock tree hedge was trimmed down approximately 6-7 feet. (Complete)

The Arborist involved in the transposition error was counseled on 6/26/2017. (Complete)

The 329 line was foot patrolled in its entirety and completed on 7/21/17 with no other vegetation issues found. (Complete)

TVM reviewed the spring inspection logs and determined that the 329 line was the only facility that was missed during that round of inspections on 6/26/2017. (Complete)

The hemlock hedge will be completely removed by 9/30/17.

All of the remaining NERC facilities will be foot patrolled by 11/1/17.

Provide details to prevent recurrence:

An "All Hands" meeting with TVM Arborists was held to on 7/12/17 to discuss the lessons learned of this issue. (Complete)

To ensure that each line scheduled for an inspection is actually inspected and completed, a documented sign off process will be instituted and become part of the inspection procedure. 9/30/17.

Contractors will be informed during the upcoming pre-bid meeting in September that they are to report ALL conditions where vegetation appears to present a risk to the transmission system regardless of whether the vegetation may be flagged (ribboned) as it is not clear who would have placed the flagging on the condition or what the flagging actually represents. The pre-bid meetings are expected to be completed by 9/30/17.

The TVM Maintenance Standard 6.60B "VM Patrol & Inspection Program," will be revised by 10/1/17 to require all NERC facilities inspected from the ground in the spring beginning in 2018. Our current inspection practice is to perform two aerial inspections each year on these facilities but we will replace one aerial inspection with a ground inspection.

The maintenance specifications for contractors performing ground inspections will be revised to clearly require a span by span ground inspection and reporting of all vegetation conditions beginning with the 2018 program work. Maintenance specifications will be updated by 9/30/17.

Refresher training will be provided to all TVM personnel, with a lessons learned publication regarding assessing and managing vegetation conditions during the inspection process. Training will be completed by 12/31/17.

Formalize a peer review process among TVM to ensure program consistency. Peer review process will be developed by 12/31/17.

Date Mitigating Activities (including activities to prevent recurrence) are expected to be completed or were completed:

12/31/2017

MITIGATING ACTIVITIES

Title	Due Date	Description	Prevents Recurrence
Tree Trimmed	6/24/2017	The line was taken out of service on 6/24/17 at 17:52 and the hemlock tree hedge was trimmed down approximately 6-7 feet. (Complete)	No
Arborist counseled	6/26/2017	The Arborist involved in the transposition error has been counseled. (Complete 6/26/2017)	No
Foot Patrol 329 line	7/21/2017	The 329 line was foot patrolled in its entirety and completed on 7/21/17 with no other vegetation issues found (Complete).	No
Review 2017 Spring Inspection Log	6/26/2017	TVM reviewed the 2017 spring inspection logs and determined that the 329 line was the only facility that was missed during that round of inspections (Complete 6/26/2017).	No
All Hands Meeting	7/12/2017	An "All Hands" meeting with TVM Arborists was held to on 7/12/17 to discuss the lessons learned of this issue. (Complete)	Yes
Remove Hemlock Hedge	9/30/2017	The hemlock hedge will be completely removed by 9/30/17.	No
Document Sign-Off Process	9/30/2017	To ensure that each line scheduled for an inspection is actually inspected and completed, a documented sign off process will be instituted and become part of the inspection procedure by 9/30/17.	Yes
Contractors Report All Conditions	9/30/2017	Contractors will be informed during the upcoming pre-bid meeting in September that they are to report ALL conditions where vegetation appears to present a risk to the transmission system regardless of whether the vegetation may be flagged (ribboned) as it is not clear who would have placed the flagging on the condition or what the flagging actually represents. The pre-bid meetings are expected to be completed by 9/30/17	Yes
Foot Patrol All Facilities	11/11/2017	All of the remaining NERC facilities will be foot patrolled by 11/1/17.	No

Title	Due Date	Description	Prevents Recurrence
Revise 6.06B	10/1/2017	The TVM Maintenance Standard 6.60B "VM Patrol & Inspection Program," will be revised by 10/1/17 to require all NERC facilities inspected from the ground in the spring beginning in 2018. Our current inspection practice is to perform two aerial inspections each year on these facilities but we will replace one aerial inspection with a ground inspection.	Yes
Revise Maintenance Specs	9/30/2017	The maintenance specifications for contractors performing ground inspections will be revised to clearly require a span by span ground inspection and reporting of all vegetation conditions beginning with the 2018 program work. Maintenance specifications will be updated by 9/30/17.	Yes
Refresher Training	12/31/2017	Refresher training will be provided to all TVM personnel, with a lessons learned publication regarding assessing and managing vegetation conditions during the inspection process. Training will be completed by 12/31/17.	Yes
Formalize Peer Review	12/31/2017	Formalize a peer review process among TVM to ensure program consistency. Peer review process will be developed by 12/31/17.	Yes

Potential Impact to the Bulk Power System: Moderate

Actual Impact to the Bulk Power System: Minimal

Provide detailed description of Potential Risk to Bulk Power System:

The potential risk to the bulk power system (BPS) was moderate and not serious or substantial. A conclusion of a moderate risk was based on the following considerations:

- The 329 line was taken out of service on 6/24/17 and the trees were trimmed downed approximately 6-7 feet.
- The line has dual high speed protection schemes.
- The protection system on the 329 line operated correctly, clearing the fault within 5 seconds, limiting any impact to the 345kV system.
- Eversource's TVM inspection practice is to perform inspections twice a year. The first inspections take place in March and April. The second rounds of inspections occur during peak growing season in August and September.

Provide detailed description of Actual Risk to Bulk Power System:

There was no actual impact to the BPS.
The 329 line (345kV) Transmission line experienced a line fault that was followed by a successful reclose in 5 seconds.
All protection relays operated as designed.
The momentary loss of the 329 line did not result in an exceedance of System Operating Limits (SOLs).

Additional Comments:

NOTE: While submittal of a mitigation plan is not required until after a determination of a violation is confirmed, early submittal of a mitigation plan to address and remedy an identified deficiency is encouraged. Submittal of a mitigation plan shall not be deemed an admission of a violation. (See NERC Rules of Procedure, Appendix 4C, Section 6.4.)

Attachment D

CL&P's Mitigation Plan designated as NPCCMIT013274
Submitted October 2, 2017

 A [previous version](#) of this Mitigation Plan exists

 This item was signed by Mark Kenny (mark.kenny@eversource.com) on 10/2/2017

 This item was marked ready for signature by Mark Kenny (mark.kenny@eversource.com) on 10/2/2017

SECTION A: COMPLIANCE NOTICES & MITIGATION PLAN REQUIREMENTS

A.1 Notices and requirements applicable to Mitigation Plans and this Submittal Form are set forth in "[Attachment A - Compliance Notices & Mitigation Plan Requirements](#)" to this form.

[Yes] A.2 I have reviewed Attachment A and understand that this Mitigation Plan Submittal Form will not be accepted unless this box is checked.

SECTION B: REGISTERED ENTITY INFORMATION

B.1 Identify your organization

Company Name: Connecticut Light & Power Company

Company Address: 780 North Commercial Street

Manchester, New Hampshire 03101

Compliance Registry ID: NCR07044

B.2 Identify the individual in your organization who will be the Entity Contact regarding this Mitigation Plan.

Name: William Temple

SECTION C: IDENTIFICATION OF ALLEGED OR CONFIRMED VIOLATION(S) ASSOCIATED WITH THIS MITIGATION PLAN

C.1 This Mitigation Plan is associated with the following Alleged or Confirmed violation(s) of Reliability Standard listed below.

Standard: FAC-003-4

Requirement	Regional ID	NERC Violation ID	Date Issue Reported
R2.	NPCC2017-201400	NPCC2017018215	8/21/2017

C.2 Identify the cause of the Alleged or Confirmed violation(s) identified above:

The root cause of this issue is that vegetation (hemlock hedge) was allowed to grow underneath the transmission line because of a contract (In Lieu of Agreement) with the property owner. In Lieu of Agreements (ILOs) were initially created in the 1990's for herbicide restrictions and in some cases to allow property owners to maintain trees at or below a company designated height. These have been used in the past where landscaped trees are within the company's rights-of-way. The ILO agreement requires that vegetation "shall be kept at or below 15 ft." which is below the minimum vegetation clearance distance (MVCD). The property where this flashover occurred had a ILO agreement for the hemlock hedge issued in 1997.

A direct contributor to this event is that the spring aerial inspection was incorrectly noted as completed on 4/3/17 for the 329 line. This occurred because while updating the inspection log, an Arborist inadvertently copied and pasted an inspection date for work performed on 4/3/17 onto the 329 line row of the inspection log. Therefore, while the 329 line inspection was recorded as complete, it had not actually occurred.

The 2016 aerial inspections were performed on 3/30/2016 and 8/24/2016.

A brush control contractor's foot patrol conducted on 03/11/2017 did not identify this vegetation condition on the 329 line. Although the contractor did provide a few locations of concern on other areas of the line, they stated that they did not report the location where the event occurred as there was a ribbon hanging on one of the trees and they believed that Eversource had tagged this hedgerow and were aware of the situation.

[Attachments \(\)](#)

C.3 Provide any additional relevant information regarding the Alleged or Confirmed violations associated with this Mitigation Plan:

The potential risk to the BES presented by this incident was moderate, and not serious or substantial. There was no actual impact to the BES.

- The event did not result in a sustained outage. The event was mitigated by dual high speed protection systems operating as designed, clearing the fault in 3 cycles at Southington substation and 8 cycles at Frost Bridge substation. Automatic reclosing operated as designed, restoring the line to service in five seconds, limiting any impact to the 345 kV system.

- Vegetation crews responded promptly. The 329 line was taken out of service the same day on 6/24/17 and the trees were trimmed downed approximately 6-7 feet.

- Eversource has a comprehensive and systematic Transmission Vegetation Management (TVM) inspection program, which includes performing inspections twice a year. Our Transmission Vegetation Management Program and this mitigation plan will ensure there are no encroachments into the MVCD with respect to Eversource's facilities that meet the NERC definition per FAC-003-4 (NERC facilities).

- The Eversource transmission system is designed and operated in a manner where the loss of a single circuit would not cause overloads or voltage limit violations under a

variety of system conditions. The design of the transmission system takes into consideration that the loss of a circuit could occur at any system load level from minimum load (typically an early Spring or Fall morning) to peak load (1-in-10 year likelihood of occurrence and typically a mid-afternoon of the third or fourth very hot Summer day). Similarly, the operation of the transmission system also considers that the loss of a circuit could occur at any time. Therefore:

o The tripping of the 329 line from the Southington substation to the Frostbridge substation, under a variety of system conditions, would not have resulted in a loss of load or equipment flows higher than equipment ratings.

o If the tripping of the 329 line was accompanied by a circuit breaker failing to clear the fault; it would not cause overloads or voltage limit violations in accordance with NERC standards, NPCC and ISO-New England criteria and requirements.

[Attachments \(\)](#)

SECTION D: DETAILS OF PROPOSED MITIGATION PLAN

D.1 Identify and describe the action plan, including specific tasks and actions that your organization is proposing to undertake, or which it undertook if this Mitigation Plan has been completed, to correct the Alleged or Confirmed violations identified above in Part C.1 of this form:

Description of Mitigating Activities:

The line was taken out of service on 6/24/17 at 17:52 and the hemlock tree hedge was trimmed downed approximately 6-7 feet. The hemlock hedge was removed on 9/26/17. (Complete)

The Arborist involved in the transposition error was counseled on 6/26/2017. An "All Hands" meeting with TVM Arborists was held to on 7/12/17 to discuss the lessons learned of this issue. The TVM Manager discussed the errors and missed opportunities, TVM procedures, and contractor responsibilities (Complete)

TVM reviewed the spring inspection logs and determined that the 329 line was the only facility that was missed during that round of inspections. This review was conducted on 6/26/2017. (Complete)

The 329 line was foot patrolled in its entirety and completed on 7/21/17 with no other vegetation issues found. (Complete)

ILOs associated with vegetation in the wire zone on NERC lines have been inspected and no vegetation issues requiring maintenance were identified (Complete 8/30/2017).

All remaining transmission right-of-ways associated with NERC facilities will be foot patrolled by 11/01/17.

To ensure that each line scheduled for an inspection is actually inspected and completed, a documented sign off process will be instituted and become part of the inspection procedure. 11/01/17.

Technical specifications for contractors will be revised to explicitly require the reporting of all conditions where vegetation appears to present a risk to the transmission system regardless of whether the vegetation may be flagged (ribboned). The upcoming pre-bid meetings are expected to be completed by 11/01/17.

Our current inspection practice is to perform two aerial inspections each year on facilities. We will enhance our inspections by replacing one aerial inspection with a ground inspection for NERC facilities. The TVM Maintenance Standard 6.6B "VM Patrol & Inspection Program," will be revised by 11/1/17 to require all NERC facilities to be inspected from the ground each spring beginning in 2018.

Refresher training will be provided to all TVM personnel, with a lessons learned publication regarding assessing and managing vegetation conditions during the inspection process. A peer review process will be formalized among TVM to ensure program consistency. Refresher training to be completed by 12/31/17.

WorkStudio software - Eversource is currently in the process of installing an enterprise-wide software WorkStudio 8.6 and expects it to be placed in production by 12/31/2017. The new automated system will accommodate planning and implementation of annual work to be performed, budgets, vendors, schedules, work orders, work in progress, work site location, crew performance and job site inspections and reporting capabilities.

A maintenance and inspection program will be developed specifically for the ILOs by 01/31/2018. The program will require an annual review and site inspection of the property while an ILO is in effect, and remove vegetation not consistent with our TVM specifications.

[Attachments \(\)](#)

D.2 Provide the date by which full implementation of the Mitigation Plan will be, or has been, completed with respect to the Alleged or Confirmed violations identified above. State whether the Mitigation Plan has been fully implemented:

1/31/2018

D.3 Enter Milestone Activities, with due dates, that your organization is proposing, or has completed, for this Mitigation Plan:

[Tree Trimmed](#)

Milestone Completed (Due: 6/24/2017 and Completed 6/24/2017)

The line was taken out of service on 6/24/17 at 17:52 and the hemlock tree hedge was trimmed downed approximately 6-7 feet. (Complete)

[Arborist counseled](#)

Milestone Completed (Due: 6/26/2017 and Completed 6/26/2017)

The Arborist involved in the transposition error was counseled on 6/26/2017.

[Review 2017 Spring Inspection Log](#)

Milestone Completed (Due: 6/26/2017 and Completed 6/26/2017)

TVM reviewed the spring inspection logs and determined that the 329 line was the only facility that was missed during that round of inspections. This review was conducted on 6/26/2017. (Complete)

[All Hands Meeting](#)

Milestone Completed (Due: 7/12/2017 and Completed 7/12/2017)

An "All Hands" meeting with TVM Arborists was held to on 7/12/17 to discuss the lessons learned of this issue. The TVM Manager discussed the errors and missed opportunities, TVM procedures, and contractor responsibilities (Complete)

[Foot Patrol 329 line](#)

Milestone Completed (Due: 7/21/2017 and Completed 7/21/2017)

The 329 line was foot patrolled in its entirety and completed on 7/21/17 with no other vegetation issues found. (Complete)

ILO review and inspection

Milestone Completed (Due: 8/30/2017 and Completed 8/30/2017)

ILOs associated with vegetation in the wire zone on NERC lines have been inspected and no vegetation issues requiring maintenance were identified (Complete 8/30/2017).

Remove Hemlock Hedge

Milestone Completed (Due: 9/30/2017 and Completed 9/26/2017)

The hemlock hedge was removed on 9/26/17. (Complete)

Revise Maintenance Specs

Milestone Pending (Due: 10/7/2017)

Technical specifications for contractors will be revised to explicitly require the reporting of all conditions where vegetation appears to present a risk to the transmission system regardless of whether the vegetation may be flagged (ribboned). The upcoming pre-bid meetings are expected to be completed by 11/01/17.

Document Sign-Off Process

Milestone Pending (Due: 11/1/2017)

To ensure that each line scheduled for an inspection is actually inspected and completed, a documented sign off process will be instituted and become part of the inspection procedure. 11/01/17.

Enhanced Annual Inspection Strategy

Milestone Pending (Due: 11/1/2017)

Our current inspection practice is to perform two aerial inspections each year on facilities. We will enhance our inspections by replacing one aerial inspection with a ground inspection for NERC facilities. The TVM Maintenance Standard 6.6B "VM Patrol & Inspection Program," will be revised by 11/1/17 to require all NERC facilities to be inspected from the ground each spring beginning in 2018.

All NERC facilities Foot Patrolled

Milestone Pending (Due: 11/11/2017)

All remaining transmission right-of-ways associated with NERC facilities will be foot patrolled by 11/01/17.

Refresher Training

Milestone Pending (Due: 12/31/2017)

Refresher training will be provided to all TVM personnel, with a lessons learned publication regarding assessing and managing vegetation conditions during the inspection process.

Formalize Peer Review

Milestone Pending (Due: 12/31/2017)

A peer review process will be formalized among TVM to ensure program consistency. Refresher training to be completed by 12/31/17.

WorkStudio software

Milestone Pending (Due: 12/31/2017)

WorkStudio software - Eversource is currently in the process of installing an enterprise-wide software WorkStudio 8.6 and expects it to be placed in production by 12/31/2017. The new automated system will accommodate planning and implementation of annual work to be performed, budgets, vendors, schedules, work orders, work in progress, work site location, crew performance and job site inspections and reporting capabilities.

ILO Maintenance Plan

Milestone Pending (Due: 1/31/2018)

A maintenance and inspection program will be developed specifically for the ILOs by 01/31/2018. The program will require an annual review and site inspection of the property while an ILO is in effect, and remove vegetation not consistent with our TVM specifications.

SECTION E: INTERIM AND FUTURE RELIABILITY RISK

E.1 Abatement of Interim BPS Reliability Risk: While your organization is implementing this Mitigation Plan the reliability of the Bulk Power Supply (BPS) may remain at higher risk or be otherwise negatively impacted until the plan is successfully completed. To the extent they are, or may be, known or anticipated: (i) identify any such risks or impacts; and (ii) discuss any actions that your organization is planning to take to mitigate this increased risk to the reliability of the BPS. (Additional detailed information may be provided as an attachment):

The reliability of the Bulk Power System does not remain at a higher risk and will not be negatively impacted prior to full completion of the action items in this Mitigation Plan for the following reasons:

- The 329 line was foot patrolled in its entirety with no other vegetation issues found. In addition, the spring inspection logs were reviewed and it was determined that the 329 line was the only facility that was missed during that round of inspections. An All-Hands meeting was held with the TVM arborists to further raise awareness of vegetation risks associated with this event.
- All ILOs associated with vegetation in the wire zone on NERC lines have been inspected and no vegetation issues identified. (The company no longer enters into these type of ILOs as a normal practice)
- Eversource has a comprehensive and systematic TVM inspection program, which includes performing inspections twice a year. Our TVM Program and the mitigation actions to date will ensure there are no encroachments into MVCD with respect to Eversource's NERC facilities.

• The Eversource transmission system is designed and operated in a manner where the loss of a single circuit would not cause overloads or voltage limit violations under a variety of system conditions. The design of the transmission system takes into consideration that the loss of a circuit could occur at any system load level from minimum load (typically an early Spring or Fall morning) to peak load (1-in-10 year likelihood of occurrence and typically a mid-afternoon of the third or fourth very hot Summer day). Similarly, the operation of the transmission system also considers that the loss of a circuit could occur at any time. Additional contingencies (e.g., a stuck breaker in addition to a loss of an element) are designed for in accordance with NERC standards, NPCC and ISO-New England criteria and requirements.

[Attachments \(\)](#)

E.2 Prevention of Future BPS Reliability Risk: Describe how successful completion of this Mitigation Plan will prevent or minimize the probability that your organization incurs further risk of Alleged violations of the same or similar reliability standards requirements in the future. (Additional detailed information may be provided as an attachment):

The additional measures that will be completed for embedding explicit requirements into technical specifications for contractors, process improvements for inspection reporting and implementation of WorkStudio software, and increased use of foot patrols regularly will be further enhancement measures on our comprehensive TVM program.

The company is also aggressively managing the ILOs that do exist, and reducing any vegetation not consistent with our TVM specifications, and terminating those agreement wherever possible.

[Attachments \(\)](#)

SECTION F: AUTHORIZATION

An authorized individual must sign and date this Mitigation Plan Submittal Form. By doing so, this individual, on behalf of your organization:

- a) Submits this Mitigation Plan for acceptance by NPCC and approval by NERC, and
- b) If applicable, certifies that this Mitigation Plan was completed on or before the date provided as the 'Date of Completion of the Mitigation Plan' on this form, and
- c) Acknowledges:
 - I am Mark Kenny of Connecticut Light & Power Company
 - I am qualified to sign this Mitigation Plan on behalf of Connecticut Light & Power Company
 - I understand Connecticut Light & Power Company's obligations to comply with Mitigation Plan requirements and ERO remedial action directives as well as ERO documents, including, but not limited to, the NERC Rules of Procedure, including Appendix 4 (Compliance Monitoring and Enforcement Program of the North American Electric Reliability Corporation (NERC CMEP))
 - I have read and am familiar with the contents of this Mitigation Plan
 - Connecticut Light & Power Company agrees to comply with, this Mitigation Plan, including the timetable completion date, as accepted by NPCC and approved by NERC

SECTION G: REGIONAL ENTITY CONTACT


Please direct any questions regarding completion of this form to:

Jason Wang
NPCC
NPCC
646-737-2153
jwang@npcc.org

Attachment E

CL&P's Certification of Mitigation Plan Completion
Submitted April 4, 2018

VIEW MITIGATION PLAN CLOSURE: FAC-003-4 (MITIGATION PLAN CLOSURE COMPLETED)

 This item was signed by Timothy Reyher (timothy.reyher@eversource.com) on 4/4/2018



 This item was marked ready for signature by Mark Kenny (mark.kenny@eversource.com) on 1/29/2018

**MEMBER MITIGATION PLAN CLOSURE**

All Mitigation Plan Completion Certification submittals shall include data or information sufficient for NPCC to verify completion of the Mitigation Plan. NPCC may request such additional data or information and conduct follow-up assessments, on-site or other Spot Checking, or Compliance Audits as it deems necessary to verify that all required actions in the Mitigation Plan have been completed and the Registered Entity is in compliance with the subject Reliability Standard. (CMEP Section 6.6) Data or information submitted may become part of a public record upon final disposition of the possible violation, therefore any confidential information contained therein should be marked as such in accordance with the provisions of Section 1500 of the NERC Rules of Procedure.

Name of Registered Entity submitting certification:

Connecticut Light & Power Company

Name of Standard of mitigation violation(s):

FAC-003-4

Requirement	Tracking Number	NERC Violation ID
R2.	NPCC2017-201400	NPCC2017018215

Date of completion of the Mitigation Plan:

1/29/2018

Tree Trimmed

Milestone Completed (Due: 6/24/2017 and Completed 6/24/2017)

[Attachments \(0\)](#)

The line was taken out of service on 6/24/17 at 17:52 and the hemlock tree hedge was trimmed downed approximately 6-7 feet. (Complete)

Arborist counseled

Milestone Completed (Due: 6/26/2017 and Completed 6/26/2017)

[Attachments \(0\)](#)

The Arborist involved in the transposition error was counseled on 6/26/2017.

Review 2017 Spring Inspection Log

Milestone Completed (Due: 6/26/2017 and Completed 6/26/2017)

[Attachments \(0\)](#)

TVM reviewed the spring inspection logs and determined that the 329 line was the only facility that was missed during that round of inspections. This review was conducted on 6/26/2017. (Complete)

All Hands Meeting

Milestone Completed (Due: 7/12/2017 and Completed 7/12/2017)

[Attachments \(0\)](#)

An "All Hands" meeting with TVM Arborists was held to on 7/12/17 to discuss the lessons learned of this issue. The TVM Manager discussed the errors and missed opportunities, TVM procedures, and contractor responsibilities (Complete)

Foot Patrol 329 line

Milestone Completed (Due: 7/21/2017 and Completed 7/21/2017)

[Attachments \(0\)](#)

The 329 line was foot patrolled in its entirety and completed on 7/21/17 with no other vegetation issues found. (Complete)

ILO review and inspection

Milestone Completed (Due: 8/30/2017 and Completed 8/30/2017)

[Attachments \(0\)](#)

ILOs associated with vegetation in the wire zone on NERC lines have been inspected and no vegetation issues requiring maintenance were identified (Complete 8/30/2017).

Remove Hemlock Hedge

Milestone Completed (Due: 9/30/2017 and Completed 9/26/2017)

[Attachments \(0\)](#)

The hemlock hedge was removed on 9/26/17. (Complete)

[Revise Maintenance Specs](#)

Milestone Completed (Due: 10/7/2017 and Completed 11/1/2017)

[Attachments \(0\)](#)

Technical specifications for contractors will be revised to explicitly require the reporting of all conditions where vegetation appears to present a risk to the transmission system regardless of whether the vegetation may be flagged (ribboned). The upcoming pre-bid meetings are expected to be completed by 11/01/17.

[Document Sign-Off Process](#)

Milestone Completed (Due: 11/1/2017 and Completed 11/1/2017)

[Attachments \(0\)](#)

To ensure that each line scheduled for an inspection is actually inspected and completed, a documented sign off process will be instituted and become part of the inspection procedure. 11/01/17.

[Enhanced Annual Inspection Strategy](#)

Milestone Completed (Due: 11/1/2017 and Completed 11/1/2017)

[Attachments \(0\)](#)

Our current inspection practice is to perform two aerial inspections each year on facilities. We will enhance our inspections by replacing one aerial inspection with a ground inspection for NERC facilities. The TVM Maintenance Standard 6.6B "VM Patrol & Inspection Program," will be revised by 11/1/17 to require all NERC facilities to be inspected from the ground each spring beginning in 2018.

[All NERC facilities Foot Patrolled](#)

Milestone Completed (Due: 11/11/2017 and Completed 11/1/2017)

[Attachments \(0\)](#)

All remaining transmission right-of-ways associated with NERC facilities will be foot patrolled by 11/01/17.

[Refresher Training](#)

Milestone Completed (Due: 12/31/2017 and Completed 12/15/2017)

[Attachments \(0\)](#)

Refresher training will be provided to all TVM personnel, with a lessons learned publication regarding assessing and managing vegetation conditions during the inspection process.

[Formalize Peer Review](#)

Milestone Completed (Due: 12/31/2017 and Completed 12/28/2017)

[Attachments \(0\)](#)

A peer review process will be formalized among TVM to ensure program consistency. Refresher training to be completed by 12/31/17.

[WorkStudio software](#)

Milestone Completed (Due: 12/31/2017 and Completed 1/29/2018)

[Attachments \(0\)](#)

WorkStudio software - Eversource is currently in the process of installing an enterprise-wide software WorkStudio 8.6 and expects it to be placed in production by 12/31/2017. The new automated system will accommodate planning and implementation of annual work to be performed, budgets, vendors, schedules, work orders, work in progress, work site location, crew performance and job site inspections and reporting capabilities.

[ILO Maintenance Plan](#)

Milestone Completed (Due: 1/31/2018 and Completed 1/26/2018)

[Attachments \(0\)](#)

A maintenance and inspection program will be developed specifically for the ILOs by 01/31/2018. The program will require an annual review and site inspection of the property while an ILO is in effect, and remove vegetation not consistent with our TVM specifications.

Summary of all actions described in Part D of the relevant mitigation plan:

Description of the completed Mitigating Activities:

The line was taken out of service on 6/24/17 at 17:52 and the hemlock tree hedge was trimmed downed approximately 6-7 feet. The hemlock hedge was removed on 9/26/17.

The Arborist involved in the transposition error was counseled on 6/26/2017. An "All Hands" meeting with TVM Arborists was held to on 7/12/17 to discuss the lessons learned of this issue. The TVM Manager discussed the errors and missed opportunities, TVM procedures, and contractor responsibilities

TVM reviewed the spring inspection logs and determined that the 329 line was the only facility that was missed during that round of inspections. This review was conducted on 6/26/2017.

The 329 line was foot patrolled in its entirety and completed on 7/21/17 with no other vegetation issues found.

ILOs associated with vegetation in the wire zone on NERC lines have been inspected and no vegetation issues requiring maintenance were identified.

All remaining transmission right-of-ways associated with NERC facilities were foot patrolled.

To ensure that each line scheduled for an inspection is actually inspected and completed, a documented sign off process has been instituted and become part of the inspection procedure.

Technical specifications for contractors were revised to explicitly require the reporting of all conditions where vegetation appears to present a risk to the transmission system regardless of whether the vegetation may be flagged (ribboned).

Our current inspection practice is to perform two aerial inspections each year on facilities. Our inspections have been enhanced by replacing one aerial inspection with a ground inspection for NERC facilities. The TVM Maintenance Standard 6.6B "VM Patrol & Inspection Program," were revised to require all NERC facilities to be inspected from the ground each spring beginning in 2018.

Refresher training has been provided to all TVM personnel, with a lessons learned publication regarding assessing and managing vegetation conditions during the inspection process. A peer review process has been formalized among TVM to ensure program consistency.

WorkStudio software - Eversource has installed an enterprise-wide software WorkStudio 8.6. The new automated system will accommodate planning and

implementation of annual work to be performed, budgets, vendors, schedules, work orders, work in progress, work site location, crew performance and job site inspections and reporting capabilities.

A maintenance and inspection program has been developed specifically for the ILOs. The program requires an annual review and site inspection of the property while an ILO is in effect, and remove vegetation not consistent with our TVM specifications.

Description of the information provided to NPCC for their evaluation *

In addition to the completion of the mitigation milestones, Eversource has also provided supporting evidence to support the completion of the milestone completion commitment. This Mitigation Plan Closure is complete and NPCC has recieved all supporting evidence.

I certify that the Mitigation Plan for the above-named violation has been completed on the date shown above. In doing so, I certify that all required Mitigation Plan actions described in Part D of the relevant Mitigation Plan have been completed, compliance has been restored, the above-named entity is currently compliant with all of the requirements of the referenced standard, and that all information submitted is complete, true and correct to the best of my knowledge.

Attachment F

NPCC's Verification of Mitigation Plan Completion
Dated April 5, 2018



NORTHEAST POWER COORDINATING COUNCIL, INC.
1040 AVE. OF THE AMERICAS, NEW YORK, NY 10018 (212) 840-1070 FAX (212) 302-2782

VIA EMAIL

April 5, 2018

Mary Ellen Paravalos
Vice President - ISO, Siting and Compliance
Connecticut Light & Power Company
780 North Commercial Street
Manchester, NH 03101
maryellen.paravalos@eversource.com

Subject: Verification of Mitigation Plan Completion
Standard/Req: FAC-003-4 R2.
NERC Registration ID: NCR07044
NPCC Violation ID: NPCC2017-201400
NERC Violation ID: NPCC2017018215
Mitigation Plan ID: NPCCMIT013274

On April 5, 2018 Northeast Power Coordinating Council, Inc. (NPCC) completed its review of the evidence submitted by Connecticut Light & Power Company in support of its Certification of Completion submitted on April 4, 2018. Based on its review of the evidence submitted, NPCC Staff verifies that, in its professional judgment, all required actions in the Mitigation Plan have been completed and Connecticut Light & Power Company is in compliance with the subject Reliability Standard Requirement as of June 24, 2017.

This statement, along with the subject Mitigation Plan, may become part of a public record upon final disposition of the possible violation.

NPCC thanks you for your cooperation in this matter and for improving the reliability of the bulk electric system.

If you have any questions regarding this issue, please contact me.

Sincerely,

Francesco Elmi

Francesco Elmi
Sr. Compliance Engineer
Northeast Power Coordinating Council Inc.
1040 Avenue of the Americas- 10th Fl
New York, NY 10018-3703
Tel: 212-840-1070



Connecticut Light & Power Company
April 5, 2018
Page 2 of 2

Fax: 212-302-2782
E-mail: felmi@npcc.org

cc: NPCC Enforcement (Enforcement@npcc.org)
Vicki O'Leary, vicki.o'leary@eversource.com