



56 Prospect Street  
Hartford, CT 06103

Steven J. Allen  
Eversource, ISO-NE Coordination  
phone: 860-728-4536  
email: steven.allen@eversource.com

January 19, 2023

Ms. Emily Laine  
Chair, NEPOOL Reliability Committee  
ISO New England, Inc.  
One Sullivan Road  
Holyoke, MA 01040-2841

Dear Ms. Laine,

In accordance with Schedule 12C of the ISO New England ("ISO-NE") Transmission, Markets & Services Tariff ("ISO-NE Tariff"), Eversource Energy Service Company ("Eversource") hereby submits the attached Transmission Cost Allocation ("TCA") application(s) reporting cost support information associated with the construction, retirement, or modification to facilities rated 69 kV and above that qualify as regional Pool Transmission Facilities ("PTF") for the following Eversource project:

**ES-23-TCA-02      381/379 345 kV Line Optical Ground Wire Upgrade Project  
(Northfield Mountain substation to VELCO to Fitzwilliam  
substation)**

Eversource is requesting that ISO-NE submit this TCA to the NEPOOL Reliability Committee for review, in accordance with ISO-NE Planning Procedure No. 4 ("PP-4").

If you have any questions, I can be reached via the information listed above.

Sincerely,

*Steven J. Allen*

Steven J. Allen

cc: M. Drzewianowski

**Attachment B**  
**TCA Application Form**

1. Applicant:	Application #:	ES-23-TCA-02	Date:	Jan-23
Contact Name:	Steven J. Allen			
Company Name:	Eversource Energy Service Company			
Address 1:	56 Prospect Street			
Address 2:				
City, State, Zip:	Hartford, CT 06103	RSP Project ID # or		
Contact Phone #:	860-728-4536	Asset Condition ID #	TBD	
Email Address:	<a href="mailto:steven.allen@eversource.com">steven.allen@eversource.com</a>	Is Project related to CIP-14		
		Yes	<input type="checkbox"/>	No
			<input checked="" type="checkbox"/>	

2. Project Description: In Service Date: Sep-23

a. **High Level Project Details:**

**Project Name** ( If no formal name, then Substation Upgrade, Line Upgrade, etc. are acceptable):

**381/379 345 kV Line Optical Ground Wire Upgrade Project (Northfield Mountain substation to VELCO to Fitzwilliam substation)**

**Project Location** (State only):

**State:**

MA/NH

**County:**

Franklin (MA), Cheshire (NH)

b. Summary of PTF-related work for Project:

Replace 20.1 miles of existing shield wire with Optical Ground Wire (OPGW) on the 381 345-kV Line (Northfield Mountain substation - VELCO) and supporting terminal work to tie into Northfield Mountain and Chestnut Hill substations; and replace 1.1 miles of existing shield wire with OPGW on the 379 345-kV Line (VELCO to Fitzwilliam substation).

Final project cost details will be known following closeout of all project work orders.

c. Summary of Non-PTF-related work for Project:

3. Was a transmission Proposed Plan Application required for this work?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	PPA Number: <u>N/A</u>
4. Has a transmission Proposed Plan Application been approved?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
If yes, attach a copy and reference Proposed Plan Application # and approval date.		(Please check only one)			

**Need For Project:**

5. Need Based On (Check all Categories that apply):

- a. Reliability
- b. Economic
- c. Service to new load
- d. New generator interconnection

Generator Proposed Plan Application Number \_\_\_\_\_

Generator Proposed Plan Application Date \_\_\_\_\_

(Attach copy of cover letter & Generator Proposed Plan Application)

- e. Public Policy Transmission Upgrade (PPTU)
- f. Market Efficiency Transmission Upgrade (METU)
- g. Asset Condition
- h. Other (specify in line 6)

6. Provide a narrative description of the need for this Project.  
(Include available documentation relative to the need for this Project. )

This project will support Eversource's standard to provide facilities with a high-bandwidth, low latency, secure, reliable network operations. This project will provide a controlled alternate fiber communications path supporting long-term build-out of the fiber optic network, greatly reduces the reliance on leased services for protection and SCADA. A private Eversource network is segregated from third-party Telecom services, mitigating accessibility to Bulk Electric System (BES) Cyber Systems.

**Cost of Project:**

7. Total Project Cost (\$M) equals PTF + Non-PTF + all other Project Costs:	<u>\$8.238</u>
8. Total Proposed PTF Costs	
a. Total Proposed PTF Cost of this Project (\$M):	<u>\$8.238</u>
b. Requested Pool-Supported PTF Costs associated with this Project (\$M):	<u>\$8.238</u>
c. Breakdown of Requested Pool-Supported PTF Cost associated with this Project (\$M): (Consistent with Table 1 and Appendix D of this Procedure)	
Material	<u>\$0.726</u>
Labor	<u>\$5.054</u>
ROW	<u>\$0.000</u>
Engineering/Permitting/Indirects	<u>\$1.886</u>
Escalation	<u>\$0.000</u>
AFUDC (or equivalent)	<u>\$0.080</u>
Contingency	<u>\$0.492</u>
d. Generator Supported PTF Costs* (\$M):	<u>\$0.000</u>

If the costs in 8.b. plus 8.d. do not equal the total proposed PTF cost (8.a) explain and indicate who is responsible for the remaining costs.

9. Total Proposed Non-PTF Cost of this Project (\$M): \$0.000

10. Proposed PTF Costs (\$M) introduced as a result of local, state or other regulatory/legislative requirements, including costs identified pursuant to Section 1.6.3 of this PP-4. \$0.000

a. Description of Proposed PTF Cost introduced as a result of local, state or other regulatory/legislative requirements as defined in question 8 above.

11. All other Project Costs not captured in PTF Costs (8) or Non-PTF Costs (9) (\$M) associated with this Project: \$0.000

12. Total PTF Cost based on: (check one)

Actual Costs

**OR**

Estimated Costs\*

13. Valuation Year(s) of dollar amounts submitted above: \_\_\_\_\_ 2023 \_\_\_\_\_

14. If applicable, explain how the cost of common facilities were allocated between PTF and Non-PTF.

15. Does this Project result in a change of existing Non-PTF facilities to PTF? Yes  No

16. Describe the major transmission alternatives, and their costs consistent with the breakdown provided in item 7 of this Application, that were considered. Provided an explanation why the preferred alternative was selected.  
(Include available documentation relative to the major transmission alternatives analysis and selection.)

**Alternative:**

Do nothing - does not align with Eversource standard of improving the communication network and expanding fiber optic infrastructure to meet operational and compliance needs.

**Preferred:**

Installing OPGW is the chosen alternative as it supports Eversource's standard to provide facilities with a high-bandwidth, low latency, secure, reliable network operations. This project will provide a controlled alternate fiber communications path supporting long-term build-out of the fiber optic network, greatly reduces the reliance on leased services for protection and SCADA. A private Eversource network is segregated from third-party Telecom services, mitigating accessibility to Bulk Electric System (BES) Cyber Systems.

17. Has state and local siting been completed? If yes, explain the siting process and any provisions that were made during siting, provide docket or siting reference numbers. If no, then explain when siting is expected to be completed and any provisions that have been agreed to.

No unusual Siting or permitting were required for this project.

\* Pool-Supported PTF costs were determined pursuant to Schedule 11 of Section II of the Tariff.

## PROJECT COST ESTIMATE & SCHEDULE SHEET

**Transmission Owner:** NSTAR Electric Company and Public Service Company of New Hampshire

**RSP Project #:** TBD

**Project Name:** 381/379 345 kV Line Optical Ground Wire Upgrade Project (Northfield Mountain substation to VELCO to Fitzwilliam substation)

**Date:** Jan-23

### 1. Project Scope Summary

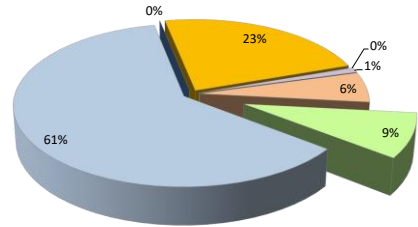
Replace 20.1 miles of existing shield wire with Optical Ground Wire (OPGW) on the 381 345 kV Line (Northfield Mountain substation - VELCO) and supporting terminal work to tie into Northfield Mountain and Chestnut Hill substations; and replace 1.1 miles of existing shield wire with OPGW on the 379 345-kV Line (VELCO to Fitzwilliam substation).

### 2. Project Cost Summary

(\$M)

2.1. Project Cost Summary			
Cost Category	PTF	Non-PTF	Total
Material	\$ 0.726	\$ -	\$ 0.726
Labor & Equipment	\$ 5.054	\$ -	\$ 5.054
Right of Way	\$ -	\$ -	\$ -
Engineering/Permitting /Indirects	\$ 1.886	\$ -	\$ 1.886
Escalation	\$ -	\$ -	\$ -
AFUDC	\$ 0.080	\$ -	\$ 0.080
Contingency	\$ 0.492	\$ -	\$ 0.492
<b>Total Project Cost</b>	<b>\$ 8.238</b>	<b>\$ -</b>	<b>\$ 8.238</b>

- Material
- Labor & Equipment
- Right of Way
- Engineering/Permitting /Indirects
- Escalation
- AFUDC
- Contingency



2.2 Detailed Cost Summary By Project Element									
	Material	Labor & Equipment	Right of Way	Engineering/Permitting/Indirects	Escalation	AFUDC	Contingency	Total	PTF Amount
381/379 345 kV Line Optical Ground Wire Upgrade Project (Northfield Mountain substation to VELCO to Fitzwilliam substation)	\$ 0.726	\$ 5.054	\$ -	\$ 1.886	\$ -	\$ 0.080	\$ 0.492	\$ 8.238	\$ 8.238
<b>Total</b>	<b>\$ 0.726</b>	<b>\$ 5.054</b>	<b>\$ -</b>	<b>\$ 1.886</b>	<b>\$ -</b>	<b>\$ 0.080</b>	<b>\$ 0.492</b>	<b>\$ 8.238</b>	<b>\$ 8.238</b>

### 3. Project Milestone Schedule

Description			2021				2022				2023				2024				2025																																											
			Qtr1	Qtr2	Qtr3	Qtr4	Qtr1	Qtr2	Qtr3	Qtr4	Qtr1	Qtr2	Qtr3	Qtr4	Qtr1	Qtr2	Qtr3	Qtr4	Qtr1	Qtr2	Qtr3	Qtr4																																								
<b>Siting &amp; Permitting</b>																																																														
Approval and Permits	1/15/2022	4/13/2023																																																												
<b>Engineering</b>																																																														
Engineering and Design	3/21/2022	2/23/2023																																																												
<b>Material</b>																																																														
Material	6/9/2022	3/17/2023																																																												
<b>Construction</b>																																																														
Construction	1/13/2023	9/30/2023																																																												
<table border="0" style="width: 100%;"> <tr> <td>Qtr1</td><td>Qtr2</td><td>Qtr3</td><td>Qtr4</td> <td>Qtr1</td><td>Qtr2</td><td>Qtr3</td><td>Qtr4</td> <td>Qtr1</td><td>Qtr2</td><td>Qtr3</td><td>Qtr4</td> <td>Qtr1</td><td>Qtr2</td><td>Qtr3</td><td>Qtr4</td> <td>Qtr1</td><td>Qtr2</td><td>Qtr3</td><td>Qtr4</td> </tr> <tr> <td colspan="4">2021</td> <td colspan="4">2022</td> <td colspan="4">2023</td> <td colspan="4">2024</td> <td colspan="4">2025</td> </tr> </table>																							Qtr1	Qtr2	Qtr3	Qtr4	Qtr1	Qtr2	Qtr3	Qtr4	Qtr1	Qtr2	Qtr3	Qtr4	Qtr1	Qtr2	Qtr3	Qtr4	Qtr1	Qtr2	Qtr3	Qtr4	2021				2022				2023				2024				2025			
Qtr1	Qtr2	Qtr3	Qtr4	Qtr1	Qtr2	Qtr3	Qtr4	Qtr1	Qtr2	Qtr3	Qtr4	Qtr1	Qtr2	Qtr3	Qtr4	Qtr1	Qtr2	Qtr3	Qtr4																																											
2021				2022				2023				2024				2025																																														

381/379 345 kV Lines Optical Ground Wire Upgrade Project  
 Correlation Table  
 (Northfield Mountain substation - VELCO Fitzwilliam substation)

<u>TCA Item</u>	<u>RSP:</u> Project ID #	<u>Study:</u> Reliability Issues Requiring Action	<u>PPA Application:</u>		<u>PAC/RC Meeting:</u> Presentation Reference	<u>TCA Application (\$Ms):</u>	
			<u>PPA No.</u>	<u>Preferred Solution Description</u>		<u>PTF Estimate</u>	<u>Non-PTF Estimate</u>
ES-23-TCA-02	TBD	n/a	n/a	Replace 20.1 miles of existing shield wire with Optical Ground Wire (OPGW) on the 381 345 kV Line (Northfield Mountain substation - VELCO) and supporting terminal work to tie into Northfield Mountain and Chestnut Hill substations; and replace 1.1 miles of existing shield wire with OPGW on the 379 345-kV Line (VELCO to Fitzwilliam substation).	Per PAC Presentation 01/19/2023	\$ 8.238	
				SUBTOTAL		\$ 8.238	\$ -