56 Prospect Street
Hartford, CT 06103

Steven J. Allen
Eversource, ISO-NE Coordination
phone: 860-728-4536
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September 28, 2022

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-22-TCA-37 Q171 115-kV Line Wood Structure Replacements and OPGW Installation (Merrimack substation – Greggs 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:

Contact Name:	Steven J. Allen
Company Name:	Eversource Energy Service Company
Address 1:	56 Prospect Street
Address 2:	
City, State, Zip	Hartford, CT 06103
Contact Phone #	860-728-4536
Email Address	steven.allen@eversource.com

Application #: ES-22-TCA-37

Date: Sep-22

RSP Project ID # or Asset Condition ID #: TBD

Is Project related to CIP-14: Yes [ ] No [x]

2. Project Description:

In Service Date: Jul-23

a. **High Level Project Details:**

Project Name (If no formal name, then Substation Upgrade, Line Upgrade, etc. are acceptable): **Q171 115-kV Line Structure Replacements and OPGW Installation Project (Merrimack substation - Greggs substation)**

Project Location (State only): **State:** **NH** **County:** **Merrimack, Hillsborough**

b. Summary of PTF-related work for Project:

This project will replace 21.6 miles (two 10.8 circuit miles) of obsolete copperweld/alumoweld shield wire with Optical Ground Wire (OPGW), and remove one wood structure and replace 44 wood structures with light-duty steel structures to mitigate deficiencies such as rot, splits, cracks, and ability to accommodate OPGW on the Q171 115-kV Line (Merrimack substation - Greggs 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 [ ] No [X] PPA Number: n/a

4. Has a transmission Proposed Plan Application been approved? Yes [ ] No [X] N/A [ ] Approval Date: n/a
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 [X]
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.)

Replacing these structures remediates the potential for structure failures due to asset condition vulnerabilities. To ensure the continued operability of this line segment, the identified structures in this line section need to be replaced. Installing OPGW improves communication bandwidth, security, and continuity in network reliability.

Cost of Project:

7. Total Project Cost ($M) **equals PTF + Non-PTF + all other Project Costs**:	**$14.966**
8. Total Proposed PTF Costs	
a. Total Proposed PTF Cost of this Project ($M):	$14.966
b. Requested Pool-Supported PTF Costs associated with this Project ($M):	**$14.966**
c. Breakdown of Requested Pool-Supported PTF Cost associated with this Project ($M): (Consistent with Table 1 and Appendix D of this Procedure)	
Material	$1.401
Labor	$10.093
ROW	$0.000
Engineering/Permitting/Indirects	$2.791
Escalation	$0.000
AFUDC (or equivalent)	$0.251
Contingency	$0.430
d. Generator Supported PTF Costs* ($M):	$0.000

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* [X]

13. Valuation Year(s) of dollar amounts submitted above: _____2022_____

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
[ ]	[X]

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 but for the reasons stated in 6 above is not acceptable.
- Replacing only C-rated structures and copperweld shield wire is not a viable alternative due to increased loading from the new shield wire.

Preferred: Field inspections have indicated a significant amount of degradation and decreased load carrying capacity of wood 115-kV structures (many of the poles show signs of rot, cracks, splits, and deterioration). Replacing the structures resolves multiple structural/hardware issues and supports safe and reliable operation of the transmission line. The installation of OPGW will provide high speed communication between substation, reduce dependency on leased services for protection and improve the reliability of the Transmission system.

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 was 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: Public Service Company of New Hampshire **RSP Project #:** TBD

Project Name: Q171 115-kV Line Structure Replacements and OPGW Installation Project (Merrimack substation - Greggs substation) **Date:** Sep-22

1. Project Scope Summary

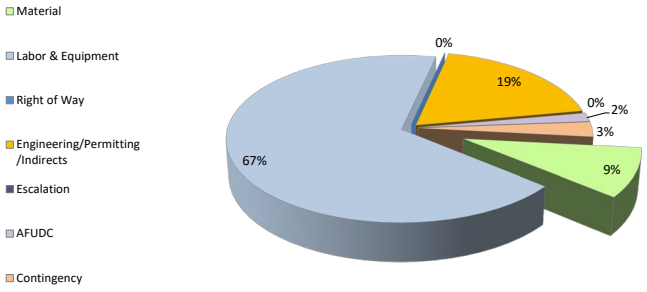
This project will replace 21.6 miles (two 10.8 circuit miles) of obsolete copperweld/alumoweld shield wire with Optical Ground Wire (OPGW), and remove one wood structure and replace 44 wood structures with light-duty steel structures to mitigate deficiencies such as rot, splits, cracks, and ability to accommodate Optical Ground Wire (OPGW) on the Q171 115-kV Line (Merrimack substation - Greggs substation).

2. Project Cost Summary

($M)

2.1. Project Cost Summary

Cost Category	PTF	Non-PTF	Total
Material	$ 1.401	$ -	$ 1.401
Labor & Equipment	$ 10.093	$ -	$ 10.093
Right of Way	$ -	$ -	$ -
Engineering/Permitting /Indirects	$ 2.791	$ -	$ 2.791
Escalation	$ -	$ -	$ -
AFUDC	$ 0.251	$ -	$ 0.251
Contingency	$ 0.430	$ -	$ 0.430
Total Project Cost	**$ 14.966**	**$ -**	**$ 14.966**

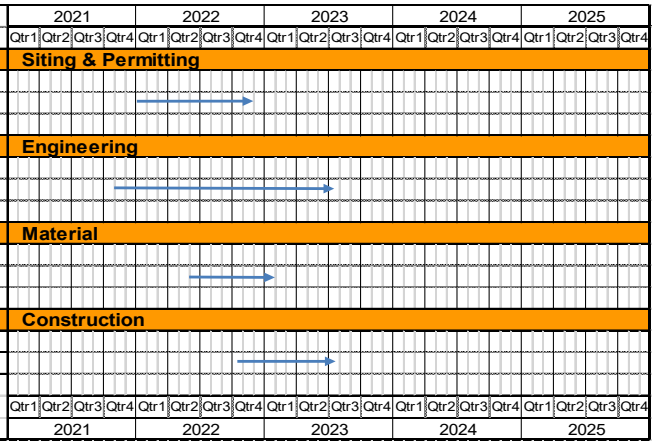


2.2 Detailed Cost Summary By Project Element

	Material	Labor & Equipment	Right of Way	Engineering/ Permitting/ Indirects	Escalation	AFUDC	Contingency	Total	PTF Amount
Q171 115-kV Line Structure Replacements and OPGW Installation Project (Merrimack substation - Greggs substation)	$ 1.401	$ 10.093	$ -	$ 2.791	$ -	$ 0.251	$ 0.430	**$ 14.966**	**$ 14.966**
Total	**$ 1.401**	**$ 10.093**	**$ -**	**$ 2.791**	**$ -**	**$ 0.251**	**$ 0.430**	**$ 14.966**	**$ 14.966**

3. Project Milestone Schedule

Description	Start	End
Siting & Permitting		
Approval and Permits	1/1/2022	11/30/2022
Engineering		
Engineering and Design	11/1/2021	7/15/2023
Material		
Material	6/1/2022	1/30/2023
Construction		
Construction	10/17/2022	7/15/2023



Q171 115-kV Line Structure Replacements and OPGW Installation Project
Correlation Table
(Merrimack substation - Greggs substation)

TCA Item	RSP: Project ID #	Study: Reliability Issues Requiring Action	PPA Application: PPA No.	PPA Application: Preferred Solution Description	PAC/RC Meeting: Presentation Reference	TCA Application ($Ms): PTF Estimate	TCA Application ($Ms): Non-PTF Estimate
ES-22-TCA-37	**TBD**	n/a	n/a	Removal of one wood structure and replacement of 44 wood structures with light-duty steel structures to include insulators, guys and hardware and install 21.6 miles of Optical Ground Wire (OPGW).	Per PAC Presentation 9/21/2022	$ 14.966	
				SUBTOTAL		$ 14.966	$ -