EVERSOURCE ENERGY

56 Prospect Street
Hartford, CT 06103

David J. Burnham
Eversource ISO Policy and Economic Analysis
phone: 860-728-4506
email: david.burnham@eversource.com

October 05, 2021

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-21-TCA-53 **K105 115-kV Line Laminate Wood Structure and OPGW Replacements Project (North 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,

David J. Burnham

David J. Burnham

cc: M. Drzewianowski

Attachment B
TCA Application Form

1. Applicant:

Contact Name:	David J. Burnham
Company Name:	Eversource Energy Service Company
Address 1:	56 Prospect Street
Address 2:	
City, State, Zip	Hartford, CT 06103
Contact Phone #	860-728-4506
Email Address	david.burnham@eversource.com

Application #: ES-21-TCA-53 Date: Oct-21

RSP Project ID # or Asset Condition ID # 289

Is Project related to CIP-14 Yes [ ] No [X]

2. Project Description: In Service Date: May-22

a. **High Level Project Details:**

Project Name (If no formal name, then Substation Upgrade, Line Upgrade, etc. are acceptable): **K105 115-kV Line Laminate Wood Structure and OPGW Replacement Project (North Merrimack substation - Greggs substation)**

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

b. Summary of PTF-related work for Project:

Replace 64 laminate wood structures with steel pole structures and 10.8 miles of existing shield wire with Optical Ground Wire (OPGW) on the K105 115-kV Line (North Merrimack substation - Greggs substation) to mitigate deficiencies such as: woodpecker damage, rot, cracks and deteriorated steel mechanical connections.

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 [ ] N/A [X] Approval Date:
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. Replacing the existing Shield Wire with 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**:	**$16.503**
8. Total Proposed PTF Costs	
a. Total Proposed PTF Cost of this Project ($M):	$16.503
b. Requested Pool-Supported PTF Costs associated with this Project ($M):	**$16.503**
c. Breakdown of Requested Pool-Supported PTF Cost associated with this Project ($M): (Consistent with Table 1 and Appendix D of this Procedure)	
Material	$1.475
Labor	$11.342
ROW	$0.000
Engineering/Permitting/Indirects	$2.552
Escalation	$0.000
AFUDC (or equivalent)	$0.542
Contingency	$0.592
d. Generator Supported PTF Costs* ($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: 2021

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.

Preferred: Field Inspections have indicated a significant amount of degradation and decreased load carrying capacity of laminate wood 115-kV structures (many of the poles show signs of decay, woodpecker damage, rot and deterioration). Replacing the structures resolves multiple structural/hardware issues and supports safe and reliable operation of the transmission line. The installation of the OPGW will provide high speed communications between the substations, reduce dependency on less reliable TELCO services 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: The Connecticut Light and Power Company **RSP Project #:** 289

Project Name: K105 115-kV Line Laminate Wood Structure and OPGW Replacement Project (North Merrimack substation - Greggs substation) **Date:** Oct-21

1. Project Scope Summary

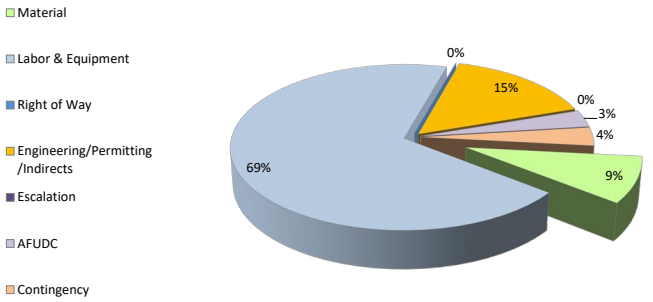
The project will replace 64 laminate wood structures (LWS) with steel structures and 10.8 miles of existing shield wire with Optical Ground Wire (OPGW) on the K105 115-kV Line (North Merrimack substation - Greggs substation). The structure are being replaced due to deficiencies such as: woodpecker damage, cracks, rot and splitting as the result of visual and aerial inspections.

2. Project Cost Summary

($M)

2.1. Project Cost Summary

Cost Category	PTF	Non-PTF	Total
Material	$ 1.475	$ -	$ 1.475
Labor & Equipment	$ 11.342	$ -	$ 11.342
Right of Way	$ -	$ -	$ -
Engineering/Permitting /Indirects	$ 2.552	$ -	$ 2.552
Escalation	$ -	$ -	$ -
AFUDC	$ 0.542	$ -	$ 0.542
Contingency	$ 0.592	$ -	$ 0.592
Total Project Cost	**$ 16.503**	**$ -**	**$ 16.503**

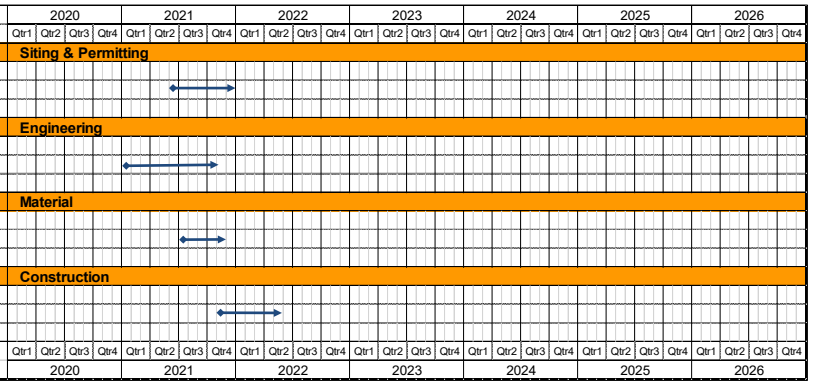


2.2 Detailed Cost Summary By Project Element

	Material	Labor & Equipment	Right of Way	Engineering/ Permitting/ Indirects	Escalation	AFUDC	Contingency	Total	PTF Amount
K105 115-kV Line Laminate Wood Structure and OPGW Replacement Project (North Merrimack substation - Greggs substation)	$ 1.475	$ 11.342	$ -	$ 2.552	$ -	$ 0.542	$ 0.592	**$ 16.503**	**$ 16.503**
Total	**$ 1.475**	**$ 11.342**	**$ -**	**$ 2.552**	**$ -**	**$ 0.542**	**$ 0.592**	**$ 16.503**	**$ 16.503**

3. Project Milestone Schedule

Description	Start	Complete
Siting & Permitting		
Approval and Permits	06/01/2021	12/30/2021
Engineering		
Engineering and Design	01/01/2021	11/01/2021
Material		
Material	07/01/2021	11/30/2021
Construction		
Construction	11/01/2021	05/30/2022



K105 115-kV Laminate Wood Structure and OPGW Replacements Project
Correlation Table (North 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-21-TCA-53	**289**	n/a	n/a	Replace 64 laminate wood 115-kV structures with light-duty steel pole structures, including hardware, insulators, and guys and replace 10.8 miles of existing shield wire with Optical Ground Wire (OPGW).	Per PAC Presentation 03/17/2021	$ 16.503	
				SUBTOTAL		$ 16.503	$ -