



56 Prospect Street  
Hartford, CT 06103

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August 19, 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-44      A111 115-kV Line Asset Condition and OPGW Project (Webster substation – Pemigewasset 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:	Application #:	ES-21-TCA-44	Date:	Aug-21
Contact Name:	David J. Burnham			
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 #	860-728-4506	Asset Condition ID #	279	
Email Address	david.burnham@eversource.com	Is Project related to CIP-14		
		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	

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

a. **High Level Project Details:**

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

**A111 115-kV Asset Condition and OPGW Project (Webster substation - Pemigewasset substation)**

**Project Location** (State only):

**State:**

NH

**County:**

Merrimack, Belknap, Grafton

b. Summary of PTF-related work for Project:

This project will replace 116 wooden structures with self-weathering steel structures, replace 10.6 circuit miles of 336 ACSR conductor with 1272 ACSS conductor and replace 10.6 miles of two 3#6 copperweld static wires with two 48F 0.646 Optical Ground Wire (OPGW) on the A111 115-kV Line (Webster substation - Pemigewasset substation). The structures have 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 <input checked="" type="checkbox"/>	No <input type="checkbox"/>	PPA Number:	ES-21-T45
4. Has a transmission Proposed Plan Application been approved?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	Approval Date: <u>July 15, 2021</u>
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. )

A rebuild of the A111 345-kV Line is necessary due to asset condition and engineering analysis concerns with many structures on the line driven by many factors.

- the existing 10.6 miles of 3#6 copperweld shield wire is obsolete and susceptible to failure due to thermal rating degradation of the conductor as well as degradation due to environmental factors such as wind, ice and ambient temperature.
- the 10.6 circuit miles of existing obsolete 336 ACSR copper conductor will be replaced with 1272 ACSS 54/19 conductor
- the replacement of 116 wood structures with steel structures is necessary as the result of foot and aerial patrols noting deficiencies such as: woodpecker damage, rot, cracks, splits and decay.

**Cost of Project:**

7. Total Project Cost (\$M) equals PTF + Non-PTF + all other Project Costs:	<u>\$31.227</u>
8. Total Proposed PTF Costs	
a. Total Proposed PTF Cost of this Project (\$M):	<u>\$31.227</u>
b. Requested Pool-Supported PTF Costs associated with this Project (\$M):	<u>\$31.227</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>\$3.893</u>
Labor	<u>\$20.383</u>
ROW	<u>\$0.100</u>
Engineering/Permitting/Indirects	<u>\$5.639</u>
Escalation	<u>\$0.000</u>
AFUDC (or equivalent)	<u>\$0.212</u>
Contingency	<u>\$1.000</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):	<u>\$0.000</u>
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.	<u>\$0.000</u>

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:	<u>\$0.000</u>
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12. Total PTF Cost based on: (check one)

Actual Costs

**OR**

Estimated Costs\*

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

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:**

1. Do nothing but for the reasons stated in 6 above is not acceptable.
2. Replace only high priority structures and copperweld shield wire - all structures on the line would need to be replaced to support the increased loading of the shield wire.
3. Construct a new line in parallel with existing line - this is not a preferred solution due to costs, extensive vegetation clearing work and the impact to abutting property owners, municipalities and other sensitive stakeholders along this right-of-way

**Preferred:** Rebuild the A111 Line is the preferred solution by replacing 116 wooden structures with self-weathering steel structures, replace 10.6 circuit miles of 336 ACSR conductor with 1272 ACSS conductor and replace 10.6 miles of two 3#6 copperweld static wires with two 48F 0.646 Optical Ground Wire (OPGW). A full rebuild allows replacement of aging conductor and shield wire and is more efficient and cost effective.

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 #: 279

Project Name: Webster-Beebe River 115-kV Corridor Asset Condition and OPGW Project - A111

Date: Aug-21

### 1. Project Scope Summary

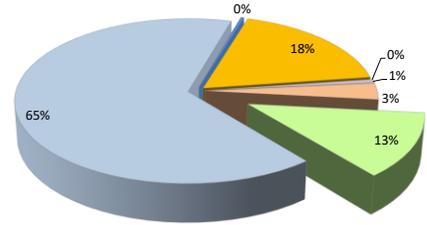
This project will replace 116 wooden structures with self-weathering steel structures, replace 10.6 circuit miles of 336 ACSR conductor with 1272 ACSS conductor and replace 10.6 miles of two 3#6 copperweld static wires with two 48F 0.646 Optical Ground Wire (OPGW) on the A111 115-kV Line (Webster substation - Pemigewasset substation). The structures have deficiencies such as: woodpecker damage, rot, cracks and deteriorated steel mechanical connections.

### 2. Project Cost Summary

(\$M)

2.1. Project Cost Summary			
Cost Category	PTF	Non-PTF	Total
Material	\$ 3.893	\$ -	\$ 3.893
Labor & Equipment	\$ 20.383	\$ -	\$ 20.383
Right of Way	\$ 0.100	\$ -	\$ 0.100
Engineering/Permitting /Indirects	\$ 5.639	\$ -	\$ 5.639
Escalation	\$ -	\$ -	\$ -
AFUDC	\$ 0.212	\$ -	\$ 0.212
Contingency	\$ 1.000	\$ -	\$ 1.000
<b>Total Project Cost</b>	<b>\$ 31.227</b>	<b>\$ -</b>	<b>\$ 31.227</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
A111 115-kV Corridor Asset Condition and OPGW Project (Webster substation - Pemigewasset substation)	\$ 3.893	\$ 20.383	\$ 0.100	\$ 5.639	\$ -	\$ 0.212	\$ 1.000	\$ 31.227	\$ 31.227
<b>Total</b>	<b>\$ 3.893</b>	<b>\$ 20.383</b>	<b>\$ 0.100</b>	<b>\$ 5.639</b>	<b>\$ -</b>	<b>\$ 0.212</b>	<b>\$ 1.000</b>	<b>\$ 31.227</b>	<b>\$ 31.227</b>

### 3. Project Milestone Schedule

Description	Start	End	2020				2021				2022				2023				2024			
			Qtr1	Qtr2	Qtr3	Qtr4																
<b>Siting &amp; Permitting</b>																						
Approval and Permits	12/16/2020	10/31/2021																				
<b>Engineering</b>																						
Engineering and Design	6/1/2020	5/26/2021																				
<b>Material</b>																						
Material	5/17/2021	10/31/2021																				
<b>Construction</b>																						
Construction	9/13/2021	9/28/2022																				

A111 115-kV Asset Condition and OPGW Project Correlation Table  
 (Webster substation - Pemigewasset substation)

<u>TCA Item</u>	<u>RSP:</u> Project ID #	<u>Study:</u> Reliability Issues Requiring <u>Action</u>	<u>PPA Application:</u>		<u>PAC/RC Meeting:</u> Presentation Reference	<u>TCA Application (\$1,000s):</u>	
			<u>PPA No.</u>	<u>Preferred Solution Description</u>		<u>PTF Estimate</u>	<u>Non-PTF Estimate</u>
<b>ES-21-TCA-44</b>	<b><u>279</u></b>	n/a	ES-21-T45	Replace 116 wood 115-kV structures with steel structures, replace copperweld shield wire with Optical Ground Wire (OPGW) and replace 10.6 circuit miles of copper conductor with 1272 ACSS.	Per PAC Presentation 12/16/2020	\$ 31.227	
				SUBTOTAL		\$ 31.227	\$ -