EVERSOURCE

Operations Project Authorization Form

Approved at December 9, 2020 EPAC

Link to Meeting Minutes

Date Prepared: 12/02/2020	**Project Title: [redacted] Replacements**
Company: Eversource CT	**Project Number: CS00426**
Organization: Asset Management	**Class(es) of Plant: D SS**
Project Initiator: [redacted]	**Project Category: Stations - Transformers**
Project Manager: [redacted]	**Project Type: Specific**
Project Sponsor: [redacted]	**Project Purpose: Reliability and Safety Improvement**
In service date: 11/17/2020	**Capital Investment part of original Oper. Plan: Yes**
Eng./Constr. Resources Budgeted? Yes	**O&M Expenses part of original Oper. Plan: N/A**
Authorization Type: Full Funding	**Facility Type (check all that apply):**
Total Request: $184K	**☐ PTF ☐ non-PTF ☒ Distribution**

Financial Requirements:

Project Authorization

ERM: _____

FP&A: _____

Executive Summary

This Project Authorization Form (PAF) is seeking approval for full funding of $184K for a completed project to replace [redacted] for improved relay protection. This project was executed and completed under annual work order number DSQ92021. This PAF provides the documentation necessary to transfer the project charges to capital project number CS00426, as the direct capital charges exceeded the $100K annual work order limit. The project was placed in service November 17, 2020.

In March of 2019, a small animal contacted an [redacted] The outages for the CT replacements were coordinated and used to install animal protection on each transformer under the Animal Protection Installation project (C320003). The new CTs have a different transformer ratio (changed from 1200:5 to 800:5) which will help improve the current protection scheme.

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Project Costs Summary

Note: Dollar values are in thousands

Line item Category	Prior Authorized	Actuals to Date	2020 to Go	2021	2022	2023	2024	2025	Total
1. ROW / Easements / Land Acquisition	$	$	$	$	$	$	$	$	$
2. Environmental Approvals / Permits	$	$	$	$	$	$	$	$	$
3. Outreach	$	$	$	$	$	$	$	$	$
4. Siting Approvals / Permits	$	$	$	$	$	$	$	$	$
5. Engineering / Design	$	$	$	$	$	$	$	$	$
6. Materials (Eversource purchased)	$	$22	$	$	$	$	$	$	$22
7. Construction (incl matl's by contractors)	$	$90	$	$	$	$	$	$	$90
8. Testing / Commissioning	$	$6	$	$	$	$	$	$	$6
9. Project Mgmt Team	$	$	$	$	$	$	$	$	$
10. Removals	$	$	$	$	$	$	$	$	$
11. Other	$	$	$	$	$	$	$	$	$
12. Risks	$	$	$	$	$	$	$	$	$
SUBTOTAL DIRECTS W/ RISKS	**$**	**$118**	**$**	**$**	**$**	**$**	**$**	**$**	**$118**
13. Indirects/Overhead	$	$66	$	$	$	$	$	$	$66
14. AFUDC	$	$	$	$	$	$	$	$	$
PROJECT TOTAL – BASELINE BUDGET	**$**	**$184**	**$**	**$**	**$**	**$**	**$**	**$**	**$184**
15. Contingency	$	$	$	$	$	$	$	$	$
TOTAL CAPITAL REQUEST	**$**	**$184**	**$**	**$**	**$**	**$**	**$**	**$**	**$184**
16. Reimbursables/Customer Contribution	$	$	$	$	$	$	$	$	$
PROJECT TOTAL (LESS REIMBURSABLES)	**$**	**$184**	**$**	**$**	**$**	**$**	**$**	**$**	**$184**
O&M	$	$	$	$	$	$	$	$	$
TOTAL REQUEST	**$**	**$184**	**$**	**$**	**$**	**$**	**$**	**$**	**$184**

Note: Explain unique payment provisions, if applicable: *Provide a detailed breakdown of Other costs here.*

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Breakout Costs

Note: Dollar values are in thousands

Line item Category	Prior Authorized	Actuals to Date	2020 to Go	2021	2022	2023	2024	2025	Total
ST Labor	$	$85	$	$	$	$	$	$	$85
OT Labor	$	$9	$	$	$	$	$	$	$9
Outside Services Labor	$	$2	$	$	$	$	$	$	$2
Materials*	$	$22	$	$	$	$	$	$	$22
Removals	$	$	$	$	$	$	$	$	$
Other	$	$	$	$	$	$	$	$	$
Indirects	$	$66	$	$	$	$	$	$	$66
AFUDC	$	$	$	$	$	$	$	$	$
TOTAL CAPITAL REQUEST - W/O REIMBURSABLES	**$**	**$184**	**$**	**$**	**$**	**$**	**$**	**$**	**$184**

*All materials including Eversource purchased and outside service purchased. Note that outside service purchased material included in construction in project cost summary above.

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Future Financial Impacts:

Provide below the estimated future costs that will result from the project: N/A
Note: Dollar values are in thousands

Future Costs	Year 20__	Year 20__	Year 20__	Year 20__+	Total Future Project Costs
Capital	$ -	$ -	$ -	$ -	$ -
O&M	-	-	-	-	-
Other	-	-	-	-	-
TOTAL	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**

Describe the estimated future Capital, O&M, and/or Other costs noted above:

What functional area(s) will these future costs be funded in?_____N/A_____
A representative from the respective functional area is required to be included as a project approver.

Provide below the estimated future financial benefits that will result from the project: N/A
Note: Dollar values are in thousands

Future Benefits	Year 20__	Year 20__	Year 20__	Year 20__+	Total Future Project Benefits
Capital	$ -	$ -	$ -	$ -	$ -
O&M	-	-	-	-	-
Other	-	-	-	-	-
TOTAL	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**

Describe the estimated future Capital, O&M, and/or Other benefits noted above:

What functional area(s) will these benefits be reflected in?____N/A_____
A representative from the respective functional area is required to be included as a project approver.

Asset Retirement Obligation (ARO) and/ or Environmental Cleanup Costs (Environmental Liabilities):

Is there an ARO associated with this project? If yes, please provide details: No

Are there other environmental cleanup costs associated with this project? If yes, please provide details: No

Technical Justification:

Project Need Statement

This project was needed to replace [redacted] The new CTs also have additional animal protection to prevent animal related failures from occurring in the future, funded by project number C320003. See Attachment B for photographs.

Project Objectives

The purpose of this project is to improve the current [redacted] and to add additional animal protection to the CTs.

Project Scope

The scope of work for the [redacted] This work has been completed as of December 1, 2020.

[redacted]

Background / Justification

In March 2019, there was a [redacted]. This project combines these two (2) efforts due to their overlapping scope.

Business Process and / or Technical Improvements

The new CT ratio allows for improvements in the protection scheme and system reliability.

Alternatives Considered with Cost Estimates

Do Nothing:

The do nothing alternative involves [redacted] This is not a viable option for system reliability.

Purchase New Transformers:

The alternative to purchase and install new transformers is not cost efficient. Therefore, this alternative was not chosen.

Replace the 12 CTs:

[redacted] (CS320003).

Project Schedule

Milestone/Phase Name	Estimated Date
Animal Related Failure	March 2019
Annual Work Order Created	April 2019
Final Construction Outage	November 17, 2020
Testing	November 17, 2020
In Service Date (Completed)	November 17, 2020

Regulatory Approvals

None

Risks and Risk Mitigation Plans

The project is complete.

Contingency

No contingency is included in the project budget as the project is completed.

References

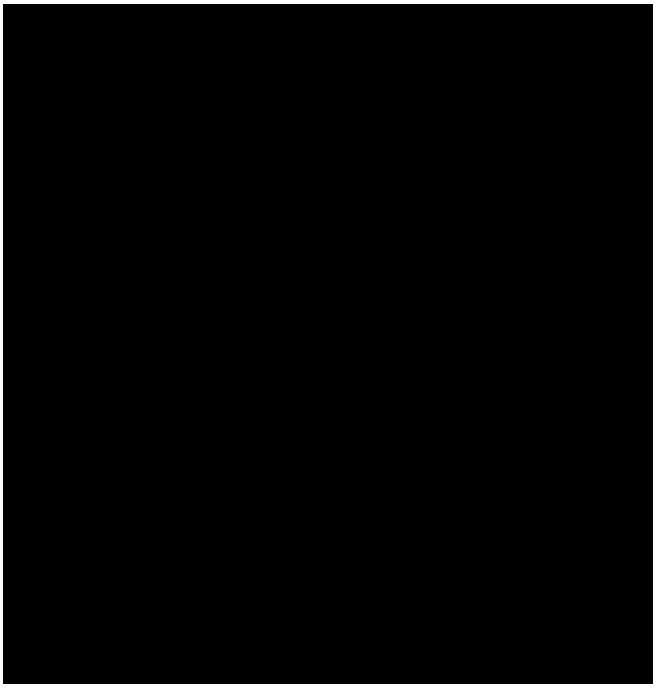
None

Attachments (Images below)

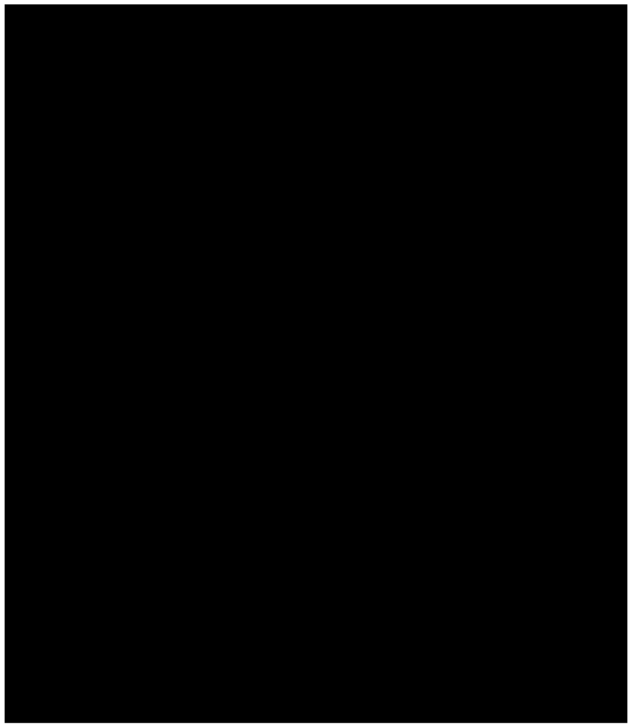
Attachment A – Backup Cost Estimate (Actuals)
Attachment B – Equipment Photographs

Attachment B - Equipment Photographs

Photograph 1: Old CT with exposed metal strip near top



Photograph 2: New CT unit with additional animal protection



INSTRUCTIONS:
It is the responsibility of the initiator to contact the subject matter experts in the listed area disciplines to determine if the project considerations contained in this list are applicable to their project. They should fill out the checklist and determine a transition plan for the purpose of project execution. See the PAF Guide for additional instruction.

Project Checklist - Transmission & Substation Capital Project					
Project Name: [redacted] **Current Transformer Replacements**			**Project Number: CS00426**		
Facility Type: ☐ BPS ☐ BES ☐ PTF ☐ non-PTF ☐ CIP ☒ Distribution					
PLANNING					
Is a NX-9 required?			No		
Is an ISO-NE PAC presentation required?			No		
ISO-NE Presentation Date (if completed):			Enter Date		
Cost in ISO-NE Presentation ($M) (if completed):			Enter Cost ($M)		
Is a PPA required?			No		
Is a TCA Application Required?			No		
TCA Submittal Date (if submitted):			Enter Date		
Cost in TCA Submittal ($M) (if submitted):			Enter Cost ($M)		
Enter ISO-NE RSP / Asset Condition ID, if assigned:			Enter ISO-NE ID		
PLANNING/PROTECTION & CONTROLS					
Are RAS/SPS/UVLs affected?			No		
OPERATIONS					
Outage Required?	☒ Primary Equipment (Power Transfer)	☒ Secondary Equipment (P&C only)		☐ Outage Not Required	
Do SCLL Conditions Exist?			No		
Has an outage schedule been approved?			Yes		
Are Operations & Maintenance procedures/training required?			No		
STANDARDS					
Does the project include standard equipment and designs?			Yes		
SUBSTATION ENGINEERING					
Does this impact Revenue Metering			No		
Is preliminary short circuit/ breaker duty analysis required?			No		
Are there any changes to the baseline audible noise?			No		
Is there an impact to the existing ground grid?			No		
Is a Transient Over Voltage (TOV) analysis required?			No		

Project Checklist - Transmission & Substation Capital Project	
Project Name: [redacted] Current Transformer Replacements	**Project Number: CS00426**

P&C ENGINEERING	
OP-22 - Are PMUs and DDR required?	No
If BPS, is an NPCC Directory #4 presentation required?	No
Are ISO-NE OP-24 Appendix B updates necessary?	No
TRANSMISSION LINE ENGINEERING	
Are there any changes that affect the baseline EMF?	No
Are there any changes that affect the baseline EMI?	No
SITING	
Is a Siting filing required? *(If yes, list in regulatory approvals section)*	No
PERMITTING	
Is there any permitting required? *(If yes, list in regulatory approvals section)*	No
SITING & CONSTRUCTION SERVICES (OUTREACH)	
What is the level of outreach expected?	None
INITIATOR	
Has a field constructability review been completed?	NR
INVESTMENT RECOVERY	
Does the project require development of an Investment Recovery plan?	No
COST ESTIMATING	
What team/firm prepared the cost estimate?	Other (specify below)
Name of the person who prepared the estimate:	Project Actuals
Was the estimate reviewed by Eversource Estimating?	No

Cost Estimate Backup Details

Please see Attachment A for the project cost backup details.

Sum of amount	Column Labels		
Row Labels	**2019**	**2020**	**Grand Total**
Direct	**$16,037.80**	**$102,098.03**	**$118,135.83**
Contractors	**$1,124.45**	**$1,420.86**	**$2,545.31**
Other Outside Services		$1,420.86	$1,420.86
Other Outside Services- Other	$1,124.45		$1,124.45
Labor	**$11,101.39**	**$80,683.53**	**$91,784.92**
Labor Overtime Non-Exempt	$3,890.99	$4,022.35	$7,913.34
Labor Premium and Special Non-Exempt	$377.66	$361.32	$738.98
Labor Straight Time Exempt	$1,677.72		$1,677.72
Labor Straight Time Non-Exempt	$5,155.02	$76,299.86	$81,454.88
Materials	**$3,655.14**	**$18,080.18**	**$21,735.32**
Materials- Purchased	$125.69	$1,731.77	$1,857.46
Materials- Stores	$3,529.45	$16,348.41	$19,877.86
Misc Other	**$156.82**	**$1,913.46**	**$2,070.28**
Meals	$140.00	$100.00	$240.00
Mileage	$16.82	$309.37	$326.19
Rent Expense-External		$1,504.09	$1,504.09
Indirect	**$10,817.54**	**$55,615.65**	**$66,433.19**
Indirect	**$10,817.54**	**$55,615.65**	**$66,433.19**
Admin and Eng OH- Acct Use Only	$185.90	$1,610.13	$1,796.03
Gen Ser Co Benefit Loader- Acct Use Only	$3,932.68	$398.60	$4,331.28
Non Productive Time Loader- Acct Use Only	$1,699.40	$10,142.55	$11,841.95
Payroll Benefit Loader- Acct Use Only	$3,537.19	$32,728.58	$36,265.77
Service Company Allocations- Acct Use Only	$0.00	$0.00	$0.00
Stores Loader- Acct Use Only	$559.56	$2,615.75	$3,175.31
Vehicle Costs Clearing- Acct Use Only	$902.81	$8,120.04	$9,022.85
Grand Total	**$26,855.34**	**$157,713.68**	**$184,569.02**

		2019		**2020**		
Total Direct	$	16,038	$	102,098	$	118,136
Indirects	$	10,818	$	55,616	$	66,433
AFUDC	$	-	$	-	$	-
Total	$	26,855	$	157,714	$	184,569
Straight time labor	$	6,990	$	78,213	$	85,203
OT Labor	$	4,269	$	4,384	$	8,652
Outside Services	$	1,124	$	1,421	$	2,545
Material	$	3,655	$	18,080	$	21,735
Total Direct	$	16,038	$	102,098	$	118,136
Indirect	$	10,818	$	55,616	$	66,433
AFUDC	$	-	$	-	$	-
Total Indirect	$	10,818	$	55,616	$	66,433