EVERSOURCE

Operations Project Authorization Form

Approved on November 08, 2022 EPAC

Link to Meeting Minutes

Project Title: [redacted] 2X Rebuild Failed LTC	**Project Number: CS00619**
Date Prepared: 11/01/2022	**Company: Eversource CT**
Organization: Asset Management	**Class(es) of Plant: D SS**
Project Initiator: [redacted]	**Project Category: Stations - Switches**
Managing Organization: Engineering	**Schedule ID#: N/A**
Project Manager: [redacted]	**Project Type: Specific**
Project Sponsor: [redacted]	**Capital Investment part of original Op Plan: Yes**
Estimated in service date: October 28, 2021	**Emergency Related Request? Yes**
Eng./Constr. Resources Budgeted? Yes	**Facility Type (check all that apply):** ☐ PTF ☐ non-PTF ☒ Distribution ☐ N/A (General Plant)
Total Capital Request: $155K	**Authorization Type: Full Funding**

[1] Executive Summary

The [redacted] CT) project is seeking full funding of $155K. The project began under annual work order (WO) DSQ92050 which was authorized for $100K in PowerPlan on October 8, 2019. The project was placed in-service October 28, 2021 and completed October 17, 2022. The $55K overspend is due to higher than estimated costs for both the Installation and removal charges authorized and also includes Indirects/overheads.

This specific Project Authorization Form (PAF) documents the final costs that were more than the authorized spend for work order (WO) DSQ92050. Charges exceeded authorization by a work order threshold value per Eversource Project Authorization Policy APS01. Upon approval of this Full Funding PAF, charges to the WO will be fully accounted for under funding project number (PN) CS00619 and journaled following approval.

[redacted]

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[2] PROJECT COSTS SUMMARY

Note: Dollar values are in thousands

Line item Category	Prior Authorized	Actuals to Date	2022 to Go	2023	Total
1. ROW / Easements / Land Acquisition	$	$	$	$	$
2. Environmental Approvals / Permits	$	$	$	$	$
3. Outreach	$	$	$	$	$
4. Siting Approvals / Permits	$	$	$	$	$
5. Engineering / Design	$	$3	$	$	$3
6. Materials (Eversource purchased)	$	$29	$	$	$29
7. Construction (incl matl's by contractors)	$80	$75	$	$	$75
8. Testing / Commissioning	$	$2	$	$	$2
9. Project Mgmt Team	$	$	$	$	$
10. Removals	$20	$28	$	$	$28
11. *Other	$	$2	$	$	$2
12. Risks	$	$	$	$	$
SUBTOTAL DIRECTS W/ RISKS	**$100**	**$139**	**$**	**$**	**$139**
13. Indirects/Overhead	$	$12	$	$	$12
14. AFUDC	$	$4	$	$	$4
PROJECT TOTAL – BASELINE BUDGET	**$100**	**$155**	**$**	**$**	**$155**
15. Contingency	$	$0	$	$	$0
TOTAL CAPITAL REQUEST	**$100**	**$155**	**$**	**$**	**$155**
16. Reimbursables/Customer Contribution	$	$0	$	$	$0
PROJECT TOTAL (LESS REIMBURSABLES)	**$100**	**$155**	**$**	**$**	**$155**
O&M	$	$0	$	$	$0
TOTAL REQUEST	**$100**	**$155**	**$**	**$**	**$155**

*Other – Equipment rentals and mileage

Detail other costs, project risk items and their allocations:

Risk	Allocation
1. Facility Waste Haz-Non haz-PCB-Universal disposal charge	$2K
2.	$
3.	$
4.	$
5.	$
Total	$2K

A cost analysis spreadsheet "Attachment A WBS DSQ92050 [redacted] 2X Cost Analysis 10312022 was created for this PAF:

- Power Plan financial data for the WO is contained in Data Tab.
- WBS PT Tab has the summary of the actual expenditures used to populate the Project Costs Summary.

Explain unique payment provisions, if applicable:
N/A

Identify and detail any unique O&M impacts resulting from this project:
N/A

[3] TECHNICAL JUSTIFICATION

Project Need, Objective and Justification

[redacted] C) was performed and a capital annual work order DSQ92050 was authorized for $100K for the required rebuild.

Project Scope

The project under Eversource Maintenance to rebuild the [redacted]

Substation Equipment

Station	Device Position / Nomenclature	Device Removals *include manufacturer*	Device Additions *include manufacturer*
[redacted]	[redacted]	[redacted]	[redacted]

[4] ALTERNATIVES CONSIDERED

N/A. The project was put in service October 28, 2021.

[5] PROJECT SCHEDULE

Milestone	Scheduled Completion Date
IFR Approval (WO Initiation)	October 8, 2019
SDC Approval (for applicable projects)	N/A
Conversion of Tx development costs, 183 to 107 (applicable to projects that require SSF approval and/or ISO preferred alternative selection)	N/A
EPAC Partial Funding Approval (for applicable projects)	N/A
Preliminary Design Completion (or latest pre-full funding design phase)	N/A
EPAC Full Funding Approval	November 2022
Siting Approval (for applicable projects)	N/A
Start of Construction	October 2019
Project In-Service Date (ISD)	October 28, 2021
Project Need Date (for applicable projects)	N/A
ISO Related Milestones: (for applicable projects)	
• ISO Preferred Alternative Selected	N/A
• PAC Presentation	N/A
• TCA Submittal	N/A

[6] REGULATORY APPROVALS

N/A – The project was completed.

[7] RISK AND RISK MITIGATION PLANS

Contingency:

N/A - The project was completed.

Risk Mitigation:

The project has been completed and there are no outstanding risks.

Risk	Mitigation
1. N/A	
2.	

[8] REFERENCES

References
1. APS01 Project Authorization Policy – Eversource 12-21-2021
2. WO # DSQ92050 – [redacted] 2X Rebuild Failed LTC

[9] ATTACHMENTS (One-Line Diagrams, Images, etc.)

Attachment	Included in Submittal?
A. WBS DSQ92050 [redacted] 2X Cost Analysis 10312022	*YES*
B. Nomenclature [redacted] 01212022	*YES*
C. DGA T1191 LTC [redacted] 2X 12102019	*YES*

Project Checklist - Transmission & Substation Capital Project			
Project Name: [redacted] **2X Rebuild Failed LTC**		**Project Number: CS00619**	
Facility Type: ☐BPS ☐BES ☐PTF ☐PTF non-regional ☐non-PTF ☐CIP ☒Distribution ☐General Plant			
PLANNING			
Is a NX-9 required?		No	
Is an ISO-NE PAC presentation required?		No	
ISO-NE Presentation Date (if completed):		NA	
Cost in ISO-NE Presentation ($M) (if completed):		Enter Cost ($M)	
Is a PPA required?		No	
ISO-NE Approval Date (if completed):		Enter Date	
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?		NR	
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] 2X Rebuild Failed LTC	**Project Number: CS00619**

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
PROJECT SERVICES (OUTREACH) and ROW WORK COORDINATION	
What is the level of outreach expected?	None
Is any part of this project in an Environmental Justice Community?	No
Has ROW Coordination reviewed this project?	No
Is this project coordinating with other existing scheduled work?	No
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:	Costs based on Actuals
Was the estimate reviewed by Eversource Estimating?	No

	Descrition / #'s: DSQ92050	FP#	WO#							
	FP Desciption	XX/31/2022	12/31/2022							
	Line item Category	**PAF (000's) Prior Authorized**	**Actuals to Date**	**2022 to Go**	**2023**	**2024**	**2025**	**2026**	**2027**	**Total**
1	1. ROW / Easements / Land purchases									$0
2	2. Environmental Approvals / Permits									$0
3	3. Outreach									$0
4	4. Siting Approvals / Permits									$0
5	5. Engineering / Design									$0
6	6. Materials (Eversource purchased)		$29							$29
7	7. Construction (incl matl's by contractors)		$75							$75
8	8. Testing / Commissioning		$2							$2
9	9. PMT Project Mgmt Team									$0
10	10. Removals		$28							$28
11	11. Other		$2							$2
12	12. Risks									$0
	Project Directs Total w/Risks	**$0**	**$139**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$139**
13	13. Indirects/Overhead		$12							$12
14	14. AFUDC		$4							$4
	Project Total - Baseline Budget	**$0**	**$155**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$155**
15	15. Contingency									$0
0	#N/A									$0
	Project Total - Funding Approval Level	**$0**	**$155**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$155**
16	16. Reimbursables/Customer Contribution									$0
	#N/A									$0
	Project Total (less reimbursables)	**$0**	**$155**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$155**
	Total O&M									$0
	TOTAL REQUEST	**$0**	**$155**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$155**

[redacted]

Equipment	T1191	**kV ratings**	[redacted]
Apparatus type	LTC	**Max rated voltage**	[redacted]
Group name	CT	**Fluid volume**	[redacted]
Owner	D-[redacted]	**In service**	True
Region	CT	**Spare**	False
Substation	[redacted]	**Tank**	LTC
Designation	1C-2X	**Norms used**	[redacted]
Norms	[redacted]	**DGA result**	[redacted]
Fluid type	OIL	**Moisture result**	[redacted]
Description	LTCTransformer	**FQ result**	[redacted]
Manufacturer	Mcgraw Edison	**PCB result**	[redacted]
Model	550C	**Oil test status**	UNREVIEWED

Dissolved Gas Analysis



Symbol legend:

Dissolved Gas Analysis Remarks



Dissolved Gas Analysis Summary

[redacted]

Diagnosis

[redacted]

Moisture Analysis

[redacted]

Symbol legend: [redacted]

Moisture Remarks

[redacted]

Fluid Quality



Fluid Quality Analysis Remarks



History Graphs and Diagnostic Charts











