EVERSOURCE

Operations Supplement Request Form

Approved on October 27, 2022 EPAC

Link to Meeting Minutes

Project Title: [redacted] **- OCB replacement**	**Project Number: CS00099**
Date Prepared: 10/14/2022	**Company: Eversource CT**
Organization: Asset Management	**Class(es) of Plant: D SS**
Project Initiator: [redacted]	**Project Category:** [redacted] **- Circuit Breakers**
Managing Organization: Transmission / Major Projects	**Schedule ID#: N/A**
Project Manager: [redacted]	**Project Type: Specific**
Project Sponsor: [redacted]	**Capital Investment part of original Op Plan: Yes**
Project Manager's Director: [redacted]	**Estimated in service date: 11/14/2018 (Completed)**
Current Authorized Amount: $677K	**Emergency Related Request? No**
Supplement Request: $61K	**Supplement Type: Supplement**
Total Capital Request: $738K	**ISO-NE Approval Required** (check all that apply): ☐ PAC ☐ TCA

[1] BACKGROUND

This request is for supplemental funding in the amount of $61K for a total request of $738K. This project is currently authorized for $677K, which was approved in PowerPlan on May 9, 2019. The current spend to date is $738K. The ISD for this project was 11/14/2018 and a TD-707 form was entered into PowerPlan to close out the project.

The objective of this project was to replace the [redacted] The need was driven by customer and employee safety, obsolescence, and environmental concerns. Eversource had an initiative that began in 2006 as part of an environmental initiative (under PURA Docket No. 14-05-06) to replace all OCBs in distribution substations to minimize environmental and safety impacts from leaking and failed equipment. The initiative started by targeting OCBs with PCB bushings. In 2012, the initiative increased in scope to include all substation OCBs.

The cost overruns for this project were the result of a [redacted] that was not identified at the time of the original authorization but was [redacted] and additional labor hours and overtime hours to complete the work that was authorized. Additional direct charges

for the project occurred between April and November 2019 and indirect charges continued to August 2020.

[2] SUPPLEMENT JUSTIFICATION OVERVIEW

The project authorization amount of $30K was initially approved in on October 24, 2016 for preliminary engineering. The replaced OCB was in service in November 2018. The project was authorized for full funding on April 17, 2019 for $677K, which included charges to the project up to March 2019.

Additional charges for the project in the amount of $61K occurred between April and November 2019. There are two (2) primary drivers for the cost overruns for this project: [redacted] and additional labor hours and overtime hours to complete the work than was originally authorized.

After the [redacted] was not included in the original scope but was [redacted] These added costs were the result of additional construction and as built documentation by engineering.

A late invoice was also received and charged to the project for outsourced [redacted]

Work for the removal of the OCB was not completed until October 2019.

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[3] SUPPLEMENT JUSTIFICATION DETAIL

The reasons for the project authorization supplement of $61K are summarized below.

1. **ROW / Easements / Land Acquisition: $0K**
2. **Environmental Approvals / Permits: $0K**
3. **Outreach: $0K**
4. **Siting Approvals / Permits: $0K**
5. **Engineering / Design: $0.7K** – Engineering and design costs were moderately higher due to the review of [redacted] documents and more time spent on as-built drawings than originally estimated.
6. **Materials (by Eversource): $8.4K** – An [redacted], which resulted in the increased material costs.
7. **Construction: $27K -** Labor costs for the project were estimated based on the work required to complete the original scope. Additional labor was also required for items not in the original scope including the [redacted]. The added labor hours resulted in $25.5K of added construction costs and included a late invoice received for [redacted] Added costs of $1.5K were for miscellaneous materials provided by the contractor to complete the work.
8. **Project Management Team: $0K**
9. **Removals: $0K**
10. **Other: $0K**
11. **Risk: $0K**
12. **Indirects/Overhead: $25K** – Indirect rates are a calculation of the real-time applied rates to direct costs.
13. **AFUDC: $0K**
14. **Contingency: $0K**
15. **Reimbursables/Customer Contribution: $0K**

Total Supplement Request: $61K

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[4] SUPPLEMENT COST SUMMARY

The table below summarizes the line item categories from the original project estimates and the updated total requests based on actual total costs for the completed project. Note that original cost estimate was not completed using the current WBS breakdown but were authorized as shown below. New total requests have been adjusted to match the original estimate breakdown. See Attachment A for the cost estimate summary.

Note: Dollar values are in thousands:

Line item Category	Prior Authorized	New Total Request	Variance (Supplemental Request)
1. ROW / Easements / Land Acquisition			
2. Environmental Approvals / Permits			
3. Outreach			
4. Siting Approvals / Permits			
5. Engineering / Design	$20.6	$21.4	$1
6. Materials (Eversource purchased)	$68.1	$76.5	$8
7. Construction (incl matl's by contractors)	$164	$191	$27
8. Testing / Commissioning			
9. Project Mgmt Team			
10. Removals	$10	$10	
11. Other ††	$17	$17	
12. Risks			
SUBTOTAL DIRECTS W/ RISKS	**$280**	**$316**	**$36**
13. Indirects/Overhead	$390	$415	$25
14. AFUDC	$9	$9	
PROJECT TOTAL – BASELINE BUDGET	**$678**	**$739**	**$61**
15. Contingency			
TOTAL CAPITAL REQUEST	**$678**	**$739**	**$61**
16. Reimbursables/Customer Contribution	$1	$1	
PROJECT TOTAL (LESS REIMBURSABLES)	**$677**	**$738**	**$61**

†† The Other line item of $17K is for expenses, including mileage and contingency per original Financial Evaluation section of original FF PAF.

Total Supplement Request by Year

Note: Dollar values are in thousands:

Line item Category	2022	2023	2024	Total
1. ROW / Easements / Land Acquisition				
2. Environmental Approvals / Permits				
3. Outreach				
4. Siting Approvals / Permits				
5. Engineering / Design	$1			$1
6. Materials (Eversource purchased)	$8			$8
7. Construction (incl matl's by contractors)	$27			$27
8. Testing / Commissioning				
9. Project Mgmt Team				
10. Removals				
11. Other				
12. Risks				
SUBTOTAL DIRECTS W/ RISKS	**$36**			**$36**
13. Indirects/Overhead	$25			$25
14. AFUDC				
PROJECT TOTAL – BASELINE BUDGET	**$61**			**$61**
15. Contingency				
TOTAL CAPITAL REQUEST	**$61**			**$61**
16. Reimbursables/Customer Contribution				
PROJECT TOTAL (LESS REIMBURSABLES)	**$61**			**$61**
O&M				
TOTAL REQUEST	**$61**			**$61**

[6] ATTACHMENTS

Attachment	Included in Submittal?
A. Actuals Summary CS00099 20221017	YES
B.	

Cost breakdown based on actual cost based on WBS breakdown.

(See WBS Summary Sheet.)

Line item Category	Prior Authorized	Actuals to Date	Variance (Supplemental Request)
1. ROW / Easements / Land purchases	$0	$0	$0
2. Environmental Approvals / Permits	$0	$0	$0
3. Outreach	$0	$0	$0
4. Siting Approvals / Permits	$0	$0	$0
5. Engineering / Design	$20.6	$21.4	$0.7
6. Materials (Eversource purchased)	$68.1	$76.5	$8.4
7. Construction (incl matl's by contractors)	$144.6	$170.1	$25.5
8. Testing / Commissioning	$45.5	$45	$0.0
9. PMT Project Mgmt Team		$0	$0.0
10. Removals	$1	$1	$0.0
11. Other	$0	$0	$0.0
12. Risks		$0	$0
Project Directs Total w/Risks	**$280**	**$315**	**$35**
13. Indirects/Overhead	$390	$415	$25
14. AFUDC	$9	$9	$0
Project Total - Baseline Budget	**$679**	**$738**	**$59**
15. Contingency			$0
#N/A		$0	
Project Total - Funding Approval Level	**$679**	**$738**	**$59**
16. Reimbursables/Customer Contribution	$0	$0	$0
		$0	
Project Total (less reimbursables)	**$677**	**$738**	**$61**
Total O&M	**$0**	**$0**	**$0**
TOTAL REQUEST	**$677**	**$738**	**$61**

Cost breakdown based on actual cost based on FF PAF Document breakdown.

(See PAF Breakdown below.)

Line item Category	Prior Authorized	New Total Request	Variance (Supplemental Request)	
1. ROW / Easements / Land purchases	$0	$0	$0	
2. Environmental Approvals / Permits	$0	$0	$0	
3. Outreach	$0	$0	$0	
4. Siting Approvals / Permits	$0	$0	$0	
5. Engineering / Design	$20.6	$21.4	$0.7	
6. Materials (Eversource purchased)	$68.1	$76.5	$8.4	
7. Construction (incl matl's by contractors)	$164.2	$191.2	$27.0	
8. Testing / Commissioning			$0.0	
9. PMT Project Mgmt Team		$0	$0.0	
10. Removals	$10	$10	$0.0	See Line 40
11. Other	$17	$17	$0.0	See Line 54
12. Risks		$0	$0	
Project Directs Total w/Risks	**$280**	**$316**	**$36**	
13. Indirects/Overhead	$390	$415	$25	
14. AFUDC	$9	$9	$0	
Project Total - Baseline Budget	**$678**	**$739**	**$61**	
15. Contingency	$0	$0	$0	
#N/A		$0		
Project Total - Funding Approval Level	**$678**	**$739**	**$61**	
16. Reimbursables/Customer Contribution	$1	$1	$0	
		$0		
Project Total (less reimbursables)	**$677**	**$738**	**$61**	
Total O&M	**$0**	**$0**	**$0**	
TOTAL REQUEST	**$677**	**$738**	**$61**	

The following is from the FF PAF: A7. CS00099 -[redacted]-Replace[redacted] OCB _04042019_comnts_04182019_final.docx

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A7. CS00099 -[redacted]-Replace[redacted] OCB _04042019_comnts_04182019_final.docx

Project Costs Summary

Note: Dollar values are in thousands

	Prior Authorized	Prior Years Spend	2018	2019
Capital Additions - Direct	$14	$5	$265	($2)
Less Customer Contribution	$0	$0	$0	$0
Removals net of Salvage ____%	$0	$0	$0	$10
Total - Direct Spending	$14	$5	$265	$9
Capital Additions - Indirect	$15	$7	$374	$9
Subtotal Request	$29	$12	$639	$18
AFUDC	$1	$0	$9	$0
Total Capital Request	$30	$12	$648	$18
O&M	$0	$0	$0	$0
Total Request	$30	$12	$648	$18

Direct Capital Costs	Prior Years	2018	2019	Total
Straight Time Labor	$5	$141	$4	$149
Overtime Labor	$0	$39	$0	$39
Outside Services	$0	$0	$5	$5
Materials	$0	$70	($2)	$68
Other, including contingency amounts (describe)	$0	$15	$2	$17
Total Direct Costs	$5	$265	$9	$278

Indirect Capital Costs	Prior Years	2018	2019	Total
Indirects/Overheads (including benefits)	$7	$374	$9	$390
Capitalized interest or AFUDC, if any	$0	$9	$0	$9
Total Indirect Costs	$7	$381	$9	$399
Total Capital Costs	$12	$646	$18	$677
Less Total Customer Contribution	$0	$0	$0	$0
Total Capital Project Costs	**$12**	**$646**	**$18**	**$677**
Total O&M Project Costs	$0	$0	$0	$0

Operations Project Authorization Form

Approved at April 17, 2019 EPAC

Link to Meeting Minutes

Date Prepared: 03/24/2019	Project Title: [redacted]OCB Replacement
Company/les: Eversource CT	Project ID Number: CS00099
Organization: Asset Management	Class(es) of Plant: Distribution[redacted]
Project Initiator: [redacted]	Project Category: [redacted]Breakers
Project Manager [redacted]	Project Type: Specific
Project Sponsor: [redacted]	Project Purpose: Replace Aging Oil Circuit Breaker
Estimated in service date: 12/18	If Transmission Project: PTF? N/A
Eng. /Constr. Resources Budgeted? Yes	Capital Investment Part of Original Operating Plan? Y
Authorization Type: Full Funding	O&M Expenses Part of the Original Operating Plan? N
Total Request: $677,000	

Project Costs Summary

Note: Dollar values are in thousands

	Prior Authorized	Prior Years Spend	2018	2019	Totals
Capital Additions - Direct	$14	$5	$265	($2)	$268
Less Customer Contribution	$0	$0	$0	$0	$0
Removals net of Salvage ____%	$0	$0	$0	$10	$10
Total - Direct Spending	$14	$5	$265	$9	$278
Capital Additions - Indirect	$15	$7	$374	$9	$390
Subtotal Request	$29	$12	$639	$18	$668
AFUDC	$1	$0	$9	$0	$9
Total Capital Request	$30	$12	$648	$18	$677
O&M	$0	$0	$0	$0	$0
Total Request	$30	$12	$648	$18	$677

Financial Evaluation

Note: Dollar values are in thousands

Direct Capital Costs	Prior Years	2018	2019	Total
Straight Time Labor	$5	$141	$4	$149
Overtime Labor	$0	$39	$0	$39
Outside Services	$0	$0	$5	$5
Materials	$0	$70	($2)	$68
Other, including contingency amounts (describe)	$0	$15	$2	$17
Total Direct Costs	$5	$265	$9	$278

Indirect Capital Costs	Prior Years	2018	2019	Total
Indirects/Overheads (including benefits)	$7	$374	$9	$390
Capitalized interest or AFUDC, if any	$0	$9	$0	$9
Total Indirect Costs	$7	$381	$9	$399
Total Capital Costs	$12	$646	$18	$677
Less Total Customer Contribution	$0	$0	$0	$0
Total Capital Project Costs	**$12**	**$646**	**$18**	**$677**
Total O&M Project Costs	$0	$0	$0	$0

Note: Explain unique payment provisions, if applicable
The other line item of $17K is for expenses, including mileage.

This project is seeking full funding of $677,000 to replace one (1) Oil Circuit Breaker (OCB) at [redacted]

Eversource has an initiative that began in 2006 to replace all OCBs in distribution substations to minimize environmental and safety impacts from leaking and failed equipment. The initiative started by targeting OCBs with PCB bushings. In 2012, the initiative increased in scope to include all substation OCBs. [redacted] The previous authorized amount of $30,000 was approved in PowerPlan on October 24, 2016 for preliminary engineering. $677,446 has been spent to date and the project was in service December 2018.

Work Order Number: CS000991	TOTAL		SUPPLEMENTAL		ORIGINAL PAF	
	First 2017-06	Last 2020-08	First 2019-04	Last 2020-08	First 2017-06	Last 2019-03
	$738,261.09		$60,814.68		$677,446.41	
Directs	########## #		######### ##		########## #	
Indirects	########## #		######### ##		########## #	

WBS	B/k Out	WBS		WBS1	WBS2	WBS1	WBS2	WBS1	WBS2
1.00	0	1	**ROW / Easements / Land Acquisition**	$0.00		$0.00		$0.00	
1.01	1		Evensource Personnel		$0.00		$0.00		$0.00
1.02	3		ROW / Easements / Land Services Perso		$0.00		$0.00		$0.00
1.03	6		ROW / Easements / Land Acquisition		$0.00		$0.00		$0.00
-	0								
2.00	0	2	**Environmental Approvals / Permits**	$0.00		$0.00		$0.00	
2.01	1		Evensource Personnel		$0.00		$0.00		$0.00
2.02	3		Environmental Services Personnel		$0.00		$0.00		$0.00
2.03	3		Mitigations		$0.00		$0.00		$0.00
2.04	3		Fees		$0.00		$0.00		$0.00
-	0								
3.00	0	3	**Outreach**	$0.00		$0.00		$0.00	
3.01	1		Evensource Personnel		$0.00		$0.00		$0.00
3.02	3		Outreach Services Personnel		$0.00		$0.00		$0.00
-	0						$0.00		$0.00
4.00	0	4	**Siting Approvals / Permits**	$0.00		$0.00		$0.00	
4.01	1		Evensource Personnel		$0.00		$0.00		$0.00
4.02	3		Siting Services Personnel		$0.00		$0.00		$0.00
4.03	3		Siting Mitigation		$0.00		$0.00		$0.00
4.04	3		Payments		$0.00		$0.00		$0.00
-	0								
5.00	0	5	**Engineering / Design**	##########	$0.00	$749.24	$0.00	##########	$0.00
5.01	1		Evensource Personnel		$21 393.38		$748.24		$20 645.74
5.02	3		Engineering / Design		$0.00		$0.00		$0.00
-	0								
6.00	0	6	**Materials (by Evensource)**	##########	$0.00	##########	$0.00	##########	$0.00
6.01	1		Evensource Personnel		$0.00		$0.00		$0.00
6.02	1		Procurement / Logistics Services Persona		$0.00		$0.00		$0.00
6.03	4		Equipment / Materials		$76 529.29		$8 441.79		$68 113.50
-	0								
7.00	0	7	**Construction**	##########	$0.00	##########	$0.00	##########	$0.00
7.01	1		Evensource Personnel - General		$150 503.77		$15 380.97		$135 122.80
7.02	1		Evensource Personnel - Overhead Line Wo		$0.00		$0.00		$0.00
7.03	1		Evensource Personnel Underground Line W		$0.00		$0.00		$0.00
7.04	1		Evensource Personnel - Substation Electric		$0.00		$0.00		$0.00
7.05	1		Evensource Personnel - Civil Work		$0.00		$0.00		$0.00
7.06	3		Contract Construction Reps		$0.00		$0.00		$0.00
7.07	3		Line Construction - Matting / Access Road		$0.00		$0.00		$0.00
7.08	3		Line Construction - Civil / Drilling / Trench		$0.00		$0.00		$0.00
7.09	3		Line Construction - Overhead Tower Cons		$0.00		$0.00		$0.00
7.10	3		Line Construction - Underground Cable Ins		$0.00		$0.00		$0.00
7.11	3		S/S Construction - Civil / Site Prep / Excav		$0.00		$0.00		$0.00
7.12	3		S/S Construction - Electrical		$0.00		$0.00		$0.00
7.13	3		Misc. Construction		$19 582.45		$10 075.66		$9 506.80
-	0								
8.00	0	8	**Testing / Commissioning**	##########	$0.00	$0.00	$0.00	##########	$0.00
8.01	1		Evensource Personnel		$45 479.66		$0.00		$45 479.66
8.02	3		Testing / Commissioning Personnel		$0.00		$0.00		$0.00
-	0								
9.00	0	9	**Project Management Team**	$0.00		$0.00		$0.00	
9.01	1		Evensource Personnel		$0.00		$0.00		$0.00
9.02	3		Contract Personnel		$0.00		$0.00		$0.00
-	0								
-	0								
10.00	0	10	**Removals**	##########	$0.00	##########	$0.00	$0.00	$0.00
10.01	5		Evensource Personnel		$2 200.00		$2 200.00		$0.00
10.02	5		Contract Personnel		$0.00		$0.00		$0.00
10.03	5		Material Salvage Investment Recovery Tra		-$402.44		-$402.44		$0.00
-	0								
11.00	0	11	**Other**	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
11.01	6		Journal Entry Adjustments				$0.00		$0.00
11.02	6		UVL		$0.00		$0.00		$0.00
11.03	6		Property Tax		$0.00		$0.00		$0.00
-	0								
12.00	6	12	**Risks**	$0.00		$0.00		$0.00	
-	0								
13.00	0	13	**Overhead**	##########	$0.00	##########	$0.00	##########	$0.00
13.01	7		2A0=Admin & Eng- OH		$3 726.10		$530.38		$3 203.72
13.02	7		2EB- 2EL 2ES=> Alloc-E&S OH Subst. Alloc		$229 949.70		$11 467.38		$218 482.31
13.03	7		2GS =Gen Svc Co Benefit Loader		$17 476.14		$773.25		$16 700.89
13.04	7		2NP=Non Productive Time Loader		$24 980.51		$2 036.20		$24 953.25
13.05	7		2PR=Payroll Benefit Loader		$83 517.19		$7 270.87		$76 246.32
13.06	7		2VE=Vehicle Costs Clearing		$31 848.25		$2 651.84		$29 196.41
13.07	7		2MI=Misc Dist Exp Capitalized OH		$15 527.18		$64.68		$15 462.50
13.08	7		2SC=Service Company Allocations		$0.00		-$0.00		-$0.00
13.09	7		2ST=Stores Loader		$5 489.54		$0.00		$5 489.54
-	0								
14.00	8	14	**AFUDC**	##########	$8 843.97	$0.00	$0.00	##########	$8 843.97
-	0								
15.00	7	15	**Contingency**	$0.00		$0.00		$0.00	
-	0								
16.00	5	16	**Reimbursables**	$0.00		$0.00		$0.00	
-	0								
			Total	##########	##########	##########	##########	##########	##########

funding_project	(All)																																
accounting_work_order	(All)																																
Sum of amount	month_number																																
CostTV	201706	201707	201708	201709	201710	201711	201712	201801	201802	201803	201804	201805	201806	201807	201808	201809	201810	201811	201812	201901	201902	201903	201904	201905	201906	201907	201908	201909	201910	201911	201912	202001	202002	202003	202004	Grand Total
A66: AFUDC Debt	$1	$3	$5	$5	$6	$8	$14	$21	$25	$30	$33	$41	$62	$66	$187	$374	$547	$830	$133																	$2 810
A67: AFUDC Equity	$2	$6	$10	$11	$16	$16	$30	$46	$54	$64	$71	$89	$134	$181	$402	$806	$1 175	$1 782	$1 146																	$6 034
AB5: Miscellaneous Accounting Adjustments																			$0	($2)	$0	$0	($2)	($0)	($0)	$0	$0	($5)	$0	$0	($0)	$0	$0	($0)	($2)
E13: Meals																	$30	$360			$0														$391
E14: Mileage														$67	$1 126	$2 730	$2 174	$4 775	$988	$231	($0)							$1 917		$38					$13 179
J17: Rent Expense-External															$1 200	$733	$400	$0	$314	$649	$0										$3 116		$69	$108	$0 $6 476
L11: Labor Straight Time Exempt	$440	$691	$136	$101	$598	$126	$962	$255	$565	$377	$535	$523	$1 188	$1 546	$595	$2 010	$2 980	$4 333	$4 418	$1 444	$193		$421		$128	$896					$135					$25 509
L12: Labor Straight Time Non-Exempt							$1 831	$285	$794	$265	$98	$923	$2 978	$255	$13 199	$28 997	$24 238	$39 564	$10 386	$2 081	$126		$287		$12 121		$286	$362								$136 $97
L22: Labor Overtime Non-Exempt												$182	$285			$186	$33 291				$36						$55									$36 $33
L42: Labor Premium and Special Non-Exempt																$183	$2 789				$0															$2 $94
M51: Materials- Purchased												$1 041			$12	$48	$3 053	$1 771					$8 416													$14 $15
M12: Materials- Stores															$8 769	$1 578	$1 231					(S1 580)														$10 045
M15: Material Salvage																															($803)					($803)
MAK: Stores over 25K															$52 169																					$52 169
MKK: Stores Loader Cap															$0																					$0
S10: Environmental Outside Services																			$331	($3)	$0						$1 853							$0		$2 001
S58: Facility Waste Haz-Non haz-PCB-Universal																																$4 869	$0	$0		$4 869
S68: Other Outside Services- Other															$255	$0				$1 464	$0										$2 350					$3 730
ZA0: Admin and Eng- OH- Acct Use Only	$10	$16	$3	$2	$33	$3	$35	$7	$17	$8	$10	$27	$84	$35	($16)	$890	$662	$1 114	$202	$85	$7	($7)	$47	$4	$2	$285	$20	$22	$76	$8	$60	$14	$1	$1		$3 730
ZEB: Alloc- E. S OH Subst. Acct Use Only																$43 580	$39 222	$78 057	$14 386	$4 534	$206		$281	$236	$106	$8 703	$741	$195	$215	$111	$880					$191 452
ZES: Engin and Super OH- Acct Use Only	$96	$150	$27	$22	$137	$29	$1 358	$257	$677	$228	$1 046	$2 889	$8 091	$3 202	$20 239	-	-	-	-	-	($0)					$0									$0 $28 498
ZGS: Gen Svc Co Benefit Loader- Acct Use Only	$147	$206	$36	$40	$458	$97	$2 515	$433	$1 086	$312	$486	$2 238	$3 024	$1 438	$241	$287	$327	$1 688	$1 274	$96	$114		$253	$133				$58	$231	$118							$17 474
ZMI: Misc Dist Exp Capitalized OH- Acct Use Only	$9	$14	$6	$5	$34	$7	$269	$51	$134	$63	$61	$165	$449	$178	$1 124	$2 421	$2 179	$6 505	$1 339	$167	$26		$35	$30		$0					($0)					$15 527
ZNP: Non Productive Time Loader- Acct Use Only	$82	$128	$23	$19	$84	$20	$441	$93	$240	$113	$109	$267	$804	$318	$2 128	$3 837	$3 455	$10 325	$1 906	$490	$44		$58	$50	$23	$1 794		$41	$46	$24					$0		$26 090
ZPR: Payroll Benefit Loader- Acct Use Only															$6 214	$13 771	$12 248	$36 195	$5 943	$1 749	$76		$218			$6 948		$207									$83 517
ZSC: Service Company Allocations- Acct Use Only	$0	($0)	$0	($0)	$0	$0	$0	($0)	$0	$0	($0)	($0)	($0)	$0	($0)	$0	($0)	($0)	($0)	$0	$0		$0	$0	$0	$0		($0)	$0	($0)	$0					($0)
ZST: Stores Loader- Acct Use Only															$5 065	($60)	$185		$36			($45)														$5 490
ZVE: Vehicle Costs Clearing- Acct Use Only	$8	$8	$4		$4	$5	$5	$10	$16	$8	$37	$14	$19	$24	$2 833	$5 816	$5 165	$12 497	$2 052	$693	$27		$96	$5	$2	$2 495		$50	$4	$1					$0		$31 848
Grand Total	$993	$1 520	$303	$264	$1 356	$310	$7 997	$1 435	$3 613	$1 668	$2 508	$7 481	$17 851	$7 335	$115 226	$107 405	$99 675	$238 981	$44 478	$17 838	$1 429	($1 230)	$9 579	$865	$376	$34 759	$2 820	$772	$1 187	$397	$3 140	$4 923	$50	$130	$0 $738 261

Operations Project Authorization Form

Approved at April 17, 2019 EPAC
Link to Meeting Minutes

Date Prepared: 03/24/2019	**Project Title: [redacted] OCB Replacement**
Company/ies: Eversource CT	**Project ID Number: CS00099**
Organization: Asset Management	**Class(es) of Plant: Distribution [redacted]**
Project Initiator: [redacted]	**Project Category: [redacted] - Breakers**
Project Manager: [redacted]	**Project Type: Specific**
Project Sponsor: [redacted]	**Project Purpose: Replace Aging Oil Circuit Breaker**
Estimated in service date: 12/18	**If Transmission Project: PTF? N/A**
Eng. /Constr. Resources Budgeted? Yes	**Capital Investment Part of Original Operating Plan? Y**
Authorization Type: Full Funding	**O&M Expenses Part of the Original Operating Plan? N**
Total Request: $677,000	

Financial Requirements:

Project Authorization

ERM: _____

FP&A: _____

Executive Summary

This project is seeking full funding of $677,000 to replace [redacted] Oil Circuit Breaker (OCB) at [redacted] Eversource has an initiative that began in 2006 to replace all OCBs in distribution substations to minimize environmental and safety impacts from leaking and failed equipment. The initiative started by targeting OCBs with PCB bushings. In 2012, the initiative increased in scope to include all substation OCBs. There are two (2) customers that would be affected by a failure of this aging equipment. The previous authorized amount of $30,000 was approved in PowerPlan on October 24, 2016 for preliminary engineering. $677,446 has been spent to date and the project was in service December 2018.

Project Costs Summary
Note: Dollar values are in thousands

	Prior Authorized	Prior Years Spend	2018	2019	Totals
Capital Additions - Direct	$14	$5	$265	($2)	$268
Less Customer Contribution	$0	$0	$0	$0	$0
Removals net of Salvage ____%	$0	$0	$0	$10	$10
Total - Direct Spending	$14	$5	$265	$9	$278
Capital Additions - Indirect	$15	$7	$374	$9	$390
Subtotal Request	$29	$12	$639	$18	$668
AFUDC	$1	$0	$9	$0	$9
Total Capital Request	$30	$12	$648	$18	$677
O&M	$0	$0	$0	$0	$0
Total Request	$30	$12	$648	$18	$677

Financial Evaluation
Note: Dollar values are in thousands

Direct Capital Costs	Prior Years	2018	2019	Total
Straight Time Labor	$5	$141	$4	$149
Overtime Labor	$0	$39	$0	$39
Outside Services	$0	$0	$5	$5
Materials	$0	$70	($2)	$68
Other, including contingency amounts (describe)	$0	$15	$2	$17
Total Direct Costs	$5	$265	$9	$278

Indirect Capital Costs	Prior Years	2018	2019	Total
Indirects/Overheads (including benefits)	$7	$374	$9	$390
Capitalized interest or AFUDC, if any	$0	$9	$0	$9
Total Indirect Costs	$7	$381	$9	$399

Total Capital Costs	$12	$646	$18	$677
Less Total Customer Contribution	$0	$0	$0	$0
Total Capital Project Costs	**$12**	**$646**	**$18**	**$677**
Total O&M Project Costs	$0	$0	$0	$0

Note: Explain unique payment provisions, if applicable

The other line item of $17K is for expenses, including mileage.

Future Financial Impacts:

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

Future Costs	Year 20__	Year 20__	Year20__	Year 20__+	Total Future Project Costs
Capital	$ -	$ -	$ -	$ -	$ -
O&M	-	-	-	-	-
Other	-	-	-	-	-
TOTAL	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**

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

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.

If this is other than a Reliability Project, please complete the section below;

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

Future Benefits	Year 20__	Year 20__	Year20__	Year 20__+	Total Future Project Benefits
Capital	$ -	$ -	$ -	$ -	$ -
O&M	-	-	-	-	-
Other	-	-	-	-	-
TOTAL	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**

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

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? There are No ARO's associated with this project
If yes, please provide details:

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

Technical Justification:

Project Need Statement

[redacted] nd in need of replacement. As part of an environmental initiative (under PURA Docket No. 14-05-06) that began in 2006, the OCB was replaced with a [redacted]. The need was driven by customer and employee safety, obsolescence and environmental concerns.

Project Objectives

The main objectives of this project are to:

- Increase employee and customer safety
- Removal of oil filled devices from the [redacted]/environment.
- Increase system reliability

Project Scope

Replaced [redacted] oil circuit breaker with [redacted] The following OCB was identified for replacement:

Nom	Age	Tank Style	Mfg.	Model	Load Rating	V class	Interrupt kA
[redacted]							

[redacted]

[redacted]

[redacted]

Background / Justification

As mentioned above under the project need statement, this project is part of an overall oil circuit breaker removal initiative that began in 2006. The initiative was created to decrease Eversource's environmental exposure to oil spills and leaks, as well as replacing a vital component of aging substation infrastructure. The overall capital initiative to eliminate oil filled circuit breakers from the system was presented to PURA within docket number 14-05-06. It started off with replacing OCBs with PCB bushings and has now expanded to all oil filled circuit breakers. The initiative justification was due to the amount of environmental damage and the associated dollars the company was exposed to with a PCB bushing/breaker catastrophically failing.

[redacted]

efer to Figure 2 for equipment visuals.

Business Process and / or Technical Improvements:

The benefit to customers and Eversource is improved reliability and less environmental risk in the future by replacing aging equipment that is both a safety and environmental concern.

Alternatives Considered with Cost Estimates

A do-nothing approach was not recommended as an alternative due to not addressing the environmental concerns of the regulatory agencies.

[redacted]

Project Schedule

Milestone/Phase Name	Estimated Completion Date
Engineering	December 2017
Construction start	September 2018
Construction finish	December 2018

Regulatory Approvals

N/A

Risks and Risk Mitigation Plans

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Internal construction resources not available to perform the work.	2018	Low	OCB removals and [redacted] to be performed by an outside contractor.
Internal engineering resources not available to perform the work.	2018	Low	This project was engineered by internal engineering.
[redacted]	2018	Low	[redacted]
[redacted]	2018	Low	[redacted] Man-hours were included in the estimate for this.

References

CL&P 2014-2019 Capital Operating Initiatives

PURA Docket No. 14-05-06

Attachments (One-Line Diagrams, Images, etc.)



Figure 1- Nomenclature diagram [redacted]



Figure 2 – Pictured is the [redacted]



Figure 3 - Detail map showing [redacted]

Project Checklist – Transmission and Substation

INSTRUCTIONS:
It is the responsibility of the initiator to contact the 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.

Checklist for Studies and Processes of a Transmission & Substation Capital Project		
Project Name: [redacted]	**OCB Replacement**	**PAF No: CS00099**
Facility Type: ☐ BPS ☐ BES ☐ PTF ☒ non-PTF ☐ CIP ☒ Distribution		
PLANNING		
Is a NX-9 required?	No	
Is an ISO-NE PAC presentation required?	No	
Is a PPA required?	No	
Is a TCA Application Required?	No	
PLANNING/PROTECTION & CONTROLS		
Are RAS/SPS/UVLs affected?	No	
OPERATIONS		
Outage Required?	[redacted]	☐ Outage Not Required
Do SCLL Conditions Exist?	Yes	
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?	Yes	
Is a Transient Over Voltage (TOV) analysis required?	No	
P&C ENGINEERING		
OP-22 - Are PMUs and DDR required?	No	
If BPS, is an NPCC Directory #4 presentation required?	No	

Checklist for Studies and Processes of a Transmission & Substation Capital Project	
Project Name: [redacted] **OCB Replacement**	**PAF No: CS00099**
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?	No
PERMITTING	
Is there any permitting required?	No
SITING & CONSTRUCTION SERVICES (OUTREACH)	
What is the level of outreach expected?	Low
INITIATOR	
Has a field constructability review been completed?	Yes
INVESTMENT RECOVERY	
Does the project require development of an Investment Recovery plan?	No
COST ESTIMATING	
How was the cost estimate prepared?	Other (specify below)
Who prepared the estimate?	Actuals from Power Plan
Was the estimate reviewed by Eversource Estimating?	No

Cost Estimate Backup Details

See attached detailed cost backup

Cost Breakdown for FP# CS00099

04/03/2019

				FERC Account #						
Cost_Type	Year	CE_Type	DESCRIPTION	106010	107010	108030	45701X	92000X	93020X	Total
Direct	2017	Labor	Labor Straight Time Exempt		3,038.77					3,038.77
Direct	2017	Labor	Labor Straight Time Non-Exempt		1,831.45					1,831.45
		Labor Total		-	4,870.22	-	-	-	-	4,870.22
	2017 Total			-	4,870.22	-	-	-	-	4,870.22
Direct	2018	Contractors	Environmental Outside Services		150.50					150.50
Direct	2018	Contractors	Other Outside Services- Other		255.00					255.00
		Contractors Total		-	405.50	-	-	-	-	405.50
Direct	2018	Labor	Labor Overtime Non-Exempt		35,953.87					35,953.87
Direct	2018	Labor	Labor Premium and Special Non-Exempt		2,893.94					2,893.94
Direct	2018	Labor	Labor Straight Time Exempt		19,314.53					19,314.53
Direct	2018	Labor	Labor Straight Time Non-Exempt		121,444.99					121,444.99
		Labor Total		-	179,607.33	-	-	-	-	179,607.33
Direct	2018	Materials	Materials- Purchased		5,899.56					5,899.56
Direct	2018	Materials	Materials- Stores		11,574.69					11,574.69
Direct	2018	Materials	Stores over 25K		52,169.13					52,169.13
		Materials Total		-	69,643.38	-	-	-	-	69,643.38
Direct	2018	Misc Other	Meals		980.00					980.00
Direct	2018	Misc Other	Mileage		11,754.62					11,754.62
Direct	2018	Misc Other	Miscellaneous Accounting Adjustments	659,472.34	(659,472.34)					-
Direct	2018	Misc Other	Rent Expense-External		2,577.55					2,577.55
		Misc Other Total		659,472.34	(644,160.17)	-	-	-	-	15,312.17
	2018 Total			659,472.34	(394,503.96)	-	-	-	-	264,968.38
Direct	2019	Contractors	Environmental Outside Services		(10.83)	7.82				(3.01)
Direct	2019	Contractors	Other Outside Services- Other		5,484.14					5,484.14
		Contractors Total		-	5,473.31	7.82	-	-	-	5,481.13
Direct	2019	Labor	Labor Overtime Non-Exempt		(1,878.32)	1,908.23				29.91
Direct	2019	Labor	Labor Premium and Special Non-Exempt		(153.47)	153.47				-
Direct	2019	Labor	Labor Straight Time Exempt		305.93	1,268.91				1,574.84
Direct	2019	Labor	Labor Straight Time Non-Exempt		(4,453.38)	6,654.10				2,200.72
		Labor Total		-	(6,179.24)	9,984.71	-	-	-	3,805.47
Direct	2019	Materials	Materials- Stores		(1,529.88)					(1,529.88)
		Materials Total		-	(1,529.88)	-	-	-	-	(1,529.88)
Direct	2019	Misc Other	Meals		(51.97)	51.97				-
Direct	2019	Misc Other	Mileage		(405.97)	635.53				229.56
Direct	2019	Misc Other	Miscellaneous Accounting Adjustments	(13,096.73)	13,096.73					-
Direct	2019	Misc Other	Rent Expense-External		1,042.62					1,042.62
		Misc Other Total		(13,096.73)	13,681.41	687.50	-	-	-	1,272.18
	2019 Total			(13,096.73)	11,445.60	10,680.03	-	-	-	9,028.90
Direct Total				646,375.61	(378,188.14)	10,680.03	-	-	-	278,867.50
Indirect	2017	Indirect	Admin and Eng OH- Acct Use Only		81.13					81.13
Indirect	2017	Indirect	Engin and Super OH- Acct Use Only		1,818.91					1,818.91
Indirect	2017	Indirect	Gen Ser Co Benefit Loader- Acct Use Only		3,779.25					3,779.25
Indirect	2017	Indirect	Misc Dist Exp Capitalized OH-Acct Use Only		344.51					344.51
Indirect	2017	Indirect	Non Productive Time Loader- Acct Use Only		806.05					806.05
Indirect	2017	Indirect	Vehicle Costs Clearing- Acct Use Only		33.62					33.62
		Indirect Total		-	6,863.47	-	-	-	-	6,863.47
Indirect	2017	Misc Other	AFUDC Debt		41.25					41.25
Indirect	2017	Misc Other	AFUDC Equity		88.57					88.57
		Misc Other Total		-	129.82	-	-	-	-	129.82
	2017 Total			-	6,993.29	-	-	-	-	6,993.29
Indirect	2018	Indirect	Admin and Eng OH- Acct Use Only		3,036.83					3,036.83
Indirect	2018	Indirect	Alloc- E+S OH Subst- Acct Use Only		175,244.74					175,244.74
Indirect	2018	Indirect	Engin and Super OH- Acct Use Only		36,678.63					36,678.63
Indirect	2018	Indirect	Gen Ser Co Benefit Loader- Acct Use Only		12,717.00					12,717.00
Indirect	2018	Indirect	Misc Dist Exp Capitalized OH-Acct Use Only		14,525.48					14,525.48
Indirect	2018	Indirect	Non Productive Time Loader- Acct Use Only		23,613.89					23,613.89
Indirect	2018	Indirect	Payroll Benefit Loader- Acct Use Only		74,420.82					74,420.82
Indirect	2018	Indirect	Stores Loader- Acct Use Only		5,246.10					5,246.10
Indirect	2018	Indirect	Vehicle Costs Clearing- Acct Use Only		28,442.81					28,442.81
		Indirect Total		-	373,926.30	-	-	-	-	373,926.30
Indirect	2018	Misc Other	AFUDC Debt		2,768.89					2,768.89
Indirect	2018	Misc Other	AFUDC Equity		5,945.26					5,945.26
		Misc Other Total		-	8,714.15	-	-	-	-	8,714.15
	2018 Total			-	382,640.45	-	-	-	-	382,640.45
Indirect	2019	Indirect	Admin and Eng OH- Acct Use Only		(84.29)	170.05				85.76
Indirect	2019	Indirect	Alloc- E+S OH Subst- Acct Use Only		(4,804.61)	9,544.64				4,740.03
Indirect	2019	Indirect	Engin and Super OH- Acct Use Only		(2,041.54)	2,041.54				-
Indirect	2019	Indirect	Gen Ser Co Benefit Loader- Acct Use Only		(681.01)	885.65				204.64
Indirect	2019	Indirect	Misc Dist Exp Capitalized OH-Acct Use Only		(227.47)	819.98				592.51
Indirect	2019	Indirect	Non Productive Time Loader- Acct Use Only		(789.97)	1,323.28				533.31
Indirect	2019	Indirect	Payroll Benefit Loader- Acct Use Only		(2,217.87)	4,043.37				1,825.50
Indirect	2019	Indirect	Service Company Allocations- Acct Use Only				(486.26)	234.54	251.72	-
Indirect	2019	Indirect	Stores Loader- Acct Use Only		243.44					243.44
Indirect	2019	Indirect	Vehicle Costs Clearing- Acct Use Only		(828.32)	1,548.30				719.98
		Indirect Total		-	(11,431.64)	20,376.81	(486.26)	234.54	251.72	8,945.17
	2019 Total			-	(11,431.64)	20,376.81	(486.26)	234.54	251.72	8,945.17
Indirect Total				-	378,202.10	20,376.81	(486.26)	234.54	251.72	398,578.91
Grand Total				646,375.61	13.96	31,056.84	(486.26)	234.54	251.72	677,446.41