Supplement Request Form

Approved at June 10, 2020 EPAC
Link to Meeting Minutes

Date Prepared: 05/11/2020	**Project Title:** [redacted]
Company/Companies: Eversource CT	**Project ID Number: CS00257**
Organization: Asset Management	**Plant Class: Distribution Substation**
Project Initiator: [redacted]	**Project Type: Specific**
Project Manager: [redacted]	**Capital Investment Part of Original Operating Plan? Yes**
Project Sponsor: [redacted]	**O&M Expenses Part of the Original Operating Plan? N/A**
Current Authorized Amount: $1,684K	**Estimated in service date(s): 04/11/2020**
Supplement Request: $212K	**Other:**
Total Request: $1,896K	

Supplement Justification

The [redacted] – [redacted] project had an original authorized budget of $1,684K, which was approved in Power Plan on 11/15/2018. This project was placed in service on 04/11/2020. This supplement requests approval of an additional $212K for the updated total request of $1,896K. As of May 14, 2020, the spend to date on the project is approximately $1,675K. However, due to the extension of the project schedule in tandem with un-anticipated outage delays additional cost were incurred to the project.

The scope of work for this project includes the [redacted] The project is currently in service, and the as-built process is currently ongoing. [redacted] The use of the mobile unit was not a part of the initial scope and is the main driver for this supplement. Also, the project incurred additional costs to support the remobilization effort to complete the project work.

The cascading effect of these issues contributed to higher direct and indirect charges that affected the project budget.

Justification for Additional Resources

A summary of the previously approved budget and the new estimate is provided below.

	Previously Approved ($K)	New Estimate ($K)	Delta ($K)
Labor/OT	26	95	69
Material	156	94	(62)
Engineering	0	58	58
Construction	722	627	(95)
Testing	0	227	227
Project support	0	104	104
Other including Contingency	2	0	(2)
Total Direct	**906**	**1,205**	**299**
Indirect	776	647	(129)
AFUDC	2	44	42
Total Request	**1,684**	**1,896**	**212**

*** Original authorized budget not broken down by category. Cost distribution provided from cash flow dated 11/15/2018.*

Labor – 69K

The labor cost increased due to the additional time required to install and remove the mobile unit. The use of the mobile unit was deemed mandatory by the SCLL and CONVEX during the outage prep for the 11F-3X3-2. The cost to install and remove the mobile unit was not included in the project budget.

Materials – ($62K)

The material cost is lower than the original estimate because the [redacted] was lower than the initial assumptions.

Engineering – $58K

The engineering cost increase due to the additional engineering required to install the mobile unit.

Construction – ($95K)

The cost for the construction requirements decreased because the resources for this activity was acquired at a lower cost.

Testing – $227K

Additional testing was required to install the mobile unit which was not included in the project budget. Also, additional time was required to confirm the SCLL requirements for the mobile installation which contributed to the cost increase.

Project support – $104K

Additional project support was required for the installation of the mobile unit which was not included in the initial project budget.

Contingency – ($2K)

The funds allocated for this activity were lower because they were not utilized.

Indirects – ($129K)

The rates used to calculate the initial funding requirements are lower than the current rates.

AFUDC – $42K

The cost increased due to adjustments made to direct cost budgets.

Supplement Cost Summary

Note: Dollar values are in thousands:

	Prior Authorized	Supplement Request	Total
Capital Additions - Direct	$906	$297	$1,203
Less Customer Contribution	$0	$0	$0
Removals net of Salvage ____%	$0	$2	$2
Total Direct Spending	$906	$299	$1,205
Capital Additions - Indirect	$776	($129)	$647
AFUDC	$2	$42	$44
Total Capital Request	$1,684	$212	$1,896
O&M	$0	$0	$0
Total Request	**$1,684**	**$212**	**$1,896**

Note: Dollar values are in thousands:

Total Supplement Request by Year View:

	2020	Total
Capital Additions Direct	$297	$297
Less Customer Contribution	$ -	$ -
Removals Net of Salvage 0.6%	$2	$2
Total Direct Spending	$299	$299
Capital Additions - Indirect	($129)	($129)
AFUDC	$42	$42
Subtotal Request	$212	$212
O&M	$ -	$ -
Total Request	$212	$212

EVERSOURCE
Project Authorization Form

Operations Project Authorization Form

Approved at September 12, 2018 EPAC

Link to Meeting Minutes

Date Prepared: 08/22/2018	**Project Title: [redacted] – Replace 5 OCB's**
Company/ies: Eversource CT	**Project ID Number: CS00257**
Organization: Asset Management	**Class(es) of Plant: Distribution Substation**
Project Initiator: [redacted]	**Project Category: Reliability**
Project Manager: [redacted]	**Project Type: Specific**
Project Sponsor: [redacted]	**Project Purpose: Replace aging oil circuit breakers**
Estimated in service date: 12/2019	**If Transmission Project: PTF? N/A**
Eng. /Constr. Resources Budgeted? Y	**Capital Investment Part of Original Operating Plan? Y**
Authorization Type: Full Funding	**O&M Expenses Part of the Original Operating Plan? N**
Total Request: $1,684,000	

Financial Requirements:

Project Authorization

ERM: _____

FP&A: _____

Executive Summary

This project is seeking full funding of $1,684,000 to [redacted] Eversource CT has an initiative (under PURA Docket No. 14-05-06) that began in 2006 to replace all OCB's in distribution substations to minimize environmental impacts from leaking and failed equipment. The initiative started by targeting OCB's with PCB bushings, then in 2012, the initiative increased in scope to include all distribution substation OCB's. The previous authorized amount of $110,000 was approved on August 10, 2017 for preliminary engineering.

Project Costs Summary

Note: Dollar values are in thousands

	Prior Authorized	2019	2020	2021	Totals
Capital Additions - Direct	$84	$906	-	-	$906
Less Customer Contribution	$0	$ -	-	-	$ -
Removals net of Salvage 8%	$6	$ -	-	-	$ -
Total - Direct Spending	$90	$906	-	-	$906
Capital Additions - Indirect	$20	$776	-	-	$776
Subtotal Request	$110	$1,682	-	-	$1,682
AFUDC	$0	$2	-	-	$2
Total Capital Request	$110	$1,684	-	-	$1,684
O&M	$0	$ -	-	-	$ -
Total Request	$110	$1,684	-	-	$1,684

Financial Evaluation

Note: Dollar values are in thousands

Direct Capital Costs	2019	2020	2021	Total
Straight Time Labor	$26	-	-	$26
Overtime Labor	$ -	-	-	$ -
Outside Services	$722	-	-	$722
Materials	$156	-	-	$156
Other, including contingency amounts (describe)	$ 2	-	-	$2
Total	$906	-	-	$906

Indirect Capital Costs	2019	2020	2021	Total
Indirects/Overheads (including benefits)	$776	-	-	$712
Capitalized interest or AFUDC, if any	$2	-	-	$2
Total	$778	-	-	$714

Total Capital Costs	$1,684	-	-	$1,684
Less Total Customer Contribution	$0	-	-	$0
Total Capital Project Costs	$1,684	-	-	$1,684
Total O&M Project Costs	$0	-	-	$0

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? There are no additional future costs associated with this project. [redacted]

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 2018	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? Substation Operations
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: There is no ARO associated with this project.

Are there other environmental cleanup costs associated with this project? If yes, please provide details: Each site was inspected for any additional scope that would be a factor associated with the [redacted] PM confirmed that no additional environmental cost will be associated with this project.

Technical Justification:

Project Need Statement

[redacted] As part of an environmental effort (under PURA Docket No. 14-05-06), [redacted]. The need is driven by obsolescence and environmental concerns.

Project Objectives

The main objectives of this project are to:

- [redacted]
- Increase employee and customer safety
- Increase system reliability
- Reduce costs by increasing maintenance intervals

Project Scope

[redacted]

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

[redacted]

[redacted]

Background / Justification

The overall capital initiative to eliminate oil filled circuit breakers from the system was presented to PURA within Docket No. 14-05-06. It started off with replacing (OCB's) with PCB bushings and later expanded to all oil filled circuit breakers. The initiative justification was due to the amount of environmental damage and the associated cost the company would be exposed to by a PCB bushing/breaker failing catastrophically. The complete docket can be found as an attachment under References.

[redacted]s.

Business Process and / or Technical Improvements:

The benefit to customers will be improved reliability and less environmental risk in the future by replacing aging oil filled equipment that is both a safety and environmental concern. New vacuum circuit breakers have higher BIL and short circuit ratings.

Alternatives Considered with Cost Estimates

A do-nothing approach is not recommended as an alternative because it does not address the environmental concerns the regulatory bodies were told would be addressed.

[redacted] is roughly $4M to $5M to install.

Project Schedule

Milestone/Phase Name	Estimated Completion Date
Engineering	Sept 2018
Procurement	Oct 2018
Construction start	Feb 2019
Construction finish	Dec 2019

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.	2019	Low	[redacted] will be performed by an outside contractor.
Internal engineering resources not available to perform the work.	2018	Low	This project will be engineering by outside services. Limited support from internal engineering
Materials Shortage or long lead times	2019	Medium	[redacted]. Lead times may delay construction schedules.
[redacted]	2019	High	[redacted]

References

CL&P Operating Initiatives 2014 to 2019, Docket# 14-05-06

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

[redacted])



Fig. 1 [redacted]

Project Checklist – Transmission and Substation

Checklist for Studies and Processes of a Transmission & Substation Capital Project					
Project Name: [redacted] – [redacted]					**PAF No: CS00257**
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?	☒ 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?					Yes
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] – Replace 5 OCB's	**PAF No: CS00257**
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?	Estimate was prepared by an external firm
Who prepared the estimate?	[redacted]
Was the estimate reviewed by Eversource Estimating?	No

Cost Estimate Backup Details

ESTIMATE SUMMARY

Project Title: [redacted]
Project Mgr/Lead: [redacted]
Project Number: CS00257
Est. Revision # 00

Estimate By: ABC
Date of Estimate: 09/18/2018
ISD: 12/31/19
Estimate 09/18/2018

ESTIMATE SUMMARY

Estimate Type: Construction

	TOTAL	% of Total	Prior	2018	2019	2020	2021	2022	2023
CONSTRUCTION	$226,510	13.4%			$226,510				
ENGINEERING/DESIGN	$226,985	13.5%			$226,985				
LAND									
MATERIAL	$151,500	9.0%			$151,500				
PROJECT MGR & SUPPORT									
REMOVAL									
TEST	$275,000	16.3%			$275,000				
CONTINGENCY									
ESCALATION	$26,400	1.6%			$26,400				
INDIRECTS	$776,242	46.1%			$776,242				
AFUDC	$1,941	0.1%			$1,941				
Total Cost	**$1,684,578**	100.0%			**$1,684,578**				

Estimate Range	-10%	-	10%
	$1,516,120	-	**$1,853,036**

COMMENTS:

Project Scope:

[redacted]

Assumptions/Clarifications;
Indirect rates based on; 11 - CT , Station work
Estimate based on previous work.

