Operations Project Authorization Form

Date Prepared: 08/24/2018	**Project Title: [redacted] - Replace failed switchgear with reclosers**
Company/ies: Eversource CT	**Project ID Number: CS00303**
Organization: Asset Management	**Class(es) of Plant: Distribution Substations**
Project Initiator: [redacted]	**Project Category: General Modernization**
Project Manager: [redacted]	**Project Type: Specific**
Project Sponsor: [redacted]	**Project Purpose: Replacement of failed equipment**
Estimated in service date: Completed	**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: $261,262	

Financial Requirements:

Project Authorization

ERM: _____

FP&A: _____

Executive Summary

This project seeks funding of $261,262 to cover the capital [redacted]
This equipment included the Annual project DSQ42012 was created to address the emergent condition at [redacted] on March 10, 2014.

Project Costs Summary

	Prior Authorized	2014	2015	2017	Totals
Capital Additions - Direct	$77,750	$116,655	$9,714	$410	$126,779
Less Customer Contribution	$0	$0	$0	$0	$0
Removals net of Salvage ____%	$0	$28,133	$2,429	$102	$30,664
Total - Direct Spending	$77,750	$144,788	$12,143	$512	$157,443
Capital Additions - Indirect	$0	$98,038	$5,407	$374	$103,819
Subtotal Request	$0	$242,826	$17,550	$886	$261,262
AFUDC	$0	$0	$0	$0	$0
Total Capital Request	$77,750	$242,826	$17,550	$886	$261,262
O&M	$0	$0	$0	$0	$0
Total Request	$77,750	$242,826	$17,550	$886	$261,262

Financial Evaluation

Direct Capital Costs	2014	2015	2017	Total
Straight Time Labor	$41,715	$5,885	$0	$47,600
Overtime Labor	$18,889	$0	$492	$19,381
Outside Services	14687	$3,379	$0	18066
Materials	$49,060	$405	$0	$49,465
Other, including contingency amounts (describe)	$20,437	$2,474	$20	$22,931
Total Direct Costs	**$144,788**	**$12,143**	**$512**	**$157,443**

Indirect Capital Costs	2014	2015	2017	Total
Indirects/Overheads (including benefits)	$98,038	$5,407	$374	$103,819
Capitalized interest or AFUDC, if any	$0	$0	$0	$0
Total Indirect Costs	**$98,038**	**$5,407**	**$374**	**$103,819**

Total Capital Costs	**$242,826**	**$17,550**	**$886**	**$261,262**
Less Total Customer Contribution	$0	$0	$0	$0
Total Capital Project Costs	**$242,826**	**$17,550**	**$886**	**$261,262**
Total O&M Project Costs	$0	$0	$0	$0

Note: Explain unique payment provisions, if applicable
Other is a combination of misc with vehicles charges

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?_____
A representative from the respective functional area is required to be included as a project approver.

<u>If this is other than a Reliability Project, please complete the section below:</u>

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?_____
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: **Does not apply**

Are there other environmental cleanup costs associated with this project? If yes, please provide details:

Technical Justification:

Project Need Statement

Due to the failure of the [redacted] an annual project was created to capture the costs associated with the switchgear removal.

Project Objectives

[redacted]

Project Scope

Project scope details

- [redacted]
- [redacted]
- [redacted]

Background / Justification

[redacted] increased the project cost

Business Process and / or Technical Improvements:

This project consisted of replacement of damaged equipment.

Alternatives Considered with Cost Estimates

There were no alternatives considered prior to the fault as this was an emergent replacement project to restore normal service.

Project Schedule

Milestone/Phase Name	Estimated Completion Date
Project has been completed	completed

Regulatory Approvals

N/A

Risks and Risk Mitigation Plans

Project has been completed

References

N/A

Reconciliation of Cost Increase

Annual work order DSQ42012 estimate was estimated at $77,750
The final project cost came to $261,262 with the last recorded spend in 09/2015

	Original estimate	Actuals	Delta
Materials	$30,000	$49,466	$19,466
Labor	$47,750	$85,047	$37,297
Removals	$0	$30,664	$30,664
Totals	$77,750	$261,262	$183,512

Material costs increased by $19,466
Labor costs increased by $37,297
Removal costs increased by $30,664
Overall project costs increased by $183,512

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



Nomenclature diagram showing failed equipment location and feeder modification to recloser



Figure 1 - Picture of failed switchgear equipment



Figure 2 – Image of failed switch within switchgear

Project Checklist – Transmission and Substation

Checklist for Studies and Processes of a Transmission & Substation Capital Project				
Project Name : Replace failed switchgear with reclosers				**PAF No: CS00303**
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?				No
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
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: Replace failed switchgear with reclosers	**PAF No: CS00303**

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?	None
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?	Engineering
Was the estimate reviewed by Eversource Estimating?	No

Cost Estimate Backup Details

Sum of amount			Column Labels												
Row Labe	CE Type	cost_elen	cost elem	106010	107010	108030	163010	163020	186950	593000	926300	92000X	92102X	93020X	Grand Total
Direct	Contracto	M14	Contractor Materials		68.36	17.1			-9E-16						85.46
		S22	Other Outside Services		1539.02	384.75			1E-13						1923.8
		S25	Police Services and Traffic Control		838.57	209.64									1048.2
		S31	Contractor Vehicles + Equip - Conv Only- Disable		2201.95	550.49									2752.4
		S35	Contractor Labor - Conv Only- Disable		1433.34	358.33									1791.7
		S39	Other Outside Services- Other - Conv Only- Disab		107.53	26.88									134.41
		S45	Contractor Vehicles + Equip		640.71	160.17			-3E-14						800.88
		S49	Contractor Labor		454.8	113.69			-2E-14						568.49
		S50	Environmental Outside Services		7168.64	1792.2			0						8960.8
	Contractors Total				14452.92	3613.2			5E-14						18066
	Labor	L11	Labor Straight Time Exempt		2360.17	590.06						2355			5305.2
		L12	Labor Straight Time Non-Exempt		33835.64	8458.9			6E-13	2E-15					42295
		L21	Labor Overtime Exempt		280.57	70.14									350.71
		L22	Labor Overtime Non-Exempt		13714	3428.5			-3E-14						17143
		L35	Labor Non Productive Rest Time Non-Exempt		157.58	39.4									196.98
		L42	Labor Premium and Special Non-Exempt		1352.64	338.16			0						1690.8
	Labor Total				51700.6	12925			5E-13	2E-15		2355			66981
	Materials	M11	Materials- Purchased		37131.44	9282.9			-9E-16						46414
		M12	Materials- Stores		2441.33	610.35			-2E-14						3051.7
	Materials Total				39572.77	9893.2			-2E-14						49466
	Misc Oth	A21	Miscellaneous Journal Entries Other		-79.06	-19.76			0						-98.82
		A66	AFUDC Debt		633.12										633.12
		A67	AFUDC Equity		1047.71										1047.7
		A85	Miscellan	2996.9	-2996.9										0
		E13	Meals		432	108			0						540
		E17	Travel		70.26	17.57							87.83		175.66
	Misc Other Total			2996.9	-892.87	105.81			0				87.83		2297.7
	Vehicle	V42	Vehicles-Class 2L-Large Vehicles		2606.94	651.76			6E-14	0					3258.7
		V43	Vehicles-Class 2S-Small Vehicles		844.59	211.16									1055.8
		V44	Vehicles-Class 3		3960.87	990.22			6E-14	0					4951.1
		V45	Vehicles-Class 3S		419.64	104.92			0						524.56
		V49	Vehicles-Class 4A		3478.17	869.53			0	0					4347.7
		V50	Vehicles-Class 4B		1450.18	362.55			0	4E-15					1812.7
		V55	Vehicles-Class 4R-Rebuilds		616.26	154.06									770.32
		V58	Vehicles-Class 5C		217.92	54.48			0						272.4
		V67	Vehicles-Class 6G		763.07	190.77				0					953.84
		V68	Vehicles-Class 6M-Mobiles		2148.93	537.23			-7E-15						2686.2
	Vehicle Total				16506.57	4126.7			1E-13	4E-15					20633
Direct Total				2996.9	121340	30664			7E-13	5E-15		2355	87.83		157444
Indirect	Indirect	ZAS	Admin and Eng OH- Acct Use Only		2993.34	747.92									3741.3
		ZES	Engin and Super OH- Acct Use Only		28035.72	7009									35045
		ZGS	Gen Ser Co Benefit Loader- Acct Use Only		1917.75	479.46								2397.2	4794.4
		ZLO	Lobby Stock Loader-Acct Use Only		359.71	89.94	7E-15								449.65
		ZNP	Non Productive Time Loader- Acct Use Only		9393.13	2348.3								413.51	12155
		ZPB	Payroll Benefit Loader- Acct Use Only		32677.11	8169.3					0				40846
		ZST	Stores Loader- Acct Use Only		5539.53	1176.7		0							6716.3
		ZVE	Vehicle Costs Clearing- Acct Use Only		56.63	14.16									70.79
	Indirect Total				80972.92	20035	7E-15	0			0			2810.7	103818
Indirect Total					80972.92	20035	7E-15	0			0			2810.7	103818
Grand Total				2996.9	202312.9	50699	7E-15	0	7E-13	5E-15	0	2355	87.83	2810.7	261262