EVERSOURCE
Project Authorization Form

Operations Project Authorization Form

Approved at September 26, 2018 EPAC

Link to Meeting Minutes

Date Prepared: 09/07/2018	**Project Title: [redacted] 2 Failed Breaker Replacement**
Company/ies: Eversource CT	**Project ID Number: CS00324**
Organization: Asset Management	**Class(es) of Plant: Distribution Substation**
Project Initiator: [redacted]	**Project Category: Other**
Project Manager: [redacted]	**Project Type: Specific**
Project Sponsor: [redacted]	**Project Purpose: Repair of 27.6kV switchgear**
Estimated in service date: 10/01/2018	**If Transmission Project: PTF? N**
Eng. /Constr. Resources Budgeted? Y	**Capital Investment Part of Original Operating Plan? N**
Authorization Type: Full Funding	**O&M Expenses Part of the Original Operating Plan? N**
Total Request: $304,000	

Financial Requirements:

Project Authorization
ERM: _____

FP&A: _____

Executive Summary

This project is seeking full funding of $304,000 for the emergent condition at [redacted] substation. [redacted] This PAF seeks funding for those costs.

Project Costs Summary

Note: Dollar values are in thousands

	Prior Authorized	"2018"	"2019"	"2020"	Total
Capital Additions - Direct	$	$205	$	$	$205
Less Customer Contribution	$	$0	$	$	$0
Removals net of Salvage ____%	$	$3	$	$	$3
Total - Direct Spending	$	$208	$	$	$208
Capital Additions - Indirect	$	$95	$	$	$95
Subtotal Request	$	$304	$	$	$304
AFUDC	$	$0	$	$	$0
Total Capital Request	$	$304	$	$	$304
O&M	$	$0	$	$	$0
Total Request	$	$304	$	$	$304

Financial Evaluation

Note: Dollar values are in thousands

Direct Capital Costs	"2018"	"2019"	"2020"	Total
Straight Time Labor	$4	$	$	$4
Overtime Labor	$0	$	$	$0
Outside Services	$88	$	$	$88
Materials	$116	$	$	$116
Other, including contingency amounts (describe)	$0	$	$	$0
Total Direct Costs	$208	**$**	**$**	$208

Indirect Capital Costs	"2018"	"2019"	"2020"	Total
Indirects/Overheads (including benefits)	$95	$	$	$95
Capitalized interest or AFUDC, if any	$0	$	$	$0
Total Indirect Costs	$96	**$**	**$**	$96
Total Capital Costs	$304	**$**	**$**	$304
Less Total Customer Contribution	$0	$	$	$0
Total Capital Project Costs	$304	**$**	**$**	$304
Total O&M Project Costs	$	$	$	$

Note: Explain unique payment provisions, if applicable

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:

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:

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): No

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 addressed the [redacted]

Project Objectives

- To replace the [redacted]
- Perform any [redacted]

Project Scope

The scope of this specific PAF is to [redacted] the following actions were taken:

[redacted]

Background / Justification

On September 1, 2018 [redacted]

[redacted]

Business Process and / or Technical Improvements:

This was an emergent project with restoring the system to a normal configuration as the priority.

Alternatives Considered with Cost Estimates

This was an emergent repair and alternatives were not considered

Project Schedule

Milestone/Phase Name	Estimated Completion Date
Project was completed	09/11/2018

Regulatory Approvals

N/A

Risks and Risk Mitigation Plans

Work has already been completed

References

N/A

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

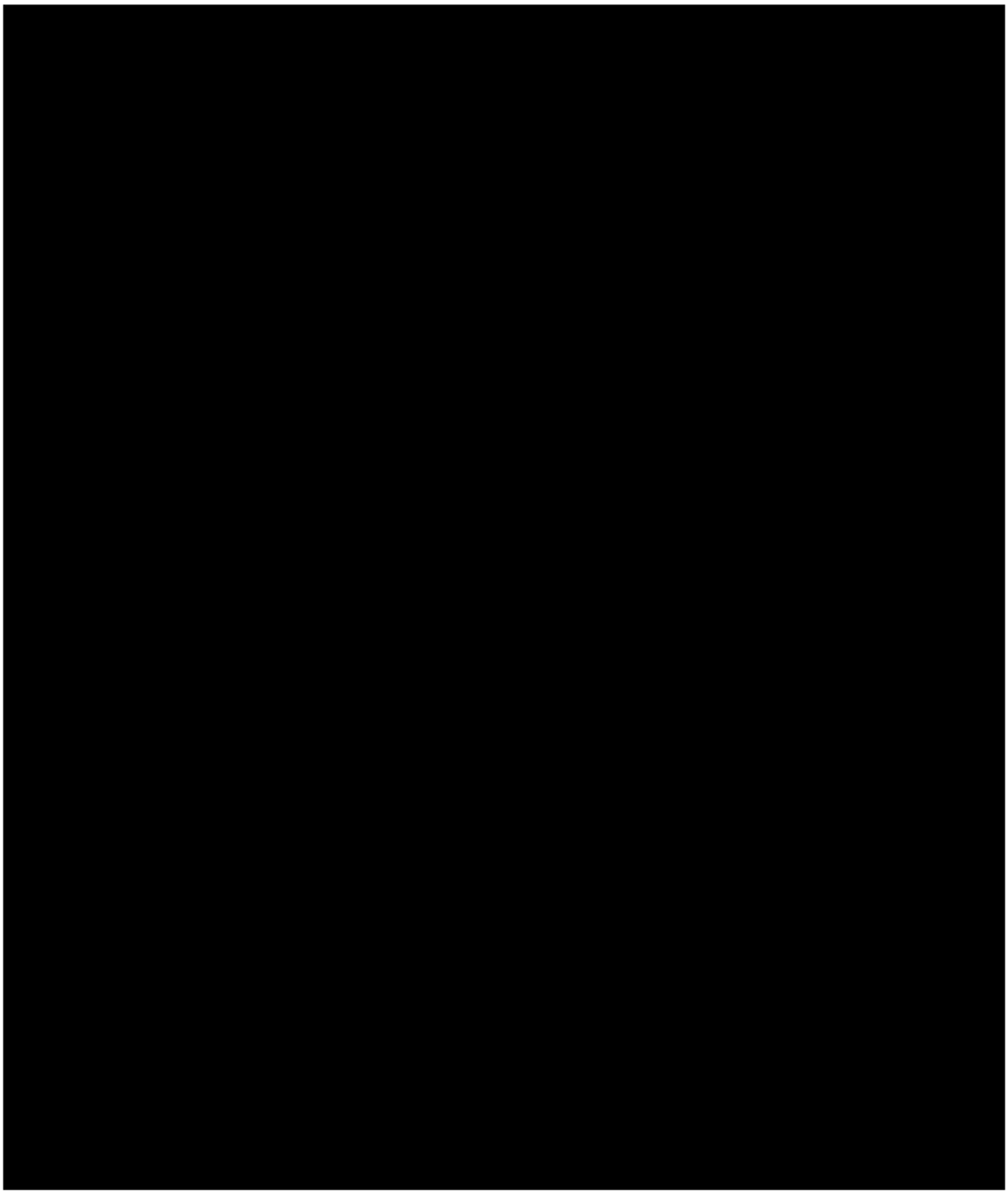

Figure 1. Nomenclature diagram showing failed breaker location within Switchgear

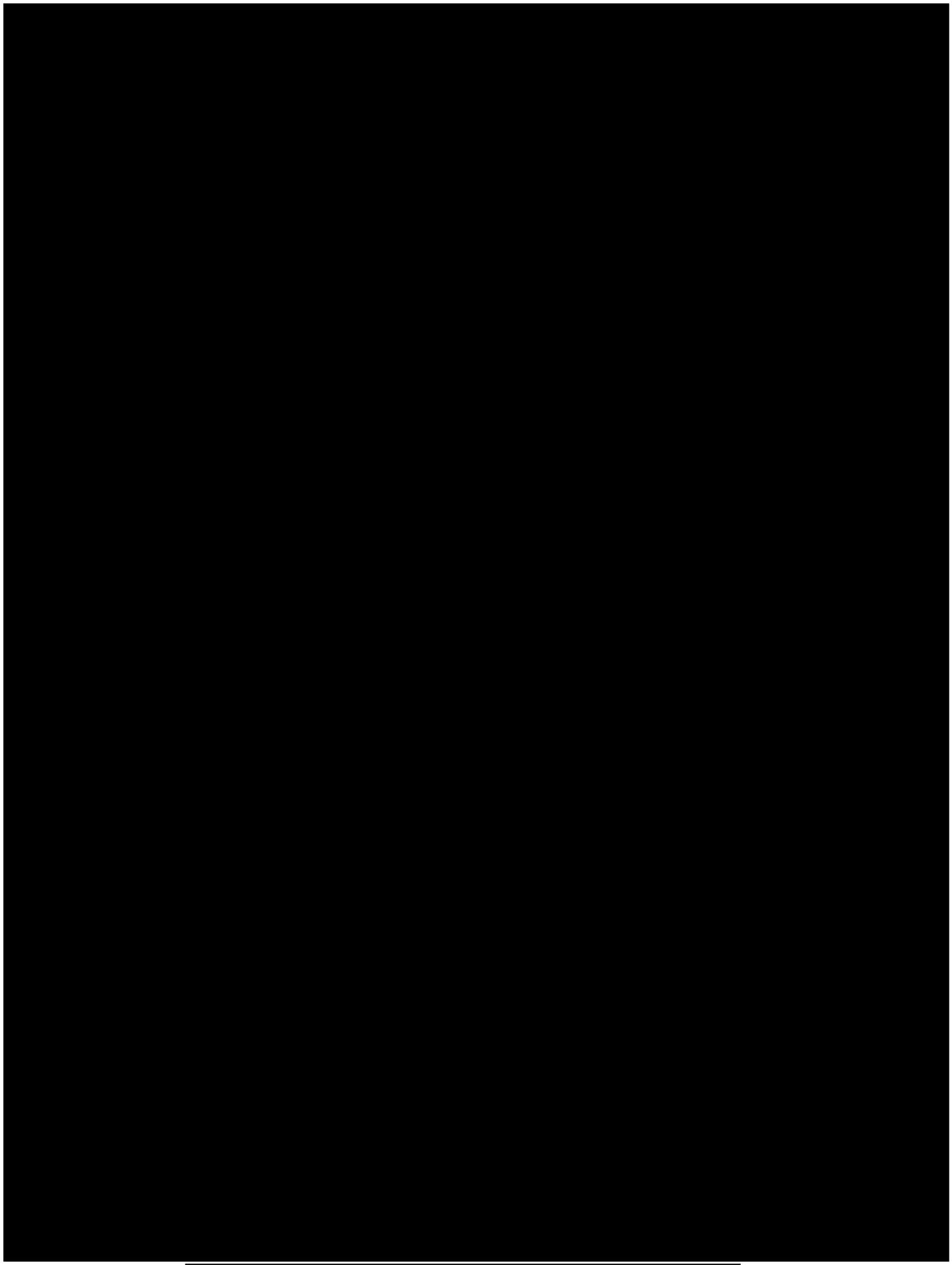

Figure 2. View of [redacted]



Figure 3. View of [redacted]



Figure 4. View of [redacted]

Project Checklist – Transmission and Substation

Checklist for Studies and Processes of a Transmission & Substation Capital Project		
Project Name: [redacted] **Failed Breaker Replacement**		**PAF No: CS00324**
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?		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?		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: [redacted] **Failed Breaker Replacement**	**PAF No: CS00324**
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?	NR
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?	SS Engineering
Was the estimate reviewed by Eversource Estimating?	No

Cost Estimate Backup Details

Project Title: [redacted] Breaker Replacement TAF / Project #: CS00324		Prior Yrs. $		2018 Mdays	N/A $
ENRXX-TG ENG / DESIGN					
Project Services & Drafting		$0		0	$0
Trans Eng & Design		$0		0	$0
Civil Engineering		$0		0	$0
Civil Design		$0		0	$0
Elect Eng & Design		$0		0	$0
Dist. SS Eng & Design		$0		1	$370
Protection & Control		$0		0	$0
Surveying		$0		0	$0
Permitting		$0		0	$0
Telecom		$0		0	$0
SS Technical Engineer		$0		5	$1,850
Apparatus Specialist		$0		0	$0
Escalation					
LT Subtotal		$0		6	$2,220
Distribution Contractor Engineering		$0		0	$0
Eng Contractor = W19 x Material & Construction Cost		$0			$18,577
Contingency Escalation					$0
ENRXX TOTAL		$0			$20,797
PSMXX-PROJECT MGR & SUPPORT					
Project Planning		$0		0	$0
Project Management/Engineer		$0		5	$1,850
Legal		$0		0	$0
Escalation					
LT Subtotal		$0		5	1,850
Employee Expenses		$0			$19
Contractors - Includes Sales Tax & Esc.		$0			$0
Environmental (Identifiable Tax Credit)		$0			$0
Legal - Contractors - Includes Sales Tax		$0			$0
Property Tax (Large Projects & Town Expectations)		$0			$0
Fees & Payments		$0			$0
Contingency Escalation					$0
PSMXX-PROJECT MGR & SUPPORT TOTAL		$0			$1,869
CSTXX-CONSTRUCTION - Additions %					
Civil		$0		0	$0
Electrical		$0		0	$0

Test	$0	0	$0
Other - Switch / Tag Support	$0	0	$0
Construct. Reps	$0	0	$0
Escalation			
LT Subtotal	$0	0	$0
Employee Expenses	$0		$0
Contractor Civil	$0	0	$0
Contractor Electrical	$0	30	$33,600
Contractor Test	$0	12	$14,400
Contractor Other - Switch / Tag Support	$0	8	$8,960
Contractor Equipment = % of Total Construction Labor	$0		$9,600
Additional Test & Commissioning Labor Inc sales tax	$0		$0
Fees & Payments	$0		$0
Rents & Leases	$0		$0
Contingency Escalation			$0
CSTXX TOTAL	$0		$66,560
REMXX-TG REMOVAL - %			
Civil	$0	0	$0
Electrical	$0	0	$0
Escalation			
LT Subtotal	$0	0	$0
Employee Expenses	$0		$0
Contractor Civil	$0	0	$0
Contractor Electrical	$0	3	$3,360
Contractors - Include Sales Tax	$0		$0
Contingency Escalation			$0
REMXX TOTAL	$0		$3,360
MATXX-TG MATERIAL (Includes Tax)			
Misc. Purchases (Credit Card Etc.)	$0		$666
Stock	$0		$0
Direct	$0		$115,180
Contingency Excluding Big Ticket Items Escalation			$0
MATXX TOTAL	$0		$115,846
Contingency Excludes Large Items	$0		$115,180
LNDXX-TG LAND			
Real Estate	$0	0	$0
Escalation			
LT Subtotal	$0		$0
Purchase Land	$0		$0
Fees & Payments	$0		$0

Contingency			$0
Escalation			
LNDXX TOTAL	$0	0	$0
DIRECT COST TOTAL	$0		$208,432
INDIRECTS			
Non-Productive Allocation (ZB-TM1-ZNP)	$0		$625
Payroll Benefits Allocation (ZE-TM1-Z93)	$0		$1,894
Material Stores Allocation (Stock) <25k (ZC-TM1-Z91)	$0		$133
Gen Service Co. OH Allocation (ZF-TM1-Z94)	$0		$41
E&S Allocation (25%<20M<3%) - (ZI-TM1-Z96)	$0		$85,577
Misc. Dist. Exp. Cap. Allocation (ZH-TM1-Z92)	$0		$4,754
AS&E Allocations (ZJ-TM1-Z90)	$0		$1,056
Vehicle Allocations (ZV-TM1-Z98)	$0		$1,068
INDIRECT Subtotal	$0		$95,148
AFUDC (ZK - TM1-Z95)	$0		$363
PROJECT COST TOTAL	$0		$303,943