EVERSOURCE
Project Authorization Form

Operations Project Authorization Form

Approved at February 20, 2019 EPAC
Link to Meeting Minutes

Date Prepared: 01/28/2019	**Project Title: [redacted] - Circuit Breaker Auto**
Company/ies: Eversource CT	**Project ID Number: CS00185**
Organization: Asset Management	**Class(es) of Plant: Distribution Substation**
Project Initiator: [redacted]	**Project Category: Stations – Breakers**
Project Manager: [redacted]	**Project Type: Specific**
Project Sponsor: [redacted]	**Project Purpose: To Automate feeder breaker**
Estimated in service date: 09/30/2018	**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: $202,427	

Financial Requirements:

Project Authorization

ERM: _____

FP&A: _____

Executive Summary

This project is seeking full funding of $202,427 to [redacted] The initiative objectives are to introduce safety, reliability and emergency response. The initiative was approved by the Connecticut Public Utilities Regulatory Authority (PURA) in the 2014 rate case. The project is complete and was put in service in September 2018. This project was previously approved in PowerPlan on February 23, 2016 for preliminary engineering in the amount of $75,000.

Project Costs Summary

	Prior Authorized	Prior Years Spend	Totals
Capital Additions - Direct	$57,000	$133,864	$133,864
Less Customer Contribution	$0	$0	$0
Removals net of Salvage 15%	$1,000	$20,298	$20,298
Total - Direct Spending	$58,000	$154,162	$154,162
Capital Additions - Indirect	$15,000	$40,280	$40,280
Subtotal Request	$73,000	$194,442	$194,442
AFUDC	$2,000	$7,986	$7,986
Total Capital Request	$75,000	$202,427	$202,427
O&M	$0	$0	$0
Total Request	$75,000	$202,427	$202,427

Financial Evaluation

Direct Capital Costs	Prior Years	Total
Straight Time Labor	$23,869	$23,869
Overtime Labor	$1,543	$1,543
Outside Services	$96,315	$96,315
Materials	$27,401	$27,401
Other, including contingency amounts (describe)	$5,033	$5,033
Total	$154,162	$154,162

Indirect Capital Costs	Prior Years	Total
Indirects/Overheads (including benefits)	$40,280	$40,280
Capitalized interest or AFUDC, if any	$7,986	$7,986
Total	$48,266	$48,266

Total Capital Costs	$202,427	$202,427
Less Total Customer Contribution	$0	$0
Total Capital Project Costs	$202,427	$202,427
Total O&M Project Costs	$0	$0

Note: Explain unique payment provisions, if applicable

Future Financial Impacts:

Provide below the estimated future costs that will result from the project:

Future Costs	Year 20__	Year 20__	Year 20__	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:

Future Benefits	Year 20__	Year 20__	Year 20__	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: 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? No 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

Eversource has an initiative "2015 to 2017 Expanded System Resiliency Plan Initiatives" to install [redacted].
Distribution Automation is a capital Plan Program initiated in 2014 to 2019. This program was initiated to [redacted]

Project Objectives

[redacted] This supports the following Eversource objectives:

- Safety
- Reliability and Emergency Response
- Commitment to customers and communities

Project Scope

The project scope was to [redacted] Refer to figure 1 for equipment location on nomenclature diagram.

1. **Relay Replacement**

[redacted]

2. [redacted]

3. [redacted]

4. [redacted]

Background / Justification

[redacted]

[redacted] This automation initiative meets the National Electric Safety Code (NESC) and Occupational Safety and Health Administration (OSHA) requirements for Arc Flash protection.

Business Process and / or Technical Improvements:

[redacted]

Alternatives Considered with Cost Estimates

[redacted]
This portion of the project was not included in the provided cost estimate.

Project Schedule

Milestone/Phase Name	Estimated Completion Date
Engineering	10/31/17
Materials	12/2017
Construction	02/31/18
ISD	09/31/18

Regulatory Approvals

The recloser automation program was approved by the Connecticut Public Utilities Regulatory Authority (PURA) in the 2014 rate case. Refer to the capital initiatives for 2014 – 2019 for a description of the automation guidelines proposed and approved by the PURA. The description of the Substation Automation initiative for breakers and reclosers is on page 39 of the rate case.

Risks and Risk Mitigation Plans

The project has been completed and is in service.

References

Connecticut Public Utilities Regulatory Authority (PURA) - 2014 rate case
Eversource “2015 to 2017 Expanded System Resiliency Plan Initiatives”

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

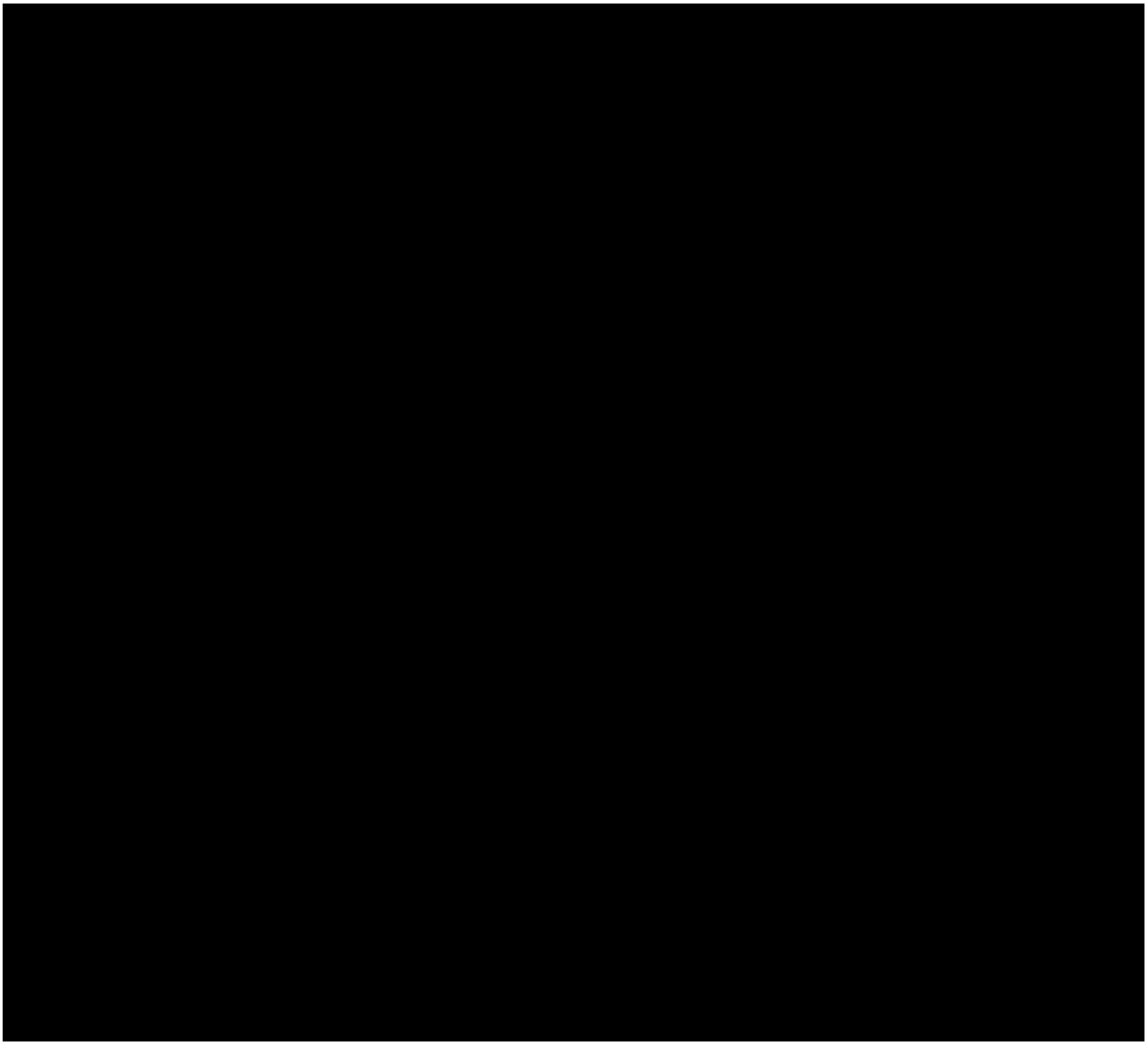

Figure 1 – Nomenclature view of equipment location

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] - Circuit Breaker Auto					**PAF No: CS00185**
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?					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] **Circuit Breaker Auto**	**PAF No: CS00185**
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?	Engineering
Was the estimate reviewed by Eversource Estimating?	No

Cost Backup Details

Project# CS00185

				FERC Account			
Cost_Type	Charge_Year	CE_Type	DESCRIPTION	106010	107010	108030	Total
Direct	2016	Labor	Labor Overtime Non-Exempt		825.54	164.86	990.40
Direct	2016	Labor	Labor Straight Time Exempt		8,375.78	1,672.67	10,048.45
Direct	2016	Labor	Labor Straight Time Non-Exempt		1,997.75	398.95	2,396.70
		Labor Total		-	11,199.07	2,236.48	13,435.55
Direct	2016	Misc Other	Mileage		141.79	28.31	170.10
		Misc Other Total		-	141.79	28.31	170.10
Direct	2016	Vehicle	Vehicles-Class 2S-Small Vehicles		23.40		23.40
		Vehicle Total		-	23.40	-	23.40
	2016 Total			-	11,364.26	2,264.79	13,629.05
Direct	2017	Labor	Labor Straight Time Exempt		721.13	144.00	865.13
		Labor Total		-	721.13	144.00	865.13
Direct	2017	Materials	Materials- Stores		27,401.35		27,401.35
		Materials Total		-	27,401.35	-	27,401.35
	2017 Total			-	28,122.48	144.00	28,266.48
Direct	2018	Contractors	Contractor Labor		80,282.14	16,032.55	96,314.69
Direct	2018	Contractors	UVL-Contractor Labor		-	-	-
		Contractors Total		-	80,282.14	16,032.55	96,314.69
Direct	2018	Labor	Labor Overtime Non-Exempt		288.65	57.65	346.30
Direct	2018	Labor	Labor Premium and Special Non-Exempt		172.21	34.38	206.59
Direct	2018	Labor	Labor Straight Time Exempt		7,597.05	1,517.15	9,114.20
Direct	2018	Labor	Labor Straight Time Non-Exempt		1,203.92	240.44	1,444.36
		Labor Total		-	9,261.83	1,849.62	11,111.45
Direct	2018	Misc Other	Meals		33.34	6.66	40.00
Direct	2018	Misc Other	Miscellaneous Accounting Adjustments	176,927.23	(176,927.23)		-
Direct	2018	Misc Other	Rent Expense-External		4,800.27		4,800.27
		Misc Other Total		176,927.23	(172,093.62)	6.66	4,840.27
	2018 Total			176,927.23	(82,549.65)	17,888.83	112,266.41
Direct Total				176,927.23	(43,062.91)	20,297.62	154,161.94
Indirect	2016	Indirect	Admin and Eng OH- Acct Use Only		376.60	75.13	451.73
Indirect	2016	Indirect	Engin and Super OH- Acct Use Only		4,422.42	883.17	5,305.59
Indirect	2016	Indirect	Gen Ser Co Benefit Loader- Acct Use Only		8,005.25	1,598.67	9,603.92
Indirect	2016	Indirect	Misc Dist Exp Capitalized OH- Acct Use Only		678.63	135.52	814.15
Indirect	2016	Indirect	Non Productive Time Loader- Acct Use Only		1,953.74	390.16	2,343.90
Indirect	2016	Indirect	Payroll Benefit Loader- Acct Use Only		96.73	19.32	116.05
Indirect	2016	Indirect	Service Company Allocations- Acct Use Only				-
Indirect	2016	Indirect	Vehicle Costs Clearing- Acct Use Only		11.10	2.20	13.30
		Indirect Total		-	15,544.47	3,104.17	18,648.64
Indirect	2016	Misc Other	AFUDC Debt		183.30		183.30
Indirect	2016	Misc Other	AFUDC Equity		311.59		311.59
		Misc Other Total		-	494.89	-	494.89
	2016 Total			-	16,039.36	3,104.17	19,143.53
Indirect	2017	Indirect	Admin and Eng OH- Acct Use Only		196.25	3.01	199.26
Indirect	2017	Indirect	Engin and Super OH- Acct Use Only		231.10	46.14	277.24
Indirect	2017	Indirect	Gen Ser Co Benefit Loader- Acct Use Only		566.49	113.09	679.58
Indirect	2017	Indirect	Misc Dist Exp Capitalized OH- Acct Use Only		28.34	5.65	33.99
Indirect	2017	Indirect	Non Productive Time Loader- Acct Use Only		128.04	25.55	153.59
Indirect	2017	Indirect	Service Company Allocations- Acct Use Only				-
Indirect	2017	Indirect	Stores Loader- Acct Use Only		8,819.31		8,819.31
Indirect	2017	Indirect	Vehicle Costs Clearing- Acct Use Only		12.45	2.49	14.94
		Indirect Total		-	9,981.98	195.93	10,177.91
Indirect	2017	Misc Other	AFUDC Debt		453.76		453.76
Indirect	2017	Misc Other	AFUDC Equity		955.10		955.10

Overtime	Straight time	Outside
1,543.29	23,868.84	96,314.69
Materials		
27,401.35		
Misc		
5,033.77		

		Misc Other Total		-	1,408.86	-	1,408.86
	2017 Total			-	11,390.84	195.93	11,586.77
Indirect	2018	Indirect	Admin and Eng OH- Acct Use Only		514.52	97.94	612.46
Indirect	2018	Indirect	Alloc- E+S OH Subst- Acct Use Only		943.55	188.43	1,131.98
Indirect	2018	Indirect	Engin and Super OH- Acct Use Only		(6,060.90)	(1,210.39)	(7,271.29)
Indirect	2018	Indirect	Gen Ser Co Benefit Loader- Acct Use Only		6,727.10	1,343.42	8,070.52
Indirect	2018	Indirect	Misc Dist Exp Capitalized OH- Acct Use Only		4,913.51	981.26	5,894.77
Indirect	2018	Indirect	Non Productive Time Loader- Acct Use Only		1,611.68	321.85	1,933.53
Indirect	2018	Indirect	Payroll Benefit Loader- Acct Use Only		387.98	77.48	465.46
Indirect	2018	Indirect	Service Company Allocations- Acct Use Only				-
Indirect	2018	Indirect	Vehicle Costs Clearing- Acct Use Only		513.32	102.52	615.84
		Indirect Total		-	9,550.76	1,902.51	11,453.27
Indirect	2018	Misc Other	AFUDC Debt		1,932.52		1,932.52
Indirect	2018	Misc Other	AFUDC Equity		4,149.43		4,149.43
		Misc Other Total		-	6,081.95	-	6,081.95
	2018 Total			-	15,632.71	1,902.51	17,535.22
Indirect Total				-	43,062.91	5,202.61	48,265.52
Grand Total				176,927.23	-	25,500.23	202,427.46