EVERSOURCE

Supplement Authorization Form

Project Title: [redacted]	**Project Number: CD00759**
Date Prepared: 06/20/2025	**Company:** Eversource CT
Organization: Distribution Engineering	**Project Category:** UG CABLE & EQUIPMNT REPLACEMNT
Initiating Organization: Distribution	**Project Type:** Specific
Project DDE: [redacted]	**Capital Investment part of 5-year plan?** Yes
Project Manager: [redacted]	**Emergency Related Request?** No
Project Sponsor: [redacted]	**Facility Type** (check all that apply)**:** ☐ PTF ☐ non-PTF ☒ Distribution ☐ N/A (General Plant)
Current Authorized Amount: $1,299.6K	**Approved In-Service Date:** 11/8/2024
Supplement Request: $1,255.9K	**Estimated In-Service Date: 06/15/2025**
Total Capital Request: $2,555.5K	**Authorization Type:** Supplement Request
	Reason: : Cost Overage

1. Project Background

- This project is being established to account for the costs associated with replacing manual switchgear with automatic.
- [redacted]
- [redacted]
- In August of 2017, the Full Funding project was approved for $790K.
- August 11, 2022, the First Supplement was approved for $1299.6K.
- This second supplement is for an additional S1,255.9K for a total of $2,555.5K.
- The project is complete and in service.

2. Supplement Justification Overview

[redacted]. See the Justification Detail for more information.

3. Supplement Justification Detail

Internal Labor: $256.3 Actual vs $72K Budget or $184.3K increase.

[redacted] This required a settings update and additional testing time.

Outside Services: $636.3K Actual vs $333.9K Budget or $302.4K increase.

The delays with the switchgear caused multiple mobilization/demobilizations on this project.
Several sections of cable needed to be replaced that was originally installed in 2017 due to water intrusion into the cable.
Labor cost increases from the original bid in 2022 to 2025.
Delays due to the commissioning of the switchgear due to the circulating current mentioned above.

Material: $484.6K Actual vs $433.6K Budget or $50.8K increase

Additional 4/0 AL cable that had to be replaced.
[redacted].

4. Supplement Cost Summary (Project Total)

Line-item Category	To Date Spend Year(s)	Prior Authorized Year(s)	Variance (Supplemental Request) Year(s)	New Total Request (Add Prior Authorized and Variance) Year(s)
Internal Labor and Construction Equipment	183.2	69.4	121.2	190.6
Outside Services	560.3	333.9	302.4	636.3
Materials	462.3	433.8	50.8	484.6
Removals	53.0	0.0	12.3	12.3
Risk and Contingency	0.0	0.0	50.1	50.1
Other	3.0	2.6	0.7	3.3
SUBTOTAL DIRECTS W/ RISKS	**1,261.8**	**839.7**	**537.5**	**1,377.2**
Indirect / Overhead (including benefits)	960.4	367.0	678.9	1,045.9
AFUDC	132.4	92.9	39.5	132.4
Subtotal – Indirect Costs	**1,092.7**	**459.9**	**718.4**	**1,178.3**
TOTAL CAPITAL REQUEST	**2,354.5**	**1,299.6**	**1,255.9**	**2,555.5**
Reimbursables/Customer Contribution				
PROJECT TOTAL (LESS REIMBURSABLES)	**2,354.5**	**1,299.6**	**1,255.9**	**2,555.5**

Line item Category	Years 2017-2021	Year 2022	Year 2023	Year 2024	Year 2025	Total
Internal Labor and Construction Equipment	70.2	25.0	0.4	65.5	29.4	190.6
Outside Services	198.9	101.4	33.6	369.3	-66.9	636.3
Materials	413.0	31.1	0.0	29.5	11.0	484.6
Removals	0.1	1.0	0.0	5.8	5.4	12.3
Risk and Contingency					50.1	50.1
Other	1.7	0.1	0.0	1.0	0.5	3.3
SUBTOTAL DIRECTS W/ RISKS	**683.9**	**158.6**	**34.1**	**471.2**	**29.5**	**1,377.2**
Indirect / Overhead (including benefits)	244.5	112.2	16.3	688.7	-15.8	1,045.9
AFUDC	74.7	20.7	3.7	10.7	22.5	132.4
Subtotal – Indirect Costs	**319.2**	**132.9**	**19.9**	**699.5**	**6.8**	**1,178.3**
TOTAL CAPITAL REQUEST	**1,003.1**	**291.5**	**54.0**	**1,170.7**	**36.2**	**2,555.5**
Reimbursables/Customer Contribution						
PROJECT TOTAL (LESS REIMBURSABLES)	**1,003.1**	**291.5**	**54.0**	**1,170.7**	**36.2**	**2,555.538**

5. Lessons Learned

Attachment A: Supplement Request #1

Supplement Request Form

Project Title: [redacted]	**Project Number:** CD00759
Date Prepared: 08/10/2022	**Company:** CL&P Electric Distribution 11
Organization: Electric Field Operations	**Class(es) of Plant:** D Line
Project Initiator: [redacted]	**Project Category:** UG CABLE & EQUIPMNT REPLACEMNT
Project Manager: [redacted]	**Project Type:** Annual
Project Sponsor: [redacted]	**Project Purpose:** Replace Manual Switchgear with Automatic
Estimated in service date: 12/30/2022	**Capital Investment part of original Operating Plan:** Yes
Current Authorization Amount: $ 788.6K	**O&M Expenses part of request:** No
Supplement Request: $511K	**Other:**
Total Request: $1,299.6K	

Supplement Justification

Project CD00759 received Full Funding authorization of $790K in August 2017. This project is still in progress and is expected to be completed in 2022. This supplemental is requesting final authorization in the amount of $1299.6K, an increase of $511K.

The additional dollars spent are attributed to the problems commissioning the ISG switchgear onto the Eversource system. These delays resulted in multiple contractor mobilization/demobilization charges, increase in switching time, traffic control costs and $379K in indirect charges.

Justification for Additional Resources

Supplement Cost Summary

Note: Dollars are in thousands.

Capital Costs	Prior Authorized	Supplemental Request	Total
Direct Capital Costs			
Internal Labor	129.9	(60.5)	69.4
Outside Services	150.5	183.4	333.9
Materials	378.2	55.6	433.8
Removals	0	0	0
Risk and Contingency	49.4	(49.4)	0
Other	0	2.6	2.6
Subtotal	708.0	131.7	839.7
Indirect Capital Costs			
Indirect/Overheads (including benefits)	76.4	290.6	367
Capitalized interest or AFUDC, if any	4.2	88.7	92.9
Subtotal	80.6	379.3	459.9
Total Customer Contribution	-	-	-
Total Capital Project Costs	**788.6**	**511.0**	**1299.6**

Project Authorization Form

Date Prepared: 5/11/2017	Project Title: [redacted]
Company/ies: Eversource CT	Project ID Number: CD00759
Organization: Distribution Engineering	Class(es) of Plant: Underground Distribution
Project Initiator: [redacted]	Project Category: UG Obsolescence/Reliability
Project Owner/Manager: [redacted]	Project Type: Specific
Project Sponsor: [redacted]	Project Purpose: Replace Manual Switchgear with Automatic
Estimated in service date: 12/31/2017	If Transmission Project: N/A
Supplement to Existing Authorization? Yes	Capital Investment Part of Original Operating Plan? Yes
Eng./Constr. Resources Budgeted? Yes	O&M Expenses Part of the Original Operating Plan? Yes

Project Authorization

Project authorization must be in accordance with the approval levels included in the Delegation of Authority Policy (DOA).

If Chief Executive Officer or subsidiary board approval is required, document the review by Enterprise Risk Management (ERM) and Financial Planning and Analysis (FP&A)

ERM: _____

FP&A: _____

Executive Summary

[redacted]



This project was ENG approved through the OCRC process on 8/17/2016 for $660.6K.

Project CD00661 is approved in PowerPlan for $660.6K.

We are requesting ACT CPAC approval for $794.3K; a variance of $133.7K or 120.2% of ENG.

Reason for Variance:

$123K -- The traffic ACT estimate is more than the ENG estimate.

($45) -- The switching costs are spread through the ACT estimates and cannot be broken out of the ACT estimate.

$31K -- The ENG estimate to install the 4/0 Al underground loop was less than the ACT estimate. There is an additional 185 feet of cable in the ACT estimate.

$42 -- The ACT estimate is higher than the ENG estimate and there is 100 feet less of the 500 Cu cable in the ACT estimate.

$95.6K -- The new Innovative Switchgear Solutions switchgear costs more than the S&C PMH-9 air insulate switchgear.

($6.2K) -- The new switchgear required manhole installations for its base.

($15K) -- The ACT manhole installation costs are less than ENG estimate.

($11.8) -- The ACT estimate has 10 feet less conduit duct bank than the ENG estimate.

($5.2K) — The removal costs were less in the ACT estimate.

($72.4K) -- The ENG contingency was more than the ACT contingency.

Total project request: $794.3K

Project Costs Summary

See APS3 and APS8 requirements and consult with Plant Accounting for capital/O&M determination. Use published loaders for benefits, materials, and invoices, maintained by the Director, Budget and Internal Reporting.

Note: Dollar values are in thousands

	Prior Authorized*	Additional Request	2017**	2018	Totals
Capital Additions - Direct			$632.4		$632.4
Less Customer Contribution					$0.0
Removals net of Salvage			$75.6		$75.6
Total - Direct Spending	$0.0	$0.0	$708.0	$0.0	$708.0
Capital Additions - Indirect			$76.4		$76.4
AFUDC			$4.2		$4.2
Total Capital Request			$788.6		$788.6
O&M			$5.7		$5.7
Total Request	$660.6	$133.7	$794.3	$0.0	$794.3

** Current total amount authorized in PowerPlan.*

*** Total amount needed for authorization in PowerPlan based on ACT.*

Financial Evaluation

Provide the following financial information (attach additional detail if summarized items are significant or additional information is needed). Note: Dollar values are in thousands

Direct Capital Costs	2017	Year 2	Year 3+	Total
Straight Time Labor	129.9			
Overtime Labor				
Outside Services	150.5			
Materials	378.2			
Other, 7.5% Contingency	49.4			
Total	708.0			

Indirect Capital Costs	2017	Year 2	Year 3+	Total
Indirects/Overheads (including benefits)	76.4			
Capitalized interest or AFUDC, if any	4.2			

Total	80.6			

Total Capital Costs	788.6			

Less Total Customer Contribution				

Total Capital Project Costs	788.6			

Total O&M Project Costs	5.7			

Total Project Costs	794.3			

Project Variance Report

PROJECT VARIANCE REPORT							Project #_CD00759_____ Total___
	Cont.	Original ENG	Revised ENG	Cont.	ACT	Variance	Comments
Total Cost ($000):							
Tree Trimming ($)		$ -			$ -	$ -	
Traffic Control ($)		$ 18,000			$ 141,200	$ 123,200	Did not estimate enough traffic.
Switching ($)		$ 45,656			$ -	$ (45,656)	
Overtime ($)		$ -			$ -	$ -	
4/0 Al Cables($)		$ 54,264			$ 85,255	$ 30,991	
500 kcmil Cu Cables		$ 75,516			$ 116,091	$ 40,575	
Switchgear		$ 197,760			$ 293,403	$ 95,643	ENG was S&C PMH-9 and PMH-12 switchgear and the ACT is Innovative Switchgear Solutions, INC. Four Way units. I cannot
Switchgear Pad		$ 6,209			$ -	$ (6,209)	The orginal design was S&C PMH Swtichgear. The new swithgear requires two manholes verses a manhole and
Manholes		$ 62,986			$ 47,509	$ (15,477)	
Conduit Duct banks ($)		$ 18,880			$ 7,120	$ (11,760)	
Removals		$ 53,440			$ 48,275	$ (5,165)	
Loader($)		$ -			$ -		
Subtotal		$ 532,711			$ 738,853	$ 206,142	
Contingency ($)		$ 127,851			$ 55,414	$ (72,437)	
Total ($)	24.0%	$ 660,562		7.5%	$ 794,267	$ 133,705	
Other:							
Year ENG approved?		08/17/2016			07/01/2017		ENG estimates > 2 years old should be updated / re-presented.
Major Material (number of units):							
Precast Manholes (#)		1			2	-1	
Switchgear Pad (#)		1			0	1	
12 Duct Bank Travelled (ft)		100			90	10	
4/0 Al Cables($)		1615			1430	185	
500 kcmil Cu Cables		1085			1185	-100	
Switchgear		2			2	0	ENG was S&C PMH-9 and PMH-12 switchgear and the ACT is Innovative Switchgear Solutions, INC. Four Way units.
Removal (Cable)		1806			0		
Removal (Switchgear)		2			0	0	
Other:							

ACT Snapshot

Project Number:	CD00759				Project Manager:	[redacted]			
Project Title:	[redacted]				Construction Rep:				
Est. Project Start Date:					Project Engineering:				
Need Date for ACT Approval:					Circuit Owner:				
ACT Date:	05/03/2017				Eversource Crews:				
Project Management Contact:	[redacted]				Contractor:	Charter Oak / Central CT Cable			
					Investment Recovery?				
		Total Project [A]	Segment 01	Segment 02	Segment 03	Segment 04	Segment 05	Segment 06	Segment 07
CURRENT ENG ESTIMATE	=	**$660,562.00**	**$109,213.00**	**$61,613.00**	**$89,952.00**	**$13,114.00**	**$288,743.00**	**$31,661.00**	**$65,266.00**
Eversource Direct Eng/Supv	=	$12,099.71	$1,621.08	$3,224.31	$2,793.30	$714.59	$471.12	$705.38	$2,569.93
Eversource Labor	=	$118,677.81	$15,805.32	$31,631.24	$27,613.52	$7,070.14	$4,773.32	$6,997.09	$24,787.18
Eversource Labor Overtime	=	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Per Diem [B]	=	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Eversource Equipment	=	$24,833.00	$4,163.00	$6,127.00	$5,821.00	$1,295.00	$880.00	$1,339.00	$5,208.00
Material	=	$356,035.82	$16,660.89	$9,275.89	$42,535.05	$1,436.15	$280,250.86	$5,876.98	$0.00
Contractor Labor	=	$5,882.07	$888.46	$1,560.96	$1,129.03	$282.49	$67.43	$259.70	$1,694.00
Tree Trimming	=	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Traffic Control	=	$141,200.00	$8,500.00	$41,500.00	$30,000.00	$7,500.00	$1,800.00	$6,900.00	$45,000.00
Contractor Additional [C]	=	$4,500.00	$4,500.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Contractor Other [D]	=	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Costs	=	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
E&S	=	$59,077.22	$9,320.53	$15,176.08	$13,421.20	$3,436.49	$2,319.75	$3,368.93	$12,034.24
MDEC	=	$4,425.85	$698.26	$1,136.93	$1,005.47	$257.45	$173.79	$252.39	$901.56
AS&E	=	$8,256.58	$698.83	$1,273.93	$1,436.17	$259.46	$3,210.72	$297.34	$1,080.13
AFUDC	=	$3,865.00	$273.00	$996.00	$1,123.00	$101.00	$1,256.00	$116.00	$0.00
Sub-Total	=	$738,853.06	$63,129.37	$111,902.34	$126,877.74	$22,352.77	$295,202.99	$26,112.81	$93,275.04
Contingency [E]	=	$55,414.00	$4,734.71	$8,392.68	$9,515.84	$1,676.46	$22,140.22	$1,958.47	$6,995.62
TOTAL PROJECT COST	=	**$794,267.06**	**$67,864.08**	**$120,295.02**	**$136,393.58**	**$24,029.23**	**$317,343.21**	**$28,071.28**	**$100,270.66**
Reimbursable Costs	=	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
CL&P PROJECT BUDGET	=	**$794,267.06**							
ACT / ENG (%)		**120.2%**							

FERC Mapping of estimate:		%	
Additions	=	89%	704,284.75
Retirements	=	11%	84,264.43
Expense	=	1%	5,717.88
			794,267.06
Total Capital			788,549.18

Notes:

(A) Project Costs originate from STORMS

(B) Formula for Per Diem: manhours/8 hrs = Days. Days x Rate = Per Diem $

(Ensure the correct hrs are selected.) Per Diem Rat $ -

(C) Non-Line Contractor, Non-TC and Non-TT costs in STORMS

(D) Contractor costs not in STORMS (e.g., Show-up Costs)

(E) The contingency covers the following Contingency % 7.5%

field changes and other unanticipate - on Labor 7.5%

costs not already captured in - on Equipme 7.5%

"Other Costs" - on Material 7.5%

- on Contrac 7.5%

The Contingency % can be the same for - on Other 7.5%

category or can change by category if ne - on Indirects 7.5%

Weighted Average Contingency % 7.5%

Work Order	WR	Seg #	NU Hours	Contr. Hours
2M720608	2869503	01	220.30	0.00
2M720613	2872795	02	441.00	0.00
2M720612	2872794	03	385.00	0.00
2M720611	2872793	04	98.60	0.00
2M720609	2872791	05	66.60	0.00
2M720610	2872792	06	97.60	0.00
2M720614	2872796	07	345.60	0.00

ENG Approval

[redacted]

Attachments.

Design Sketch. (See the sketches at the end of document.)

ACT Estimate

EVERSOURCE

Supplement Authorization Form

Project Number:	CD00759				Project Manager:	[redacted]			
Project Title:	NB Post Office Switchgear and Loop				Construction Rep:				
Est. Project Start Date:					Project Engineering:				
Need Date for ACT Approval:					Circuit Owner:				
ACT Date:	05/03/2017				Eversource Crews:				
Project Management Contact:	[redacted]				Contractor:	Charter Oak / Central CT Cable			
					Investment Recovery?				
		Total Project [A]	Segment 01	Segment 02	Segment 03	Segment 04	Segment 05	Segment 06	Segment 07
CURRENT ENG ESTIMATE	=	$660,562.00	$109,213.00	$61,613.00	$89,952.00	$13,114.00	$288,743.00	$31,661.00	$66,266.00
Eversource Direct Eng/Supv	–	$12,099.71	$1,621.08	$3,224.31	$2,793.30	$714.59	$471.12	$705.38	$2,569.93
Eversource Labor	–	$118,677.81	$15,805.32	$31,631.24	$27,613.52	$7,070.14	$4,773.32	$6,997.09	$24,787.18
Eversource Labor Overtime	=	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Per Diem [B]	–	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Eversource Equipment	–	$24,833.00	$4,163.00	$6,127.00	$5,821.00	$1,295.00	$880.00	$1,339.00	$5,208.00
Material	–	$356,035.82	$16,660.89	$9,275.89	$42,535.05	$1,436.15	$280,250.86	$5,876.98	$0.00
Contractor Labor	=	$5,882.07	$888.46	$1,560.96	$1,129.03	$282.49	$67.43	$259.70	$1,694.00
Tree Trimming	=	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Traffic Control	=	$141,200.00	$8,500.00	$41,500.00	$30,000.00	$7,500.00	$1,800.00	$6,900.00	$45,000.00
Contractor Additional [C]	–	$4,500.00	$4,500.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Contractor Other [D]	=	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Costs	=	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
E&S	=	$59,077.22	$9,320.53	$15,176.08	$13,421.20	$3,436.49	$2,319.75	$3,368.93	$12,034.24
MDEC	–	$4,425.85	$698.26	$1,136.93	$1,005.47	$257.45	$173.79	$252.39	$901.56
AS&E	=	$8,256.58	$698.83	$1,273.93	$1,436.17	$259.46	$3,210.72	$297.34	$1,080.13
AFUDC	=	$3,865.00	$273.00	$996.00	$1,123.00	$101.00	$1,256.00	$116.00	$0.00
Sub-Total	=	$738,853.06	$63,129.37	$111,902.34	$126,877.74	$22,352.77	$295,202.99	$26,112.81	$93,275.04
Contingency [E]	–	$55,414.00	$4,734.71	$8,392.68	$9,515.84	$1,676.46	$22,140.22	$1,958.47	$6,995.62
TOTAL PROJECT COST	–	$794,267.06	$67,864.08	$120,295.02	$136,393.58	$24,029.23	$317,343.21	$28,071.28	$100,270.66
Reimbursable Costs	=	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
CL&P PROJECT BUDGET	=	$794,267.06							
ACT / ENG (%)		120.2%	62.1%	195.2%	151.6%	183.2%	109.9%	88.7%	151.3%

FERC Mapping of estimate:		%	
Additions	=	89%	704,284.75
Retirements	–	11%	84,264.43
Expense	=	1%	5,717.88
			794,267.06
Total Capital			788,549.18

Notes:
(A) Project Costs originate from STORMS
(B) Formula for Per Diem: manhours/8 hrs = Days. Days x Rate = Per Diem $
(Ensure the correct hrs are selected.) Per Diem Rate Used: $ -
(C) Non-Line Contractor, Non-TC and Non-TT costs in STORMS
(D) Contractor costs not in STORMS (e.g., Show-up Costs)
(E) The contingency covers the following:
field changes and other unanticipated costs not already captured in "Other Costs"

The Contingency % can be the same for each category or can change by category if needed.

Contingency %	7.5%
- on Labor	7.5%
- on Equipment	7.5%
- on Material	7.5%
- on Contractor	7.5%
- on Other	7.5%
- on Indirects	7.5%
Weighted Average Contingency %	7.5%

Work Order	WR	Seg #	NU Hours	Contr. Hours
2M720608	2869503	01	220.30	0.00
2M720613	2872795	02	441.00	0.00
2M720612	2872794	03	385.00	0.00
2M720611	2872793	04	98.60	0.00
2M720609	2872791	05	66.60	0.00
2M720610	2872792	06	97.60	0.00

CD00759 NB Post Office Switchgear and Loop.xlsx 07/10/2017 12:51 PM

Variance Report.

PROJECT VARIANCE REPORT							Project #_CD00759_____ Total___
	Cont.	Original ENG	Revised ENG	Cont.	ACT	Variance	Comments
Total Cost ($000):							
Tree Trimming ($)		$ -			$ -	$ -	
Traffic Control ($)		$ 18,000			$ 141,200	$ 123,200	Did not estimate enough traffic.
Switching ($)		$ 45,656			$ -	$ (45,656)	
Overtime ($)		$ -			$ -	$ -	
4/0 Al Cables($)		$ 54,264			$ 85,255	$ 30,991	
500 kcmil Cu Cables		$ 75,516			$ 116,091	$ 40,575	
Switchgear		$ 197,760			$ 293,403	$ 95,643	ENG was S&C PMH-9 and PMH-12 switchgear and the ACT is Innovative Switchgear Solutions, INC. Four Way units. I cannot
Switchgear Pad		$ 6,209			$ -	$ (6,209)	The orginal design was S&C PMH Swtichgear. The new swithgear requires two manholes verses a manhole and
Manholes		$ 62,986			$ 47,509	$ (15,477)	
Conduit Duct banks ($)		$ 18,880			$ 7,120	$ (11,760)	
Removals		$ 53,440			$ 48,275	$ (5,165)	
Loader($)		$ -			$ -		
Subtotal		$ 532,711			$ 738,853	$ 206,142	
Contingency ($)		$ 127,851			$ 55,414	$ (72,437)	
Total ($)	24.0%	$ 660,562		7.5%	$ 794,267	$ 133,705	
Other:							
Year ENG approved?		8/17/2016			7/1/2017		ENG estimates > 2 years old should be updated / re-presented.
Major Material (number of units):							
Precast Manholes (#)		1			2	-1	
Switchgear Pad (#)		1			0	1	
12 Duct Bank Travelled (ft)		100			90	10	
4/0 Al Cables($)		1615			1430	185	
500 kcmil Cu Cables		1085			1185	-100	
Switchgear		2			2	0	ENG was S&C PMH-9 and PMH-12 switchgear and the ACT is Innovative Switchgear Solutions, INC. Four Way units.
Removal (Cable)		1806			0		
Removal (Switchgear)		2			0	0	
Other:							

Minor Scope Change: Brief Description (List any changes / associated cost)
NOTE: Significant scope changes need to be re-presented to the OCRC for revised ENG prior to seeking ACT approval.

Unforseen Issues / Obstacles:	Explanation / Comments
Ledge; Easements; Overtime Required; Customer Issues; Resource Issues; Town / State Requirements and Regulations including Restricted Hours of Operations or Paving / Restoration requests; Other....	We just used the distribution ENG amount for building a transmission H frame. We figured this amount should be able to replace an H frame. My distribution estimate was to install a distribution H frame and two distribution poles. The distribution design would have eliminated the existing transmission H frame.

Project TAF

Technical Authorization Form

Date Prepared: July 8, 2016	Project Title: [redacted]
Company/ies: Eversource CT	Project ID Number: CD00759
Organization: Distribution	Class(es) of Plant: Distribution
Project Initiator: [redacted]	Project Category: UG Obsolescence
Project Owner/Manager: [redacted]	Project Type: *Specific*
Project Sponsor: [redacted]	Project Purpose: Replace condemned manually operated switchgear with automatic switchgear.
Estimated in service date: 12/31/17	If Transmission Project: *NA*

Project Need Statement *(Description of Issue)*

[redacted]

[redacted]

Project Objectives

[redacted]

Project Scope

[redacted]

[redacted]

Background / Justification

[redacted]

Business Process and / or Technical Improvements:

[redacted]

Cost Estimate and Assumptions

Budget Summary - Preferred Option Install S&C PMH 9/12 Switchgear Pair.

2017

ID	Title	Status	Rev	Contingency	Expenditure Amount	Net Estimate
1	Install Concrete Sturctures for Switchge	Draft	0	24%	$109,213	$109,213
2	Loop Cable between Pad [redacted] and MH 932.	Draft	0	24%	$61,613	$61,613
3	Install [redacted]0 to New Switchgear	Draft	0	24%	$89,952	$89,952
4	Install Loop Cable to MH 930.	Draft	0	24%	$13,114	$13,114
5	Install PMH-9/12 Auto Switchgear Pair	Draft	0	24%	$288,743	$288,743
6	Install [redacted] Source to swtichgear.	Draft	0	24%	$31,661	$31,661
7	Remove [redacted] and loop cables.	Draft	0	24%	$66,266	$66,266
				2017 Total:	**$660,562**	**$660,562**
				Total Project:	**$660,562**	**$660,562**

Alternatives Considered with Cost Estimates

[redacted]

ID	Title	Preliminary Estimate	Construction Estimate	Variance	IEEE $/CMS	All (w/Storm)
8	Replace the condemned Switchgear.	$147,252			$0.00	$0.00

Project Schedule

Describe the project schedule and milestones. Include estimated start and end dates.

Milestone/Phase Name	Estimated Completion Date
Detail Engineering.	6/1/2017
Construction.	12/31/2017

Regulatory Approvals

None required.

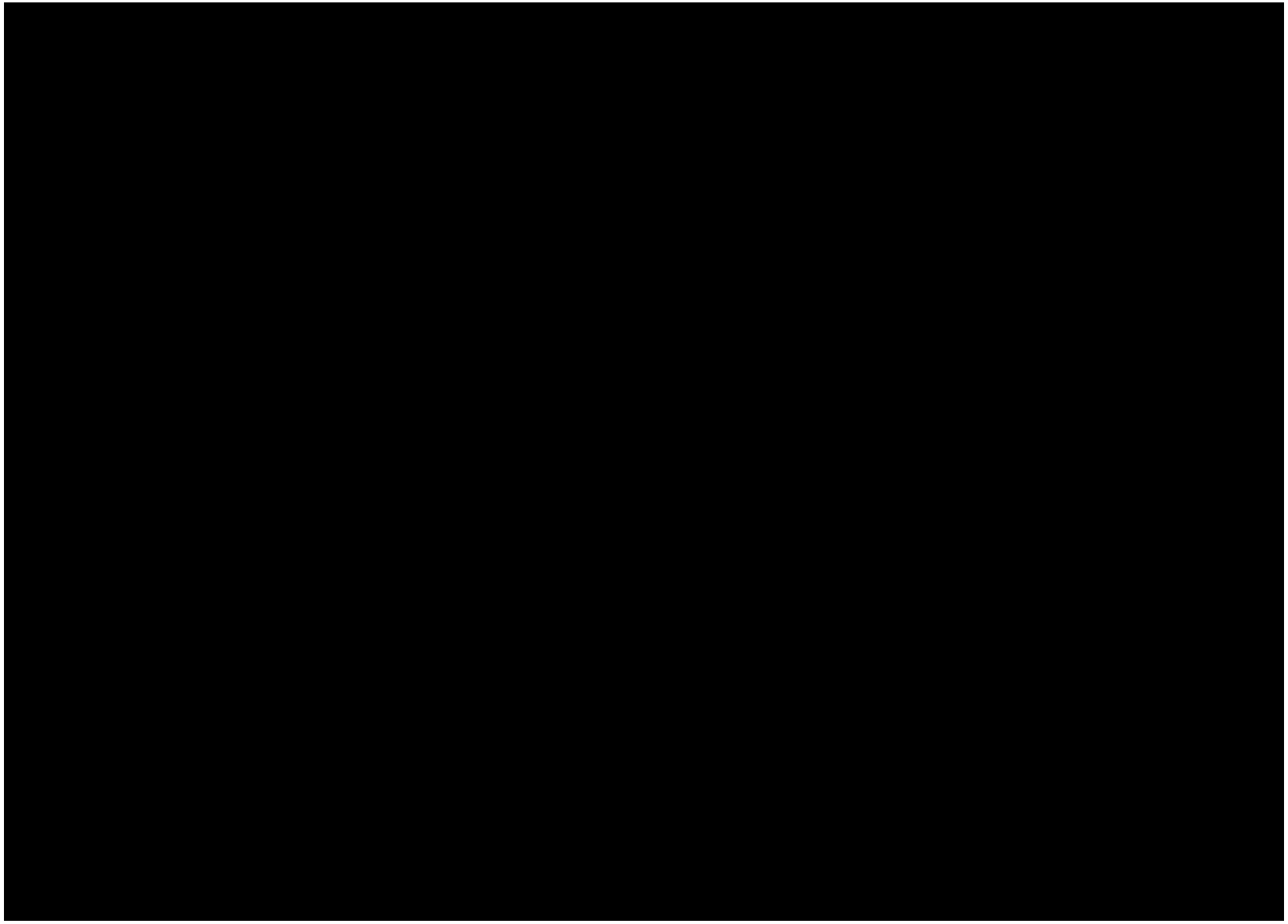
Risks and Risk Mitigation Plans

Risk Event	Risk Horizon	Likelihood of Occurrence	Expected Value Cost Exposure ($M)	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2017	20%	$0.66M x 20% = $132K	Included contingency costs in the funding request. Perform detailed Field Analysis and walk down in project development to avoid potential issues.
Internal resources not available to perform the work.	2017	20%	Labor cost could increase. $50K - $300M	Plan internal resources to perform the work.
Storms delays	2017	5%	Labor cost could increase. $50K - $300M	If storm activity delays work, we may be forced to use external resources.
System abnormal configuration	2017	5%	Minimal dollars	Impact to system configuration during construction when loop scheme is taken out of service. If event occurs while clearance is in place to perform work, more customers will be impacted to an outage.

References

One-Line Diagrams, Attachments, and Images.

Supplement Authorization Form



Refer to Distribution Capital Project Approval Process
JA-AM-2001-B, Rev.3
Refer to Distribution Capital Project Supplement Process
JA-AM-2001-C, Rev.0

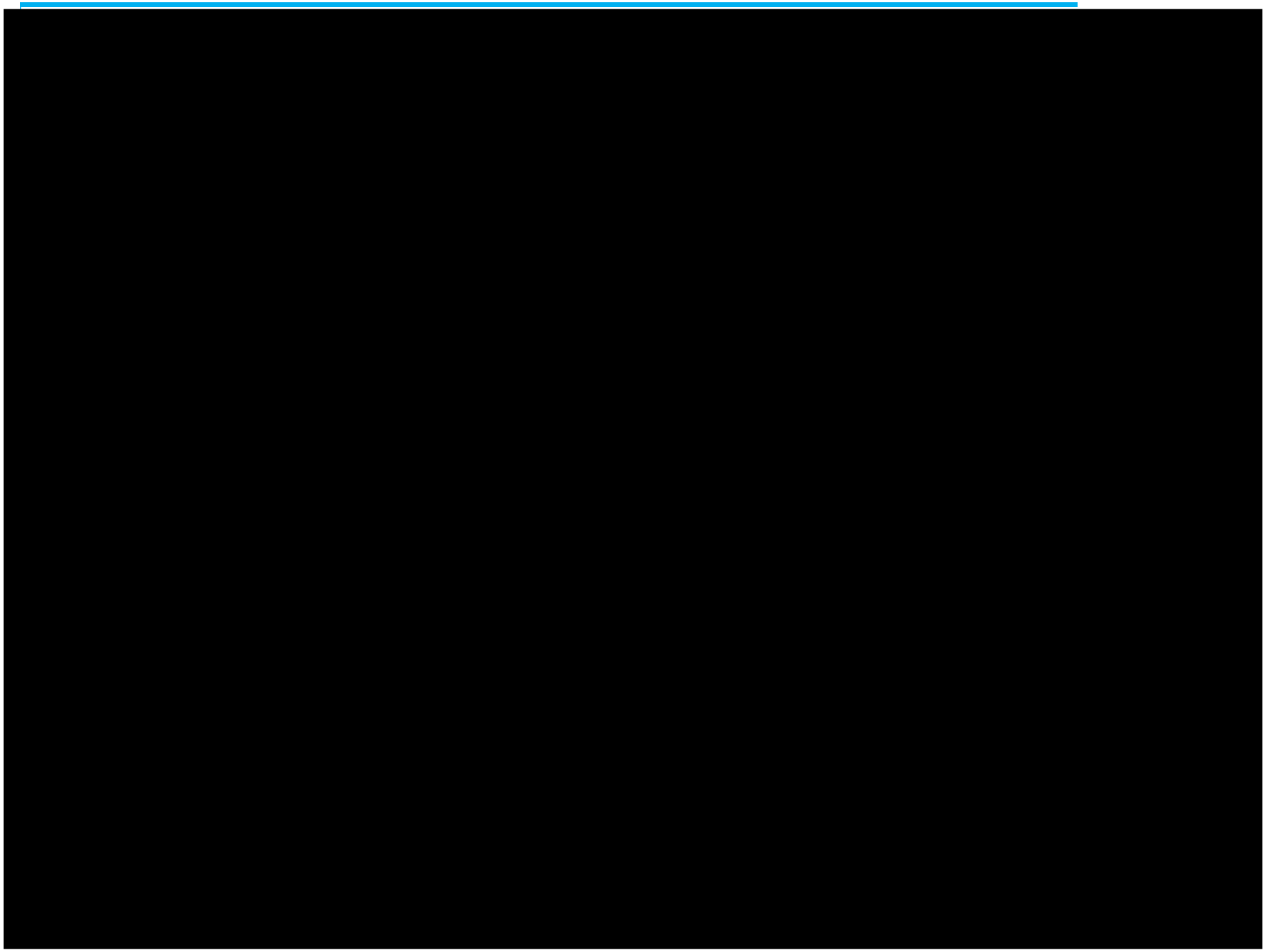
Supplement Authorization Form



Refer to Distribution Capital Project Approval Process
JA-AM-2001-B, Rev.3
Refer to Distribution Capital Project Supplement Process
JA-AM-2001-C, Rev.0

EVERSOURCE

Supplement Authorization Form



Refer to Distribution Capital Project Approval Process
JA-AM-2001-B, Rev.3
Refer to Distribution Capital Project Supplement Process
JA-AM-2001-C, Rev.0

Switchgear easement area.

