EVERSOURCE

Project Approval Form

Project Title: [redacted]	**Project Number: CD02040**
Date Prepared: 12/21/2023	**Company:** Eversource CT
Organization: Distribution Engineering	**Project Category:** SMART SWITCHES PROGRAM
Project Initiator: [redacted]	**Project Type:** Specific
Initiating Organization: Distribution	**Capital Investment part of original Op 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)
Required in service date: 12/31/24	
Total Capital Request: $711.8K	**Authorization Type:** Full Funding

1. Executive Summary

Project CD02040 was established to address [redacted]

- [redacted]
- [redacted]
- [redacted]
- [redacted]
- Project Location
  - Division: Central
  - District: Cheshire AWC
  - City/Town Newington, CT

The partial estimate for this project was $488K and was approved on 7/28/2022. The full funding estimate is $711.8K. The difference in cost equates to $223.8K, an increase of 46%. The difference in cost is due to increased material and labor cost and using legacy estimating units. If the project was estimated using the latest estimating units, the revised estimate would be $644K which is $67.8K less or an 11% increase.

2. Project Cost Summary

Note: Dollar values are in thousands.

Capital Costs	Year 2024	Year 2025+	Total
Direct Capital Costs			
Internal Labor and Construction Equipment	57.8	0.0	57.8
Outside Services	3.7	0.0	3.7
Materials	351.4	0.0	351.4
Removals	20.3	0.0	20.3
Risk and Contingency	49.7	0.0	49.7
Other	0.0	0.0	0.0
Subtotal – Direct Costs	**482.8**	**0.0**	**482.8**
Indirect Capital Costs			
Indirect/Overheads (including benefits)	229.0	0.0	229.0
Capitalized interest or AFUDC, if any	0.0	0.0	0.0
Subtotal – Indirect Costs	**229.0**	**0.0**	**229.0**
Total Gross Capital Costs	**711.8**	**0.0**	**711.8**
Customer Contribution	**0.0**	**0.0**	**0.0**
Total Net Capital Project Costs	**711.8**	**0.0**	**711.8**

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

Outage History:

[redacted]

The project was created as part of an initiative to improve circuit reliability by adding automatic sectionalizing devices on overhead distribution circuits.

b. Project Need

[redacted]

c. Project Scope

The scope of this project is as follows:

- [redacted]

Major Material:

- 3 Reclosers
- 3 Disconnect Switch
- 1,200 ft. of KCMIL CU

4. Alternatives Considered

Preferred Option: [redacted]

Option 2: [redacted]

	Option
[redacted]	

[redacted]

Estimate Type:	Full	Partial
Capital Cost	$711.8K	$366.9K
Expense Cost	$20.6K	$16.1K
Total Cost	$732.4K	$383K
Preferred option	X	

Note – All estimates were calculated due to updated estimating units.

5. Project Schedule

Milestone/Phase Name	Estimated Date
Partial Approval	July 2022
100% Detailed Engineering Completion	October 2022
Construction Start	April 2024
In Service Date	December 2024

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

Attachment	Included in Submittal?
A. Cost Estimate	*YES*
B. P6 Schedule	*NO*
C. Geographic Map	*YES*
D. System and Station One-Lines	*YES*

E. Load Summary	*YES*
F. Partial Funding PAF	*YES*

Attachment A: Cost Estimate:

Budget Summary - Preferred Option — Option 3 - Upgrade 7L87 Getaway

2024

ID	Title	Status	Rev #	Contingency	Expenditure Amount	Net Estimate
1	Install two Reclosers on [redacted]	Draft	0	28%	$176,442	$176,442
3	Install SR on Church St. on the [redacted]	Draft	0	28%	$82,123	$82,123
4	Upgrad[redacted] Getaway Cable	Draft	0	28%	$242,828	$242,828
				2024 Total:	**$501,393**	**$501,393**
				Total Project:	**$501,393**	**$501,393**

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	28.00%
SubTotal:	$137,846
Contingency Amount:	$38,597
Estimate:	$176,442
Reimbursement:	$0
Net Amount:	**$176,442**

Description:

Item Description	CU	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	16-ALL17	$3,509.60
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18	$3,000.00
SECTIONALIZE OH - Recloser Control - setting changes only Change the settings on the [redacted] to become a two-way tie.	16-OH39A	$9,771.20
SECTIONALIZE OH-Vertical Disconnect Switches-600/900 amp 3-1ph Install a disconnect for each recloser.	16-OH43	$20,566.40
SECTIONALIZE OH - Recloser - 3ph Install an SR on Robbins Ave. on pole [redacted] Install an MR on Howards St	16-OH38	$95,979.20
XF OH - OH XF's - bank of 3-1ph Install sensing pots on pole [redacted] on Maple Hill Ave.	16-OH46	$5,019.20

[redacted]

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	28.00%
SubTotal:	$64,158
Contingency Amount:	$17,964
Estimate:	$82,123
Reimbursement:	$0
Net Amount:	**$82,123**
Description:	

Item Description	CU	[redacted]	Amount
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18		$1,000.00
SECTIONALIZE OH - Recloser - 3ph Install a SR on Church St. on pole 4403.	16-OH38		$47,989.60
SECTIONALIZE OH-Vertical Disconnect Switches-600/900 amp 3-1ph Install disconnect switches along with SS.	16-OH43		$10,283.20
SECTIONALIZE OH - Recloser Control - setting changes only Switch the settings on the [redacted]	16-OH39A		$4,885.60

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Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	28.00%
SubTotal:	$189,710
Contingency Amount:	$53,119
Estimate:	$242,828
Reimbursement:	$0
Net Amount:	**$242,828**
Description:	

Item Description	CU	[redacted]	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	16-ALL17		$3,509.60
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18		$2,000.00
UG CABLE DB/UG - 750/1000 - 3-1/C (3ph) Cu	16-UG114B		$115,200.00
UG CABLE UG - Cable Removal - all cables	16-UG117		$24,000.00
OTHER OTHER 30% loader for Contractors	16-ALL14		$45,000.00

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

Operations Project Authorization Form

Project Title [redacted]	**Project Number: CD02040**
Date Prepared: 07/28/2022	**Company:** Eversource CT
Organization: EFO	**Class(es) of Plant:** D Line
Project Initiator: [redacted]	**Project Category: Smart Switch**
Project Manager: [redacted]	**Project Type:** Specific
Project Sponsor: [redacted]	**Capital Investment part of original Operating Plan:** Yes
Estimated in service date: 12/31/2024	**Emergency Related Request?** Yes
Eng./Constr. Resources Budgeted? Yes	**Facility Type** (check all that apply): ☐ PTF ☐ non-PTF ☑ Distribution
Total Gross Capital Request: $488K	**Authorization Type:** Initial Funding

Executive Summary

[redacted]

Project Costs Summary

Capital Costs	2022	2023	2024+	Total
Direct Capital Costs				
Internal Labor and Construction Equipment	$0	$0	$42	$42
Outside Services	$0	$0	$56	$56
Materials	$0	$0	$178	$178
Removals	$0	$0	$12	$12
Risk and Contingency	$0	$0	$2	$2
Other	$0	$0	$0	$0
Subtotal	**$0**	**$0**	**$290**	**$290**
Indirect Capital Costs				
Indirect/Overheads (including benefits)	$0	$0	$192	$192
Capitalized interest or AFUDC, if any	$0	$0	$6	$6
Subtotal	**$0**	**$0**	**$198**	**$198**
Total Customer Contribution	$0	$0	$0	$0
Total Capital Project Costs	$0	$0	$488	$488

Technical Justification:

Project Need, Objective and Justification

This project is established to address the large customer zones on the [redacted]

[redacted]

The goal of the Smart Switch program is to reduce the number of customers exposed to an outage event. This project reduces two large customer zones by adding sectionalizing reclosers to isolate outages.

Project Scope

[redacted]

Major Material:

- 3 Reclosers
- 3 Disconnect Switches
- 1,200 ft. of 1000 KCMIL CU

Background

Outage History

[redacted]

Alternatives Considered:

Project is a compliance obligation - no alternatives considered - no financial benefit

Regulatory Approvals:

No

Project Schedule

Milestone/Phase Name	Estimated Date
100% Engineering Completion	July 2023
Construction Start	April 2024
Testing/Commissioning	September 2024
In Service Date	December 2024

Risks and Risk Mitigation Plans

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2024	Medium	Included contingency costs in the funding request. Perform detailed Field Analysis and walk down in project development to avoid potential issues.
Customer Permission / Siting Council / Municipal approvals	2024	Low	Design to minimize customer impact. Project Preplanning and customer/community outreach
Internal construction resources not available to perform the work.	2024	High	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.
Internal engineering resources not available to perform the work.	2023	Medium	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.

Storm delays	2024	Medium	If storm activity delays work, we may be forced to use external resources.