EVERSOURCE

Project Approval Form

Project Title: [redacted]	**Project Number: CD02039**
Date Prepared: 12/20/2023	**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: 12/31/2024	
Total Capital Request: $239.2k	**Authorization Type:** Full Funding

1. Executive Summary

Project CD02039 was established to address [redacted]

- [redacted]

- [redacted]

- Project Location
  - Division: Central
  - District: Hartford AWC
  - City/Town: Farmington

- Project will be completed by December 2024. The partial funding estimate for this project is $197k and was approved on 02/21/23. The full funding estimate is $239.2k; an increase of $42.2k or 18%. The reason for the overage between the partial and full funding PAF is due

to the cost of material and labor increasing. If using updated estimating units the partial funding estimate would be $251.1k; which is 4.7% higher than the full funding estimate.

2. Project Cost Summary

Financial Evaluation ($000's)

Capital Costs	2024	Total
Internal Labor and Construction Equipment	12.1	12.1
Outside Services	31.4	31.4
Materials	98.8	98.8
Removals	3.7	3.7
Risk and Contingency	16.7	16.7
Other	0.0	0.0
Subtotal	**162.7**	**162.7**

Indirect Capital Costs	2024	Total
Indirects/Overheads (including benefits)	76.5	76.5
Capitalized interest or AFUDC, if any	0.0	0.0
Subtotal	**76.5**	**76.5**
Total Capital Costs (Gross)	**239.2**	**239.2**
Less Total Customer Contribution	**0.0**	**0.0**
Project Costs (Net of Reimbursement)	**239.2**	**239.2**

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

[redacted] The outage information is listed below.

[redacted]

[redacted]. The outage information is listed below.

[redacted]

b. Project Need

[redacted]

c. Project Scope

[redacted]

Major Material:

- Two 23 KV reclosers
- 2 – Vertical Disconnect Switches 600/900 amp 3-1ph

4. Alternative Considered

An alternative solution was considered to install [redacted]

[redacted]

		2 – Replace 3B05-
[redacted]		
Authorization Type	Full	Partial
Capital Cost	$239.2k	
Expense Cost	$6.9k	
Total Cost	$246.1k	$382.6k
Preferred option	X	

5. Project Schedule

Milestone/Phase Name	Estimated Date
Preliminary Approval	February 2023
Detailed Design	April 2023
Settings Requested	January 2024
Construction Start	July 2024
Testing/Commissioning	December 2024

Milestone/Phase Name	Estimated Date
In Service Date	December 2024

6. Regulatory Decisions

N/A

7. Codes and Standards

N/A

8. Risk and Contingencies

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	Medium	Design to minimize customer impact. Project Preplanning and customer/community outreach.
Internal construction resources not available to perform the work.	2024	Medium	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.	2024	Medium	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.

Materials Shortage or long lead times	2024	Medium	Pre-order long lead time material; minimize the use of non-standard and non-stocked material.
Storm delays	2024	Medium	If storm activity delays work, we may be forced to use external resources.
System abnormal configuration	2024	Low	Schedule work to minimize system abnormal time. Install temporary bypasses/equipment if system will be abnormal for extended periods.
Technological risks involving integration of new technology	2024	Low	Before use of new technology ensure support of standards and manufacturer. Schedule project to accommodate for extra time or ensure new technology is not on the critical path.
Wetlands / Environmentally sensitive area	2024	Medium	Use of mats and specialty equipment, only work during certain times of the year.

9. References

References
1.

10. 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 Sheet Analysis	*YES*
F. Initial Funding PAF	*YES*

Attachment A – Cost Estimate

Design Alternative CD02039-01

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	24.00%
SubTotal:	$65,782
Contingency Amount:	$15,788
Estimate:	$81,570
Reimbursement:	$0
Net Amount:	**$81,570**

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		$4,000.00
SECTIONALIZE OH - Recloser - 3ph	16-OH38		$47,989.60
SECTIONALIZE OH-Vertical Disconnect Switches-600/900 amp 3-1ph	16-OH43		$10,283.20

Connecticut Light & Power
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Specific Project Proposal - Project #: [redacted]

Segment CD02039-02

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	24.00%
SubTotal:	$97,178
Contingency Amount:	$23,323
Estimate:	$120,500
Reimbursement:	$0
Net Amount:	**$120,500**
Description:	

Item Description	CU	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	16-ALL17	$7,019.20
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18	$6,000.00
SECTIONALIZE OH-Vertical Disconnect Switches-600/900 amp 3-1ph	16-OH43	$10,283.20
TREE OH - Tree Trimming [redacted] on Arch Rd	16-OH61	$21,000.00
SECTIONALIZE OH - Recloser Control - setting changes only RR to SR	16-OH39A	$4,885.60
SECTIONALIZE OH - Recloser - 3ph TR	16-OH38	$47,989.60

[redacted]

Design Alternative CD02039-03

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	24.00%
SubTotal:	$137,221
Contingency Amount:	$32,933
Estimate:	$170,154
Reimbursement:	$0
Net Amount:	**$170,154**

Description:

Item Description	CU	[redacted]	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	16-ALL17		$7,019.20
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18		$8,000.00
SECTIONALIZE OH-Vertical Disconnect Switches-600/900 amp 3-1ph	16-OH43		$20,566.40
SECTIONALIZE OH - Remove Recloser (any) RR	16-OH42		$5,656.00
SECTIONALIZE OH - Recloser - 3ph SR and TR	16-OH38		$95,979.20

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Design Alternative CD02039-04

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	24.00%
SubTotal:	$105,538
Contingency Amount:	$25,329
Estimate:	$130,867
Reimbursement:	$0
Net Amount:	**$130,867**
Description:	

Item Description	CU	[redacted]	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	16-ALL17		$7,019.20
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18		$13,765.00
OTHER OTHER Reinstall SR on p#2784	16-ALL14		$5,656.00
SECTIONALIZE OH - Remove Recloser (any) Remove from p#1729	16-OH42		$5,656.00
SECTIONALIZE OH - Recloser Control - setting changes only RR to SR	16-OH39A		$4,885.60
SECTIONALIZE OH-Vertical Disconnect Switches-600/900 amp 3-1ph SR & TR	16-OH43		$20,566.40
SECTIONALIZE OH - Recloser - 3ph TR	16-OH38		$47,989.60

[redacted]

[redacted]

[redacted]

[redacted]

Attachment F – Partial Funding PAF

Operations Project Authorization Form

Project Title: [redacted]	**Project Number: CD02039**
Date Prepared: 02/21/2023	**Company:** Eversource CT
Organization: Distribution Engineering	**Class(es) of Plant:** D Line
Project Initiator: [redacted]	**Project Category:** SMART SWITCHES PROGRAM
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?** No
Eng./Constr. Resources Budgeted? Yes	**Facility Type** (check all that apply)**:** ☐ PTF ☐ non-PTF ☒ Distribution
Total Gross Capital Request: $197K	**Authorization Type:** Initial Funding

Executive Summary

[redacted]

[redacted]

[redacted]

Project Costs Summary

Note: Dollar values are in thousands

Capital Costs	Year 2023	Year 2024	Year 2025	Total
Direct Capital Costs				
Internal Labor and Construction Equipment	$0	$17	$0	$17
Outside Services	$0	$23	$0	$23
Materials	$0	$72	$0	$72
Removals	$0	$5	$0	$5
Risk and Contingency	$0	$1	$0	$1
Other	$0	$0	$0	$0
Subtotal – Direct Costs	**$0**	**$117**	**$0**	**$117**
Indirect Capital Costs				
Indirect/Overheads (including benefits)	$0	$77	$0	$77
Capitalized interest or AFUDC, if any	$0	$2	$0	$2
Subtotal – Indirect Costs	**$0**	**$80**	**$0**	**$80**
Total Gross Capital Costs	**$0**	**$197**	**$0**	**$197**
Customer Contribution	**$0**	**$0**	**$0**	**$0**
Total Net Capital Project Costs	**$0**	**$197**	**$0**	**$197**

Technical Justification:

Project Need, Objective and Justification:

[redacted]

[redacted]

Project Scope:

[redacted]

- [redacted]

[redacted]

- [redacted]
- [redacted]

Major Material:

- 2 – 25kV Reclosers (SS & TR)
- 2 – Vertical Disconnect Switches 600/900 amp 3-1ph

Background:

[redacted]

[redacted]. The outage information is listed below.

[redacted]

[redacted]

[redacted]. The outage information is listed below.

[redacted]

[redacted]

[redacted]

Alternatives Considered:

Option 1 – Presented

Option 2 – This proposal also includes to install a [redacted]

Design Criteria	Option	
[redacted]		
Cost	$202K	$382.6K
Cost / MVA added	NA	NA
Cost / CM Saved	$0.51/CM	$1.07/CM
Cost / CI Saved	$220.12/CI	$667.44/CI
Preferred option	X	

Regulatory Approvals:

Are Regulatory body approvals needed for the project?

Yes

This project will require a state highway permit for Reclosers Installation and Department of Transportation permits to adjust traffic flow along Waterville and Avon Mountain Rd, Avon.

Project Schedule

Milestone/Phase Name	Estimated Date
Preliminary Approval	February 2023
Detailed Design	April 2023
Settings Requested	January 2024
Construction Start	July 2024
Testing/Commissioning	August 2024
In Service Date	August 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.

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