EVERSOURCE

Project Approval Form

Project Title: 2025 Eastern Smart Switch (CI) [redacted]	**Project Number:** CD02385
Date Prepared: 09/05/2024	**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: 12/31/2025	
Total Capital Request: $364.3K	**Authorization Type:** Full Funding

1. Executive Summary

Full funding is being requested for this project at a cost of $364.3K which is 69% of the partial funding capital estimate of $527.8K. CD02385 was partially approved on 2/1/2024. There is no scope change on the project. The variance between the full funding and partial funding estimate is due to the 30% contractor adder that was included in the partial funding estimate. These projects are being completed by the district and are therefore reduced in cost overall. Another impact was the added inline switch cost in the partial funding estimates. These in-line switches were already included in the estimate for the recloser installation and didn't need to be added as a separate line item.

The Original Project was presented as follows:

- This 2025 Smart Switch project addresses circuit zones that have between 500 and 1000 customers and have experienced multiple outages over the past 4 years. Circuit zones that contain more than 1000 customers will be addressed under a different 2025 project.
- CD02385 seeks partial funding of $527.8K to address the following 3 circuit zones in the Eastern region of Connecticut:

AWC	Devices	ZONE_DVCNAME	Existing Customers in zone	TOTAL CI 2019-2023
[redacted]				

2. Project Cost Summary

Note: Dollar values are in thousands.

Capital Costs	2025	Total
Direct Capital Costs		
Internal Labor and Construction Equipment	36.4	36.4
Outside Services	12.3	12.3
Materials	152.1	152.1
Removals	4.7	4.7
Risk and Contingency	0.0	0.0
Other	0.0	0.0
Subtotal – Direct Costs	**205.6**	**205.6**
Indirect Capital Costs		
Indirect/Overheads (including benefits)	158.7	158.7
Capitalized interest or AFUDC, if any	0.0	0.0
Subtotal – Indirect Costs	**158.7**	**158.7**
Total Gross Capital Costs	**364.3**	**364.3**
Customer Contribution	**0.0**	**0.0**
Total Net Capital Project Costs	**364.3**	**364.3**

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

The Smart Switch Program is a continuation of an Eversource initiative of a multi-year program to improve circuit reliability by adding automatic or SCADA sectionalizing devices on overhead

distribution circuits. The Smart Switch Program focuses on breaking up customer zones and lowering the average number of customers impacted by a backbone interruption.

b. Project Need

[redacted]

c. Project Scope

The scope for the project is as follows:

[redacted]

4. Alternatives Considered

An alternative for this project was to "do nothing", but this wasn't selected as it doesn't address the large customer zones that would be affected by a single location outage.

5. Project Schedule

Add any additional milestones that are pertinent to the project

Milestone/Phase Name	Estimated Date
Partial Approval	February 2024
100% Detailed Engineering Completion	June 2024
Construction Start	January 2025
In Service Date	December 2025

6. Regulatory Decisions

N/A

7. Codes and Standards

N/A

8. Risk and Contingencies

Contingencies:

Risk Mitigation:

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2025	Low	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	2025	Low	Design to minimize customer impact. Project Preplanning and customer/community outreach.
Internal construction resources not available to perform the work.	2025	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	Low	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.
Materials Shortage or long lead times	2025	Low	Pre-order long lead time material; minimize the use of non-standard and non-stocked material.
Storm delays	2025	Low	If storm activity delays work, we may be forced to use external resources.
System abnormal configuration	2025	Low	Schedule work to minimize system abnormal time. Install temporary bypasses/equipment if system will be abnormal for extended periods.

9. References

N/A

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

Attachment	Included in Submittal?
A1. Partial Funding PAF Form	*YES*
A. Cost Estimates	*YES*

B. Load Sheets	*YES*
C. Geographic Maps	*YES*
D. One-Lines	*YES*

Attachment A1: Partial Funding PAF Form

Project Title: 2025 Eastern Smart Switch (CI)[redacted]	**Project Number:** CD02385
Date Prepared: 12/11/2023	**Company:** Eversource CT
Organization: Distribution Engineering	**Project Category:** RELIABILITY IMPROVE SPEC PROJ
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: 12/31/2025	
Total Capital Request: $527.8K	**Authorization Type:** Partial Funding

1. Executive Summary

This 2025 Smart Switch project addresses circuit zones that have between 500 and 1000 customers and have experienced multiple outages over the past 4 years. Circuit zones that contain more than 1000 customers will be addressed under a different 2025 project.

CD02385 seeks partial funding of $527.8K to address the following 3 circuit zones in the Eastern region of Connecticut:

AWC	ZONE_DVCNAME	CUST IN ZONE	TOTAL CI 2019-2023
[redacted]			

2. Project Cost Summary

Note: Dollar values are in thousands.

Capital Costs	2025	2026	2027+	Total
Internal Labor and Construction Equipment	28.8	0.0	0.0	28.8
Outside Services	59.0	0.0	0.0	59.0
Materials	274.0	0.0	0.0	274.0
Removals	31.5	0.0	0.0	31.5
Other	1.4	0.0	0.0	1.4
Risk and Contingency	0.0	0.0	0.0	0.0
Subtotal	**394.7**	**0.0**	**0.0**	**394.7**

Indirect Capital Costs	2025	2026	2027+	Total
Indirects/Overheads (including benefits)	126.8	0.0	0.0	126.8
Capitalized interest or AFUDC, if any	6.2	0.0	0.0	6.2
Subtotal	**133.0**	**0.0**	**0.0**	**133.0**
Total Capital Costs (Gross)	**527.8**	**0.0**	**0.0**	**527.8**
Less Total Customer Contribution	**0.0**	**0.0**	**0.0**	**0.0**
Project Costs (Net)	**527.8**	**0.0**	**0.0**	**527.8**

Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

The Smart Switch Program is a continuation of an Eversource initiative of a multi-year program to improve circuit reliability by adding automatic or SCADA sectionalizing devices on overhead distribution circuits. The Smart Switch Program focuses on breaking up customer zones and lowering the average number of customers impacted by a backbone interruption.

b. Project Need

[redacted]

c. Project Scope

The scope for the project is as follows:

[redacted]

3. Alternatives Considered

An alternative for this project was to “do nothing”, but this wasn’t selected as it doesn’t address the large customer zones that would be affected by a single location outage.

4. Project Schedule

Milestone/Phase Name	Estimated Date
Partial Approval	December 2023
100% Detailed Engineering Completion	June 2024
Fully Funded	December 2024
Construction Start	January 2025
In Service Date	December 2025

5. Regulatory Decisions

N/A

6. Codes and Standards

N/A

7. Risk and Contingencies

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2025	Low	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	2025	Low	Design to minimize customer impact. Project Preplanning and customer/community outreach.

Internal construction resources not available to perform the work.	2025	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	Low	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.
Materials Shortage or long lead times	2025	Low	Pre-order long lead time material; minimize the use of non-standard and non-stocked material.
Storm delays	2025	Low	If storm activity delays work, we may be forced to use external resources.
System abnormal configuration	2025	Low	Schedule work to minimize system abnormal time. Install temporary bypasses/equipment if system will be abnormal for extended periods.

8. References

References
1. N/A

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

Attachment	Included in Submittal?
A. Cost Estimates	*YES*
B. Load Sheets	*YES*
C. Geographic Maps	*YES*
D. One-Lines	*YES*

Attachment A: Cost Estimate

East Hampton:

Design Alternative CD02385-01

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	28.00%
SubTotal:	$107,012
Contingency Amount:	$29,963
Estimate:	$136,976
Reimbursement:	$0
Net Amount:	**$136,976**
Description:	

Item Description	CU	[redacted]	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	23-ALL17		$4,562.48
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	23-ALL18		$2,000.00
SECTIONALIZE OH - Recloser - 3ph	23-OH38		$62,386.48
SECTIONALIZE OH-Vertical Disconnect Switches-600/900 amp 3-1ph	23-OH43		$13,368.16
OTHER OTHER 30% contractor adder	23-ALL14		$24,695.00

Madison:

Design Alternative CD02385-02

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	28.00%
SubTotal:	$107,012
Contingency Amount:	$29,963
Estimate:	$136,976
Reimbursement:	$0
Net Amount:	**$136,976**

Description:

Item Description	CU	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	23-ALL17	$4,562.48
TRAFFIC OH/DB/UG - Traffic Control - Flagger	23-ALL19	$2,000.00
SECTIONALIZE OH - Recloser - 3ph	23-OH38	$62,386.48
SECTIONALIZE OH-Vertical Disconnect Switches-600/900 amp 3-1ph	23-OH43	$13,368.16
OTHER OTHER 30% contractor adder	23-ALL14	$24,695.00

[redacted]

New London:

Design Alternative CD02385-03

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	28.00%
SubTotal:	$216,350
Contingency Amount:	$60,578
Estimate:	$276,928
Reimbursement:	$0
Net Amount:	**$276,928**

Description:

Item Description	CU	[redacted]	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	23-ALL17		$4,562.48
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	23-ALL18		$4,000.00
SECTIONALIZE OH - Recloser - 3ph	23-OH38		$124,772.96
SECTIONALIZE OH - Recloser Control - setting changes only	23-OH39A		$6,351.28
SECTIONALIZE OH-Vertical Disconnect Switches-600/900 amp 3-1ph	23-OH43		$26,736.32
OTHER OTHER 30% contractor adder	23-ALL14		$49,927.00

Attachment B: Load sheets

[redacted]

[redacted]



[redacted]

[redacted]

[redacted]

Attachment C: Geographic Maps

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]



[redacted]

[redacted]



Attachment D: One-Lines

[redacted]



[redacted]



[redacted]

[redacted]

[redacted]

After

[redacted]