EVERSOURCE

Project Approval Form

Project Title: 2025 TripSaver Central BCA	**Project Number:** CD02770
Date Prepared: 11/07/2025	**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	**NWS Excludable:** ☐ Yes ☒ No
Total Capital Request: $695.7K	**Authorization Type:** Full Funding

1. Executive Summary

This project was created to replace fused lateral locations with TripSaver units in order to reduce the number of outages caused by transient type events (tree, animal, lightning, patrolled nothing found). For the Central Division, there are a total of 58 locations.

The partial funding capital request for this project was $665.9K and was approved during the 10/31/2025 CPAC meeting. The full funding capital request for this project is $695.7K. The capital difference of the full funding minus the partial funding is equal to $29.8K, a 4% increase. No scope change was incurred.

Division: Central
District(s): Cheshire, Hartford, Tolland AWCs
Town(s): Andover, Ashford, Bloomfield, Bolton, Bristol, Cheshire, Coventry, Cromwell, Durham, East Hartford, East Windsor, Enfield, Granby, Manchester, Mansfield, Simsbury, South Windsor, Southington, Stafford, Tolland, Union, West Hartford, Willington

2. Project Cost Summary

Note: Dollar values are in thousands.

Capital Costs	2005	2006	2007	Total
Internal Labor and Construction Equipment	37.8	0.0	0.0	37.8
Outside Services	0.0	0.0	0.0	0.0
Materials	321.5	0.0	0.0	321.5
Removals	9.6	0.0	0.0	9.6
Risk and Contingency	48.5	0.0	0.0	48.5
Other	0.0	0.0	0.0	0.0
Subtotal	**417.4**	**0.0**	**0.0**	**417.4**

Indirect Capital Costs	2005	2006	2007	Total
Indirects/Overheads (including benefits)	278.3	0.0	0.0	278.3
Capitalized interest or AFUDC, if any	0.0	0.0	0.0	0.0
Subtotal	**278.3**	**0.0**	**0.0**	**278.3**
Total Capital Costs (Gross)	**695.7**	**0.0**	**0.0**	**695.7**
Less Total Customer Contribution	**0.0**	**0.0**	**0.0**	**0.0**
Project Costs (Net of Reimbursement)	**695.7**	**0.0**	**0.0**	**695.7**

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

A TripSaver is a self−powered, electronically controlled, single−phase, cutout−mounted vacuum, interrupter recloser. The TripSaver is designed to eliminate the sustained interruption that occurs when a lateral fuse cutout operates in response to a transient fault. It also can eliminate momentary circuit interruptions that occur when a substation circuit breaker or source−side line recloser would otherwise trip to prevent a lateral fuse cutout from operating in response to a transient fault.

b. Project Need

This project is required as the 58 fused lateral locations would benefit from a TripSaver replacement according to reliability metrics in Central CT. The fused lateral locations targeted for replacement with TripSavers were based on historical outage and interruption data. Based on the standardized recloser improvement indices, 60% of customer interruption and 50% of customer minutes saved were utilized.

Total Events	Events Saved	Total Customer Mins	Customer Mins Saved	Total Customers Effected	Customer Int Saved
155	23	3,336,227	383,666	8,828	2,826

Figure 1: Central TripSaver Customer Reliability Indices

c. Project Scope

This project proposes one option, Option 1, as the preferred option. This option looks to replace these fused lateral locations with TripSaver units. The scope of Option 1 is as follows:

AWC	Town(s)	WOs
Cheshire	BRISTOL	2
	CHESHIRE	1
	DURHAM	3
	SOUTHINGTON	1
Hartford	BLOOMFIELD	3
	BOLTON	2
	CROMWELL	3
	EAST HARTFORD	1
	MANCHESTER	4
	SIMSBURY	6
	WEST HARTFORD	2
Tolland	ANDOVER	1
	ASHFORD	1
	COVENTRY	1
	EAST WINDSOR	2
	ENFIELD	4
	GRANBY	3
	MANSFIELD	5
	SOUTH WINDSOR	1
	STAFFORD	1
	TOLLAND	10
	UNION	1

For more details on each location, see the Attachments section.

Major Materials:

Qty	Size	Body	Stock Code (as of 10/2025)
2	**25K**	**40A**	620630
4	**40K**	**40A**	622560
5	**40K**	**100A**	620609
2	**65K**	**40A**	622559
19	**65K**	**100A**	620607
1	**80K**	**40A**	622558
5	**80K**	**100A**	622467
	80K	**200A**	620606
4	**100K**	**40A**	622557
14	**100K**	**100A**	622468
6	**100K**	**200A**	620605
3	**140K**	**100A**	622764
2	**140K**	**200A**	620603
67			

4. Alternatives Considered

Design Criteria	Option	
	1 – Central TripSavers	2 – NWS
Required to meet project need		
Optimizes locations with TripSaver	X	
Provides alternative source during outage		X
Authorization Type	Full	Full
Capital Cost	695,714	$186,843,075
Expense Cost	$30,483	$8,186,564
Total Cost	$726,200	$195,029,640
Total Cost / CM Saved	$1.89	$508.33
Total Cost / CI Saved	$256.97	$69,012.61
Preferred Option	**X**	

NWS:

The NWS was not selected as it is not cost efficient compared to Option 1. The NWS estimate was calculated at $2M per MWh based on the two lowest of three contractor bids received in Connecticut. Per location, it was assumed the battery would support up to 4 hours and that each location would require further sectionalization to create the battery recovery zone.

Doing nothing here is not recommended as new TripSaver units along these lateral locations can offer greater reliability and mitigate outages that would otherwise occur with a fuse in its place.

5. Project Schedule

Milestone/Phase Name	Estimated Date
Partial Approval	October 31, 2025
100% Detailed Engineering Completion	November 1, 2025
Fully Funded	November 7, 2025
Construction Start	November 10, 2025
Project Completion	December 31, 2025

6. Regulatory Decisions

N/A

7. Codes and Standards

Codes and Standards
1. DSEM 06.713 – Overhead System Protection & Design Philosophy
2. DSEM 10.431 – TripSaver II General
3. WMS 09.10-234 – Operation Instruction for the S&C TripSaver II

8. Risk and Contingencies

Contingencies: 24% contingency was added for 2025 work. This contingency accounts for any risks that are unknown and do not have mitigation plans.

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2025	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	2025	Low	Design to minimize customer impact. Project Preplanning and customer/community outreach.
Internal construction resources not available to perform the work.	2025	Low	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.	2025	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.
Wetlands / Environmentally sensitive area	2025	Low	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. TripSaver Replacement Locations	*YES*
B. Partial Funding PAF	*YES*

Attachment - A: TripSaver Replacement Locations*



Figure 2: Central TripSaver Replacement Locations

*Locations are subject to change based on field conditions and other variables between now and construction

Attachment - B: Partial Funding PAF

Project Title: 2025 TripSaver Central BCA	**Project Number:** CD02770
Date Prepared: 10/31/2025	**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	**NWS Excludable:** ☐ Yes ☒ No
Total Capital Request: $665.9K	**Authorization Type:** Partial Funding

1. Executive Summary

This project was created to replace fused lateral locations with TripSaver units in order to reduce the number of outages caused by transient type events (tree, animal, lightning, patrolled nothing found). For the Central Division, there are a total of 58 locations.

Division: Central
District(s): Cheshire, Hartford, Tolland AWCs
Town(s): Andover, Ashford, Bloomfield, Bolton, Bristol, Cheshire, Coventry, Cromwell, Durham, East Hartford, East Windsor, Enfield, Granby, Manchester, Mansfield, Simsbury, South Windsor, Southington, Stafford, Tolland, Union, West Hartford, Willington

2. Project Cost Summary

Note: Dollar values are in thousands.

Capital Costs	Year 2025	Year 2026	Year 2027+	Total
Direct Capital Costs				
Internal Labor and Construction Equipment	36.3	0.0	0.0	36.3
Outside Services	74.5	0.0	0.0	74.5
Materials	345.8	0.0	0.0	345.8
Removals	39.8	0.0	0.0	39.8
Other	1.7	0.0	0.0	1.7
Risk and Contingency	0.0	0.0	0.0	0.0
Subtotal – Direct Costs	**498.0**	**0.0**	**0.0**	**498.0**
Indirect Capital Costs				
Indirect/Overheads (including benefits)	160.0	0.0	0.0	160.0
Capitalized interest or AFUDC, if any	7.9	0.0	0.0	7.9
Subtotal – Indirect Costs	**167.9**	**0.0**	**0.0**	**167.9**
Total Gross Capital Costs	**665.9**	**0.0**	**0.0**	**665.9**
Customer Contribution	**0.0**	**0.0**	**0.0**	**0.0**
Total Net Capital Project Costs	**665.9**	**0.0**	**0.0**	**665.9**

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

A TripSaver is a self−powered, electronically controlled, single−phase, cutout−mounted vacuum, interrupter recloser. The TripSaver is designed to eliminate the sustained interruption that occurs when a lateral fuse cutout operates in response to a transient fault. It also can eliminate momentary circuit interruptions that occur when a substation circuit breaker or source−side line recloser would otherwise trip to prevent a lateral fuse cutout from operating in response to a transient fault.

b. Project Need

This project is required as the 58 fused lateral locations would benefit from a TripSaver replacement according to reliability metrics in Central CT. The fused lateral locations targeted for replacement with TripSavers were based on historical outage and interruption data. Based on the standardized recloser improvement indices, 60% of customer interruption and 50% of customer minutes saved were utilized.

Total Events	Events Saved	Total Customer Mins	Customer Mins Saved	Total Customers Effected	Customer Int Saved
155	23	3,336,227	383,666	8,828	2,826

Figure 1: Central TripSaver Customer Reliability Indices

c. Project Scope

This project proposes one option, Option 1, as the preferred option. This option looks to replace these fused lateral locations with TripSaver units. The scope of Option 1 is as follows:

AWC	Town(s)	WOs
Cheshire	BRISTOL	1
	CHESHIRE	1
	DURHAM	3
	SOUTHINGTON	1
Hartford	BLOOMFIELD	3
	BOLTON	2
	CROMWELL	3
	EAST HARTFORD	1
	MANCHESTER	4
	SIMSBURY	5
	WEST HARTFORD	2
Tolland	ANDOVER	1
	ASHFORD	2
	COVENTRY	1
	EAST WINDSOR	2
	ENFIELD	4
	GRANBY	3
	MANSFIELD	5
	SOUTH WINDSOR	1
	STAFFORD	1
	TOLLAND	10
	UNION	1
	WILLINGTON	1

For more details on each location, see the Attachments section.

Major Materials:

- 1ph TripSaver Locations: 53
- 2ph TripSaver Locations: 1
- 3ph TripSaver Locations: 4

Qty	Size	Body	Stock Code (as of 10/2025)
2	**25K**	**40A**	620630
6	**40K**	**40A**	622560
4	**40K**	**100A**	620609
3	**65K**	**40A**	622559
17	**65K**	**100A**	620607
1	**80K**	**40A**	622558
6	**80K**	**100A**	622467
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4	**100K**	**40A**	622557
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5	**100K**	**200A**	620605
3	**140K**	**100A**	622764
2	**140K**	**200A**	620603
67			

4. Alternatives Considered

Design Criteria	Option	
	1 – Central TripSavers	2 – NWS
Required to meet project need		
Optimizes locations with TripSaver	X	
Provides alternative source during outage		X
Authorization Type	Partial	Partial
Capital Cost	$665,918	$179,656,803
Expense Cost	$29,177	$7,871,697
Total Cost	$695,095	$187,528,500
Total Cost / CM Saved	$1.81	$488.78
Total Cost / CI Saved	$245.96	$66,358.28
Preferred Option	**X**	

NWS:

The NWS was not selected as it is not cost efficient compared to Option 1. The NWS estimate was calculated at $2M per MWh based on the two lowest of three contractor bids received in Connecticut. Per location, it was assumed the battery would support up to 4 hours and that each location would require further sectionalization to create the battery recovery zone.

Doing nothing here is not recommended as new TripSaver units along these lateral locations can offer greater reliability and mitigate outages that would otherwise occur with a fuse in its place.

5. Project Schedule

Milestone/Phase Name	Estimated Date
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Project Completion	December 31, 2025

6. Regulatory Decisions

N/A

7. Codes and Standards

Codes and Standards
4. DSEM 06.713 – Overhead System Protection & Design Philosophy
5. DSEM 10.431 – TripSaver II General
6. WMS 09.10-234 – Operation Instruction for the S&C TripSaver II

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Customer Permission / Siting Council / Municipal approvals	2025	Low	Design to minimize customer impact. Project Preplanning and customer/community outreach.
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Internal engineering resources not available to perform the work.	2025	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.
Wetlands / Environmentally sensitive area	2025	Low	Use of mats and specialty equipment, only work during certain times of the year.

9. References

References
2.

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

Attachment	Included in Submittal?
A. Cost Estimates	*YES*
B. TripSaver Replacement Locations	*YES*
C. Initial Funding PAF	*YES*

Attachment - A: Cost Estimates

Design Alternative CD02770-01

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	24.00%
SubTotal:	$560,560
Contingency Amount:	$134,534
Estimate:	$695,094
Reimbursement:	$0
Net Amount:	**$695,094**
Description:	

Item Description	CU	[redacted]	Amount
SECTIONALIZE 1PH Tripsaver 1ph TripSaver	25-OH41A		$440,960.00
SECTIONALIZE 3PH Tripsaver 3ph TripSaver	25-OH41B		$119,600.00

Figure 2: Cost Estimates – Option 1 (preferred)

Attachment - B: TripSaver Replacement Locations*



Figure 3: Central TripSaver Replacement Locations

*Locations are subject to change based on field conditions and other variables between now and construction

Attachment - C: Initial Funding PAF

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Project Approval Form

Project Title: 2025 Central BCA Trip Savers	**Project Number: CD02770**
Date Prepared: 07/31/2025	**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 5-year plan?** Yes
	Emergency Related Request? No
Total Request ($): $30K	**Authorization Type:** Initial Funding

1. Project Need Statement

Project CD02770 was established to install Trip Savers at 63 fused lateral locations in Connecticut to reduce the number of outages caused by transient type events (Tree, Animal, Lightning, Patrolled Nothing Found).

Project Location

a. Division: Central

2. Project Objectives

This project will reduce transient type events. Based on the standardized recloser improvement indices, 50% of customer interruption & 50% customer minutes saved was utilized. This project will reduce customer outages and improve system reliability.

Project Initiator: [redacted]

Engineering Approval:

1

Refer to Distribution Capital Project Approval Process
JA-AM-2001-B, Rev.4