EVERSOURCE

Project Approval Form

Project Title [redacted]Mansfield	**Project Number:** CD02136
Date Prepared: 09/11/2025	**Company:** Eversource CT
Organization: Distributed Energy Resource Planning	**Project Category:** Distributed Generation
Project Initiator: [redacted]	**Project Type:** Specific
Initiating Organization: Distributed Energy Resources	**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: $921.2K (100% Reimbursable)	**Authorization Type:** Full Funding

1. Executive Summary

A 1.8 MW photovoltaic (PV) array to be installed at [redacted]Mansfield, CT. The project will interconnect to the [redacted] feeder.

[redacted] This will mark the point in change in ownership from Eversource to the customer.

[redacted] Additional upgrades can be found in the Project Scope section.

- Project Location
  - Division: Central
  - District: Tolland AWC
  - City/Town: Mansfield

The partial funding estimate for this project was $1,113.5K capital and was approved at the 3/14/2024 CTPAC. The full funding request is $921.2K capital. The difference in cost equates to $192.3K, a decrease of 17% of the cost of the project. There was no change in scope change to the project.

The cost difference between the partial and full funding requests were due mainly to 3 factors. The first was to partially use Eversource crews instead of using all Contractor crews for the entire project. This change reduced the cost by $77K ($212K - $135K). Another factor was the reduced cost of the tree trimming used from the original estimate. This accounted for $70K ($150K estimated – $80K used in the final cost). The final factor was the traffic control costs which do not get included in the final cost of this project. These 3 factors were partially offset by an increase in cost due to rock drilling and setting new poles behind the guardrails.

2. Project Cost Summary

Note: Dollar values are in thousands.

Capital Costs	2025	Total
Internal Labor and Construction Equipment	77.7	77.7
Outside Services	134.9	134.9
Materials	159.1	159.1
Removals	12.1	12.1
Risk and Contingency	64.3	64.3
Other	0.0	0.0
Subtotal	**448.1**	**448.1**

Indirect Capital Costs	2025	Total
Indirects/Overheads (including benefits)	473.0	473.0
Capitalized interest or AFUDC, if any	0.0	0.0
Subtotal	**473.0**	**473.0**
Total Capital Costs (Gross)	**921.2**	**921.2**
Less Total Customer Contribution	**-921.2**	**-921.2**
Project Costs (Net of Reimbursement)	**0.0**	**0.0**

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

[redacted] is proposing a 1.8 MW photovoltaic (PV) project, located at [redacted], Mansfield, CT. The project will interconnect to the [redacted]

b. Project Need

The goal of this project is to provide service to the DER applicant to allow their generator to interconnect to the Eversource EPS. This project proposes the installation of a site-dedicated recloser and primary meter. Additional upgrades to the Eversource electric power system include replacing upstream trip savers with radial reclosers and extend three-phase conductors.

c. Project Scope

[redacted]

4. Alternatives Considered

NWS Exclusion Criteria (select all that apply)

☐ Project cost < $250k	☐ New Service
☐ CDOT Relocation	☒ Generator interconnection project
☐ Maintenance, Asset condition or safety related*	

Project Option Comparison

[redacted]		
Additional Benefits (not required to meet scope of project)		
Authorization Type	Partial	Full
Capital Cost	>$5,000K	$921K
Expense Cost		
Total Cost		
Preferred option		X

Option Summary

Preferred: [redacted]. This design was selected due to the cost versus benefit.

Other: [redacted]

5. Project Schedule

Milestone/Phase Name	Estimated Date
Partial Approval	March 2024
100% Detailed Engineering Completion	August 2025
Fully Funded	September 2025
Construction Start	October 2025
In Service Date	December 2025

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.	2025	Low	Included contingency costs in the funding request. The project will also require a facility study to perform the detailed engineering.
Customer Permission / Siting Council / Municipal approvals	2025	Medium	New service requires limited easement with the existing customer.
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	Medium	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.
Technological risks involving integration of new technology	2025	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	2025	Low	The new service poles/equipment will require a limited easement to the customer's site and is not anticipated to go in wetlands.

9. References

References
1. N/A

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

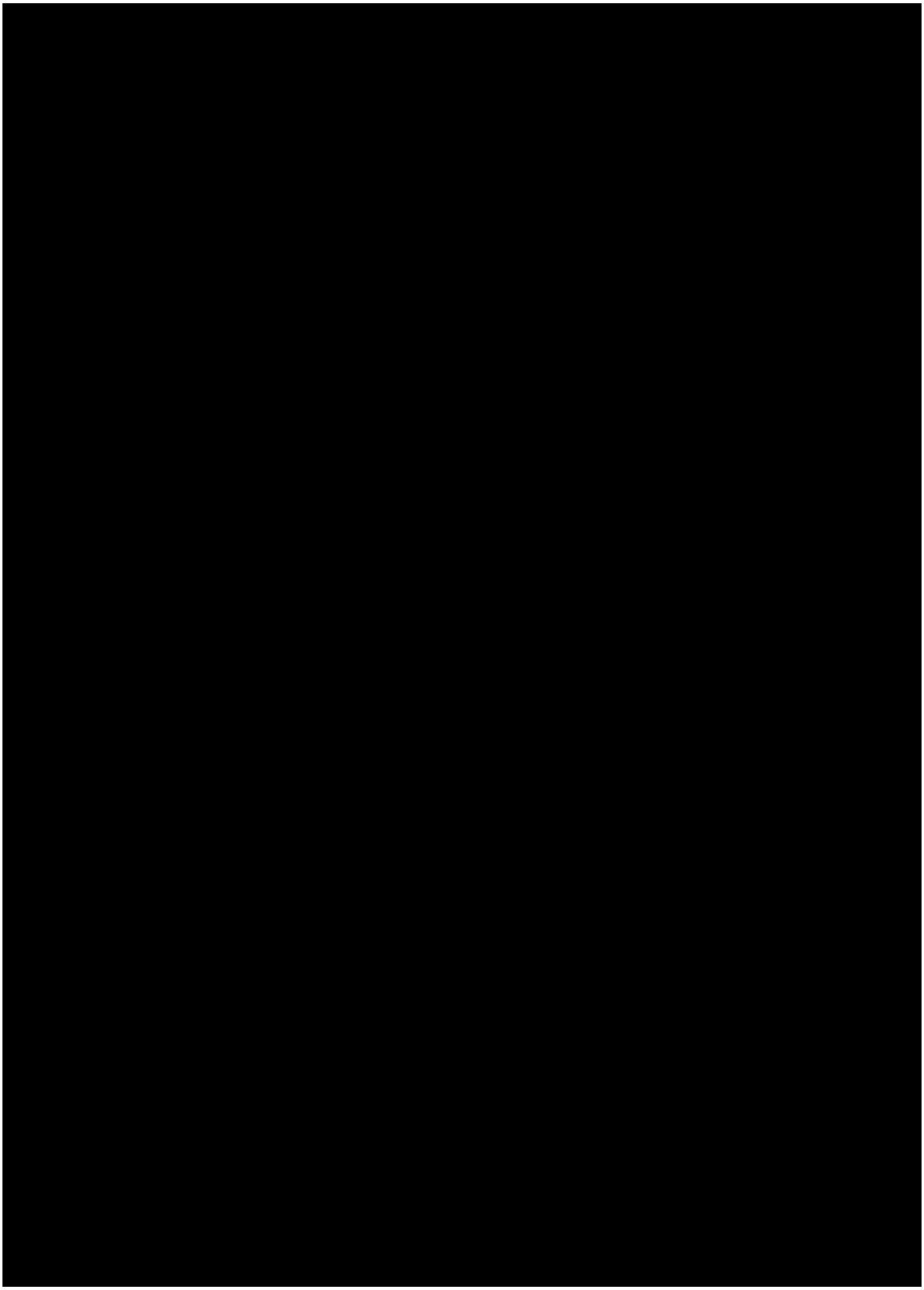
Attachment	Included in Submittal?
A. Cost Estimate	*YES*
B. Geographic Map	*YES*
C. System and Station One-Lines	*YES*

D. Customer Facility Single Line Diagram	*YES*
E. Partial Funding PAF	*YES*

Attachment A - Cost Estimate

Code	Unit Type	Unit Description	Included	Unit of Measu	[redacted]	Total Cost	KEYWORD	Comments
ALL14	ALL	OTHER	Item not in list	$		$30,000	OTHER	Primary metering
ALL18	ALL	OH/DB/UG - Traffic Control - Police Officer	$1000 / day / officer, Urban area, Main/State roads, 2 needed for reconductoring, multiple crews	$		$50,000	TRAFFIC	
OH31	OH	OH - Neutral	Labor and Material to install neutral conductor	FT		$19,136	OH WIRE	New neutral for line extension to Warrenville Rd. (2,000 ft.) Additional 300 ft. on private property.
OH34	OH	OH - Line Extension - 3ph (556 kcmil)	Includes conductor, poles, poletops, arresters, c/o's, guys, average trimming	FT		$358,800	OH WIRE	New line extension on Warrenville Rd. (2,000 ft.). 300 ft. of line extension on private property.
OH38	OH	OH - Recloser - 3ph	Includes Replacing Pole, 6 Stirrups, 6 arresters, 3 Vertical Disc Switches, Control, etc.	LOC		$124,773	SECTIONALIZE	Install radial recloser for the DG. Also install another recloser at pole 1043.
OH43	OH	OH - Vertical Disconnect Switches, 600/900 amp, 3-1ph	Includes: Pole replacement. Disconnects, 6 stirrups, arresters	LOC		$13,368	SECTIONALIZE	Install another disconnect at pole 2907 to replace 65K fuse.
OH61	OH	OH - Tree Trimming	Tree Trimming estimate from Arbonst	$		$97,500	TREE	Tree trimming Estimate
UG146	UG	DB/UG - Riser - 3ph	Includes pole replacement, labor, arrester, cutout, etc.	EA		$14,033	POLE	Install 1 3-Ph riser off Warrenville Rd.
			Contingency/Contractor Contingency/Urban Adder		24%	$169,826		
			Contractor Contingency		30%	$212,283		
				Total		$1,089,719		

Attachment B - Geographic Map



Attachment C - System One-Line



Attachment D - Project SLD





EVERSOURCE

Project Approval Form

Attachment E - Partial Funding PAF

Project Title: [redacted] Mansfield	**Project Number:** CD02136
Date Prepared: 02/12/2024	**Company:** Eversource CT
Organization: Distributed Energy Resource Planning	**Project Category:** Distributed Generation
Project Initiator: [redacted]	**Project Type:** Specific
Initiating Organization: Distributed Energy Resources	**Capital Investment part of original Op Plan:** No
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: $1,113,500 (100% Reimbursable)	**Authorization Type:** Partial Funding

1. Executive Summary

The purpose of this request is to approve the 100% reimbursable preliminary engineering estimate of $1,113,500. This preliminary engineering estimate includes a 54% contingency for a projected December 31, 2025 in service date. 24% of the contingency is for an in-service date a year out, 30% of the contingency is for contractors to perform the work. Note, the total gross capital does not include the CIAC tax or witness test cost. Those costs are illustrated in the Project Cost Summary section. The project will be in the Central Division, in the Town of Mansfield in the Tolland AWC.

[redacted] is proposing a 1.8 MW photovoltaic (PV) project, located at [redacted] Mansfield Center CT. [redacted]

[redacted] This will mark the point in change in ownership from Eversource to the customer.

In addition, [redacted] Additional upgrades can be found in the Project Scope section.

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	66.1	0.0	0.0	66.1
Outside Services	358.9	0.0	0.0	358.9
Materials	146.3	0.0	0.0	146.3
Removals	149.2	0.0	0.0	149.2
Risk and Contingency	0.0	0.0	0.0	0.0
Other	7.3	0.0	0.0	7.3
Subtotal – Direct Costs	**727.8**	**0.0**	**0.0**	**727.8**
Indirect Capital Costs				
Indirect/Overheads (including benefits)	385.7	0.0	0.0	385.7
Capitalized interest or AFUDC, if any	0.0	0.0	0.0	0.0
Subtotal – Indirect Costs	**385.7**	**0.0**	**0.0**	**385.7**
Total Gross Capital Costs	**1,113.5**	**0.0**	**0.0**	**1,113.5**
Customer Contribution	**-1,113.5**	**0.0**	**0.0**	**-1,113.5**
Total Net Capital Project Costs	0.0	0.0	0.0	0.0

The below table illustrates the total cost that will be shared with the customer in the interconnection agreement. It includes a CIAC contribution as well as witness test fee.

Distribution cost with O&M	$1,242,207
CIAC Tax (15%)	$186,331
Total Distribution cost	$1,428,538
Witness Test	$2,000
Facility Study	$75,000
TOTAL CIAC **paid by customer**	**$1,505,538**

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

[redacted] is proposing a 1.8 MW photovoltaic (PV) project, located at [redacted], Mansfield, CT. The project will interconnect to the [redacted]

Project Location:

- Division: Central
- District: Tolland
- City: Mansfield

b. Project Need

The goal of this project is to provide service to the DER applicant to allow their generator to interconnect to the Eversource EPS. This project proposes the installation of a site-dedicated recloser and primary meter. Additional upgrades to the Eversource electric power system include replacing upstream trip savers with radial reclosers and extend three-phase conductors.

c. Project Scope

[redacted]

4. Alternatives Considered

[redacted]

5. Project Schedule

Milestone/Phase Name	Estimated Date
Partial Approval	March 2024
Facility Study	August 2024
Issuance of Interconnection Agreement	September 2024
100% Detailed Engineering Completion	December 2024
Fully Funded	December 2024
Construction Start	January 2025
In Service Date	December 2025

6. Regulatory Decisions

N/A

7. Codes and Standards

See section 9.

8. Risk and Contingencies

Contingencies:

A 54% contingency was added, consistent with an in-service date one year out. This includes a 30% contractor adder.

Risk Mitigation:

No additional dollars were included for risk. Given the magnitude of the upgrades, a facility study is being required. During the facility study, detailed work orders will be written to account for any risk that may not have been caught during the system impact study phase.

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	2024/2025	Medium	Design to minimize customer impact. Project Preplanning and customer/community outreach.
Internal construction resources not available to perform the work.	2024/2025	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	2024	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.
Technological risks involving integration of new technology	2025	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	2025	Low	Use of mats and specialty equipment, only work during certain times of the year.

9. References

References
1. DSEM- Distributed Generation- Remote monitoring and control- 7.0
2. DSEM- Distributed Generation- General Standards- Large scale DER 1.4.1
3. DSEM- New Service- NB-3-7a
4. DER Planning Guide
5.

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

Attachment	Included in Submittal?
A. Cost Estimate	*YES*
B. Geographic Map	*YES*
C. System and Station One-Lines	*YES*
D. Customer Single Line Diagram	*YES*