EVERSOURCE

Project Approval Form

Project Title: [redacted]	Project Number: CD02134
Date Prepared: 05/01/2025	**Company:** Eversource CT
Organization: Distribution Engineering	**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: $163.5K (100% Reimbursable)	**Authorization Type:** Full Funding

1. Executive Summary

- [redacted] is installing an 840 kW photovoltaic (PV) generator
- A distribution impact study determined:
  - the proposed generator has no negative impact on voltage or thermal violations on the distribution system.
  - The generator does not cause any flicker or rapid voltage change at the point of interconnection or anywhere on the [redacted]
  - This project does not cause any transient overvoltage and it has no risk of islanding
- The scope of work to interconnect the generator includes installing an overhead primary service with a recloser and primary meter.
- Project Location
  - Division: Central
  - District: Hartford AWC
  - City: Hartford
- The Full funding request is $163.5K; 56% of the approved Partial Funding amount of $293.7K.
- The Full funding estimate is lower than the Partial Funding estimate due to the elimination of contractor labor and real time automation controller (RTAC), which were included in the Partial Funding estimate.

2. Project Cost Summary

Note: Dollar values are in thousands.

Capital Costs	2025	Total
Internal Labor and Construction Equipment	12.3	12.3
Outside Services	0.0	0.0
Materials	67.6	67.6
Removals	2.5	2.5
Risk and Contingency	11.4	11.4
Other	0.0	0.0
Subtotal	**93.9**	**93.9**

Indirect Capital Costs	2025	Total
Indirects/Overheads (including benefits)	69.6	69.6
Capitalized interest or AFUDC, if any	0.0	0.0
Subtotal	**69.6**	**69.6**
Total Capital Costs (Gross)	**163.5**	**163.5**
Less Total Customer Contribution	**-163.5**	**-163.5**
Project Costs (Net of Reimbursement)	**0.0**	**0.0**

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

- The DER applicant is proposing a new service at their site at [redacted] The customer will be responsible for all electrical design on the load side of the Eversource-owned primary meter.
- An impact study was performed to study the effect of this PV on the 130 primary feeder. All generation online or in queue ahead of the proposed generator was included in the impact study. The study found no negative impact to voltage or thermal limits on the distribution system due to the proposed generator. The generator does not cause any flicker or rapid voltage change at the point of interconnection or anywhere on the [redacted]

b. Project Need

- The DER customer, Ano Brainard has requested Eversource to determine the impact of the generator on the electric power system. The impact study found there to be no negative impact on the [redacted] The generator requires a new service with a primary meter. The new service will only benefit the DER customer and will allow the customer to access the Eversource EPS. All equipment downstream of the primary meter will be owned and operated by the customer.

- The goal of this project is to provide a new service to the DER applicant and to make upgrades to the [redacted] feeder to allow the generator to interconnect to the Eversource EPS.

c. Project Scope

- [redacted]
- [redacted]
- [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 is a compliance obligation - no alternatives considered - no financial benefit

5. Project Schedule

Add any additional milestones that are pertinent to the project

Milestone/Phase Name	Estimated Date
Fully Funded	May 2025
Construction Start	June 2025
In Service Date	July 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. Perform detailed Field Analysis and walk down in project development to avoid potential issues.
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.
Materials Shortage or long lead times	2025	Medium	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	Medium	Schedule work to minimize system abnormal time. Install temporary bypasses/equipment if system will be abnormal for extended periods.

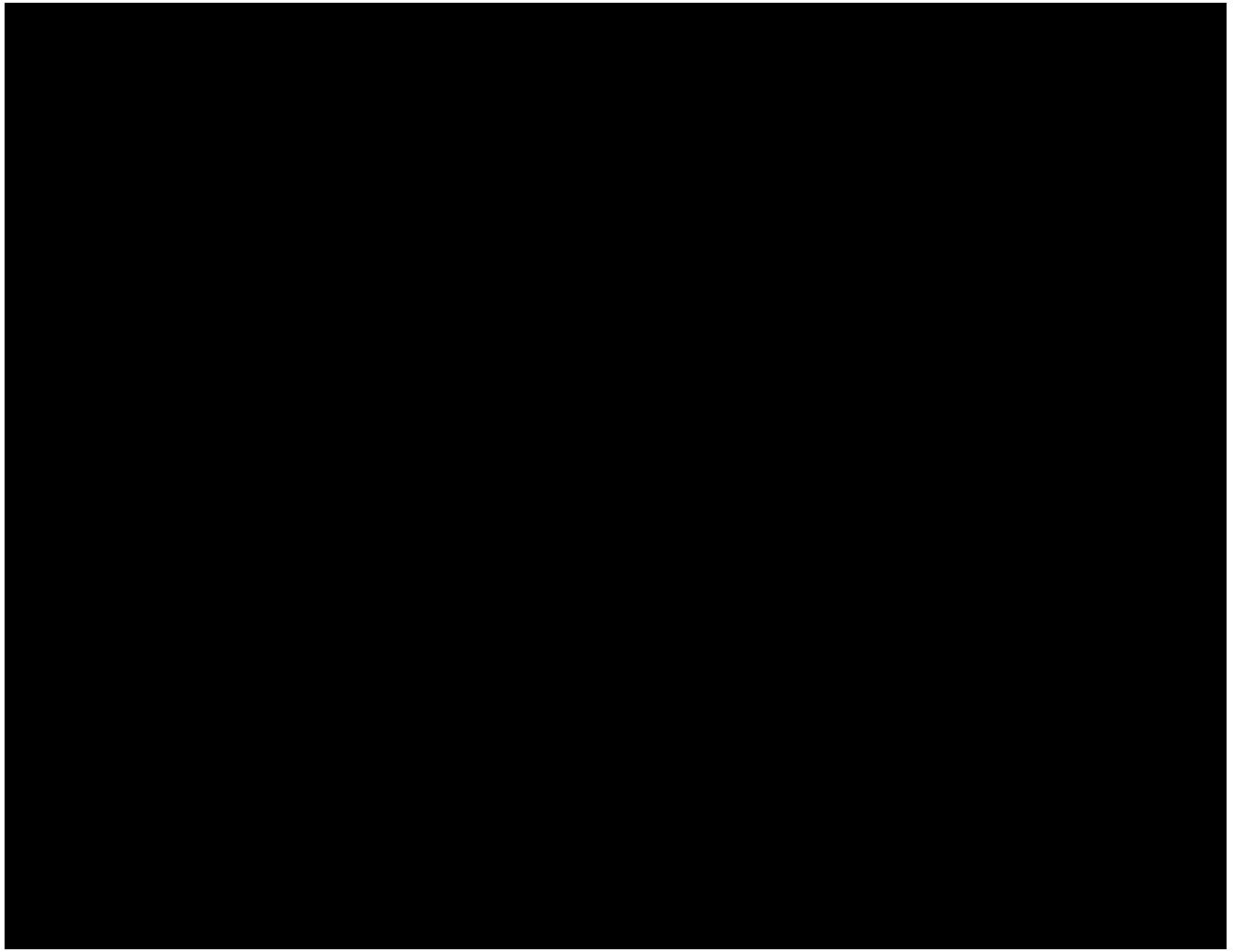
9. References

N/A

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

Attachment	Included in Submittal?
A. Sketch	*YES*
B. Partial Funding PAF	*YES*

Attachment A: Sketch



Attachment B: Partial Funding PAF

Project Title [redacted]	**Project Number:** CD02134
Date Prepared: 07/05/2024	**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: $297.3k *100% Reimbursable	**Authorization Type:** Partial Funding

1. Executive Summary

The purpose of this funding request is to approve the 100% reimbursable partial funding estimate of $297.3k for [redacted] The total 100% Customer Contribution in Aide of Construction as indicated in the project cost summary below is $386,665 which includes O&M, taxes, and a 24% contingency. The project will be in the Central Division, in the Hartford AWC, in the city of Hartford.

[redacted] is proposing an 840 kW photovoltaic (PV) generator at [redacted] A distribution impact study determined the proposed generator has no negative impact on voltage or thermal violations on the distribution system. The generator does not cause any flicker or rapid voltage change at the point of interconnection or anywhere on the [redacted]. This project does not cause any transient overvoltage and it has no risk of islanding. [redacted]

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	17.6	0.0	0.0	17.6
Outside Services	95.8	0.0	0.0	95.8
Materials	39.1	0.0	0.0	39.1
Removals	39.8	0.0	0.0	39.8
Risk and Contingency	1.9	0.0	0.0	1.9
Other	0.0	0.0	0.0	0.0
Subtotal – Direct Costs	**194.3**	**0.0**	**0.0**	**194.3**
Indirect Capital Costs				
Indirect/Overheads (including benefits)	103.0	0.0	0.0	103.0
Capitalized interest or AFUDC, if any	0.0	0.0	0.0	0.0
Subtotal – Indirect Costs	**103.0**	**0.0**	**0.0**	**103.0**
Total Gross Capital Costs	**297.3**	**0.0**	**0.0**	**297.3**
Customer Contribution	**-297.3**	**0.0**	**0.0**	**-297.3**
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 a witness test fee. The project is 100% reimbursable.

Distribution cost with O&M	$331,608
CIAC Tax: 16%	$53,057
Total Distribution cost	$384,665
Witness Test	$2,000
TOTAL Customer Contribution in Aide of Construction. **paid by customer**	$386,665

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

The DER applicant is proposing a new service at their site at [redacted] The customer will be responsible for all electrical design on the load side of the Eversource-owned primary meter.

An impact study was performed to study the effect of this PV on the [redacted]. All generation online or in queue ahead of the proposed generator was included in the impact study. The study found no negative impact to voltage or thermal limits on the distribution system due to the proposed generator. The generator does not cause any flicker or rapid voltage change at the point of interconnection or anywhere on the [redacted]

b. Project Need

The DER customer, [redacted] has requested Eversource to determine the impact of the generator on the electric power system. The impact study found there to be no negative impact on the [redacted] The generator requires a new service with a primary meter. The new service will only benefit the DER customer and will allow the customer to access the Eversource EPS. All equipment downstream of the primary meter will be owned and operated by the customer.

The goal of this project is to provide a new service to the DER applicant and to make upgrades to the [redacted] to allow the generator to interconnect to the Eversource EPS.

c. Project Scope

- [redacted]
- [redacted]
- [redacted]

4. Alternatives Considered

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

[redacted] this PV will be installed on the roof. No other nearby feeders were deemed more economically feasible (all other options are underground) than the [redacted]

5. Project Schedule

Milestone/Phase Name	Estimated Date
Partial Approval	7/25/2024
Re-Issuance of Interconnection Agreement	7/26/2024
Fully Funded	12/31/2024
Construction	06/30/2025
Anticipated In Service Date	12/31/2025

6. Regulatory Decisions

Nonapplicable.

7. Codes and Standards

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

8. Risk and Contingencies

Contingencies:

The cost estimate includes a 24% contingency, standard for the projected in-service date. The project also includes a 30% contractor adder.

Risk Mitigation:

No additional dollars were included for risk. Based on the scope of work, risk is expected to be minimal.

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2025	Low	The 24% contingency is included in the cost. Additionally, this is a standard design with no complications to increase cost
Customer Permission / Siting Council / Municipal approvals/ Wetlands Permitting	2025	Low	Eversource requires limited easement.
Internal construction resources not available to perform the work.	2025	Low	The proposed in-service date is 12/31/2025 which is 17 months away. Sufficient time to plan internal crews on the schedule exists.
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. All equipment will be standard.
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 manufacture. Schedule project to accommodate for extra time or ensure new technology

			is not on the critical path. All equipment to be installed is approved by Standards.
Wetlands / Environmentally sensitive area	2025	Low	The new service requires limited access to the customer's property and is not expected to affect any wetlands.

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

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

Attachment	Included in Submittal?
A. Geographic Map	*YES*
B. Cost Estimate	*YES*
C. Station One-Lines	*YES*
D. Project Site Plan	*YES*
E. Customer One Line	*YES*



Attachment B

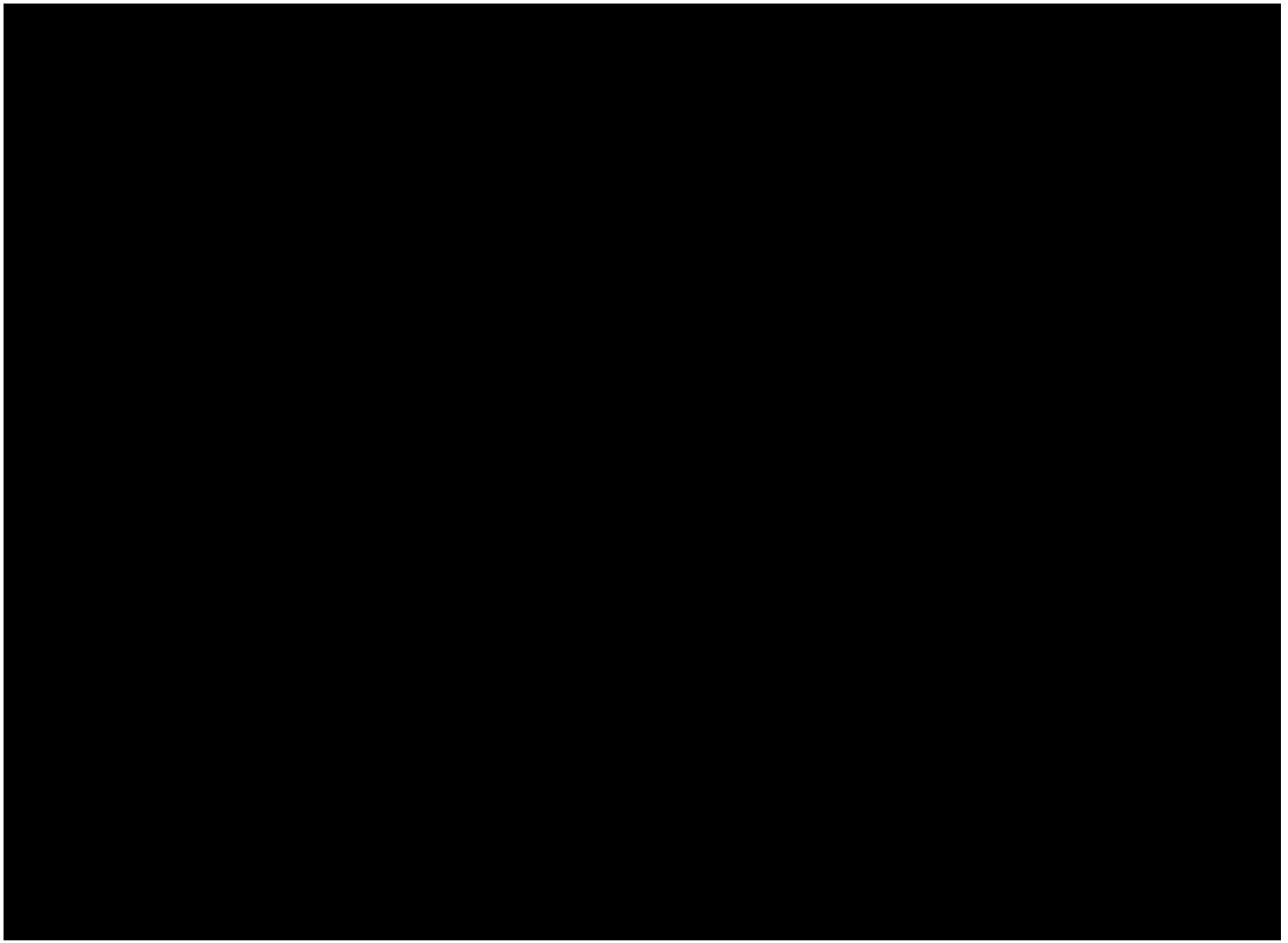
Estimating Sheet

Code	Unit Type	Unit Description	Included	Unit of Measure	[redacted]	Total Cost	KEYWORD
ALL14	ALL	OTHER	30% contractor adder	$		$43,500	30% contractor adder
ALL14	ALL	OTHER	Real Time Automation Controller ($50K ea.)	$		$50,000	RTAC
ALL14	ALL	OTHER	Pole Mounted Primary Metering Cabinet ($30K ea.)	$		$30,000	Pri Meter
ALL17	ALL	OH/DB/UG - SWITCHING NonNetwork - Average	Labor per switching order	EA		$4,562	SWITCHING
ALL18	ALL	OH/DB/UG - Traffic Control - Police Officer	$1000 / day / officer, Urban area, Main/State roads, 2 needed for reconductoring, multiple crews	$		$2,000	TRAFFIC
OH33	OH	OH Line Extension 3ph (336 kcmil)	Includes conductor, poles, poletops, arresters, c/o's, guys, average trimming	FT		$20,280	OH WIRE
OH38	OH	OH - Recloser - 3ph	Includes Replacing Pole, 6 Stirrups, 6 arresters, 3 Vertical Disc Switches, Control, etc	LOC		$62,386	SECTIONALIZE
UG137	UG	UG - Ductline - up to 12 duct - Traveled Way / Paved	Labor and Material	FT		$40,664	CONDUIT
UG146	UG	DB/UG - Riser - 3ph	Includes pole replacement, labor, arrester, cutout, etc.	EA		$14,033	POLE
Total					Sub-Total	$267,426	
					Contingency/Contractor Contingency/Urban Adder 24%	$64,182	
					Total	$331,608	

Attachment C



Attachment D



Attachment E

*Note, new single line is required to be consistent with overhead metering provided by Eversource.

