EVERSOURCE

Project Approval Form

Project Title: GRE, East Windsor, Mulnite II	Project Number: CD01682
Date Prepared: 04/16/2025	**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:** 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: 12/23/2025	**NWS Excludable:** ☒ Yes ☐ No
Total Capital Request: $1,065.1K (100% reimbursable)	**Authorization Type:** Full Funding

1. Executive Summary

Full funding is being requested for this project at a cost of **$1,065.1K** which is 92.4% of the partial funding capital estimate of $1,135K. CD01682 was partially approved in June 2024. There is no scope change on the project. This project falls within the 15% threshold relative to the initial funding request and is therefore being requested with no changes anticipated.

The Original Project was presented as follows:

- *The purpose of this request is to approve the 100% reimbursable partial funding estimate of $1,153K which is 100% reimbursable. The projected in-service date is December 31, 2024. This project was previously written up when the initial construction payments were received and material has already been long led. The long-led equipment is sitting at the [redacted]. The customer decided to re-mobilize earlier this year after putting the project on hold in 2022. The purpose of bringing this PAF back is to add applicable portions of CD01420 (GRE, East Windsor, Mulnite I) to have all work under [redacted].*
- *GRE, East Windsor, Mulnite II is proposing a photovoltaic (PV) generator at their facilities located on [redacted] The [redacted] project proposed near pole [redacted]. The proposed GRE, East Windsor, Mulnite II will interconnect to the [redacted] circuit. A distribution system impact study determined that the proposed project will need [redacted]. 3V0 is not required, as determined under CD01163, previously. The study also determined that there were thermal overloads due to the*

high penetration of DERs on the [redacted]. A dynamic study determined that there are risks of Transient Overvoltage (TOV). The customer will be required to implement their surge protection overvoltage (SPOV) settings on the inverters to dampen the TOV response. Per ISO-NE, a transmission study was not required and a PP5 was filed accordingly. Transmission Planning conducted the Level 0 study with confirmation of no adverse impact.

- *This project is a legacy project and will require a DSCADA trip scheme to ensure the cluster of projects does not transfer to alternate feeders. This is consistent with Greenskies Mulnite I (CD01420). The project lies in the first zone outside of the substation with no upstream SR devices. A DSCADA script may be replaced with language in a future operating instruction (OI). As CD01682 is proceeding before CD01420, the scope of the three-phase line extension down Barber Hill Road is being added to this scope. Approximately [redacted] TW will be used for this unless the Tolland AWC has extra [redacted] to use. The fuse that isolates [redacted] will be replaced with a radial recloser. Manufacturer of the recloser is dependent on what stock the [redacted] has.*

2. Project Cost Summary

Note: Dollar values are in thousands.

Capital Costs	2025	Total
Internal Labor and Construction Equipment	197.8	197.8
Outside Services	19.3	19.3
Materials	159.5	159.5
Removals	12.5	12.5
Risk and Contingency	74.3	74.3
Other	0.0	0.0
Subtotal	**463.3**	**463.3**

Indirect Capital Costs	2025	Total
Indirects/Overheads (including benefits)	601.7	601.7
Capitalized interest or AFUDC, if any	0.0	0.0
Subtotal	**601.7**	**601.7**

Total Capital Costs (Gross)	**1,065.1**	**1,065.1**
Less Total Customer Contribution	**-1,065.1**	**-1,065.1**
Project Costs (Net of Reimbursement)	**0.0**	**0.0**

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

Both projects CD01420 and CD01682 were previously approved. CD01420 was previously approved March 5, 2020 and CD01682 was previously approved December 2, 2021. CD01420 executed their IA in March 2021 and CD01682 executed their IA in January 2022. Construction payments had been made in full. In July 2022, both projects were placed on hold by the developer. Earlier in 2024, the customer reached out to Eversource looking to proceed with just CD01682 and only install [redacted]. The project is being brought back to add [redacted] portion of CD01420 into the scope of work for CD01682. If CD01420 decides to move forward in the future, the new service will be designed under that project.

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 will be done by reconductoring [redacted].

c. Project Scope



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*	

There were no alternates considered. The frontage of the site is Barber Hill Road and the customer requested their facilities to be placed on Barber Hill Road. There were no other circuits nearby to consider.

5. Project Schedule

Add any additional milestones that are pertinent to the project

Milestone/Phase Name	Estimated Date
Partial Approval	Jun 2024
100% Detailed Engineering Completion	Jul 2024
Fully Funded	Mar 2025
Construction Start	Jul 2025
In Service Date	Dec 2025

6. Regulatory Decisions

N/A

7. Codes and Standards

See section 9 below.

8. Risk and Contingencies

Contingencies: A 24% contingency is included. Additionally, dollars have been added for contractors to do the work, as needed depending on scheduling priorities. It is expected that this project will be constructed in-house by the district crews.

Risk Mitigation: Most of the project has already been written up based on the previous kick off the project in 2021 and 2022. Risk at this point is expected to be minimal minus permissioning issues from impacted landowners [redacted].

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. Much of the work has already been walked down and detailed design.
Customer Permission / Siting Council / Municipal approvals	2025	Medium	New service requires limited easement, and most Eversource facilities will be street side. This project requires Eversource to coordinate a line extension of about 1450 feet from residential customers on Barber Hill Road.
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. Project Manager confirmed Tolland AWC has capacity to support this project.
Internal engineering resources not available to perform the work.	2025	Low	Plan internal resources to perform the work. Internal employees are assigned the job and have written most of the work.
Materials Shortage or long lead times	2025	Low	Pre-order long lead time material; minimize the use of non-standard and non-stocked material. Most material has already been long-led.
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. 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

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

Attachment	Included in Submittal?
A1. Partial Funding PAF Form	*YES*
A. Cost Estimate	*YES*
B. Geographic Map	*YES*
C. Circuit One Line	*YES*
D. Project Single Line Diagram	*YES*

Attachment A1: Partial Funding PAF Form

Project Title: GRE, East Windsor, Mulnite II	**Project Number:** CD01682
Date Prepared: 05/24/2024	**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: December 31, 2024	
Total Capital Request: $1,153K (100% reimbursable)	**Authorization Type:** Partial Funding

1. Executive Summary

The purpose of this request is to approve the 100% reimbursable partial funding estimate of $1,153K which is 100% reimbursable. The projected in-service date is December 31, 2024. This project was previously written up when the initial construction payments were received and material has already been long led. The long-led equipment is sitting at the [redacted]. The customer decided to re-mobilize earlier this year after putting the project on hold in 2022. The purpose of bringing this PAF back is to add applicable portions of CD01420 (GRE, East Windsor, Mulnite I) to have all work under CD01682 to provide the generator with a primary, three phase service.

GRE, East Windsor, Mulnite II is proposing a photovoltaic (PV) generator at their facilities located on Barber Hill Road. The Miller Road project proposed near pole [redacted]. The proposed GRE, East Windsor, Mulnite II will interconnect to the [redacted] circuit. A distribution system impact study determined that the proposed project will need [redacted]. 3V0 is not required, as determined under [redacted], previously. The study also determined that there were thermal overloads due to the high penetration of DERs on the [redacted] will need to be upgraded

to [redacted]. The approximate length of the reconductoring [redacted]. The [redacted] was already long led and is sitting at the [redacted]. A dynamic study determined that there are risks of Transient Overvoltage (TOV). The customer will be required to implement their surge protection overvoltage (SPOV) settings on the inverters to dampen the TOV response. Per ISO-NE, a transmission study was not required and a PP5 was filed accordingly. Transmission Planning conducted the Level 0 study with confirmation of no adverse impact.

This project is a legacy project and will require a DSCADA trip scheme to ensure the cluster of projects does not transfer to alternate feeders. This is consistent with Greenskies Mulnite I (CD01420). The project lies in the first zone outside of the substation with no upstream SR devices. A DSCADA script may be replaced with language in a future operating instruction (OI). As CD01682 is proceeding before CD01420, the scope of the three-phase line extension down Barber Hill Road is being added to this scope. [redacted] will be used for this unless [redacted]. The fuse that isolates [redacted] will be replaced with a radial recloser. Manufacturer of the recloser is dependent on what stock the Tolland AWC has.

2. Project Cost Summary

Note: Dollar values are in thousands.

Capital Costs	Year 2024	Year 2025	Year 2026+	Total
Direct Capital Costs	68.4	0.0	0.0	68.4
Internal Labor and Construction Equipment	371.7	0.0	0.0	371.7
Outside Services	151.5	0.0	0.0	151.5
Materials	154.5	0.0	0.0	154.5
Removals	7.5	0.0	0.0	7.5
Risk and Contingency	0.0	0.0	0.0	0.0
Other	**753.6**	**0.0**	**0.0**	**753.6**
Subtotal – Direct Costs	68.4	0.0	0.0	68.4
Indirect Capital Costs				
Indirect/Overheads (including benefits)	399.4	0.0	0.0	399.4
Capitalized interest or AFUDC, if any	0.0	0.0	0.0	0.0

Subtotal – Indirect Costs	**399.4**	**0.0**	**0.0**	**399.4**
Total Gross Capital Costs	**1,153.0**	**0.0**	**0.0**	**1,153.0**
Customer Contribution	**-1,153.0**	**0.0**	**0.0**	**-1,153.0**
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 Including O&M	$1,286,224
CIAC – Tax 15%	$192,934
Total Distribution cost	$1,479,158
Witness Test	$2,000
TOTAL Customer Contribution in Aide of Construction **paid by customer**	**$1,481,158**

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a. Background

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[redacted] portion of CD01420 into the scope of work for CD01682. If CD01420 decides to move forward in the future, [redacted] will be designed under that project.

b. Project Need

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c. Project Scope

[redacted]

4. Alternatives Considered

There were no alternates considered. The frontage of the site is [redacted] and the customer requested their facilities to be placed on [redacted]. There were no other circuits nearby to consider.

5. Project Schedule

Milestone/Phase Name	Estimated Date
Partial Approval	June 6, 2024
100% Detailed Engineering Completion	July 30, 2024
Fully Funded	March 2022 (Actual)
Construction Start	July 30, 2024
In Service Date	December 31, 2024

6. Regulatory Decisions

N/A

7. Codes and Standards

See section 9 below.

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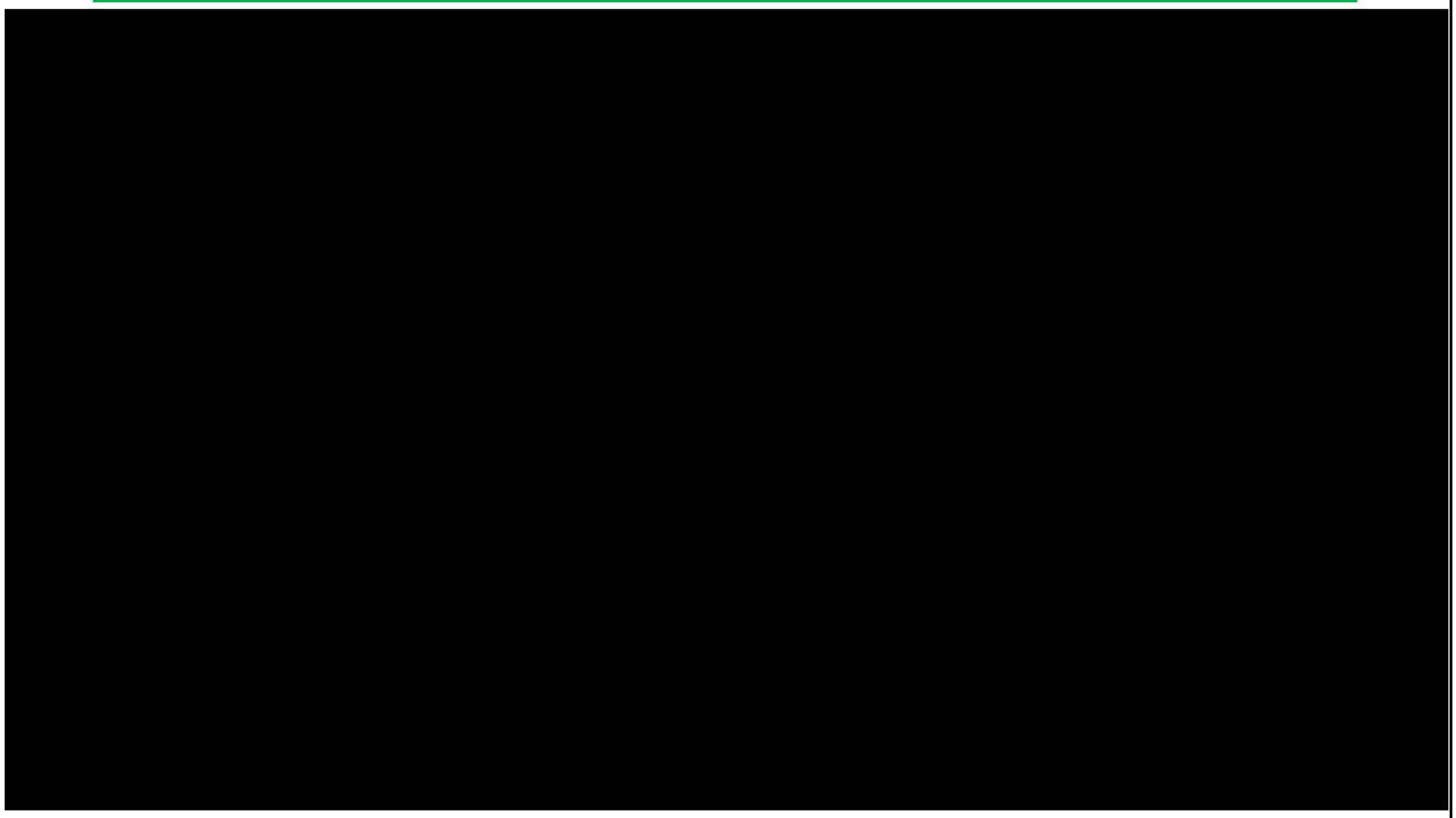
			accommodate for extra time or ensure new technology is not on the critical path.
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B. Geographic Map	*YES*
C. Circuit One Line	*YES*
D. Project Single Line Diagram	*YES*



[redacted]

