EVERSOURCE

Project Approval Form

Project Title: [redacted]	**Project Number:** CD01398
Date Prepared: 05/29/2024	**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: $240.8K (100% reimbursable)	**Authorization Type:** Full Funding

1. Executive Summary

Full funding is being requested for this project at a cost of **$240.8K** which is 37.9% of the partial funding capital estimate of $635.7K. This project was granted partial funding authorization on 05/23/2024. The variance between the full funding and partial funding estimate is due to the point of interconnection being changed by the customer, which reduced the length of the 3-phase wire necessary to interconnect to the solar farm. This resulted in decreased cost, which is reflected in this full funding request.

The Original Project was presented as follows:

- The purpose of this request is to approve the 100% reimbursable partial funding estimate of $635.7K which is 100% reimbursable. This partial funding estimate includes a 20% contingency for a December 31, 2024 in service date. The total cost shared with the customer in the interconnection agreement, including CIAC tax and a witness test fee, is $796,196.
- [redacted]

2. Project Cost Summary

Note: Dollar values are in thousands.

Capital Costs	2024	Year 2	Year 3+	Total
Direct Capital Costs				
Internal Labor and Construction Equipment	17.9	0.0	0.0	17.9
Outside Services	9.3	0.0	0.0	9.3
Materials	104.5	0.0	0.0	104.5
Removals	4.3	0.0	0.0	4.3
Risk and Contingency	21.9	0.0	0.0	21.9
Other	0.0	0.0	0.0	0.0
Subtotal – Direct Costs	**157.8**	**0.0**	**0.0**	**157.8**
Indirect Capital Costs				
Indirect/Overheads (including benefits)	82.9	0.0	0.0	82.9
Capitalized interest or AFUDC, if any	0.0	0.0	0.0	0.0
Subtotal – Indirect Costs	**82.9**	**0.0**	**0.0**	**82.9**
Total Gross Capital Costs	**240.8**	**0.0**	**0.0**	**240.8**
Customer Contribution	**-240.8**	**0.0**	**0.0**	**-240.8**
Total Net Capital Project Costs	**0**	**0.0**	**0.0**	**0**

Explain unique payment provisions, if applicable:

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

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.

b. Project Need

[redacted]

c. Project Scope

[redacted]

4. Alternatives Considered

This project had two alternatives to consider: [redacted]. Eversource distribution engineering determined that interconnection at 27.6 kV was more advantageous for the DER customer and Eversource load customers. At this time there was not enough hosting capacity on the [redacted]. This interconnection point was previously approved at the October 17, 2020 CPAC meeting.

5. Project Schedule

Add any additional milestones that are pertinent to the project

Milestone/Phase Name	Estimated Date
Partial Approval	April 1, 2021
100% Detailed Engineering Completion	May 2024
Fully Funded	July 2024
Construction Start	September 2024
In Service Date	December 2024

6. Regulatory Decisions

N/A

7. Codes and Standards

N/A

8. Risk and Contingencies

Contingencies: A 20% contingency was included. In addition, detailed design was performed on the project scope.

Risk Mitigation:

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2024	Medium	Included contingency costs in the funding request. The new service is a standard design and included a facility study to derive a construction grade estimate
Customer Permission / Siting Council / Municipal approvals	2024	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 1720 feet down US 44.
Internal construction resources not available to perform the work.	2024	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. Facility study was performed in house.
Materials Shortage or long lead times	2024	Medium	Pre-order long lead time material; minimize the use of non-standard and non-stocked material.

Storm delays	2024	Low	If storm activity delays work, we may be forced to use external resources.
System abnormal configuration	2024	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	2024	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	2024	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-Lines	*YES*
D. Project Single Line Diagram	*YES*

Attachment A1 – Partial Funding PAF Form

Project Title: [redacted]	**Project Number:** CD01398
Date Prepared: 05/10/2024	**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: $635.7K, 100% reimbursable	**Authorization Type:** Partial Funding

1. Executive Summary

The purpose of this request is to approve the 100% reimbursable partial funding estimate of $635.7K which is 100% reimbursable. This partial funding estimate includes a 20% contingency for a December 31, 2024 in service date. The total cost shared with the customer in the interconnection agreement, including CIAC tax and a witness test fee, is $796,196.

[redacted]

[redacted]. The

[redacted]

2. Project Cost Summary

Note: Dollar values are in thousands.

Capital Costs	Year 2024	Year 2025	Year 2026+	Total
Direct Capital Costs				
Internal Labor and Construction Equipment	37.7	0.0	0.0	37.7
Outside Services	204.9	0.0	0.0	204.9
Materials	83.5	0.0	0.0	83.5
Removals	85.2	0.0	0.0	85.2
Risk and Contingency	4.1	0.0	0.0	4.1
Other	0.0	0.0	0.0	0.0
Subtotal – Direct Costs	**415.5**	**0.0**	**0.0**	**415.5**
Indirect Capital Costs				
Indirect/Overheads (including benefits)	220.2	0.0	0.0	220.2
Capitalized interest or AFUDC, if any	0.0	0.0	0.0	0.0
Subtotal – Indirect Costs	**220.2**	**0.0**	**0.0**	**220.2**
Total Gross Capital Costs	**635.7**	**0.0**	**0.0**	**635.7**
Customer Contribution	**-635.7**	**0.0**	**0.0**	**-635.7**
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	$709,104

CIAC – Tax 12%	$85,092
Total Distribution cost	$794,196
Witness Test	$2,000
TOTAL Customer Contribution in Aide of Construction **paid by customer**	**$796,196**

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

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.

b. Project Need

[redacted]. However, as part of a capital project in the area, Eversource distribution engineering determined it would be best to interconnect the DER facility to the new [redacted]. The distribution system impact study on [redacted]

c. Project Scope

[redacted]

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

4. Alternatives Considered

This project had two alternatives to consider: [redacted] for the DER customer and Eversource load customers. This interconnection point was previously approved at the October 17, 2020 CPAC meeting.

5. Project Schedule

Add any additional milestones that are pertinent to the project

Milestone/Phase Name	Estimated Date
Partial Approval	April 1, 2021
100% Detailed Engineering Completion	May 2024
Fully Funded	July 2024
Construction Start	September 2024
In Service Date	December 2024

6. Regulatory Decisions

N/A

7. Codes and Standards

See Section 8 below

8. Risk and Contingencies

Contingencies: A 20% contingency was included. In addition, detailed design was performed on the project scope.

Risk Mitigation:

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2024	Medium	Included contingency costs in the funding request. The new service is a standard design and included a facility study to derive a construction grade estimate
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Wetlands / Environmentally sensitive area	2024	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

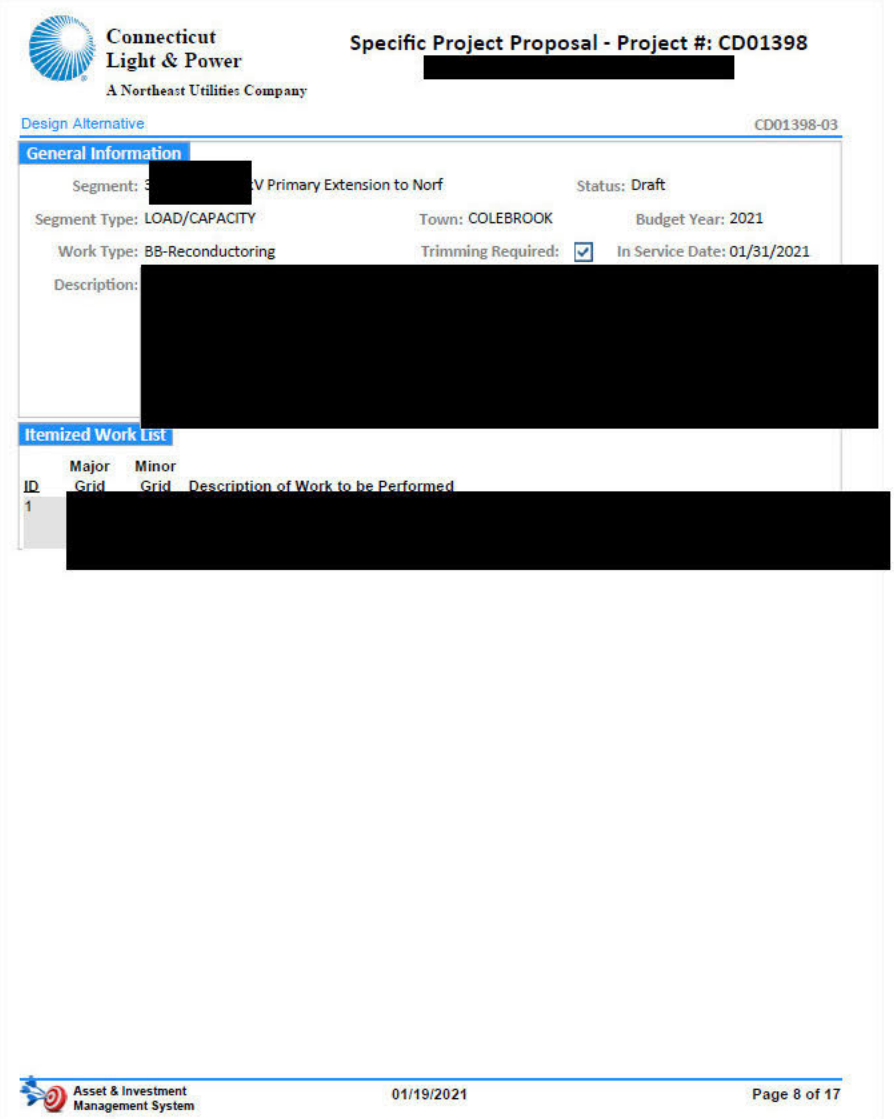
References
1. DSEM- Distributed Generation- Remote monitoring and control- 7.0
2. DSEM- Distributed Generation- General Standards- Large scale DER 1.4.1
3. DSEM- New Service- NB-3-7a
4. DER Planning Guide
1. DSEM- Distributed Generation- Remote monitoring and control- 7.0

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

Attachment	Included in Submittal?
A. Cost Estimate	*YES*

B. Geographic Map	*YES*
C. Circuit One-Lines	*YES*
D. Project Single Line Diagram	*YES*

Attachment A - Cost Estimate



Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD01398 [redacted]

Design Alternative CD01398-03

General Information

Segment: [redacted]V Primary Extension to Norf Status: Draft

Segment Type: LOAD/CAPACITY Town: COLEBROOK Budget Year: 2021

Work Type: BB-Reconductoring Trimming Required: ☑ In Service Date: 01/31/2021

Description: [redacted]

Itemized Work List

ID	Major Grid	Minor Grid	Description of Work to be Performed
1	[redacted]		

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Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD01398 [redacted]

Design Alternative CD01398-03

Estimate

Preliminary Estimate Summary

Revision Number:	0
Contingency:	20.00%
SubTotal:	$474,264
Contingency Amount:	$94,853
Estimate:	$569,117
Reimbursement:	$569,117
Net Amount:	$0

Description: Eng. Estimate fo[redacted] Line Extension for Norfolk Solar

Item Description	CU	$ / Per	Qty	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	16-ALL17	[redacted]		$7,019.20
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18			$15,000.00
OH WIRE OH - Ampact Connectors - 3ph (6 Ampacts)	16-OH22			$2,884.00
TREE OH - Tree Trimming	16-OH61			$45,000.00
POLE OH - POLE - 3ph (CL&P custodian) 1 - 45/2 @ [redacted] 5 - 50' (50% of Total Poles)	16-OH14			$28,056.00
OH WIRE OH - Neutral 1/ 0 ACSR Neutral @ [redacted]	16-OH31			$11,008.00
OTHER OTHER 20% Contractor Adder	16-ALL14			$79,044.00
SECTIONALIZE OH - Cutouts or Arresters - 3ph 24 kV - L. Arresters	16-OH20			$4,630.40
OH WIRE OH - Line Extension - 3ph (556 kcmil)	16-OH34			$206,400.00

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Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD01398 [redacted]

Design Alternative CD01398-03

[redacted]-Line Extension w/ 556 T.W. @ [redacted]

SECTIONALIZE OH - Cutouts or Arresters - 1ph 6 kV L. Arresters	16-OH19	[redacted]	$2,742.40
XF OH - OH XF - 1ph Insr./Rmv. Xfrm.w/ Dual Voltage @[redacted]	16-OH45		$4,219.20
SECTIONALIZE OH - Recloser - 3ph Inst. 1 Radial Recloser @[redacted]	16-OH38		$47,989.60
SECTIONALIZE OH - Cutouts or Arresters - 1ph Open C/O's @[redacted]	16-OH19		$2,742.40
SECTIONALIZE OH - Recloser Control - setting changes only Recloser Setting Change[redacted]	16-OH39A		$4,885.60
POLETOP OH - Replace wood xarm with composite xarm - 3ph Shift 2-#4 Bare Copper 4.8 kV Primary @[redacted]	16-OH17A		$12,643.20

Associated / Impacted Devices

Status	Type / SysID	Street / Cross St	Structure / Town	Circuit	Map	Cust	Notes

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Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD01398 [redacted]

Design Alternative CD01398-04

General Information

Segment: 4 - [redacted] Status: Draft

Segment Type: NEW SERVICE Town: NORFOLK Budget Year: 2021

Work Type: Other Trimming Required: ☐ In Service Date: 01/31/2021

Description [redacted]

Itemized Work List

ID	Major Grid	Minor Grid	Description of Work to be Performed
1			[redacted]

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Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD01398 [redacted]

Design Alternative CD01398-04

Estimate

Preliminary Estimate Summary

Revision Number:	0
Contingency:	20.00%
SubTotal:	$116,656
Contingency Amount:	$23,331
Estimate:	$139,987
Reimbursement:	$139,987
Net Amount:	$0

Description: New Service Installation to Norfolk Solar Installation

Item Description	CU	$ / Per	Qty	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	16-ALL17	[redacted]		$3,509.60
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18			$3,000.00
OH WIRE OH - Ampact Connectors - 3ph (6 Ampacts)	16-OH22			$2,884.00
POLE OH - POLE - 3ph (CL&P custodian) 1 - 45' Road Crossing Pole, 1 - 45' Pole for Metering Rack	16-OH14			$9,352.00
OTHER OTHER [redacted] - Overhead Metering Rack	16-ALL14			$20,000.00
SECTIONALIZE OH - Cutouts or Arresters - 3ph [redacted]. Arresters	16-OH20			$4,630.40
OH WIRE OH - Reconductor w/ 175 Mil Tree Wire - 3ph -1/0 Inst 200' of 1/0 ACSR Tree Wire	16-OH26a			$12,320.00
OH WIRE OH - Neutral Inst 200' of Neutral	16-OH31			$1,280.00
SECTIONALIZE OH - Recloser - 3ph Inst. 1 Radial Recloser [redacted]	16-OH38			$47,989.60

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Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD01398 [redacted]

Design Alternative CD01398-04

POLE OH - JUNCTION POLE - 3ph (CL&P custodian) Inst. Jct Pole 50/1 @ [redacted]	16-OH14A	11690.40 / LOC	1	$11,690.40

Associated / Impacted Devices

Status	Type / SysID	Street / Cross St	Structure / Town	Circuit	Map	Cust	Notes

Attachment B - Geographic Map





Attachment C – Circuit One-Lines



