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Project Approval Form

Project Title: [redacted]	Project Number: CD01594
Date Prepared: 12/27/2023	**Company:** Eversource CT
Organization: Distribution Engineering	**Project Category:** Distributed Generation
Project Initiator: [redacted]	**Project Type:** Specific
Initiating Organization: Distribution	**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: 12/31/24	
Total Capital Request: $854.7k (100% Reimbursable)	**Authorization Type:** Full Funding

1. Executive Summary

[redacted] is proposing a photovoltaic site of 1.95-megawatt (MW) on [redacted] The project will interconnect to the [redacted]

The project underwent a distribution system impact study that determined voltage and thermal limits remained within their ANSI standards after performing the above upgrades. The distribution system impact study also analyzed the project under an [redacted]. The cost estimate of $794,769 includes contingency, police estimates, and tree trimming.

To date, the customer has returned an executed interconnection agreement and has provided a 20% initial payment to begin construction. Eversource anticipates receiving the last two, 40% payments by November 1, 2022. Eversource will collect a total of $840,546, which includes the cost of circuit upgrades, new service, CIAC, and witness testing.

New Service

There will be one point of interconnection for the proposed facility on [redacted] will be necessary to provide service to the PV facility. There [redacted]

- Approved Partial Funding Authorization: $778K at the 10/06/2022 CT-PAC meeting.
- Requesting Full Funding Authorization: $854.7K, a difference of $76.7K or 9.9% of the Partial Funding Authorization

There was no change in scope. The variance is due to increased labor and material changes. The legacy estimating units used to produce the Partial Funding Estimate are 30% lower than the estimates used today, which were updated to reflect increased labor & materials.

2. Project Cost Summary

Financial Evaluation ($000's)

Capital Costs	2024	2025	2026	Total
Internal Labor and Construction Equipment	63.2	0.0	0.0	63.2
Outside Services	245.9	0.0	0.0	245.9
Materials	146.9	0.0	0.0	146.9
Removals	21.5	0.0	0.0	21.5
Risk and Contingency	59.6	0.0	0.0	59.6
Other	0.0	0.0	0.0	0.0
Subtotal	537.1	0.0	0.0	537.1

Indirect Capital Costs	2024	2025	Year 3+	Total
Indirects/Overheads (including benefits)	317.6	0.0	0.0	317.6
Capitalized interest or AFUDC, if any	0.0	0.0	0.0	0.0
Subtotal	317.6	0.0	0.0	317.6
Total Capital Costs (Gross)	854.7	0.0	0.0	854.7

Less Total Customer Contribution	854.7	0.0	0.0	854.7

Project Costs (Net of Reimbursement)	0.0	0.0	0.0	0.0

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

[redacted]

b. Project Need

[redacted]

[redacted] The Eversource distribution system impact study found there to be no adverse impacts to the primary feed or [redacted] because of the DER installation. The project also did not have any adverse impacts to [redacted] The developer has decided to undergo [redacted] ROW that passes through the customer's property is not an option, per Eversource distribution design standards.

[redacted]

Project Scope

Circuit Modifications

This project requires circuit modifications to provide the site with [redacted]. The amount of online and queued DG, including the proposed project, on the [redacted]. The DERs proposed and installed on the [redacted]

New Service

There will be one point of interconnection for the proposed facility on [redacted]. The new service will consist of [redacted]

Major Material:

- 1X overhead, primary meter
- 2X overhead, recloser
- 2350 feet of 556 TW

- Three phase conversion of Johnson Lane
- Spacer cable construction
  - 300 feet of 336 TW
- New service conductor
  - New regulator rack

4. Alternatives Considered

[redacted]

5. Project Schedule

Milestone Phase Name	Estimated Date
100% Engineering Completion	10/06/2023
Construction Start	03/01/2023
Testing/Commissioning	08/01/2023
In Service Date	03/30/2024

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

Attachment	Included in Submittal?
A. Cost Estimate	*YES*
B. Detail Map	*YES*
C. One-line	*NO*
D. Load Sheet	*YES*
E. Partial Funding PAF	*YES*

Attachment A: Cost Estimate:

Connecticut Light & Power
A Northeast Utilities Company

Project Design Alternative: 1
Project: CD01594 - [redacted]

Design Alternative CD01594-01

Estimate

Preliminary Estimate Summary

Revision Number:	0
Contingency:	20.00%
SubTotal:	$662,307
Contingency Amount:	$132,461
Estimate:	$794,769
Reimbursement:	$794,769
Net Amount:	**$0**
Description:	

Item Description	CU	$ / Per	Qty	Amount
OTHER OTHER	16-ALL14	[redacted]		$59,000.00
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	16-ALL17			$7,019.20
POLE OH - POLE - 3ph (Telephone custodian)	16-OH12			$28,480.00
OH WIRE OH - Remove circuit wire (1 phase)	16-OH37			$5,400.00
OTHER OTHER 1x primary metering	16-ALL14			$30,000.00
OH WIRE OH - Line Extension - 3ph (336 kcmil) 3P line extension onto customer property, 4 poles @150 feet per span	16-OH33			$62,400.00
OH WIRE OH - Reconductor w/Spacer Cable - 556 kcmil [redacted] P-3P w/ SC	16-OH29			$240,640.00
SECTIONALIZE OH - Recloser - 3ph Recloser on 1st pole in	16-OH38			$47,989.60
EQUIPMENT OH - Regulators, 3-1ph - on RACK replace 3-416 kVA regs on rack	16-OH48			$61,800.00

Asset & Investment Management System 11/1/2022 Page 2 of 3

Attachment B: Geographic Map

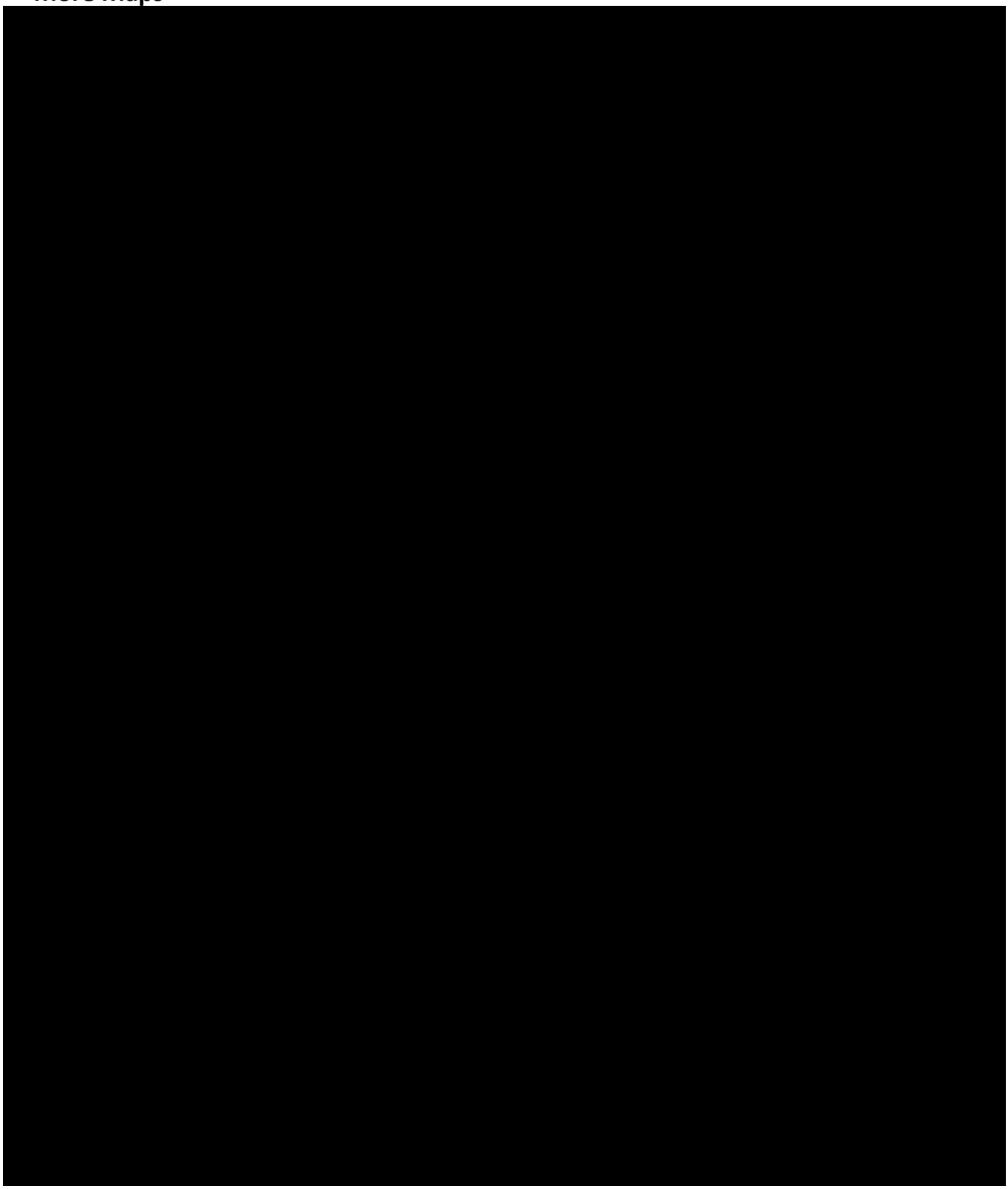
Before



After Map:



More Maps







Partial PAF:

Operations Project Authorization Form

Project Title: [redacted]	**Project Number:** CD01594
Date Prepared: 11/01/2022	**Company:** Eversource CT
Organization: Electric Field Operations	**Class(es) of Plant:** D Line
Project Initiator: [redacted]	**Project Category:** Distributed Generation
Project Manager: [redacted]	**Project Type:** Specific
Project Sponsor: [redacted]	**Capital Investment part of original Operating Plan:** No
Estimated in service date: 09/29/2023	**Emergency Related Request?** No
Eng./Constr. Resources Budgeted? No	**Facility Type** (check all that apply): ☐ PTF ☐ non-PTF ☒ Distribution
Total Gross Capital Request: $778K (100% Reimbursable)	**Authorization Type:** Initial Funding

Executive Summary

[redacted]

To date, the customer has returned an executed interconnection agreement and has provided a 20% initial payment to begin construction. Eversource anticipates receiving the last two, 40% payments by November 1, 2022. Eversource will collect a total of $840,546, which includes the cost of circuit upgrades, new service, CIAC, and witness testing.

Project Costs Summary

Note: Dollar values are in thousands

Capital Costs	Year 2022	Year 2023	Year 2024+	Total
Direct Capital Costs				
Internal Labor and Construction Equipment	$65	$0	$0	$65
Outside Services	$220	$0	$0	$220
Materials	$179	$0	$0	$179
Removals	$27	$0	$0	$27
Risk and Contingency	($70)	$0	$0	($70)
Other	$0	$0	$0	$0
Subtotal – Direct Costs	**$421**	**$0**	**$0**	**$421**
Indirect Capital Costs				
Indirect/Overheads (including benefits)	$357	$0	$0	$357
Capitalized interest or AFUDC, if any	$0	$0	$0	$0
Subtotal – Indirect Costs	**$357**	**$0**	**$0**	**$357**
Total Gross Capital Costs	**$778**	**$0**	**$0**	**$778**
Customer Contribution	**($794)**	**$0**	**$0**	**($794)**
Total Net Capital Project Costs	**($17)**	**$0**	**$0**	**($17)**

Technical Justification:

Project Need, Objective and Justification:

[redacted]

The goal of this project is to provide new service to the DER applicant to allow their generator to interconnect to the Eversource EPS. This project proposes a[redacted]

Project Scope:

Circuit Modifications

[redacted]

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[redacted]

New Service

[redacted]

Major Material:

- 1X overhead, primary meter
- 2X overhead, recloser
- 2350 feet of 556 TW
  - Three phase conversion of Johnson Lane
  - Spacer cable construction
- 300 feet of 336 TW
  - New service conductor
- New regulator rack

Background:

[redacted]ar farm. The [redacted]es do not [redacted]eeder [redacted]online [redacted]of DERs ahead of the project online and in queue.

Alternatives Considered:

Alternatives were considered (please describe below)

[redacted]

Regulatory Approvals:

No

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Project Schedule

Milestone/Phase Name	Estimated Date
100% Engineering Completion	10/06/2023
Construction Start	03/01/2023
Testing/Commissioning	08/01/2023
In Service Date	9/29/2023

Risks and Risk Mitigation Plans

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2023	Medium	Contingency costs were included. Costs may be inflated due to current supply chain crisis. Costs may also go up if contractors need to perform the work.
Customer Permission / Siting Council / Municipal approvals	2023	High	The three phase line extension will be down a primarily residential street that may pose for difficult customer approvals.
Internal construction resources not available to perform the work.	2023	High	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost. Construction is less than a year out, may not be able to secure internal crews.
Internal engineering resources not available to perform the work.	2023	Low	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.
Materials Shortage or long lead times	2023	Medium	Pre-order long lead time material; minimize the use of non-standard and non-stocked material. Regulators are a long lead time item.
Storm delays	2023	Medium	If storm activity delays work, we may be forced to use external resources.
System abnormal configuration	2023	Low	Schedule work to minimize system abnormal time. Install temporary bypasses/equipment if system will be abnormal for extended periods.

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Technological risks involving integration of new technology	2023	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	2023	Low	The reconductoring is down an existing street right of way. There should be no wetlands or environmentally sensitive areas along route. Customer service will also be along the road with limited easement onto the property.

References

Appendices (One-Line Diagrams, Images, etc.)

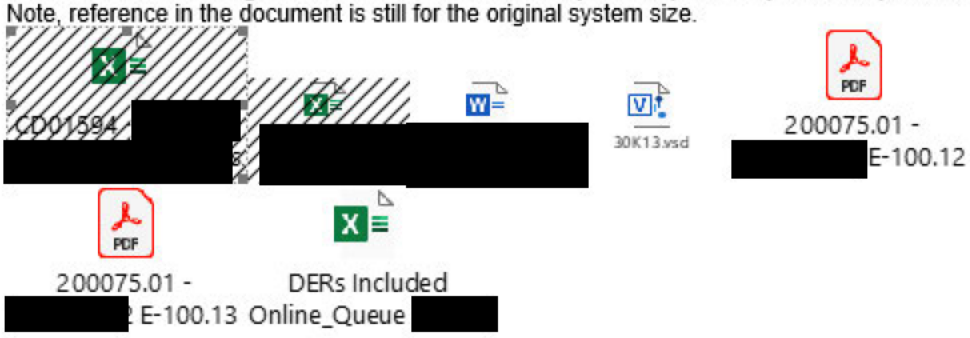
Final Estimate and Needs Statement (11/01/2022) [redacted]



Revised Estimate and Needs Statement (10/06/2022)
These documents reflect the reduction of one primary meter. Since the original estimate, the developer has withdrawn one of their projects. There was originally two projects proposed.



System Impact Study Documentation
Documentation showing the results of the distribution system impact study that was performed on this project. Note, reference in the document is still for the original system size.



Other Option: [redacted]
This estimate shows the cost to interconnect on [redacted] The developer opted to NOT proceed with this route and preferred the [redacted] option. For reference only to illustrate the two

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alternatives Eversource presented as alternatives to a right-of-way interconnection.



Pole 74 3-PH extention.pdf



estimate to pole 74.xls