EVERSOURCE

Project Approval Form

Project Title: [redacted]	**Project Number: CD01473**
Date Prepared: 10/06/2023	**Company:** Eversource CT
Organization: Distribution Engineering	**Project Category:** Generation/Interconnection
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: 12/31/23	
Total Capital Request: $303.6k ($303.6K fully reimbursable)	**Authorization Type:** Full Funding

1. Executive Summary

- [redacted] is proposing a photovoltaic site of 4.975-megawatt (MW) at [redacted] The project will [redacted]

- The project underwent a distribution system impact study that determined voltage and thermal limits remained within their ANSI standards. The distribution system impact study also analyzed the project under an [redacted] studied configurations found no thermal or voltage limit violations. The system impact study determined that the project would need to be effectively grounded. [redacted]

- This project is 100% reimbursable by the customer with final payments on this project expected by the end of 2022.

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

- The Partial Funding estimate for this project was $536K and was approved at the 5/26/20 CTPAC. The project scope was revised on 10/25/22 with a reduced estimate of $398K. The design along North St was changed from a double circuit pole line to a single pole line and the number of primary meters changed from 3 to 2. The final design once again reduced the number of primary meters from 2 to 1.

- The full funding estimate with the reduced scope is $303.6K. The difference in cost equates to $94.4K, a decrease of 24%.

2. Project Cost Summary

Note: Dollar values are in thousands.

Financial Evaluation ($000's)

Capital Costs	2023	Year 2	Year 3+	Total
Internal Labor and Construction Equipment	22.1	0.0	0.0	22.1
Outside Services	51.2	0.0	0.0	51.2
Materials	102.0	0.0	0.0	102.0
Removals	5.5	0.0	0.0	5.5
Risk and Contingency	21.2	0.0	0.0	21.2
Other	0.0	0.0	0.0	0.0
Subtotal	**201.9**	**0.0**	**0.0**	**201.9**

Indirect Capital Costs	Year 1	Year 2	Year 3+	Total
Indirects/Overheads (including benefits)	101.7	0.0	0.0	101.7
Capitalized interest or AFUDC, if any	0.0	0.0	0.0	0.0
Subtotal	**101.7**	**0.0**	**0.0**	**101.7**

Total Capital Costs (Gross)	**303.6**	**0.0**	**0.0**	**303.6**
Less Total Customer Contribution	**303.6**	**0.0**	**0.0**	**303.6**
Total O&M Project Costs*	**51.7**	**0.0**	**0.0**	**51.7**
Project Costs (Net of Reimbursement)	**0.0**	**0.0**	**0.0**	**0.0**

*Informational Purpose only

- Project is 100% reimbursable.

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

- [redacted]

[redacted]

[redacted]

- [redacted]

- [redacted]n.

- The project will require new service at its facility on [redacted]. [redacted] new service will only benefit the DER customer and will allow the customer access to the Eversource electric power system to provide clean, photovoltaic electricity.

c. Project Scope

The scope of the project is as follows:

[redacted]

- **Major Material:**
    - 1,100 ft of 556 TW
    - 2 Reclosers
    - 1 Primary Meter

4. Alternatives Considered

Project is a compliance obligation with alternatives considered (please describe below)

[redacted]

5. Project Schedule

Add any additional milestones that are pertinent to the project.

Milestone/Phase Name	Estimated Date
Partial Approval	5/26/2020
100% Detailed Engineering Completion	6/30/2023
Fully Funded	10/31/2023
Construction Start	9/1/2023
In Service Date	12/31/2023

6. Regulatory Decisions

No

7. Codes and Standards

No

8. Risk and Contingencies

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2023	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	2023	Low	North Street is a farmland area. There are a limited number of houses in the area. No wetlands present as existing facilities are along a road that runs parallel with farm fields.
Internal construction resources not available to perform the work.	2023	Medium	Plan internal resources to perform the work if possible. Use competitive bidding to ensure lowest outside labor cost.
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	High	Pre-order long lead time material; minimize the use of non-standard and non-stocked material. Primary metering is a long lead item.

Storm delays	2023	Low	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.
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. All equipment to be installed is approved by Standards
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. The area is primarily farmland. Customer service will also be along the road with limited easement onto the property.

9. References

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

Attachment	Included in Submittal?
A. Cost Estimate	*YES*
B. P6 Schedule	*NO*
C. Geographic Map	*YES*
D. System and Station One-Lines	*YES*
E. Site Plan	*YES*
F. Partial Funding PAF	*YES*

Attachment A. Cost Estimate

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD01473
[redacted] Enfield

Segment CD01473-02

General Information

Segment: 2 - New Service and [redacted] Extension
Status: Prelim Design Approved
Segment Type: NEW SERVICE
Town: ENFIELD
Budget Year: 2020
Work Type: BB-Sctnlzng-Rclsrs+Recond
Trimming Required: ☐
In Service Date: 6/30/2022
Description [redacted]

Itemized Work List

ID	Major Grid	Minor Grid	Description of Work to be Performed

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD01473 [redacted] Enfield

Segment CD01473-02

Estimate

Preliminary Estimate Summary

Revision Number:	2
Contingency:	0.00%
SubTotal:	$476,658
Contingency Amount:	$0
Estimate:	$476,658
Reimbursement:	$476,658
Net Amount:	$0

Description: New Service & [redacted] Extension

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			$10,000.00
POLE OH - POLE - 3ph (CL&P custodian)	16-OH14			$4,676.00
SECTIONALIZE OH-Vertical Disconnect Switches-600/900 amp 3-1ph	16-OH43			$20,566.40
POLE DB/UG - Riser - 3ph	16-UG146			$32,383.20
OTHER OTHER 11% CIAC tax	16-ALL14			$43,074.00
OTHER OTHER 28% Contingency for 2022 ISD	16-ALL14			$85,659.00
OTHER OTHER 3P 1/0 TW Overbuild	16-ALL14			$96,800.00
OTHER OTHER 3x primary meters	16-ALL14			$90,000.00

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD01473

[redacted] Enfield

Segment			CD01473-02
OTHER OTHER Facility Study to be conducted when the project goes to construction	16-ALL14	[redacted]	$40,000.00
SECTIONALIZE OH - Recloser - 3ph Site Recloser	16-OH38		$47,989.60
OTHER OTHER Standard Witness Test Fee	16-ALL14		$2,000.00

Associated / Impacted Devices

Status	Type / SysID	Street / Cross St	Structure / Town	Circuit	Map	Cust	Notes
Existing	[redacted]	BAILEY RD	ENFIELD	[redacted]		1339	

Reliability Projection

Title:

Outage Start Date: 1/1/2007 Outage End Date: 5/4/2020 Years History: 13.35

[redacted]

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD01473

[redacted], Enfield

Design Alternative CD01473-03

General Information

Segment: 3 - Option 2: Shift [redacted] & DG New Se
Status: Prelim Design Submitted

Segment Type: NEW SERVICE
Town: ENFIELD
Budget Year: 2022

Work Type: BB-Reconductoring
Trimming Required: ☐
In Service Date: 6/30/2022

Description: [redacted]

Itemized Work List

ID	Major Grid	Minor Grid	Description of Work to be Performed

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD01473

[redacted] Enfield

Design Alternative CD01473-03

Estimate

Preliminary Estimate Summary

Revision Number:	0
Contingency:	0.00%
SubTotal:	$536,142
Contingency Amount:	$0
Estimate:	$536,142
Reimbursement:	$536,142
Net Amount:	$0

Description: Shif[redacted] circuit on [redacted]

Item Description	CU	$ / Per	Qty	Amount
OTHER OTHER	16-ALL14	[redacted]		$97,382.00
OTHER OTHER	16-ALL14			$48,969.00
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	16-ALL17			$3,509.60
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18			$10,000.00
POLE OH - POLE - 3ph (CL&P custodian)	16-OH14			$4,676.00
SECTIONALIZE OH-Vertical Disconnect Switches-600/900 amp 3-1ph	16-OH43			$10,283.20
POLE DB/UG - Riser - 3ph	16-UG146			$32,383.20
SECTIONALIZE OH - Recloser - 3ph 1x recloser to isolate[redacted] 1x recloser to isolate DG	16-OH38			$95,979.20
OH WIRE OH - Line Extension - 3ph (336 kcmil)	16-OH33			$15,600.00

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD01473

[redacted] Enfield

Design Alternative CD01473-03

3P line extension for new service			
OTHER OTHER 3x primary metering	16-ALL14	[redacted]	$90,000.00
OTHER OTHER Flat fee for facility study	16-ALL14		$40,000.00
OTHER OTHER Flat witness test fee	16-ALL14		$2,000.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-3ph- 556 kcmil Reconductor 1/0 on [redacted]	16-OH27		$85,360.00

Associated / Impacted Devices

Status	Type / SysID	Street / Cross St	Structure / Town	Circuit	Map	Cust	Notes
Existing	[redacted]	NORTH ST PARK ST	1565 ENFIELD	[redacted]		11	

Reliability Projection

Title:

Outage Start Date: 1/1/2007 Outage End Date: 5/26/2020 Years History: 13.41

[redacted]

Attachment C, Geographic Map



Attachment D. System One-Lines



Attachment E. Site Plan



Attachment F. Partial Funding PAF

EVERSOURCE

Operations Project Authorization Form

Project Title: [redacted]	**Project Number:** CD01473
Date Prepared: 10/25/2022	**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: June 30, 2023	**Emergency Related Request?** No
Eng./Constr. Resources Budgeted? No	**Facility Type** (check all that apply): ☐ PTF ☐ non-PTF ☒ Distribution
Total Gross Capital Request: $398K (100% reimbursable)	**Authorization Type:** Initial Funding

Executive Summary

[redacted]

EVERSOURCE

Project Costs Summary

Capital Costs	Year 2022	Year 2023	Year 2024+	Total
Direct Capital Costs	$33	$0	$0	$33
Internal Labor and Construction Equipment	$113	$0	$0	$113
Outside Services	$92	$0	$0	$92
Materials	$14	$0	$0	$14
Removals	($36)	$0	$0	($36)
Risk and Contingency	$0	$0	$0	$0
Other	**$216**	**$0**	**$0**	**$216**
Subtotal – Direct Costs	$33	$0	$0	$33
Indirect Capital Costs				
Indirect/Overheads (including benefits)	$183	$0	$0	$183
Capitalized interest or AFUDC, if any	$0	$0	$0	$0
Subtotal – Indirect Costs	**$183**	**$0**	**$0**	**$183**
Total Gross Capital Costs	**$398**	**$0**	**$0**	**$398**
Customer Contribution	**($407)**	**$0**	**$0**	**($407)**
Total Net Capital Project Costs	**($9)**	**$0**	**$0**	**($9)**

Technical Justification:

Project Need, Objective and Justification:

The DER customer [redacted] will be [redacted] issues when [redacted] The project will need to be effectively grounded and effective grounding will be provided by the DER customer. A 3V0 scheme will not be incurred from the customer as the design is currently being implemented under a separate DER project. The project, as with all other solar installations, will be required to operate with a ramp rate to control the swings in voltage variation.

Additionally, [redacted] calls for one [redacted] he new service will only benefit the DER customer and will allow the customer access to the Eversource electric power system to provide clean, photovoltaic electricity.

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 extending the [redacted] utilizing the facilities currently associated to the [redacted] This project will also provide the DER customer with new service consisting of primary metering and a site-dedicated recloser.

EVERSOURCE

Project Scope

Circuit Modifications

[redacted]

New Service

[redacted]

Major Material:

[redacted]

Background:

[redacted]

Alternatives Considered:

Project is a compliance obligation with alternatives considered (please describe below)

[redacted]

Regulatory Approvals:

No

EVERSOURCE

Project Schedule

Milestone/Phase Name	Estimated Date
100% Engineering Completion	05/26/2020
Construction Start	03/01/2023
Testing/Commissioning	05/01/2023
In Service Date	06/30/2023

Risks and Risk Mitigation Plans

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2023	Low	Included contingency costs in the funding request.
Customer Permission / Siting Council / Municipal approvals/ Wetlands Permitting	2023	Low	North Street is a farmland area. Will need permission for the three-phase reconductoring work. Limited number of houses to request permission to modify facilities. No wetlands present as existing facilities are along a road that runs parallel with farm fields
Internal construction 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. Construction is within a year out, may not be able to plan internal resources.
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	Low	Pre-order long lead time material; minimize the use of non-standard and non-stocked material. Primary meter is longest lead time item and enough time exists to order. Overbuild conductor is also common and readily in stock.
Storm delays	2023	Low	If storm activity delays work, we may be forced to use external resources.

EVERSOURCE

System abnormal configuration	2023	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	2023	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	2023	Low	The reconductoring is down an existing street right of way. There should be no wetlands or environmentally sensitive areas along route. The area is primarily farmland. Customer service will also be along the road with limited easement onto the property.

References

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

Latest Submissions:



Original Submissions:

