EVERSOURCE

Project Approval Form

Project Title: [redacted] Extension	Project Number: CD02138
Date Prepared: 09/06/2023	**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: 12/31/2023	
Total Capital Request: $236.8k	**Authorization Type:** Full Funding

1. Executive Summary

CD02138 seeks to work in tandem with the improvements under CD01398 to extend the [redacted] and also the mandate from PURA Docket 13-01-32RE01 which called for Colebrook wind to be resupplied from the [redacted] but will require conversion after work is completed from CD01398 where the [redacted]

- Project Location
  - Division: Western
  - District: Torrington AWC
  - Town: Thomaston
- Approved Initial Funding Authorization: $354K at the 06/16/2022 CT-PAC meeting.
- Requesting Full Funding authorization: $476, a difference of $122K or 135% of the Initial Funding authorization.

The variance is due to the following:

$107k Updated Estimating Units: The legacy estimating units used to produce the initial funding estimate is about 30% lower than the estimates used today, which were updated to reflect increased labor and material costs.

Accounting for the 30% cost variance, the remaining difference between the initial and full funding estimate is approximately 5% or $15k.

2. Project Cost Summary

Note: Dollar values are in thousands.

Capital Costs	2023	2024	2025+	Total
Internal Labor and Construction Equipment	12.4	0.0	0.0	12.4
Outside Services	28.7	0.0	0.0	28.7
Materials	100.9	0.0	0.0	100.9
Removals	4.4	0.0	0.0	4.4
Risk and Contingency	16.5	0.0	0.0	16.5
Other	0.0	0.0	0.0	0.0
Subtotal	**162.9**	**0.0**	**0.0**	**162.9**

Indirect Capital Costs	2023	2024	2025+	Total
Indirects/Overheads (including benefits)	73.9	0.0	0.0	73.9
Capitalized interest or AFUDC, if any	0.0	0.0	0.0	0.0
Subtotal	**73.9**	**0.0**	**0.0**	**73.9**
Total Capital Costs (Gross)	**236.8**	**0.0**	**0.0**	**236.8**

Less Total Customer Contribution	**0.0**	**0.0**	**0.0**	**0.0**
Project Costs (Net of Reimbursement)	**236.8**	**0.0**	**0.0**	**236.8**

Explain unique payment provisions, if applicable:

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

Colebrook wind farm is composed of two 2.5MW wind turbines currently [redacted]. Under the work proposed in project CD01398 the installation of a new 4MW solar farm along Route 44 requires the existing [redacted]

This work is a direct extension of the proposed work in project CD01393 and follows the mandate set in PURA Docket 13-01-32RE01 which called for the Colebrook Wind Farm to be [redacted]

b. Project Need

CD02138 seeks to work in tandem with the work encompassed in CD01398 to extend the [redacted]

[redacted]

c. Project Scope

The scope of the project is as follows:

[redacted]

Major Material:

- 3000kVA 27.6/23.0kV Auto XFMR – 3
- Recloser w/ radial settings – 2
- Joint-utility Poles – 3
- Equipment Platform - 1

4. Alternatives Considered

There were no alternative options considered with this project. This project was compliance in order to continue servicing the Colebrook Wind Farm at 23kV while making changes required to support the new 27.6kV Norfolk Solar installation on the [redacted]

5. Project Schedule

Add any additional milestones that are pertinent to the project

Milestone/Phase Name	Estimated Completion Date
Preliminary Approval	12/8/22
Detailed Design	3/1/23
Settings Requested	5/1/23
Construction Start	8/1/23

Milestone/Phase Name	Estimated Completion Date
Construction End	12/31/23

6. Risk and Contingencies

Contingencies:

Risk Mitigation:

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	Medium	Design to minimize customer impact. Project Preplanning and customer/community outreach.
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.
Internal engineering resources not available to perform the work.	2023	Medium	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.
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.
Wetlands / Environmentally sensitive area	2023	Low	Use of mats and specialty equipment, only work during certain times of the year.

7. References

Attachment	Included in Submittal?
A. CD01398 – Town of Norfolk PAF	*NO*

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

Attachment	Included in Submittal?
A. Cost Estimate	*YES*
B. CD02138 Geographic Map	*NO*
C. CD02138 Project One-Line	*YES*
D. Load Summary	*NO*

A. Cost Estimate

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02138

[redacted] Extension

Work Classification

Category: Line
Type: NB3
Type Desc: DISTRIBUTED GENERATION-L4
Work Type:

Ownership / Management

AWC: Torrington
Statewide: No
Owner: [redacted]
Manager:

Project Information

Status: Draft
SPS #:
AIS Score:
Associated Projects:
Assignment ID:
Patrol Find ID:

Budget Summary - Preferred Option

[redacted] 27.6/23.0kV Conversion

2023

ID	Title	Status	Rev #	Contingency	Expenditure Amount	Net Estimate
1	27.6/23.0kV Step Conversion	Draft	0	24%	$169,797	$169,797
				2023 Total:	$169,797	$169,797
				Total Project:	$169,797	$169,797

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Specific Project Proposal - Project #: CD02138

[redacted] Extension

Project Option Summary

ID	Description	Segments	Preliminary Estimate	Construction Estimate	Variance	IEEE $/CMS	All (w/Storm)	Prfrd
O1	[redacted] 27.6/23.0kV Conversion	1	$169,797	$0	100%	$0.00	$0.00	☑

Segments

ID	Title	Preliminary Estimate	Construction Estimate	Variance	IEEE $/CMS	All (w/Storm)
1	27.6/23.0kV Step Conversion	$169,797			$0.00	$0.00

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Specific Project Proposal - Project #: CD02138

[redacted] Extension

Background / Scope

Issue:

Project Description:

Other Considerations:

Revision / ACT Comments:

If we don't do this project, what will happen?

Environmental

Water Pollution: No Change Soil Contamination: No Change Natural Habitats: No Change

Alternatives considered based on Environmental Impact or Description of Aspects Oil Spill Risks Considered? ☐

Safety Concerns With This Project? ☐

Explain:

External Stakeholders

Customer Impact / Involvement

Cust. Impacted: Approx. Pole Count (NU):

Crit. Cust. Impacted: Approx. Pole Count (Other):

Adjoining Property Owner Consent Required: ☐ Town Hearing Required: ☐

Other Utility Pole Custodian Area: ☐ Easement Required: ☐

State Highway Permit Required: ☐

Relocation / New Service

New Srvc. Contact: Requestor Type:

Customer Type: State Highway Project #:

Request Number: Route #:

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A Northeast Utilities Company

Specific Project Proposal - Project #: CD02138

[redacted] Extension

Design Alternative CD02138-01

General Information

Segment: 1 - 27.6/23.0kV Step Conversion
Status: Draft
Segment Type: OTHER
Town: COLEBROOK
Budget Year: 2023
Work Type: LT-Conversion-Recond
Trimming Required: ☐
In Service Date: 12/31/2023
Description:

Itemized Work List

ID	Major Grid	Minor Grid	Description of Work to be Performed

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Specific Project Proposal - Project #: CD02138

[redacted] Extension

Design Alternative CD02138-01

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	24.00%
SubTotal:	$136,933
Contingency Amount:	$32,864
Estimate:	$169,797
Reimbursement:	$0
Net Amount:	**$169,797**

Description:

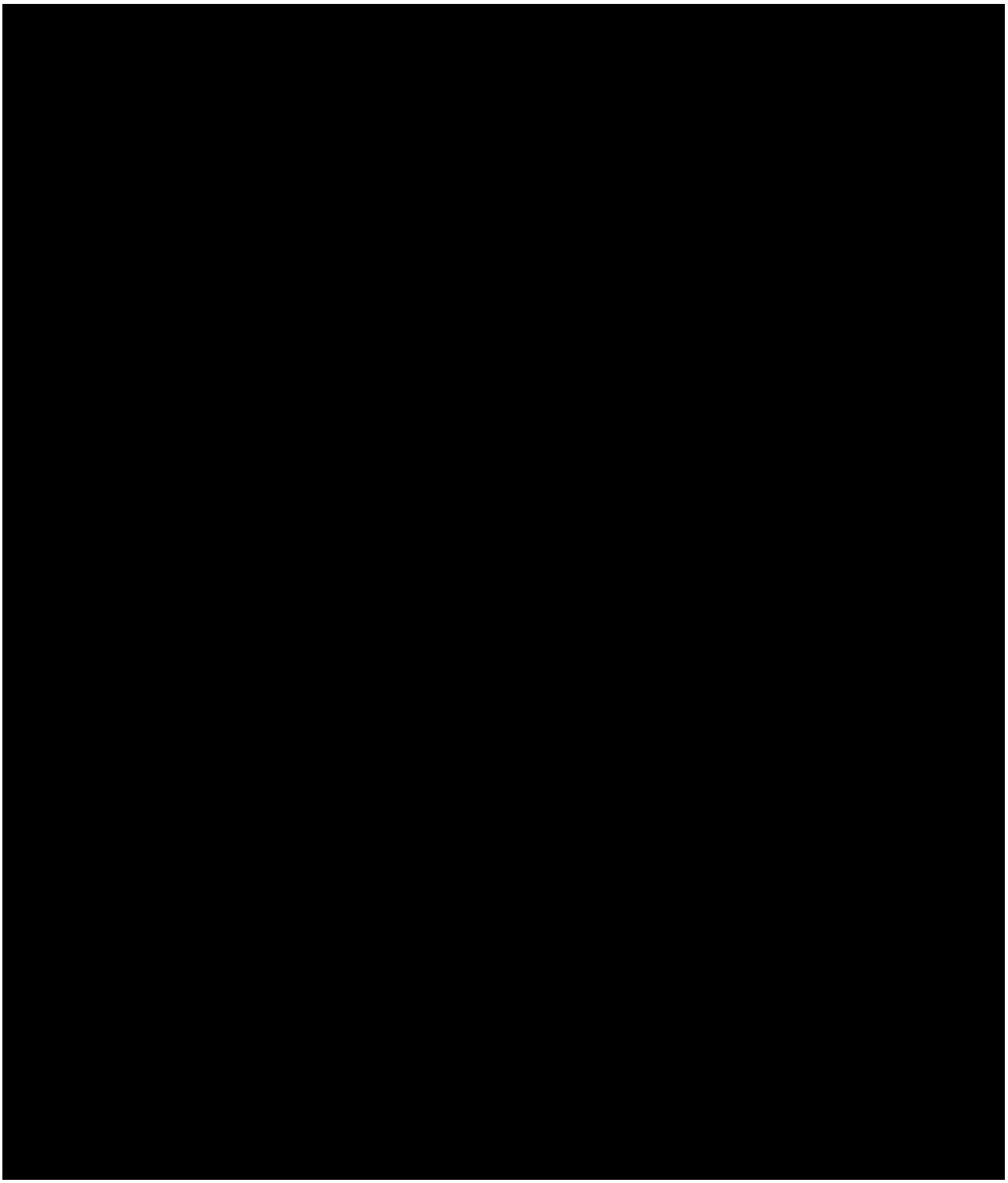
Item Description	CU	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	16-ALL17	$7,019.20
TRAFFIC OH/DB/UG - Traffic Control - Police Officer 1 Police, $1,000/Day, 3 Days	16-ALL18	$3,000.00
XF OH - OH XF or Regulator 3 3000kVA Auto XFMRs - $16,585 each	16-OH51	$0.00
OTHER OTHER Cost for potential Easement	16-ALL14	$15,000.00
SECTIONALIZE OH - Recloser - 3ph Install 1 Recloser on new set pole, High side of autos & 1 on low side	16-OH38	$95,979.20
POLE OH - POLE - 3ph (Telephone custodian) Install new 50' Class 1 Joint Utility Poles	16-OH12	$10,680.00
OTHER OTHER XFMR Rack to be installed between Newset poles. $5,255 each	16-ALL14	$5,255.00

[redacted]

Associated / Impacted Devices

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

C. CD02138 Project One-Line



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Project Approval Form

Operations Project Authorization Form

Project Title: [redacted] **Extension**	**Project Number: CD02138**
Date Prepared: 12/08/2022	**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: 12/31/2023	**Emergency Related Request?** No
Eng./Constr. Resources Budgeted? No	**Facility Type** (check all that apply)**:** ☐ PTF ☐ non-PTF ☒ Distribution
Total Gross Capital Request: $166k	**Authorization Type:** Initial Funding

Executive Summary

CD02138 seeks to work in tandem with the improvements under CD01398 to [redacted] and also the mandate from PURA Docket 13-01-32RE01 which called for Colebrook wind to be resupplied from the [redacted]. The cost for suggested work is $166k.

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Project Costs Summary

Note: Dollar values are in thousands

Capital Costs	2023	2024	2025+	Total
Internal Labor and Construction Equipment	$13.91	$0.00	$0.00	$13.91
Outside Services	$47.03	$0.00	$0.00	$47.03
Materials	$38.28	$0.00	$0.00	$38.28
Removals	$5.73	$0.00	$0.00	$5.73
Risk and Contingency	($14.97)	$0.00	$0.00	($14.97)
Other	$0.00	$0.00	$0.00	$0.00
Subtotal	**$89.98**	**$0.00**	**$0.00**	**$89.98**
Indirect Capital Costs	**2023**	**2024**	**2025+**	**Total**
Indirects/Overheads (including benefits)	$76.26	$0.00	$0.00	$76.26
Capitalized interest or AFUDC, if any	$0.00	$0.00	$0.00	$0.00
Subtotal	**$76.26**	**$0.00**	**$0.00**	**$76.26**
Total Capital Costs (Gross)	**$166.24**	**$0.00**	**$0.00**	**$166.24**

Technical Justification:

Project Need, Objective and Justification:

CD02138 seeks to work in tandem with the work encompassed in CD01398 to extend the [redacted]

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[redacted]

Project Scope:

The scope of the project is as follows:

[redacted]

Major Material:

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- Recloser w/ radial settings – 2
- Joint-utility Poles – 3
- Equipment Platform - 1

Background:

Colebrook wind farm is composed of two 2.5MW wind turbines currently interconnected on the [redacted] and operating at 23.0kV. Under the work proposed in project CD01398 the installation of a new 4MW solar farm along Route 44 requires the [redacted]

This work is a direct extension of the proposed work in project CD01393 and follows the mandate set in PURA Docket 13-01-32RE01 which called for the Colebrook Wind Farm to be fed from the [redacted]

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Business Process and / or Technical Improvements:

The suggested work is proposed to allow continued operation of the existing Colebrook Wind Farm with enhanced protection through the addition of [redacted]

[redacted]

Alternatives Considered:

Were alternative solutions considered/applicable? Include any cost/benefit analysis.

There were no alternative options considered with this project.

Project Schedule

Milestone/Phase Name	Estimated Date
Preliminary Approval	12/8/22
Detailed Design	3/1/23
Settings Requested	5/1/23
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Construction End	12/31/23

Risks and Risk Mitigation Plans

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
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Wetlands / Environmentally sensitive area	2023	Low	Use of mats and specialty equipment, only work during certain times of the year.

Reference Documents

CD01398:

CD01398 - Town of Norfolk PAF (Post SIS)

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

Geographic Map:

CD02138 Geographic Map.pd

Project Oneline:

CD02138 Project Oneline.pdf

Load Sheet:

CD02138 Load Sheet.pdf

Need Statement:

CD02138_project_needs_statement.pdf