EVERSOURCE

Project Approval Form

Project Title: [redacted] – Contingency Overload Project	Project Number: CD02004
Date Prepared: 08/03/2023	**Company:** Eversource CT
Organization: Distribution Engineering	**Project Category:** OVERLOADS-SPECIFIC PROJECTS
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: $1,343.6K	**Authorization Type:** Full Funding

1. Executive Summary

This project was created to address [redacted]

On 3/17/2022, the CPAC committee approved the overall design and capital expenditure for P/N CD01885 which addressed a [redacted] will be addressed under P/N CD02003 in 2024 due to cashflow considerations.

[redacted]

[redacted] The total cost of this project is $1,366,117.00 at a cost per minute saved of $20.89 and has an in-service date of 12/31/2024.

Initial Funding Estimate vs. Bid Document:

The total bid amount of $1,390,626 was 1.8% of the initial funding estimate amount of $1,366,117 for the [redacted] Contingency Overload Project. The overall difference between initial funding estimate as compared to the bid document equates to an over expenditure of $24,509 with no change in scope. To summarize this difference between the initial funding estimate as compared to the bid document equals $24,509 in labor costs.

2. Project Cost Summary

Note: Dollar values are in thousands.

Capital Costs	2023	2024	2025+	Total
Direct Capital Costs				
Internal Labor and Construction Equipment	167.7	0.0	0.0	167.7
Outside Services	333.5	0.0	0.0	333.5
Materials	123.8	0.0	0.0	123.8
Removals	46.9	0.0	0.0	46.9
Risk and Contingency	122.1	0.0	0.0	122.1
Other	0.0	0.0	0.0	0.0
Subtotal – Direct Costs	**794.0**	**0.0**	**0.0**	**794.0**
Indirect Capital Costs	**2023**	**2024**	**2025+**	**Total**
Indirect/Overheads (including benefits)	549.6	0.0	0.0	549.6

Capitalized interest or AFUDC, if any	0.0	0.0	0.0	0.0
Subtotal – Indirect Costs	**549.6**	**0.0**	**0.0**	**549.6**
Total Gross Capital Costs	**1,343.6**	**0.0**	**0.0**	**1,343.6**
Customer Contribution	**0.0**	**0.0**	**0.0**	**0.0**
Total Net Capital Project Costs	**1,343.6**	**0.0**	**0.0**	**1,343.6**

Explain unique payment provisions, if applicable:

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

[redacted]

b. Project Need

[redacted] The cost of the first proposal is $1,131,284.

[redacted]. The cost of the second proposal is $124,142.

[redacted]

[redacted] The cost of the third proposal is $110,690.

c. Project Scope

[redacted]

[redacted]

Major Material:

7 – 50/1 CCA Poles	4,060' – 556 AAC Tree Wire	2 – Three Phase Xfmr. Banks
23 – 45/2 CCA Poles	1 – 900Amp. 25kV GOAB Disconnect Switch	
2 - 25 kV Recloser	3 – Single Phase Xfmrs	

4. Alternatives Considered

Project Option Comparison

	Option		
[redacted]			
Estimate Type	Full	Partial	Partial
Total Cost	$1,391M	$21.04M	$42.06M
Capital Cost	$1.344M	$20.40M	$40.79M
Expense Cost	$47.0K	$640K	$1.27M
Cost / MVA added	$0.286MVA	$3.00/MVA	$6.00/MVA
Cost / CM Saved	$21.27/CM	$195.98/CM	$191.60/CM
Cost / CI Saved	$13,538.17/CI	$29,763.59/CI	$30,031.81/CI
Preferred option	X		

[redacted]

[redacted] at an approximate cost of $ 42.0M.

5. Project Schedule

Add any additional milestones that are pertinent to the project

Milestone/Phase Name	Estimated Completion Date
Preliminary Approval	6/2022
Detailed Design Segments1, 2 &3	12/2023
Settings Requested	2/2024
Construction Start Date Segments 2 &3	3/2024
Construction End Date Segments 1, 2 & 3	12/2024

6. Regulatory Decisions

This project will require a state highway permit for pole replacements and Department of Transportation permits to adjust traffic flow along Albany Turnpike, West Main Street and West Avon Road.

7. Risk and Contingencies

Contingencies:

Risk Mitigation:

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2024	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	2024	Low	Design to minimize customer impact. Project Preplanning and customer/community outreach.
Internal construction resources not available to perform the work.	2024	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.	2024	High	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.
Materials Shortage or long lead times	2024	High	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	Use of mats and specialty equipment, only work during certain times of the year.

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

Attachment	Included in Submittal?
A. Cost Estimate	*YES*
B. CD02004 Overall Site Map	*NO*

C. CD02004 Manhole Configuration Map	*NO*
D. CD02004 Project One-Line	*NO*
E. Load Summary	*YES*

A. Cost Estimate

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02004 [redacted]

Work Classification

Category: Line
Type: BLG1
Type Desc: OVERLOADS-SPECIFIC PROJECTS
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

Preferred Options

2024

ID	Title	Status	Rev #	Contingency	Expenditure Amount	Net Estimate
1	[redacted] Albany Tpke - P# 6635 - 465	Prelim	0	28%	$1,131,284	$1,131,284
2	[redacted] Albany Tpke. - Create Loop w/ [redacted]	Prelim	0	28%	$124,142	$124,142
3	[redacted] West Avon Rd. - Create Loop w/ [redacted]	Prelim	0	28%	$110,690	$110,690
				2024 Total:	$1,366,117	$1,366,117
				Total Project:	$1,366,117	$1,366,117

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02004 [redacted]

Project Option Summary

ID	Description	Segments	Preliminary Estimate	Construction Estimate	Variance	IEEE $/CMS	All (w/Storm)	Prfrd
O1	Preferred Options	1,2,3	$1,366,117	$0	100%	$40.89	$20.89	☑

Segments

ID	Title	Preliminary Estimate	Construction Estimate	Variance	IEEE $/CMS	All (w/Storm)
1	[redacted] - Albany Tpke - P# 6635 - 465	$1,131,284			$178.07	$178.07
2	[redacted] - Albany Tpke. - Create Loop w/	$124,142			$4.01	$1.98
3	[redacted] - West Avon Rd. - Create Loop w/ [redacted]	$110,690			$0.00	$263.22
4	Northeast [redacted] - Alternate Solu	$21,039,285			$0.00	$0.00
5	[redacted] W. Avon Rd. - 7.5 MW Battery Stora	$42,059,545			$0.00	$0.00

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02004

[redacted]

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02004 [redacted]

Background / Scope

Issue:

[redacted]

Project Description:

[redacted]

Other Considerations:

Revision / ACT Comments:

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

[redacted]

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02004 [redacted]

Environmental

Water Pollution: Decrease Soil Contamination: Decrease Natural Habitats: Decrease

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 [redacted] Approx. Pole Count (NU): 30

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 #:

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02004 [redacted]

Design Alternative CD02004-01

General Information

Segment: 1 [redacted] Albany Tpke - P# 6635 - 465 Status: Prelim Design Submitted

Segment Type: LOAD/CAPACITY Town: CANTON Budget Year: 2024

Work Type: BB-Rehab+Recond Trimming Required: ☑ In Service Date: 12/31/2024

Description: [redacted]

Itemized Work List

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

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02004 [redacted]

Design Alternative CD02004-01

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	28.00%
SubTotal:	$883,816
Contingency Amount:	$247,468
Estimate:	$1,131,284
Reimbursement:	$0
Net Amount:	**$1,131,284**

Description: ENG Estimate on Albany Tpke at P# 6635 - 465, 7823 - 7820

Item Description	CU	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	16-ALL17	$21,057.60
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18	$113,344.00
SECTIONALIZE OH - Cutouts or Arresters - 1ph	16-OH19	$4,113.60
OH WIRE OH - Ampact Connectors - 1ph (2 Ampacts)	16-OH21	$4,113.60
OH WIRE OH - Ampact Connectors - 3ph (6 Ampacts)	16-OH22	$20,188.00
OH WIRE OH - Remove circuit wire (3 phase)	16-OH37A	$12,992.00
XF OH - OH XF - 1ph	16-OH45	$4,219.20
XF OH - OH XF's - bank of 3-1ph	16-OH46	$10,038.40
TREE OH - Trimming for Taller Pole	16-OH64	$12,500.00

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02004 [redacted]

Design Alternative — CD02004-01

POLE OH - POLE - 3ph (CL&P custodian) 25 Total Poles, 19 @ 45/2	16-OH14	[redacted]	$46,760.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-3ph- 556 kcmil 556 T.W. @ P# 6635 - 465. P# 7823 - 7820	16-OH27		$315,056.00
SECTIONALIZE OH - Cutouts or Arresters - 3ph 6 - Taps, 2 - C/O's,	16-OH20		$18,521.60
OTHER OTHER Contractor Adder @ 20%	16-ALL14		$180,141.00
OTHER OTHER Core Bore for Poles @ $750/ea - 25 Poles	16-ALL14		$18,750.00
SECTIONALIZE OH - GOAB Switch GOAB @ P# 384	16-OH44		$20,566.40
OTHER OTHER Inst. [redacted]	16-ALL14		$5,656.00
POLE OH - JUNCTION POLE - 3ph (CL&P custodian) Jct. Poles 50/1	16-OH14A		$70,142.40
SECTIONALIZE OH - Remove Recloser (any) Rmv. [redacted]	16-OH42		$5,656.00

Associated / Impacted Devices

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

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02004

[redacted]

Design Alternative CD02004-01

Reliability Projection

Title:

Outage Start Date: 2/9/2018 Outage End Date: 2/9/2022 Years History: 4.00

[redacted]

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02004 [redacted]

Design Alternative CD02004-02

General Information

Segment: 2 - [redacted] - Albany Tpke. - Create Loop w/ [redacted]
Status: Prelim Design Submitted

Segment Type: RECLOSERS
Town: CANTON
Budget Year: 2024

Work Type: BB-Sctnlzng-Reclosers
Trimming Required: ☐
In Service Date: 12/31/2024

Description: [redacted]

Itemized Work List

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

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02004 [redacted]

Design Alternative CD02004-02

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	28.00%
SubTotal:	$96,986
Contingency Amount:	$27,156
Estimate:	$124,142
Reimbursement:	$0
Net Amount:	**$124,142**
Description:	ENG Estimate to Create Loop w/ 5R3 Circuit

Item Description	CU	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	16-ALL17	$7,019.20
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18	$12,438.00
SECTIONALIZE OH - Recloser Control - setting changes only	16-OH39A	$9,771.20
OTHER OTHER Contractor Adder @ 20%	16-ALL14	$19,768.00
SECTIONALIZE OH - Recloser - 3ph Inst. 1 - SR @ P# 2488 - 408 New Midspan Pole	16-OH38	$47,989.60

Associated / Impacted Devices

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

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02004 [redacted]

Design Alternative CD02004-02

Reliability Projection

Title:

Outage Start Date: 2/9/2018 Outage End Date: 2/9/2022 Years History: 4.00

[redacted]

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02004 [redacted]

Design Alternative CD02004-03

General Information

Segment: 3 - [redacted] - West Avon Rd. - Create Loop w/[redacted] Status: Prelim Design Submitted

Segment Type: RECLOSERS Town: AVON Budget Year: 2024

Work Type: BB-Sctnlzng-Reclosers Trimming Required: ☐ In Service Date: 12/31/2024

Description: [redacted]

Itemized Work List

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

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02004 [redacted]

Design Alternative CD02004-03

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	28.00%
SubTotal:	$86,477
Contingency Amount:	$24,214
Estimate:	$110,690
Reimbursement:	$0
Net Amount:	**$110,690**
Description:	ENG Estimate to Create a Loop Scheme with the 5R6 Ckt.

Item Description	CU	Amount
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18	$11,090.00
SECTIONALIZE OH - Recloser - 3ph 1 - SS @ P# 221	16-OH38	$47,989.60
SECTIONALIZE OH - Recloser Control - setting changes only	16-OH39A	$9,771.20
OTHER OTHER Contractor Adder @20%	16-ALL14	$17,626.00

[redacted]

Associated / Impacted Devices

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

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02004

Canton [redacted] Contingency Overload Project

Design Alternative CD02004-03

Reliability Projection

Title:

Outage Start Date: 2/9/2018 Outage End Date: 2/9/2022 Years History: 4.00

[redacted]

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02004 [redacted]

Design Alternative CD02004-04

General Information

Segment: 4 [redacted] - Alternate Solu Status: Draft

Segment Type: LOAD/CAPACITY Town: CANTON Budget Year: 2024

Work Type: BB-Rehab+Recond Trimming Required: ☑ In Service Date: 12/31/2024

Description: [redacted]

Itemized Work List

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

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02004 [redacted]

Design Alternative CD02004-04

Estimate

Preliminary Estimate Summary	
Revision Number:	0
Contingency:	28.00%
SubTotal:	$16,436,942
Contingency Amount:	$4,602,344
Estimate:	$21,039,285
Reimbursement:	$0
Net Amount:	**$21,039,285**
Description:	ENG Estimate for Northeast Simsbury 43F - Alternate Source

Item Description	CU	[redacted]	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	16-ALL17		$119,326.40
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18		$2,094,590.00
POLE OH - JUNCTION POLE - 3ph (CL&P custodian)	16-OH14A		$420,854.40
OH WIRE OH - Ampact Connectors - 3ph (6 Ampacts)	16-OH22		$103,824.00
OH WIRE OH - Line Extension w/Aerial Cable - (any gauge)	16-OH35		$5,389,920.00
SECTIONALIZE OH - Recloser Control - setting changes only	16-OH39A		$19,542.40
SECTIONALIZE OH - Remove Recloser (any)	16-OH42		$39,592.00
SECTIONALIZE OH-Vertical Disconnect Switches-600/900 amp 3-1ph	16-OH43		$164,531.20
XF OH - OH XF - 1ph	16-OH45		$107,589.60

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02004 [redacted]

Design Alternative		[redacted]	CD02004-04
XF OH - OH XF's - bank of 3-1ph	16-OH46		$80,307.20
EQUIPMENT OH - Capacitor, any kVAR, any voltage	16-OH52		$62,083.20
EQUIPMENT OH - Remove Capacitor, any kVAR	16-OH54		$5,400.00
TREE OH - Trimming for Taller Pole	16-OH64		$137,500.00
UG CABLE DB/UG - 350/500 - 3-1/C (3ph) Cu	16-UG114		$233,856.00
UG CABLE DB/UG - 750/1000 - 3-1/C (3ph) Cu	16-UG114B		$664,320.00
CONDUIT UG-Ductline-up to 12 duct - Traveled Way / Paved	16-UG137		$1,648,456.00
ENCLOSURE UG - MANHOLE - Precast	16-UG139		$1,007,782.40
POLE DB/UG - Riser - 3ph	16-UG146		$43,177.60
SECTIONALIZE OH - Cutouts or Arresters - 3ph 16 - Xfmr C/O's, 23 - Three Taps	16-OH20		$90,292.80
CONDUIT DB - Conduit Installation 2 - 5" PVC Cndt.	16-UG152		$133,280.00
SECTIONALIZE OH - Cutouts or Arresters - 1ph 51 - Xfmr C/O's, 33 - Single Taps	16-OH19		$115,180.80
OTHER OTHER	16-ALL14		$39,592.00

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02004 [redacted]

Design Alternative		[redacted]	CD02004-04
7 Recloser Reinstall			
OTHER OTHER Contractor Adder @ 20%	16-ALL14		$3,433,032.00
OTHER OTHER Core Bore Holes @ $750/ea	16-ALL14		$206,250.00
EQUIPMENT OH - Capacitor Control - Install or Replace Inst/Rmv.	16-OH55		$53,985.60
POLE OH - POLE - 3ph (CL&P custodian) Opposite Side of Road near P# 198	16-OH14		$4,676.00
OTHER OTHER Road Repair	16-ALL14		$18,000.00

Associated / Impacted Devices

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

Reliability Projection

Title:

Outage Start Date: 2/9/2018 Outage End Date: 2/9/2022 Years History: 4.00

[redacted]

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02004 [redacted]

Design Alternative CD02004-05

General Information

Segment: 5 - [redacted] W. Avon Rd. - 7.5 MW Battery Stora
Status: Draft
Segment Type: LOAD/CAPACITY
Town: AVON
Budget Year: 2024
Work Type: BB-Rehab+Recond
Trimming Required: ☐
In Service Date: 12/31/2024
Description: [redacted]

Itemized Work List

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

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: [redacted]

Design Alternative CD02004-05

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	28.00%
SubTotal:	$32,859,019
Contingency Amount:	$9,200,525
Estimate:	$42,059,545
Reimbursement:	$0
Net Amount:	**$42,059,545**
Description:	ENG Estimate for 3 - 2.5 MW of Battery Storage on West Avon Rd.

Item Description	CU	[redacted]	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	16-ALL17		$7,019.20
OTHER OTHER Inst 3 - 2.5 MW Battery Storage Units	16-ALL14		32,852,000.00

Associated / Impacted Devices

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

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02004 [redacted]

Design Alternative CD02004-05

Reliability Projection

Title:

Outage Start Date: 2/9/2018 Outage End Date: 2/9/2022 Years History: 4.00

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]