Operations Project Authorization Form

Project Title: [redacted] Smart Switch Project [redacted]	**Project Number: CD01988**
Date Prepared: 09/01/2023	**Company:** Eversource CT
Organization: Distribution Engineering	**Project Category:** SMART SWITCHES PROGRAM
Project Initiator: [redacted]	**Project Type:** Specific
Initiating Organization: Distribution	**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: 12/30/2023	
Total Capital Request: $131.58K	**Authorization Type:** Full Funding

1. Executive Summary

[redacted]

The initial engineering estimate for project CD01988 was approved for $160K on April 28th, 2022. However, the project was completed under budget due to in part by the reduction of indirect capital cost and the reduction of outside services as it was originally planned.

2. Project Cost Summary

Note: Dollar values are in thousands.

Financial Evaluation

Capital Costs	2023	2024	2025	Total
Internal Labor and Construction Equipment	$8,796	$0	$0	$8,796
Outside Services	$486	$0	$0	$486
Materials	$72,627	$0	$0	$72,627
Removals	$0	$0	$0	$0
Risk and Contingency	$9,176	$0	$0	$9,176
Other	$1,165	$0	$0	$1,165
Subtotal	**$92,250**	**$0**	**$0**	**$92,250**

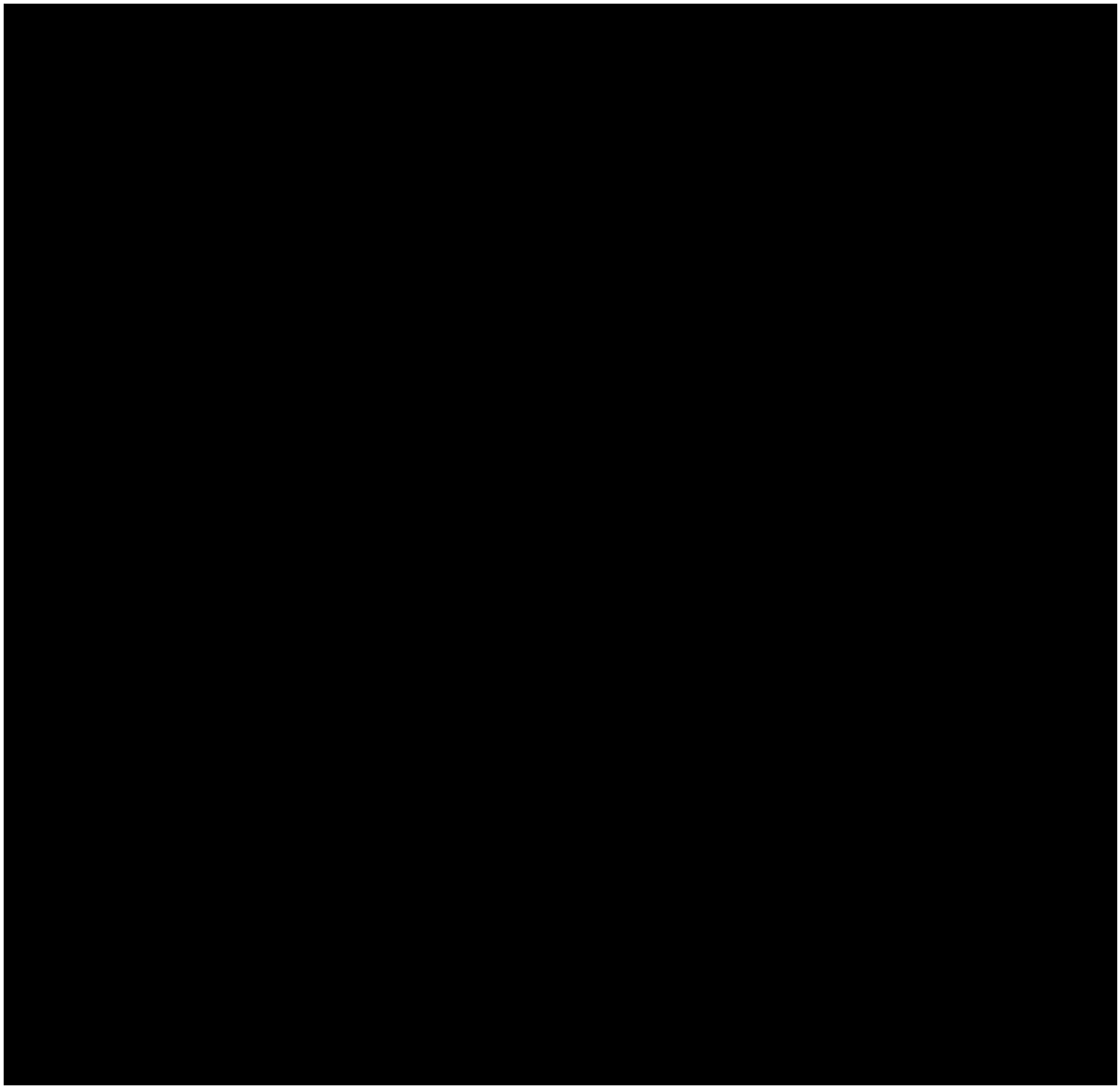
Indirect Capital Costs	2023	2024	2025	Total
Indirects/Overheads (including benefits)	$39,278	$0	$0	$39,278
Capitalized interest or AFUDC, if any	$0	$0	$0	$0
Subtotal	**$39,278**	**$0**	**$0**	**$39,278**
Total Capital Costs (Gross)	**$131,528**	**$0**	**$0**	**$131,528**
Less Total Customer Contribution	**$ -**	**$ -**	**$ -**	**$ -**
Total O&M Project Costs	**$0**	**$0**	**$0**	**$0**
Project Costs (Net of Reimbursement)	**$131,528**	**$0**	**$0**	**$131,528**

3.Technical Justification

a. Background

[redacted]

[redacted]



b. Project Need

[redacted]

c. Project Scope

(Preferred Option: Install two Smart Switches $ 160K) This option was selected because it addresses all reliability concerns using automation)

This[redacted]

Major Material:

- Recloser, Cooper Nova – 2
- Form 6 Control - 2
- Eversource pole – 1
- Frontier pole – 1
- 900 amp switches – 2 sets

4. Alternatives Considered

Alternatives were considered (please describe below)

Design Criteria	[redacted]		
Cost	$160K	$76K	$160K
Cost / CM Saved	$0.67/CM	$0.64/CM	$0.67/CM
Cost / CI Saved	$0.30/CI	$621.46/CI	$0.30/CI
Preferred option	X		

[redacted]

Regulatory Approvals:

No

5. Project Schedule

Milestone/Phase Name	Estimated Date
Preliminary Approval	4/28/2022
100% Engineering Completion	6/1/2022
Construction Start	1/1/2023
Testing/Commissioning	6/1/2023
In Service Date	12/31/2023

6. Regulatory Decisions

7. Codes and Standards

8. Risk and Contingencies

9.

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	Design to minimize customer impact. Project Preplanning and customer/community outreach.
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.
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.
Storm delays	2023	Medium	If storm activity delays work, we may be forced to use external resources.

10. References

References
N/A

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

Attachment	Included in Submittal?
A. Project Need Statement	*YES*
B. CD01988 Geographical Map	*YES*
C. CD01988 One Line	*YES*
D. Load Sheet	*YES*
E. Outage History	*YES*

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

CD01988 Needs Statement.pdf
CD01988 Geographic Map.pdf
CD01988 One Line.pdf
CD01988 Load Sheet.xlsx
CD01988 Outage History_2018-2022.xl

Detail Map **On-Line Map** **Load Summary** **Zone Projection**

- *Attachment A*

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD01988 [redacted]

Design Alternative CD01988-01

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	24.00%
SubTotal:	$135,565
Contingency Amount:	$32,536
Estimate:	$168,100
Reimbursement:	$0
Net Amount:	**$168,100**
Description:	

Item Description	CU	[redacted]	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	16-ALL17		$7,019.20
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18		$7,000.00
SECTIONALIZE OH-Vertical Disconnect Switches-600/900 amp 3-1ph	16-OH43		$20,566.40
SECTIONALIZE OH - Recloser - 3ph P.640, 1632	16-OH38		$95,979.20
OTHER OTHER remove goab	16-ALL14		$5,000.00

Associated / Impacted Devices

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

EVERSOURCE

Project Approval Form



EVERSOURCE

Project Approval Form

[redacted]

EVERSOURCE

Project Approval Form

INITIAL FUNDING PAF
Operations Project Authorization Form

Project Title [redacted]	**Project Number: CD01988**
Date Prepared: 04/28/2022	**Company:** Eversource CT
Organization: Electric Field Operations	**Class(es) of Plant:** D Line
Project Initiator: [redacted]	**Project Category:** SMART SWITCHES PROGRAM
Project Manager: [redacted]	**Project Type:** Specific
Project Sponsor: [redacted]	**Capital Investment part of original Operating Plan:** Yes
Estimated in service date: 12/31/23	**Emergency Related Request?** No
Eng./Constr. Resources Budgeted? Yes	**Facility Type** (check all that apply): ☐ PTF ☐ non-PTF ☒ Distribution
Total Gross Capital Request: $160K	**Authorization Type:** Initial Funding

Executive Summary

[redacted]

Project Costs Summary

Note: Dollar values are in thousands

Capital Costs	Year 2023	Year 2024	Year 2025	Total
Direct Capital Costs				
Internal Labor and Construction Equipment	$3	$0	$0	$3
Outside Services	$81	$0	$0	$81
Materials	$9	$0	$0	$9
Removals	$4	$0	$0	$4
Risk and Contingency	($0)	$0	$0	($0)
Other	$0	$0	$0	$0
Subtotal	**$97**	**$0**	**$0**	**$97**
Indirect Capital Costs	**Year 1**	**Year 2**	**Year 3+**	**Total**
Indirects/Overheads (including benefits)	$64	$0	$0	$64
Capitalized interest or AFUDC, if any	$0	$0	$0	$0
Subtotal	**$64**	**$0**	**$0**	**$64**
Total Capital Costs (Gross)	**$160**	**$0**	**$0**	**$160**

Technical Justification:

Project Need, Objective and Justification:

[redacted]

Project Scope:

[redacted]

Major Material:

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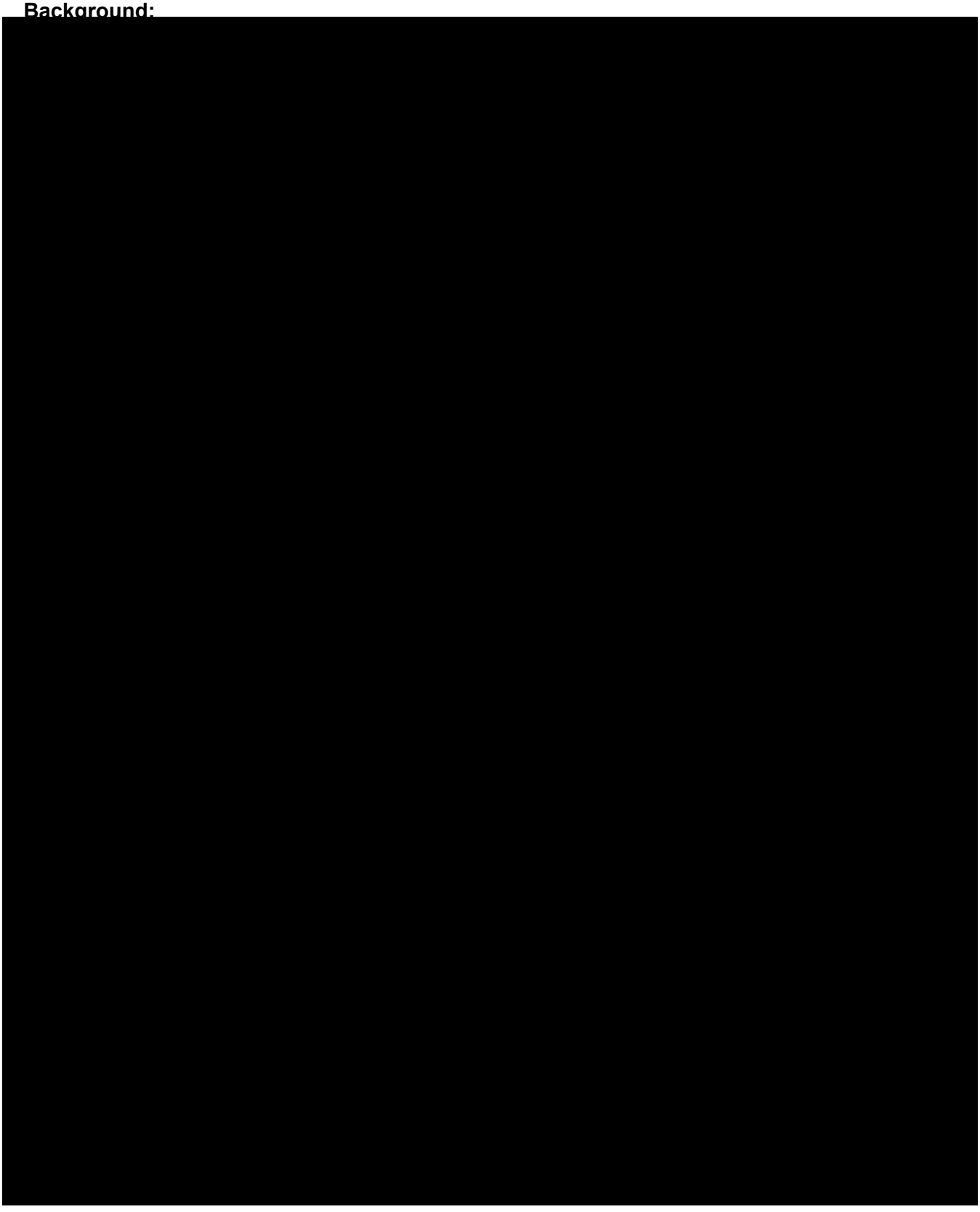
EVERSOURCE

Project Approval Form

Background:



Alternatives Considered:

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

Alternatives were considered (please describe below)

Design Criteria	[redacted]		
Cost	$160K	$76K	$160K
Cost / CM Saved	$0.67/CM	$0.64/CM	$0.67/CM
Cost / CI Saved	$0.30/CI	$621.46/CI	$0.30/CI
Preferred option	X		

[redacted]

[redacted]

Regulatory Approvals:

Are Regulatory body approvals needed for the project?

No

If yes, provide detailed regulatory approvals

Project Schedule

Milestone/Phase Name	Estimated Date
Preliminary Approval	4/28/2022
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Risks and Risk Mitigation Plans

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
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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.
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.
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.

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

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CD01988 Geographic Map.pdf

CD01988 One Line.pdf

CD01988 Load Sheet.xlsx

CD01988 Outage History_2018-2022.xl