Operations Project Authorization Form

Date Prepared: May 11, 2023	**Project Title: [redacted] New Switchgear**
Company/ies: Eversource CT	**Project ID Number: CD01755**
Organization: Distribution Electric	**Class(es) of Plant: Distribution**
Project Initiator: [redacted]	**Project Category: Line**
Project Manager: [redacted]	**Project Type: Line work for Transmission**
Project Sponsor: [redacted]	**Project Purpose: New feeder manholes/ductbanks**
Estimated in service date: 12/31/23	**If Transmission Project: PTF?**
Eng. / Constr. Resources Budgeted? N	**Capital Investment Part of Original Operating Plan? N**
Authorization Type: Full Funding	**O&M Expenses Part of the Original Operating Plan? N**
Total Request: $2,223K	**(100% to be transferred to Transmission Project)**

Financial Requirements:

Project Authorization

ERM: _____

FP&A: _____

Executive Summary

[redacted]

[redacted]. The high-level estimate for this work is $284K.

[redacted]

Per Transmission, the scope of the Distribution work requires Transmission to purchase the cables and all associated material and equipment and resources for this project, and thus will require a Distribution project and a Distribution workorder. Transmission will journal all costs from the Distribution workorder to the Transmission workorder.

May 11, 2023 – Full Funding is $2,223K. Initial Funding was approved for 1,290K on 12/9/21. The Full Funding is 172% over the Initial Funding, or $993K over.

The discrepancies can be attributed to the following:

- February 6, 2023 –Transmission requested additional funding due to a change of design for civil work due to field conditions outside the substation fence. Specifically, two [redacted]. The breakdown is as follows:
  1) Additional distribution ductbanks – $465K
  2) Relocate manhole #9 – $50K
  3) Rock removal, utility obstructions, material – $150K
     Total additional requested – $665K

The remaining $328K can be attributed to the following:

- [redacted]
- [redacted] $186.5K. [redacted]
- [redacted].

These additional costs, and all distribution costs, will be journaled from the distribution workorder to the Transmission workorder 80225464.

Financial Evaluation

Note: Dollar values are in thousands

Capital Costs	2022	2023	2024	Total
Internal Labor and Construction Equipment	22.5	140.4	0.0	162.9
Outside Services	108.3	675.9	0.0	784.2
Materials	20.7	129.0	0.0	149.6
Removals	10.8	67.7	0.0	78.5
Risk and Contingency	21.4	133.7	0.0	155.1
Other	0.0	0.0	0.0	0.0
Subtotal	**183.7**	**1,146.7**	**0.0**	**1,330.4**

Indirect Capital Costs	2022	2023	2024	Total
Indirects/Overheads (including benefits)	123.3	769.7	0.0	893.0
Capitalized interest or AFUDC, if any	0.0	0.0	0.0	0.0
Subtotal	**123.3**	**769.7**	**0.0**	**893.0**

Total Capital Costs (Gross)	**307.0**	**1,916.3**	**0.0**	**2,223.4**

Less Total Customer Contribution	**0.0**	**0.0**	**0.0**	**0.0**
Project Costs (Net of Reimbursement)	**307.0**	**1,916.3**	**0.0**	**2,223.4**

Note: Explain unique payment provisions, if applicable

Technical Justification:

Project Need Statement

[redacted] The work involves replacing the existing transformers and switchgear, install new ductbanks, manholes, and feeder getaways. Eversource Distribution is responsible to install new cable getaways and will be required to install temporary voltage regulators outside the station and remove the existing regulators inside the substation to make room for the proposed work. Also, the [redacted]. Due

to this, it is proposed to remove this portion of the [redacted]

Project Objectives

Eversource Distribution is required to coordinate the installation of new manholes, ductbanks and cables; relocate the [redacted] to the road; and the removal and installation of three sets of voltage regulators.

Project Scope

[redacted]

Major Material:

1000 kcmil Cu cable, stockcode 514042 – 2,085 feet
Frontier poles – 6
Eversource poles – 4
556 tree wire – 1,700 feet
Voltage regulators, 438 amp, stockcode 590521 – 6
Voltage regulators, 328 amp, stockcode 590223 – 3

Background / Justification

Eversource Transmission is converting the transmission source to [redacted]

Business Process and / or Technical Improvements:

Eversource Transmission project.

Alternatives Considered with Cost Estimates
None, due to Eversource Transmission request.

Project Schedule

Milestone/Phase Name	Estimated Completion Date
Install new temp regulators	4/1/22
Construction of new ductbanks/new manholes	8/1/22
Install 1000 kcmil Cu cable - new	10/1/22
Remove 1000 kcmil cable - old	12/1/22

Milestone/Phase Name	Estimated Completion Date
Preliminary Approval	7/15/21
Detailed Design	9/1/21
Construction Start Date	2/1/22
Construction End Date	12/31/22

Regulatory Approvals
None

Risks and Risk Mitigation Plans

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2022	Medium	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 /	2022	Low	Design to minimize customer impact. Project Preplanning and customer/community outreach

Municipal approvals			
Internal construction resources not available to perform the work.	2022	Medium	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.	2022	Medium	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.
Storm delays	2022	Low	If storm activity delays work, we may be forced to use external resources.
System abnormal configuration	2022	Low	Schedule work to minimize system abnormal time. Most of this work will require system to be abnormal for any extended period of time.

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

CD01755 New Switchgear Lineup 3 r

Substation Expansion.pdf

Circuit Map for Regs.pdf

CD01755 Load Data.xlsx

CD01755 - Remove [redacted] from ROW.pdf

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[redacted]Cutover Sequence Revised 11-