Operations Project Authorization Form

Date Prepared: 3/31/2023	**Project Title: Direct Buried Cable Replacement**
Company/ies: Eversource CT	**Project ID Number: 10139520**
Organization: Distribution Electric	**Class(es) of Plant: Distribution**
Project Initiator: [redacted]	**Project Category: DB Cable Replacement**
Project Manager: [redacted]	**Project Type: Specific**
Project Sponsor: [redacted]	**Project Purpose: Reliability**
Estimated in service date: 12/31/2020	**If Transmission Project: PTF? N/A**
Eng. /Constr. Resources Budgeted? Y	**Capital Investment Part of Original Operating Plan?**
Authorization Type: Full Funding	**O&M Expenses Part of the Original Operating Plan?**
Total Request: $463K	

Financial Requirements:

Project Authorization

ERM: _____

FP&A: _____

Executive Summary

This program funds the rejuvenation or replacement of direct buried (DB) distribution cables in underground residential (URD) and commercial developments that are reaching the end of their useful lives. It has been determined on an industry-wide basis that much of the original XLP and HMP-insulated primary cable installed in the DB system has not achieved its engineered life expectancy. Premature cable failures have degraded the reliability for the Eversource customers served by these cables.

This project was to capture and document the charges to address emergent failures of the direct buried/underground (DB/UG) system. The aim was to replace DB/UG cable that had experienced faults and was deemed unreliable for the year 2020. Workorders were created for each of the locations to capture labor and material for the replacement of the cable.

Project Costs Summary / Financial Evaluation

Capital Costs	Year 1	Year 2	Year 3+	Total
Internal Labor and Construction Equipment	154.0	0.0	0.0	154.0
Outside Services	17.6	0.0	0.0	17.6
Materials	37.4	0.0	0.0	37.4
Removals	27.5	0.0	0.0	27.5
Risk and Contingency	11.0	0.0	0.0	11.0
Other	0.0	0.0	0.0	0.0
Subtotal	**247.6**	**0.0**	**0.0**	**247.6**

Indirect Capital Costs	Year 1	Year 2	Year 3+	Total
Indirects/Overheads (including benefits)	214.0	0.0	0.0	214.0
Capitalized interest or AFUDC, if any	1.5	0.0	0.0	1.5
Subtotal	**215.4**	**0.0**	**0.0**	**215.4**
Total Capital Costs (Gross)	**463.0**	**0.0**	**0.0**	**463.0**
Less Total Customer Contribution	**0.0**	**0.0**	**0.0**	**0.0**
Project Costs (Net)	**463.0**	**0.0**	**0.0**	**463.0**

WO NUMBER	WO DESCRIPTION	PROJECT DEPT CODE	PROJECT	PROJECT DESCRIPTION	WO IN SRV DATE	WO INIT DATE	Total Amount (K)
3H033232	CR-DRAKE HILL RD. SIMSBURY, Cable r	15D	101395	DIRECT BURIED CABLE REPLACEMENT PRO	2/26/2021	10/22/2020	$206K
80011810	Const ID 2456 - Tallwood Dr, Vernon	15D	101395	DIRECT BURIED CABLE REPLACEMENT PRO	5/5/2022	12/27/2020	$257K
Total							$463K

Technical Justification:

Project Need Statement

Emergent failures in direct buried cable developments required cable replacement to address the reliability issues. The cable was replaced with new cable in conduit to mitigate the outages.

Project Objectives

To replace DB cable that is has a history of failure to improve reliability and customer experience.

Project Scope
Cable replacement includes failed single phase and three phase cable, replacing elbows, installing or replacing lightning arresters, and possibly a transformer, riser, or switch-vault and all other associated equipment/material.

Major Material
#1 Aluminum
4/0 Aluminum
Elbows
Arrestors
Terminators
Transformer
Switch-vault

Background / Justification
DB cables are selected for replacement based on their historical performance. Replacing the cable and placing the new cable in conduit addresses eliminates the failing cable and protects the new cable for greater reliability.

Business Process and / or Technical Improvements
Eliminate unreliable XLP/HMP DB cable and replace it with EPR in conduit.

Project Schedule

Milestone/Phase Name	Estimated Completion Date
Project Initiation	01/01/2020
Project In-Service Date	12/31/2020

Regulatory Approvals
None needed

Risks and Risk Mitigation Plans

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Internal engineering resources not available to perform the work.	2020	Low	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.

Storm delays	2020	Low	If storm activity delays work, we may be forced to use external resources.
System abnormal configuration	2020	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