Operations Project Authorization Form

Date Prepared: 3/08/2021	**Project Title: Direct Buried Cable Replacement**
Company/ies: Eversource CT	**Project ID Number: 101395C – Year 2019**
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: 12/2019	**If Transmission Project: PTF? N/A**
Eng. /Constr. Resources Budgeted? Y	**Capital Investment Part of Original Operating Plan? Y**
Authorization Type: Final Funding	**O&M Expenses Part of the Original Operating Plan? N/A**
Total Request: $13,829K	

Financial Requirements:

Project Authorization

ERM: _____

FP&A: _____

Executive Summary

This request is for the approval of the direct buried cable replacement or rejuvenation project for the year 2019 and the work orders associated with it. This project is included in an initiative called Project Authorization Process Improvement started in 2020. This initiative was formed to address multiple items including clearing the backlog of APS-1 noncompliant projects. This project falls within that guideline.

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. Workorders were created for each of the locations to capture labor and material for the replacement of the cable.

Project Costs Summary / Financial Evaluation

Work order	Work Order Description	Initiation Date	In service Date	Project	Project Description	Direct Cost
1B720253	Scuppo Rd, Danbury: DB cable replac	1/21/2019	12/13/2017	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 140K
2M622176	EJC Fairway Apartments, Hartford Rd	3/26/2019	12/5/2017	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 153K
3H820373	ROCKY HILL, WOODFIELD CROSSING - RE	1/3/2019	10/19/2018	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 265K
4E621490	XL-REPLACE 4 SECTIONS OF DB CABLE**	2/8/2019	8/21/2018	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 196K
1B722798	JS - Colonial Rd, Nw Frfld, Abandon	2/20/2019	8/23/2018	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 221K
1B822485	TB-[redacted] NEWT REPLACE	2/20/2019	9/28/2018	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 160K
2L720827	Torrington--Surry Ln. sw27- sw28	2/23/2019	10/24/2018	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 263K
4N722001	SM-YELLOW TAG Y-19512-2017 REPL DB	3/1/2019	7/20/2018	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 336K
1B820252	DM/Chestnut Hill Rd, Ridgefield Rep	7/9/2019	10/2/2018	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 260K
4E621735	XL- Replace 5 sections of DB cable.	10/24/2019	11/15/2018	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 483K
1B521944	AF - Civil - Stony Hill Rd - Brookf	11/15/2019	11/15/2018	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 201K
1N721718	JDB BENNINGTON PL NEW CANAAN INS P	3/1/2019	1/4/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 269K
2M823468	EJC Costello Rd, Newington Reconduc	4/2/2019	2/1/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 282K
1B820237	TB- 2 LAUREL DR REPL 3 XFMRS CONDUI	4/4/2019	1/4/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 453K

3H821661	CROMWELL, SHUNPIKE - P#2335 45/2 RE	4/12/2019	1/23/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 178K
4E821466	JK>3PH DB CABLE REPLACEMENT--PAD 15	4/16/2019	1/10/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 370K
3H820219	XL-REPLACE 3 SECTIONS OF DB CABLE.	5/19/2019	3/20/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 175K
3H722053	MANCHESTER, CHAPEL RD - REPLACE 3PH	5/20/2019	3/21/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 184K
4D821391	NS- Longate Rd, CL-Rplc 5 Sections	5/21/2019	2/22/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 211K
2M721371	DM Clinic Dr NB Replace Cable PAD#4	6/1/2019	3/20/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 164K
1B821421	BM/ ABANDONE EXISTING CABLE IN PLAC	6/11/2019	3/22/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 358K
1B820206	Elec Proj Cable Replacement Specifi	6/18/2019	2/21/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 218K
2M824192	WC- Pond View Dr, Prospect. Replace	6/18/2019	2/21/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 215K
3H723090	WINDSOR, GRIFFIN RD NORTH - REPLACE	6/21/2019	2/21/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 400K
2M622278	DM Crestview Dr SOG Replace Cable P	6/29/2019	4/30/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 190K
3H621683	WINDSOR, CARRIAGE WAY - CABLE REPLA	7/9/2019	2/5/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 194K
4E821322	So.Buckboard Ln, Marlborough Repl.	7/9/2019	5/9/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 261K
1B921094	101395 1350 Replace section of c	7/14/2019	5/15/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 171K
5D920471	DG P#3070/PAD#36 ORCHARD DR THOMPSO	7/19/2019	5/20/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 157K

2M921100	WOODSIDE DR, FARMINGTON 19-E-0571,	7/20/2019	4/30/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 173K
3H920098	DKH - Cotswold Way, Avon - Replace	7/31/2019	6/18/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 239K
5T921201	STAFFORD, RIVER RD - REPLACE 1000'	8/19/2019	6/20/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 287K
4E920466	101395 1366 Replace cable betwee	9/7/2019	4/8/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 187K
1B921579	101395 1401 Replace cable from	9/7/2019	5/14/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 169K
5T722682	ENFIELD, HAZARD AVE - REPLACE 3 PHA	9/9/2019	7/11/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 348K
5T821379	ENFIELD, PALOMBA DR - REPLACE 3PH #	10/1/2019	8/6/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 247K
3H920585	SIMSBURY 36 WESTLEDGE MASTERS SCHOO	10/16/2019	7/23/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 326K
4N920850	101395 1442 Replace cable from p	11/6/2019	8/14/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 144K
1B822482	Y-21074-2018, Emergent 15KV Cable i	11/14/2019	9/24/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 180K
4N920746	101395 1417 Replace cable pad 2	11/14/2019	8/14/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 148K
4D920956	101395 1560 Replace cable from P	11/14/2019	8/14/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 166K
1B820313	TB- MONR REPLACE 1 SECT 1PH CABLE P	11/15/2019	2/21/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 276K
3H821653	Y-20803-2018 - BLOOMFIELD, SCOTT DR	11/15/2019	9/24/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 213K
3H723148	RF-Chapel Rd,Manch., Complete FDR3A	11/23/2019	9/24/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 324K

3H921827	06/28 RSO AVON,AYRSHIRE PRIMARY DB	11/25/2019	9/26/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 138K
1B820329	RM - 101395, DB CABLE REPLACE, RIDG	11/27/2019	8/16/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 476K
1N721287	LD HEATHER DR NEW CANAAN INS PIPE	11/28/2019	2/5/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 266K
1B923013	JS - Silversmith Dr, Danb, Repl Pol	12/5/2019	12/5/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 198K
1S922033	TC; 10/07: Meredith Ln Stamford: Ba	12/6/2019	11/18/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 184K
1N720690	AC NYALA FARMS RD WSPT INS PIPE & R	12/10/2019	10/7/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 173K
2M723797	Jpt-East Rd Bristol Pad 711 - Rplc	12/10/2019	7/24/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 182K
2M820605	RTM-Walen Ct, Ber. Replace Faulting	12/10/2019	11/13/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 147K
4E920474	Replace 2500' of UG DB service w/ #	12/10/2019	6/27/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 277K
3H920471	DKH - Sparrowbush Rd, E.Htfd / Repl	12/10/2019	8/8/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 281K
1B921621	101395 1426 Replace cable Pole	12/10/2019	7/24/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 191K
2M921438	EVW 119 CHESHIRE RD BETH P2971 RPLC	12/11/2019	10/3/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 151K
5T921141	RSO 06/05 HAMPDEN RD SOMERS - 3PH P	12/14/2019	10/15/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 262K
3H621437	MANCHESTER, CLIFFSIDE DR - REPLACE	12/19/2019	10/3/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 151K
2M722384	AMM DEER RUN RD,FARM. REPLACE CABLE	12/19/2019	2/21/2019	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ 192K

ECBL2019	EASTERN CABLE 2019	1/2/2019	1/23/2020	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ -
WCBL2019	WESTERN CABLE 2019	1/2/2019	1/23/2020	101395	DIRECT BURIED CABLE REPLACEMENT PRO	$ -
Total Direct Costs						$ 13,829K

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	01/01/2019
Project In-Service Date	12/31/2019

Regulatory Approvals
None needed

Risks and Risk Mitigation Plans

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2019	Medium	Create a PAF if the Work Order cost exceeds $100k
Internal construction resources not available to perform the work.	2019	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.	2021	Low	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.
Storm delays	2021	Low	If storm activity delays work, we may be forced to use external resources.
System abnormal configuration	2021	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