Operations Project Authorization Form

Date Prepared: 11/12/19	**Project Title: CT Lateral Reliability [redacted]**
Company/ies: Eversource - CT	**Project ID Number: CD01380**
Organization: Statewide	**Class(es) of Plant: Distribution**
Project Initiator: [redacted]	**Project Category: Line**
Project Manager: [redacted]	**Project Type: Specific**
Project Sponsor: [redacted]	**Project Purpose: Reliability**
Estimated in service date: 6/30/20	**If Transmission Project: PTF? No**
Eng. /Constr. Resources Budgeted? Y	**Capital Investment Part of Original Operating Plan? Y**
Authorization Type: Full Funding	**O&M Expenses Part of the Original Operating Plan? Y**
Total Request: $5,000K	

Financial Requirements:

Project Authorization

ERM: _____

FP&A: _____

Executive Summary

Lateral reliability improvements will be completed in nine of our worse performing towns within Connecticut to improve our reliability and overall customer satisfaction within these towns.

This project will focus on devices supplying 100 or more customers or any lateral device that has experienced one or more outages within the past four years.

Customers supplied from these lateral devices have experienced 151 animal, patrolled nothing found, or transformer equipment failure events over four years impacting 6,203 customers between 2015 and 2018. The proposed reliability work is expected to improve the number of customers impacted by these types of events by 75% providing an estimated SAIDI improvement of 0.262 minutes.

Project Costs Summary

	Prior Authorized	2020	2021
Capital Additions - Direct	$0	$2,130	$0
Less Customer Contribution	$0	$0	$0
Removals net of Salvage ____%	$0	$646	$0
Total - Direct Spending	$0	$2,776	$0
Capital Additions - Indirect	$0	$1,939	$0
Subtotal Request	$0	$4,715	$0
AFUDC	$0	$45	$0
Total Capital Request	$0	$4,760	$0
O&M	$0	$240	$0
Total Request	$0	$5,000	$0

Financial Evaluation

Direct Capital Costs	**Year 1**	**Year 2**
Straight Time Labor	$347	$0
Overtime Labor	$78	$0
Outside Services	$1,684	$0
Materials	$650	$0
Other, including contingency amounts (describe)	$18	$0
Total Direct Costs	**$2,776**	**$0**

Indirect Capital Costs	**Year 1**	**Year 2**
Indirects/Overheads (including benefits)	$1,939	$0
Capitalized interest or AFUDC, if any	$43	$0
Total Indirect Costs	**$1,982**	**$0**

Total Capital Costs	**$4,758**	**$0**
Less Total Customer Contribution	**$0**	**$0**
Total Capital Project Costs	**$4,758**	**$0**
Total O&M Project Costs	**$242**	**$0**
Total Project Cost	**$ 5,000**	**$ -**

Technical Justification:

Project Need Statement

The towns of Enfield, Naugatuck, Newington, Plainville, Stafford, Tolland, Torrington, Watertown, and West Hartford have experienced 151 animal, patrolled nothing found, or transformer equipment failure events over four years impacting 6,203 customers between 2015 and 2018.

This project will perform lateral reliability within these towns to improve both reliability and overall customer performance.

Project Objectives

This project will perform lateral reliability on any lateral device that has experienced any type of outage over the past four years or on any lateral device supplying 100 or more customers within these nine towns.

Transformers beyond these lateral devices will be fused to limit the customers impacted to those supplied by the individual transformer as opposed to those supplied by the upstream primary isolating device.

Additional reliability work such as animal protection, lighting arresters, hot line clamp removals and tree trimming will be performed to reduce the number of outage events.

Project Scope

The lateral rehab will include the following:

- Fusing transformers
- Animal protection
- Adding lightning arresters
- Replacing main line hot line clamps with wedge stirrup connections
- Tree trimming

Background / Justification

Customers within these towns have experienced 151animal, patrolled nothing found, or transformer equipment failure events on laterals with unfused transformers over four years impacting 6,203 customers between 2015 and 2018. The lateral reliability program is expected to yield a 75% improvement on the number of customers impacted by these types of events.

Business Process and / or Technical Improvements:

2020 GROUP 5	AVG ANNUAL CUST AFF			AVG	AVG ANNUAL CMI			AVG	AVG ANNUAL # EVENTS		
TOWN	ANIM/PTNF	XFMR FAIL	TOTAL	SAIFI	ANIM/PTNF	XFMR FAIL	TOTAL	SAIDI	ANIM/PTNF	XFMR FAIL	TOTAL
ENFIELD	684	8	692	0.001	50,393	480	50,873	0.04	14	0	14
TORRINGTON	743	4	746	0.001	45,500	175	45,675	0.04	19	0	20
NAUGATUCK	978	26	1,004	0.001	67,431	1,845	69,276	0.05	23	1	23
NEWINGTON	564	0	564	0.000	37,651	0	37,651	0.03	14	0	14
PLAINVILLE	524	16	540	0.000	29,162	819	29,981	0.02	12	0	12
STAFFORD	531	1	532	0.000	45,608	166	45,774	0.04	13	0	14
TOLLAND	534	0	534	0.000	45,027	0	45,027	0.04	15	0	15
WATERTOWN	449	79	527	0.000	32,790	3,323	36,113	0.03	16	1	16
WEST HARTFORD	990	75	1,065	0.001	73,897	8,343	82,240	0.06	22	2	23
GROUP 5 TOTAL	5,995	208	6,203	0.005	427,459	15,151	442,610	0.35	147	4	151

Alternatives Considered with Cost Estimates

Do nothing – No lateral reliability improvement will be achieved within these nine towns and customer satisfaction will not improve.

Project Schedule

Milestone/Phase Name	Estimated Completion Date
Material ordered	12/31/19
Begin construction	6/1/20
Complete construction	09/1/20

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.	2020	High	System was patrolled to identify unfused xfm locations. Construction Representatives will work with crews to manage additional work.
Internal construction resources not available to perform the work.	2020	Low	Use competitive bidding to ensure lowest outside labor cost.
Storm delays	2020	Medium	If storm activity delays work, we may be forced to use additional external resources.
System abnormal configuration	2020	Low	Schedule work to minimize system abnormal time. Install temporary bypasses/equipment if system will be abnormal for extended periods.

References

None

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



CT_Lateral_Reliability_2018-12-12_v3.ppl