Operations Project Authorization Form

Date Prepared: 5/16/19	**Project Title: CT Lateral Reliability (2019 Group 3)**
Company/ies: Eversource - CT	**Project ID Number: CD01323**
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: 12/31/19	**If Transmission Project: PTF? No**
Eng. /Constr. Resources Budgeted? Y	**Capital Investment Part of Original Operating Plan? Y**
Authorization Type: ACT	**O&M Expenses Part of the Original Operating Plan? Y**
Total Request: $3,030,902	

Financial Requirements:

Project Authorization

ERM: _____

FP&A: _____

Executive Summary

Lateral reliability improvements will be completed in five 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 492 animal, patrolled nothing found, or transformer equipment failure events over four years impacting 17,561 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 0.223 minutes.

Project Costs Summary

	Prior Authorized	2019	Totals
Capital Additions - Direct	$1,910,135		$1,910,135
Less Customer Contribution	$0	$0	$0
Removals net of Salvage ____%	$0		$0
Total - Direct Spending	$1,910,135	$0	$1,910,135
Capital Additions - Indirect	$1,105,688		$1,105,688
Subtotal Request	$3,015,823	$0	$3,015,823
AFUDC	$15,079		$15,079
Total Capital Request	$3,030,902	$0	$3,030,902
O&M	$0		$0
Total Request	$3,030,902	$0	$3,030,902

Financial Evaluation

Direct Capital Costs	**Year 1**	**Total**
Straight Time Labor	$0	$0
Overtime Labor	$0	$0
Outside Services	$1,457,135	$1,457,135
Materials	$453,000	$453,000
Other, including contingency amounts (describe)	$0	$0
Total Direct Costs	**$1,910,135**	**$1,910,135**

Indirect Capital Costs	**Year 1**	**Total**
Indirects/Overheads (including benefits)	$1,105,688	$1,105,688
Capitalized interest or AFUDC, if any	$15,079	$15,079
Total Indirect Costs	**$1,120,767**	**$1,120,767**

Total Capital Costs	**$3,030,902**	**$3,030,902**
Less Total Customer Contribution	**$0**	**$0**
Total Capital Project Costs	**$3,030,902**	**$3,030,902**
Total O&M Project Costs	**$0**	**$0**
Total Project Cost	**$3,030,902**	**$3,030,902**

Project Need Statement

The towns of Ledyard, Mansfield, Vernon, South Windsor and Stonington have experienced 492 animal, patrolled nothing found, or transformer equipment failure events on laterals with unfused transformers over four years impacting 17,561 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 five 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 492 animal, patrolled nothing found, or transformer equipment failure events on laterals with unfused transformers over four years impacting 17,561 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:

2019 GROUP 3	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
LEDYARD	968	18	985	0.001	76,194	2,219	78,413	0.062	29	1	30
MANSFIELD	936	22	958	0.001	108,588	1,677	110,265	0.087	30	1	30
SOUTH WINDSOR	847	11	858	0.001	63,552	704	64,255	0.051	21	1	21
STONINGTON	789	0	790	0.001	64,093	20	64,113	0.051	21	0	21
VERNON	783	17	800	0.001	59,239	779	60,018	0.047	21	1	21
GROUP 1 TOTAL	4,323	68	4,390	0.003	371,666	5,398	377,064	0.297	121	2	123
ESTIMATED REDUCTION		75%	3,293	0.003			282,798	0.223	91	0	

Alternatives Considered with Cost Estimates

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

Project Schedule

Milestone/Phase Name	Estimated Completion Date
Material ordered	12/31/18
Begin construction	9/1/19
Complete construction	12/31/19

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.	2019	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.	2019	Low	Use competitive bidding to ensure lowest outside labor cost.
Storm delays	2019	Medium	If storm activity delays work, we may be forced to use additional external resources.
System abnormal configuration	2019	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.ppt