Operations Project Authorization Form

Date Prepared: 03/08/19	**Project Title: [redacted] Brooklyn**
Company/ies: Eversource CT	**Project ID Number: CD01291**
Organization: Distribution Design	**Class(es) of Plant: Distribution**
Project Initiator: [redacted]	**Project Category: Line**
Project Manager: [redacted]	**Project Type: Reliability Improve Spec Proj**
Project Sponsor: [redacted]	**Project Purpose: Reliability**
Estimated in service date: 12/31/2020	**If Transmission Project: PTF? N/A**
Eng. /Constr. Resources Budgeted?	**Capital Investment Part of Original Operating Plan?**
Authorization Type: ENG	**O&M Expenses Part of the Original Operating Plan?**
Total Request: $186,079	

Financial Requirements:

Project Authorization
ERM: _____

FP&A: _____

Executive Summary

Fuse pole 1415 [redacted]. This [redacted] has [redacted] and these customers have experienced [redacted] in 2016. This was resolved by replacing several poles to change the construction from neutral on a crossarm to ridge pin. There are still 11 poles out of the 27 that are in bad shape and have crossarm construction with the neutral on the crossarm. Extensive tree trimming and hazard tree removal was also performed in 2016.

This project is proposing to reconductor the remaining 5,463 feet of #2 ACSR bare wire on [redacted] with 1/0 tree wire.

Project Costs Summary

Note: Dollar values are in thousands

	Prior Authorized	2020	20__	20__+	Totals
Capital Additions - Direct	$0	$95	$0	$0	$95
Less Customer Contribution	$0	$0	$0	$0	$0
Removals net of Salvage ____%	$0	$29	$0	$0	$29
Total - Direct Spending	$0	$124	$0	$0	$124
Capital Additions - Indirect	$0	$52	$0	$0	$52
Subtotal Request	$0	$176	$0	$0	$176
AFUDC	$0	$1	$0	$0	$1
Total Capital Request	$0	$177	$0	$0	$177
O&M	$0	$9	$0	$0	$9
Total Request	$0	$186	$0	$0	$186

Financial Evaluation

Note: Dollar values are in thousands

Direct Capital Costs	Year 1	Year 2	Year 3+	Total
Straight Time Labor	$10	$0	$0	$10
Overtime Labor	$0	$0	$0	$0
Outside Services	$1	$0	$0	$1
Materials	$113	$0	$0	$113
Other, including contingency amounts (describe)	$0	$0	$0	$0
Total Direct Costs	**$124**	**$0**	**$0**	**$124**

Indirect Capital Costs	Year 1	Year 2	Year 3+	Total
Indirects/Overheads (including benefits)	$52	$0	$0	$52
Capitalized interest or AFUDC, if any	$1	$0	$0	$1
Total Indirect Costs	**$53**	**$0**	**$0**	**$53**
Total Capital Costs	**$177**	**$0**	**$0**	**$177**
Less Total Customer Contribution	**$0**	**$0**	**$0**	**$0**
Total Capital Project Costs	**$177**	**$0**	**$0**	**$177**
Total O&M Project Costs	**$9**	**$0**	**$0**	**$9**

Note: Explain unique payment provisions, if applicable

Project Need Statement

[redacted] after performing additional tree trimming and replacing several poles to build ridge pin construction. The only option left to create a significant difference in reliability is to reconductor the remaining bare wire. All wire from the [redacted] backbone out to [redacted] is currently tree wire.

Sectionalizing this road further using fuses without causing miscoordination is not an option either. The trip saver program added a 100k trip saver upstream from [redacted]

Instead of continuing to replace poles to change construction to ridge pin and get the neutral down on the pole, it would be more beneficial to make this work 100% capital by reconductor the #2 bare primary.

Project Objectives

Reconductor remaining bare wire on [redacted] to improve reliability to [redacted] customers beyond [redacted].

Project Scope

Reconductor the remaining 5,463 feet of #2 ACSR with 1/0 TW on [redacted]. Going to change approximately 14 poles out of the 27 Eversource poles. 11 of these poles currently have cross arm construction with neutral on cross arm.

Background / Justification

2019	5 or More
2016	10 or more

4 Year History:

[redacted]

Event History P.1415

ASSETNAME	START_TS	CAUSENAME	WEATHER	STORM	CIRCUIT	REMARKS	DURATION	Cust.
[redacted]	/25/2019 1:21:28 PM	TREE-Tree/Limb Outside Trim Zone/Unknown	WIND	Y	[redacted]		6:52	[redacted]
	2/21/2018 :29:44 PM	TREE-Tree/Limb Outside Trim Zone/Unknown	NORM	Y		Cleared limbs and closed 50k at pole 1415	0:46	
	0/27/2018 2:53:19 PM	TREE-Tree/Limb Outside Trim Zone/Unknown	WIND	Y		removed limb spliced primary replaced fuse hunter	1:52	
	/26/2018 :27:19 AM	EQUP-Equip Failure	NORM	N		[NURSETX]:Bottom tap not connected to cutout @p1415. Reinserted tap to cutout. CI (1) 50k @ p1415 @ 0855	0:28	
	/4/2018 :22:03 PM	TREE-Tree/Limb Outside Trim Zone/Unknown	RAIN	N		CLEARED TREE AND REFUSED 50 K FUSE POLE 1415 /GM/GEMBLE	1:20	
	0/30/2017 :09:19 AM	TREE-Tree/Limb Outside Trim Zone/Unknown	NORM	Y		removed various limbs resagged primary and secondaries along street stillwell	23:31	
	/25/2016 :07:07 AM	TREE-Tree/Limb Outside Trim Zone/Unknown	WIND	Y		Patrolled, all set	13:58	
	/6/2016 :29:10 AM	TREE-Tree/Limb Outside Trim Zone/Unknown	SNOW	Y		removed limb 1418 resotred	4:34	
	/12/2015 1:42:13 AM	PTNF-Patrolled Nothing Found	NORM	N		Fuses blown at pole 1415 and 1432 because of coordination problem; patrol revealled no cause; upgraded pole 1415 to 50K, re-fused and closed both full resoration 94063 / WF	1:28	

Upstream Events

ASSETNAME	START_TS	CAUSENAME	WEATHER	STORM	CIRCUIT	REMARKS	DURATION	Cust.
[redacted]	3/7/2018 7:49:03 PM	TREE-Tree/Limb Outside Trim Zone/Unknown	NORM	Y	[redacted]	CLEARED TREE FROM PRIMARY // REFUSED AND RESTORED // CONTRACTOR	36:6	[redacted]
	11/19/2017 2:26:51 PM	TREE-Tree/Limb Outside Trim Zone/Unknown	WIND	Y		removed tree resagged lines	4:49	
	10/30/2017 1:16:52 AM	TREE-Tree/Limb Outside Trim Zone/Unknown	NORM	Y		trees on multiple locations..had tree crews and line crews work through neighborhoods..closed	1:44	
	8/12/2016 6:49:15 PM	LTNG-Lightning	THUN	Y		Took 15kva Xfr offline at pole 143[redacted] refused 65k	4:43	
	7/29/2016 7:52:56 AM	TREE-Tree/Limb Outside Trim Zone/Unknown	RAIN	N		cleared tree from pri at p. 1417, refused 65k at p. 597. nurse / td	0:38	
	2/5/2016 9:46:46 AM	TREE-Tree/Limb Outside Trim Zone/Unknown	SNOW	Y		Removed 5 tree from primary, refused cutouts 54147 / BJM	15:42	

ASSETNAME	START_TS	CAUSENAME	WEATHER	STORM	REMARKS	DURATION
[redacted]	3/13/2018 7:35:22 PM	TREE-Tree/Limb Outside Trim Zone/Unknown	SNOW	Y	Crew removed multiple trees and refused JLL	3:35

ASSETNAME	START_TS	CAUSENAME	WEATHER	STORM	REMARKS	DURATION
[redacted]	/14/2018 :08:00 AM	TREE-Tree/Limb Outside Trim Zone/Unknown	NORM	N	DE-ENERGIZED AREA TO SAFELY SLEEVE PRIMARY AND PUT BACK UP AT POLE 1271 DUE TO TREE DOWN AND RE-ENERGIZED // SEE EVENT #3741965 and #3742020 //	0:18
	/3/2018 :48:06 AM	TREE-Tree/Limb Outside Trim Zone/Unknown	NORM	Y	no problem found	7:20
	/2/2018 :18:57 PM	TREE-Tree/Limb Outside Trim Zone/Unknown	WIND	Y		10:27
	0/10/2017 2:07:32 PM	EQUP-Equip Failure	NORM	N	pole 508 had a burnt off tap pole 593 was full power lady didnt have cable but wouldnt answer the phone when i called the reach number and pole 1273 was in power and not home strom/mg	3:33

ASSETNAME	START_TS	CAUSENAME	WEATHER	STORM	CIRCUIT	REMARKS	DURATIO	Cust.
[redacted]	12/31/2017 10:40:00 AM	EQUP-Equip Failure	COLD	N	[redacted]	CONVEX reported loss of 1505 transmission line due to static line falling onto conductor // [redacted] did not operate as designed leaving 445 customers de-energized // upon restoration of 1505 line all customers restored and distribution loops set back to normal // see	1:10	[redacted]
	10/9/2017 5:14:00 PM	TREE-Tree/Limb Outside Trim Zone/Unknown	NORM	N		big tree fell broke cross arms . took primary down made a big mess. called tree crews . isolated section and restored customers, TREE CREW REM TREE, REPAIRED PRIMARY AND PUT BACK UP, TOOK DAMAGED 30Y10-161R RECLOSERS OFFLINE POLE 500 AND CLOSED BYPASS SWITCHES, MADE OTHER GENERAL REPAIRS AND RESTORED ALL	10:31	
	6/6/2017 5:18:00 PM	TREE-Tree/Limb Outside Trim Zone/Unknown	RAIN	N		Opened [redacted] via DSCADA due to wires down @ Pole 1241 & Pole 1327. Isolated faulted area by lifting taps at Pole 1903 and 1241. Restored available customers per 17-E-	9:43	
	7/13/2016 2:05:00 PM	TREE-Tree/Limb Outside Trim Zone/Unknown	NORM	N		tree took down primary pole 1296 isolated and renergised up to open disconects	0:39	

Business Process and / or Technical Improvements:

Reconductoring bare wire with tree wire and replace 14 poles with 45-foot poles.

Alternatives Considered with Cost Estimates

An alternative to reconductoring [redacted] would be to replace the remaining 11 poles that have cross arm construction and install ridge pins.

$42,738

Project Schedule

Milestone/Phase Name	Estimated Completion Date
CPAC ENG Approval	03/2019
Project Rollout for PM and CE	07/2019
ACT Approval	09/2019
Construction Start	01/2020
Project Completion	12/2020

Regulatory Approvals

None

Risks and Risk Mitigation Plans

None

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

5 or More [redacted].pdf

CD01291_project_needs_statement.pdf

Event History [redacted].xlsx

Cost Estimate Backup Details

Budget Summary - Preferred Option — Reconductor Trip Hollow Road

2020

ID	Title	Status	Rev #	Contingency	Expenditure Amount	Net Estimate
1	Reconductor [redacted] with 1/0 T	Prelim	0	24%	$186,079	$186,079
				2020 Total:	**$186,079**	**$186,079**
				Total Project:	**$186,079**	**$186,079**

Project Option Summary

ID	Description	Segments	Preliminary Estimate	Construction Estimate	Variance	IEEE $/CMS	All (w/Storm)	Prfrd
O1	Reconductor [redacted]	1	$186,079	$0	100%	$33.17	$5.83	☑

Segments

ID	Title	Preliminary Estimate	Construction Estimate	Variance	IEEE $/CMS	All (w/Storm)
1	Reconductor [redacted] with 1/0 T	$186,079			$33.14	$5.83