EVERSOURCE
Project Authorization Form

Operations Project Authorization Form

Date Prepared: 10/21/19	**Project Title: [redacted] Sensor upgrades [redacted]**
Company/ies: Eversource CT	**Project ID Number: CD01330**
Organization: Distribution Electric	**Class(es) of Plant: Distribution**
Project Initiator: [redacted]	**Project Category: Line**
Project Manager: [redacted]	**Project Type: Line Sensors Program**
Project Sponsor: [redacted]	**Project Purpose: Upgrade Sensors from [redacted]**
Estimated in service date:	**If Transmission Project: PTF? N/A**
Eng. /Constr. Resources Budgeted?	**Capital Investment Part of Original Operating Plan? Y**
Authorization Type: Preliminary	**O&M Expenses Part of the Original Operating Plan? Y**
Total Request: $335,494	

Financial Requirements:

Project Authorization

ERM: _____

FP&A: _____

Executive Summary

This project is established to upgrade the existing [redacted] s. Line sensors are used for feeder metering, fault detection in ROWs and on step transformers, as well as monitoring important assets and loads. The line sensors installed before 2018 were equipped with a [redacted] Unfortunately, [redacted] has negotiated a discounted rate of purchase if we place orders prior to 12/13/19.

Project Costs Summary

Note: Dollar values are in thousands

	Prior Authorized	2020	2021	2020	Totals
Capital Additions - Direct	$0	$220,268	$0	$0	$220,268
Less Customer Contribution	$0	$0	$0	$0	$0
Removals net of Salvage ____%	$0	$2,611	$0	$0	$2,611
Total - Direct Spending	$0	$222,878	$0	$0	$222,878
Capital Additions - Indirect	$0	$111,234	$0	$0	$111,234
Subtotal Request	$0	$334,112	$0	$0	$334,112
AFUDC	$0	$1,382	$0	$0	$1,382
Total Capital Request	$0	$335,494	$0	$0	$335,494
O&M	$0	($0)	$0	$0	($0)
Total Request	$0	$335,494	$0	$0	$335,494

Financial Evaluation

Note: Dollar values are in thousands

Direct Capital Costs	Year 1	Year 2	Year 3+	Total
Straight Time Labor	$8,481	$0	$0	$8,481
Overtime Labor	$1,527	$0	$0	$1,527
Outside Services	$15,668	$0	$0	$15,668
Materials	$197,140	$0	$0	$197,140
Other, including contingency amounts (describe)	$62	$0	$0	$62
Total Direct Costs	**$222,878**	**$0**	**$0**	**$222,878**

Indirect Capital Costs	Year 1	Year 2	Year 3+	Total
Indirects/Overheads (including benefits)	$111,234	$0	$0	$111,234
Capitalized interest or AFUDC, if any	$1,382	$0	$0	$1,382
Total Indirect Costs	**$112,616**	**$0**	**$0**	**$112,616**
Total Capital Costs	**$335,494**	**$0**	**$0**	**$335,494**
Less Total Customer Contribution	**$0**	**$0**	**$0**	**$0**
Total Capital Project Costs	**$335,494**	**$0**	**$0**	**$335,494**
Total O&M Project Costs	**($0)**	**$0**	**$0**	**($0)**

Note: Explain unique payment provisions, if applicable

Technical Justification:

Project Need Statement

This project will replace all the installed [redacted]

Project Objectives

Upgrade all [redacted]

Project Scope

[redacted]

Major Material:

[redacted] – 27 sets SC 529180

[redacted] – 14 sets SC 601560

Background / Justification

Line sensors have been deployed as part of the CT System resiliency program and in MA as part of Grid modernization. The [redacted]

DTR 03.903 – Current Sensor Construction Standard

Business Process and / or Technical Improvements:

The continued utilization of the [redacted] will ensure better system visibility. [redacted]

Alternatives Considered with Cost Estimates

Do not replace sensors and loose system visibility.

Install reclosers at these locations - $2.6M

Project Schedule

Milestone/Phase Name	Estimated Completion Date
Detailed Design	March 2020
Construction Start	May 2020
Construction Finish	November 2020
Finalize Sensor Setup – DSCADA group	December 2020

Risks and Risk Mitigation Plans

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2020	Medium	Included contingency costs in the funding request. Perform detailed Field Analysis and walk down in project development to avoid potential issues.
Internal construction resources not available to perform the work.	2021	High	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	High	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	This work does not require the system to be abnormal for work.

References

Line Sensor Standards.pdf

[redacted] Sensor Models and In

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

[redacted]

CD01330_project_needs_statement.pdf