Operations Project Authorization Form

Date Prepared: 3/12/2020	**Project Title:** [redacted]
Company/ies: Eversource CT	**Project ID Number:** CD01317
Organization: Distribution Engineering	**Class(es) of Plant:** Distribution
Project Initiator: [redacted]	**Project Category:** Line
Project Manager: [redacted]	**Project Type:** Smart Switch Program
Project Sponsor: [redacted]	**Project Purpose:** Install automatic sectionalizing devices to reduce zone sizes.
Estimated in service date: 12/31/2020	**If Transmission Project: PTF?** NA
Eng. / Constr. Resources Budgeted? Yes	**Capital Investment Part of Original Operating?** Yes
Authorization Type: Full Funding	**O&M Expenses Part of the Original Operating?** Yes
Total Request: $383,724	

Financial Requirements:

Project Authorization
ERM: _____

FP&A: _____

Executive Summary

Zone [redacted] commercial and residential customers on [redacted]

Project CD01317 will address the [redacted]

[redacted]

Project CD01317 received Initial Funding Authorization of $287.9K at the 7/25/2019 CT PAC meeting. The detail design has been completed and we are requesting Full Funding Authorization of $383.7K; an increase of $95.8K or 133.3% of the Initial Funding Authorized amount.

Explanation of Variance:

- $51K: Did not include cost of additional in-line / vertical disconnects at four, new recloser locations per DTR18.453, Note 4.
- $7K: Did not account for cost to remove existing 32G9-4000 IntelliRupter.
- $37.8K: Higher than expected contractor labor costs and associated contractor adders.

Project Costs Summary

	Prior Authorized*	Additional Request	2020	2021+	Total **
Capital Additions Direct	$164,149	$72,356	$ 236,505	$ -	$236,505
Less Customer Contribution	$0	$0	$ -	$ -	$0
Removals Net of Salvage	$3,889	$7,447	$ 11,336	$ -	$11,336
Total - Direct Spending	$168,038	$79,803	$ 247,841	$ -	$247,841
Capital Additions - Indirect	$105,628	$17,670	$ 123,298	$ -	$123,298
AFUDC	$3,279	-$1,924	$ 1,355	$ -	$1,355
Total Capital Request	$276,945	$95,549	$ 372,494	$ -	$372,494
O&M	$10,936	$294	$ 11,230	$ -	$11,230
Total Request	**$287,881**	**$95,843**	**$ 383,724**	**$ -**	**$383,724**

* Amount currently approved in PowerPlan

** Total authorization needed in PowerPlan based on ACT

Financial Evaluation

Direct Capital Costs	2020	2021	2022	Total
Straight Time Labor	$ 5,012	$ -	$ -	$ 5,012
Overtime Labor	$ -	$ -	$ -	
Outside Services	$ 87,716	$ -	$ -	$ 87,716
Materials	$ 155,113	$ -	$ -	$ 155,113
Other, including contingency amounts	$ -	$ -	$ -	$ -
Total	$ 247,841	$ -	$ -	$ 247,841

Indirect Capital Costs	2020	2021	2022	Total
Indirects/Overheads (including benefits)	$ 123,298	$ -	$ -	$ 123,298
Capitalized interest or AFUDC, if any	$ 1,355	$ -	$ -	$ 1,355
Total	$ 124,653	$ -	$ -	$ 124,653
Total Capital Costs	$ 372,494	$ -	$ -	$ 372,494
Less Total Customer Contribution	$ -	$ -	$ -	$ -
Total Capital Project Costs	$ 372,494	$ -	$ -	$ 372,494
Total O&M Project Costs	$ 11,230	$ -	$ -	$ 11,230
Total Project Cost	**$ 383,724**	**$ -**	**$ -**	**$ 383,724**

* to be completed if supplemental authorization is required

Technical Justification

Project Need Statement

[redacted]The preferred option is described below.

Project Objectives

The main goal of the Smart Switch Program is to reduce the number of customers exposed to an outage event. Project CD01317 proposes to [redacted]

[redacted]

Project Scope

The preferred option is Option 1 which consists of Segments 1 and 2.

Segment 1 ([redacted]Zone)

[redacted]

Segment 2 [redacted] Zone)

[redacted]

Background / Justification:

The justification for this project is our current initiative to reduce the number of customers exposed to an outage event.

Business Process and / or Technical Improvements:

This Smart Switch Program will increase the number of automated devices on the system. In addition, this upgrade allows for better system visibility, faster restoration, faster outage isolation and faster reconfiguration of the system during planned and unplanned switching events. Customer zones are reduced to 500 customers or less where possible.

Alternatives Considered with Cost Estimates

[redacted]

[redacted]

[redacted]

[redacted]

Project Schedule

Milestone/Phase Name	Estimated Completion Date
Initial Funding Approval	June 2019
Detail Design Engineering	October 2019
Full Funding Approval	March 2020
Construction Complete	December 2020

Regulatory Approvals

N/A

Risks and Risk Mitigation Plans

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2020	Low	Included contingency costs in the funding request. Perform detailed Field Analysis and walk down in project development to avoid potential issues.
Customer Permission / Siting Council / Municipal approvals	2019	Low	Design to minimize customer impact. Project Preplanning and customer/community outreach
Internal construction resources not available to perform the work.	2020	Medium	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.	2019	Low	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.
Storm delays	2020	Low	If storm activity delays work, we may be forced to use 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

DTR18-453.pdf

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

CD01317_project_needs_statement.pdf

[redacted] ONE LINE DIAGRAM BEFORE.p

[redacted] ONE LINE DIAGRAM AFTER (2).

VISIO MAP BEFORE.pdf

VISIO MAP AFTER (Prefered).pdf

Loadsheet Option1 final design.xlsx

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

CD01317_Full Funding Estimate_3

CD01317 101232480 - Overall Oneline Di

CD01317 101231966 - Sketch 32G9-80M F

CD01317 101232110 - Sketch seg-2 32G9

CD01317 101232190 - Sketch seg-2 32G9

CD01317 101232205 - Sketch seg-2 Remo

CD01317 101232266 - Sketch seg-2 TR 32

CD01317 101232269 - Sketch seg-2 3A12

CD01317_AIMS Full Funding Project Nee