Operations Project Authorization Form

Date Prepared: March 19, 2021	**Project Title: [redacted] Contingency Load Relief**
Company/ies: Eversource CT	**Project ID Number: CD01377**
Organization: Distribution Electric	**Class(es) of Plant: Distribution**
Project Initiator: [redacted]	**Project Category: Line**
Project Manager: [redacted]	**Project Type: Overloads-Specific Projects**
Project Sponsor: [redacted]	**Project Purpose: Reduce Contingent Loading on [redacted]**
Estimated in service date: 12/31/2021	**If Transmission Project: PTF? N/A**
Eng. /Constr. Resources Budgeted? Yes	**Capital Investment Part of Original Operating Plan? Yes**
Authorization Type: Full Funding Authorization	**O&M Expenses Part of the Original Operating Plan? Yes**
Total Request: $338,056	

Financial Requirements:

Project Authorization

ERM: _____

FP&A: _____

Executive Summary

[redacted]

Project CD01377 received Initial Funding authorization of $245K at the 11/7/2019 CT-PAC meeting. The detail design has been completed and we are requesting Full Funding authorization of $338K; an increase of $93K or 38% of the initial Funding authorization. The difference in cost is due to the following:

- $31K: [redacted] The per-unit cost estimate for reclosers used in the Initial Funding estimate does not include this added cost.
- $36K: Underestimated cost associated with rebuilding the pole top at [redacted] Generation will be deployed while the tap is de-energized to rebuild the pole top and perform the load transfer.
- $26K: Project was originally estimated for Eversource labor. However, the project will instead be constructed with contract labor.

Project Costs Summary

	Prior Authorized*	Additional Request	2021	2021+	Total **
Capital Additions Direct	$0	$0	$ 204,842	$ -	$204,842
Less Customer Contribution	$0	$0	$ -	$ -	$0
Removals Net of Salvage	$0	$0	$ 11,844	$ -	$11,844
Total - Direct Spending	$0	$0	$ 216,686	$ -	$216,686
Capital Additions - Indirect	$0	$0	$ 110,200	$ -	$110,200
AFUDC	$0	$0	$ 1,188	$ -	$1,188
Total Capital Request	$236,780	$91,293	$ 328,073	$ -	$328,073
O&M	$8,000	$1,982	$ 9,982	$ -	$9,982
Total Request	**$244,780**	**$93,276**	**$ 338,056**	**$ -**	**$338,056**

* Amount currently approval in PowerPlan

** Total authorization needed in PowerPlan based on ACT

Financial Evaluation

Direct Capital Costs	2021	2022	2023+	Total
Straight Time Labor	$ 4,241	$ -	$ -	$ 4,241
Overtime Labor	$ -	$ -	$ -	
Outside Services	$ 84,108	$ -	$ -	$ 84,108
Materials	$ 128,336	$ -	$ -	$ 128,336
Other, including contingency amounts	$ -	$ -	$ -	$ -
Total	$ 216,686	$ -	$ -	$ 216,686

Indirect Capital Costs	2021	2022	2023+	Total
Indirects/Overheads (including benefits)	$ 110,200	$ -	$ -	$ 110,200
Capitalized interest or AFUDC, if any	$ 1,188	$ -	$ -	$ 1,188
Total	$ 111,387	$ -	$ -	$ 111,387

Total Capital Costs	$ 328,073	$ -	$ -	$ 328,073
Less Total Customer Contribution	$ -	$ -	$ -	$ -
Total Capital Project Costs	$ 328,073	$ -	$ -	$ 328,073
Total O&M Project Costs	$ 9,982	$ -	$ -	$ 9,982
Total Project Cost	**$ 338,056**	**$ -**	**$ -**	**$ 338,056**

* to be completed if supplemental authorization is required

Technical Justification:

[redacted]

[redacted]

Therefore, reduction of the [redacted] via installation of the new [redacted] The [redacted] (ref. DSEM 05.301). In addition, [redacted]

Project Objectives

[redacted]

Project Scope

The scope of this project is as follows:

[redacted]

Major Materials

3 – Cooper Nova Reclosers for 13.2/13.8kV, with Form 6 controls
1 – 600 kVAR Capacitor Bank for 13.8kV, with an HD Electric Varcom 2600 control.
3 - 900 Amp In-line disconnect switches

Background / Justification

[redacted]

Business Process and / or Technical Improvements:

[redacted]

Alternatives Considered with Cost Estimates

Option 1 – Break up the [redacted] The cost of this option is now estimated at $338K. This has been chosen as the preferred alternative.

Option 2 – Upgrade the [redacted] Therefore, this option was not chosen as the preferred option. The cost of this option is estimated at $925K.

Option 3 – This option is a combination of the above two options. With this option, the [redacted] However, the cost of this option is estimated to be $1,263K. Therefore, this option was not chosen as the preferred alternative due to its high cost.

Project Option Comparison

Design Criteria	[redacted]		
Cost	$338K	$925K	$1,263K
Cost / MVA added	$73K/MVA	$236K/MVA	$136K/MVA
Cost / CM Saved	$366/CM	$1261/CM	$706/CM
Cost / CI Saved	$5,122/CI	$14,335/CI	$8,025/CI
Preferred option	X		

Project Schedule

Milestone/Phase Name	Estimated Completion Date
Initial Funding Authorization	Completed
Protection Settings Requested	Completed
Detail Design Complete	Completed
Full Funding Authorization	March 2021
Construction Complete	December 2021

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.	2021	Medium	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	2020	Low	Design to minimize customer impact. Project Preplanning and customer/community outreach
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.	2020	Low	Detail resign engineering has been completed.
Storm delays	2021	Low	If storm activity delays work, we may be forced to use external resources.
System abnormal configuration	2021	Low	Schedule work to minimize system abnormal time. Most of this work will require system to be abnormal for any extended period of time.

References

DSEM 02.301 – Automatic Sectionalizing Device Guidelines

DSEM02-301.pdf

DSEM 05.301 - Contingency Planning

DSEM05-301.pdf

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

1. **Project Maps and One-Lines**

CD01377_Project Maps.pdf

CD01377_Project One-Lines_Rev 1_11-(

2. **Project Load Summary**

CD01377_Project Load Summary_Rev (

3. **Project Variance Report**

CD01377 Project Variance Report.pdf

4. **Cost Estimate Backup Details**

CD01377_project_needs_statement_ACT_03-

ACT - CD01377 [redacted] Cor