Operations Project Authorization Form

Project Title: CT DMX Replacements	**Project Number:** CTDMX23
Date Prepared: 06/06/2023	**Company:** Eversource CT
Organization: Substation Technical Engineering	**Class(es) of Plant:** Telecom
Project Initiator: [redacted]	**Project Category:** Stations - Telecommunications
Project Manager: [redacted]	**Project Type:** Specific
Project Sponsor: [redacted]	**Capital Investment part of original Operating Plan:** Yes
Estimated in service date: 06/30/24	**Emergency Related Request?** No
Eng./Constr. Resources Budgeted? Yes	**Facility Type** (check all that apply)**:** ☐ PTF ☐ non-PTF ☐ Distribution X Telecom General Plant
Total Gross Capital Request: $499K	**Authorization Type:** Full Funding

Executive Summary

Currently, Eversource has approximately 60 Nokia DMX Multiplexers (DMXs) in Connecticut that need to be replaced due to their [redacted] and high maintenance cost, [redacted]. The DMXs [redacted] The object of this project will be to replace some of the DMXs with new Schweitzer Engineering Laboratories Integrated Communications Optical Networks (SEL-ICON). These devices will be configured in a standardized manner to allow for expansion and organization.

The initial funding request of $109.4K was approved in December of 2022. $39K has been spent to date on project management, engineering design and support. The full funding request of $499K will allow for the purchase and installation of equipment for the replacement of ten nodes.

The nodes to be replaced are:

[redacted]

Project Costs Summary

See APS3 and APS8 requirements and consult with Plant Accounting for capital/O&M determination. Use published loaders for benefits, materials, and invoices, maintained by the Director, Budget and Internal Reporting.

Appendix 2
Operations Project Authorization Form

Note: Dollar values are in thousands

Line item Category	Prior Authorized	Actuals to Date	2023 to Go	2024	2025	2026	2027	2028	Total
1. ROW / Easements / Land purchases									
2. Environmental Approvals / Permits									
3. Outreach									
4. Siting Approvals / Permits									
5. Engineering / Design	$50	$20	$30						$50
6. Materials (Eversource purchased)			$200						$200
7. Construction (incl matl's by contractors)			$10	$40					$50
8. Testing / Commissioning			$8	$32					$40
9. PMT Project Mgmt Team	$10		$6	$4					$10
10. Removals									
11. Other									
12. Risks									
Project Directs Total w/Risks	**$60**	**$20**	**$254**	**$76**					**$350**
13. Indirects/Overhead	$49	$19	$50	$71					$140
14. AFUDC									
Project Total - Baseline Budget	**$109**	**$39**	**$304**	**$147**					**$490**
15. Contingency				$9					$9
#N/A									
Project Total - Funding Approval Level	**$109**	**$39**	**$304**	**$156**					**$499**
16. Reimbursables/Customer Contribution									
#N/A									
Project Total (less reimbursables)	**$109**	**$39**	**$304**	**$156**					**$499**
Total O&M									
TOTAL REQUEST	**$109**	**$39**	**$304**	**$156**					**$499**

Breakout costs incl above

ST Labor	$50	$20	$48	$72					$140
OT Labor									
Outside services - Labor	$10		$6	$4					$10
Materials (All materials incl. outside service purchased which is shown in constr. above)			$200						$200
Removals									
Other				$9					$9
Indirects	$49	$19	$50	$71					$140
AFUDC									
TOTAL CAPITAL REQUEST - with out Reimbursables	**$109**	**$39**	**$304**	**$156**					**$499**

Technical Justification:

Project Need, Objective and Justification
This project aims to replace a number of [redacted] DMX units with Schweitzer's newest generation of SEL-ICONs, with spares for future growth. These devices provide [redacted]

Project Scope

Several DMX in Connecticut will be replaced under the Transport Network Refresh project. The remainder of the units in Connecticut will be replaced under this project. Those needing to be replaced have already been

identified by Telecommunications Engineering in Connecticut. They will also be programmed in advance and replaced one at a time to avoid outage and impact to operations. The teams involved in this project are telecommunications engineering, telecommunication services, substation engineering and substation.

Background

A DMX is a multiplexer and an integral part of the Eversource fiber optic communications system. [redacted] eplacing these old DMXs with newer ICON multiplexers will help improve [redacted]

Alternatives Considered:

Were alternative solutions considered/applicable? Include any cost/benefit analysis.

Alternatives were considered (please describe below)

Keep the Existing DMXs
These systems are [redacted]

Regulatory Approvals:

Are Regulatory body approvals needed for the project?
No

If yes, provide detailed regulatory approvals

Project Schedule

Milestone/Phase Name	Estimated Date
100% Engineering Completion – 10 Nodes	September 2023
Full Funding PAF Submission	June 2023
Construction Start	September 2023
Testing/Commissioning	September 2023 - June 2024
In Service Date for 10 Nodes	June 2024

Risks and Risk Mitigation Plans

List top risks and mitigation plans associated with this project. Include any contingency related to each risk. (Permitting/siting; environmental; outage constraints; customer/community outreach; material delivery; constructability challenges; excavation; etc.)

References

None

Appendix 2
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Appendices (One-Line Diagrams, Images, etc.)

Reference appendices items in the appropriate section of the PAF and list items in the same order as referenced in the PAF

Appendix A – Cost Estimate