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Operations Project Authorization Form

Project Title: 2023 DB Inspections	Project Number: CD02135
Date Prepared: 11/07/2022	**Company:** Eversource CT
Organization: Electric Field Operations	**Class(es) of Plant:** D Line
Project Initiator: [redacted]	**Project Category:** URD/DB Cable Improvements
Project Manager: [redacted]	**Project Type:** Specific
Project Sponsor: [redacted]	**Capital Investment part of original Operating Plan:** Yes
Estimated in service date: 12/31/23	**Emergency Related Request?** No
Eng./Constr. Resources Budgeted? Yes	**Facility Type** (check all that apply): ☐ PTF ☐ non-PTF ☒ Distribution
Total Gross Capital Request: $3.699M	**Authorization Type:** Initial Funding

Executive Summary

The purpose of this project is to fund Year 4, 2023, of the Direct Buried (DB) inspection program and [redacted]

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Project Costs Summary

Note: Dollar values are in thousands

Capital Costs	Year 2023	Year 2024	Year 2025	Total
Direct Capital Costs				
Internal Labor and Construction Equipment	$76,903	$0	$0	$76,903
Outside Services	$1,907,667	$0	$0	$1,907,667
Materials	$206,007	$0	$0	$206,007
Removals	$101,263	$0	$0	$101,263
Risk and Contingency	($9,494)	$0	$0	($9,494)
Other	$0	$0	$0	$0
Subtotal – Direct Costs	**$2,282,346**	**$0**	**$0**	**$2,282,346**
Indirect Capital Costs				
Indirect/Overheads (including benefits)	$1,371,349	$0	$0	$1,371,349
Capitalized interest or AFUDC, if any	$45,676	$0	$0	$45,676
Subtotal – Indirect Costs	**$1,417,025**	**$0**	**$0**	**$1,417,025**
Total Gross Capital Costs	**$3,699,371**	**$0**	**$0**	**$3,699,371**
Customer Contribution	**$0**	**$0**	**$0**	**$0**
Total Net Capital Project Costs	**$3,699,371**	**$0**	**$0**	**$3,699,371**

Technical Justification:

Project Need:
Annual inspections of DB infrastructure and replacement of fault indicators on single-phase and three-phase equipment.

Project Objective:
Identify any issues in the DB system and replace old fault indicators that are at or near their end-of-life expectancy due to the internal battery weakening. Fault indicators have a life expectancy of 15 – 20 years, per the manufacturer's documentation.

Justification:
Reliable operation of fault indicators on the DB system is crucial to safe and rapid fault identification, repair, and aids in restoring power quickly.

Project Scope:
Inspect DB infrastructure and replace fault indicators at approximately [redacted]

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Major Material:
12,744 DB fault indicators

Background:
There is a large amount of DB infrastructure on the Eversource system. When there is a fault in the DB area, locating the faulted portion is aided by fault indicators. Fault indicators operate by batteries. The batteries have a life expectancy of 15 – 20 years. Fault indicators should be replaced in this timeframe to provide accurate information regarding the location of the fault.

Alternatives Considered:

The only other alternative is to do nothing, which is not recommended for the reasons listed in the Background section above.

Regulatory Approvals:

Are Regulatory body approvals needed for the project
No

Project Schedule

Milestone/Phase Name	Estimated Date
100% Engineering Completion	3/30/23
Construction Start	4/1/23
Testing/Commissioning	N/A
In Service Date	12/31/23

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Risks and Risk Mitigation Plans

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2023	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	2023	Low	Design to minimize customer impact. Project Preplanning and customer/community outreach.
Internal construction resources not available to perform the work.	2023	Low	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.	2023	Low	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.
Materials Shortage or long lead times	2023	Medium	Pre-order long lead time material; minimize the use of non-standard and non-stocked material.
Storm delays	2023	Medium	If storm activity delays work, we may be forced to use external resources.
System abnormal configuration	2023	Low	Schedule work to minimize system abnormal time. Install temporary bypasses/equipment if system will be abnormal for extended periods.
Technological risks involving integration of new technology	2023	Low	Before use of new technology ensure support of standards and manufacturer. Schedule project to accommodate for extra time or ensure new technology is not on the critical path.
Wetlands / Environmentally sensitive area	2023	Low	Use of mats and specialty equipment, only work during certain times of the year.

References

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



CD02135 DB Fault Indicator Replacemen