EVERSOURCE

Supplement Authorization Form

Project Title: [redacted] ***DGI Sensors***	**Project Number: CD00928**
Date Prepared: 04/10/2026	**Company:** Eversource CT
Organization: Distribution Engineering	**Project Category:** Network Reliability
Initiating Organization: Distribution	**Project Type:** Specific
Project DDE: [redacted]	**Capital Investment part of 5-year plan?** Yes
Project Manager: [redacted]	**Emergency Related Request?** No
Project Sponsor: [redacted]	**Facility Type** (check all that apply)**:** ☐ PTF ☐ non-PTF ☒ Distribution ☐ N/A (General Plant)
Current Authorized Amount: $24.8K	**Approved In-Service Date:** 12/31/18
Supplement Request: $159.6K	**Estimated In-Service Date: 3/31/26**
Total Capital Request: $206K	**Authorization Type:** Supplement Request
	Reason: Cost Overage

1. Project Background

The purpose of this project is to enhance the remote monitoring capabilities of the Digital Grid Network Monitoring System through the installation of [redacted]

When Project CD00928 was originally developed in 2018, the scope relied on inhouse resources to perform the installations in coordination with the Network Major Maintenance Inspection cycle for the Freight Street feeders. This work required significant planning and coordination, including traffic control, feeder outage scheduling, and vault cleaning prior to entry, making collaboration with both internal teams and external parties essential.

The project could not be executed as planned due to repeated severe weather events that prevented feeder switching, a system-wide distribution moratorium, and attrition of internal resources. As a result, management elected to issue a Request for Proposal (RFP) to engage a qualified vendor to complete the sensor installations. While using an external contractor eliminates the need to de-energize feeders during installation, it still requires costly support activities such as traffic control and vault cleaning. These additional requirements contributed to increased costs for Project CD00928.

Project CD00928 was completed, and all associated work orders were formally closed. The increase in the overall project cost is primarily attributable to the original funding estimate developed in 2018, which did not

account for subsequent increases in unit costs for materials and external services projected for 2026. Furthermore, the initial estimate assumed the work would be performed using internal resources; however, execution of the project ultimately required external contractors. Accordingly, a supplemental authorization of $159.6K is requested, resulting in a total capital request of $206K.

Project Scope:

- [redacted]

2. Supplement Justification Overview

The following are reasons for the budget being over the authorized amount:

a. Installation of the sensors was completed by an outside vendor rather than internal resources as originally planned.
b. [redacted]
c. Project CD00928 absorbed the cost for cleaning activities such as pumping water out of vaults, air control and removing sludge out from network vaults.
d. High cost of local Police's support to set up work zones and provide traffic control.

3. Supplement Cost Summary (Project Total)

Capital Costs	To Date Spend	Prior Authorized	Supplemental Request	Total Request
Internal Labor and Construction Equipment	1.2	15.5	-14.6	0.9
Outside Services	126.2	1.8	100.6	102.4
Materials	24.8	3.8	16.3	20.1
Removals	0.0	2.7	27.0	29.7
Risk and Contingency	11.0	1.0	10.0	11.0
Other	4.9	0.0	4.0	4.0
Subtotal	**168.1**	**24.8**	**143.3**	**168.1**

Indirect Capital Costs	To Date Spend	Prior Authorized	Supplemental Request	Total Request
Indirects/Overheads (including benefits)	37.9	21.5	16.4	37.9
Capitalized interest or AFUDC, if any	0.0	0.1	-0.1	0.0
Subtotal	**37.9**	**21.6**	**16.3**	**37.9**
Total Capital Costs (Gross)	**206.0**	**46.4**	**159.6**	**206.0**
Less Total Customer Contribution	**0.0**	**0.0**	**0.0**	**0.0**
Project Costs (Net of Reimbursement)	**206.0**	**46.4**	**159.6**	**206.0**

4. New Total Request by Year (if applicable)

Note: If multi-year project, include actuals for current and years past, and then show forecasted spend for upcoming years.

Capital Costs	2019	2020	2021	2022	2026	TOTAL
Internal Labor & Equipment	0.1	0.3	0.2	0.1	0.2	0.9
Outside Services	12.0	34.8	20.5	7.9	27.2	102.4
Materials	2.4	6.8	4.0	1.5	5.3	20.1
Removals	3.2	9.3	5.5	2.1	9.6	29.7
Risk and Contingency	0.0	0.0	0.0	0.0	11.0	11.0
Other	0.5	1.4	0.8	0.3	1.1	4.0
SUBTOTAL Direct Cost	**18.2**	**52.6**	**31.0**	**11.9**	**54.5**	**168.1**
Indirects / Overheads	0.3	1.5	2.1	0.7	33.2	37.9
AFUDC	0.0	0.0	0.0	0.0	0.0	0.0
SUBTOTAL Indirect Cost	**0.3**	**1.5**	**2.1**	**0.7**	**33.2**	**37.9**
TOTAL Capital Request	**18.5**	**54.1**	**33.1**	**12.6**	**87.7**	**206.0**
Less Total Customer Contribution	0.0	0.0	0.0	0.0	0.0	**0.0**
TOTAL Project Cost	**18.5**	**54.1**	**33.1**	**12.6**	**87.7**	**206.0**

5. Lessons Learned

Technical Authorization Form

Date Prepared: 04/10/2017	Project Title: [redacted] DGI Sensors
Company: Eversource CT	Project ID Number: CD00928
Organization: Asset Strategy & Performance	Class of Plant: Distribution
Project Initiator: [redacted]	Project Category: Network Automation
Project Owner/Manager: [redacted]	Project Type: *Specific*
Project Sponsor: Electrical Maintenance	Project Purpose: Part of regulatory tracked program? Yes
Estimated in service date: 12/01/2018	If Transmission Project: *PTF / Non-PTF / NA*
Authorization Type: *Eng,*	Authorization Amount: $4,600

Project Need Statement

We are in the second (and final) phase of installing the Digital Grid network remote monitoring system for Eversource CT. The first phase was installing a new Digital Grid network protector relay in our transformer vaults and a feeder sensor and receiver cabinet in our substations. In phase 2 we plan on installing Digital Grid sensors in the Digital Grid equipped network protectors. These sensors will enable us to defer network protector major maintenance from a 2 year cycle to a 4 year cycle. It is important to note that the opportunity to glean O+M savings from the Digital Grid network monitoring system was not available when many of these network monitoring projects first started. After the merger, all the operating companies transitioned to a unified maintenance manual. One of the new practices to benefit legacy CL&P is that the active monitoring of our network protectors gives us the ability to shift to a four year protector maintenance frequency. The deferred maintenance will significantly reduce the operating cost of Eversource CT with a projected annual savings of $18,328 for [redacted]. The sensors are to be added at the same time as the Digital Grid network protector relays are installed under project CD00601.

Benefits of these sensors also include System Operators being notified to conditions such as network protectors pumping or cycling, loss of protector pressure and the presence of water thereby materially prolonging the useful life of the protector and transformer. We look forward to starting this venture and this project provides the necessary first step to installing those sensors and gaining those savings.

Project Objectives

This project intends to leverage the communication infrastructure of the network monitoring systems being installed in Eversource CT major networks by installing sensors in the network protectors that would notify operators of water ingress, loss of protector pressure and excessive pumping. The sensors would also make it possible to move from a 2 year protector major maintenance schedule to a 4 year frequency generating significant O+M savings for the Company.

Project Scope

[redacted]

Background / Justification

These sensor alarms will enable us to defer network protector major maintenance from a 2 year cycle to a 4 year cycle. This will significantly reduce the operating and maintenance costs of Eversource CT.

Business Process and / or Technical Improvements:

The deferral of network major maintenance from a 2 year cycle to a 4 year cycle in Digital Grid equipped protectors will be a significant savings for Eversource CT. The project estimate assumes these sensors will be installed during planned network major maintenance outages and that no switching will be planned to install these sensors.

Cost Estimate and Assumptions

The cost per unit of installing the 3 Digital Grid network protector sensors is estimated to be [redacted]

Project #'s	Substation (- *Network/s*)	District	Network Protectors	Total Protectors	Sensor Labor	Sensor Material	Total
CD00928	[redacted] - *Waterbury N188*	Cheshire	[redacted]	[redacted]	$28,080	$16,920	$46,449

Alternatives Considered with Cost Estimates

No alternatives considered.

Project Schedule

Describe the project schedule and milestones. Include estimated start and end dates.

Milestone/Phase Name	Estimated Completion Date
Project start date	01/02/2018
100% project completion	12/01/2018

Regulatory Approvals

None required.

Risks and Risk Mitigation Plans

[redacted]

References

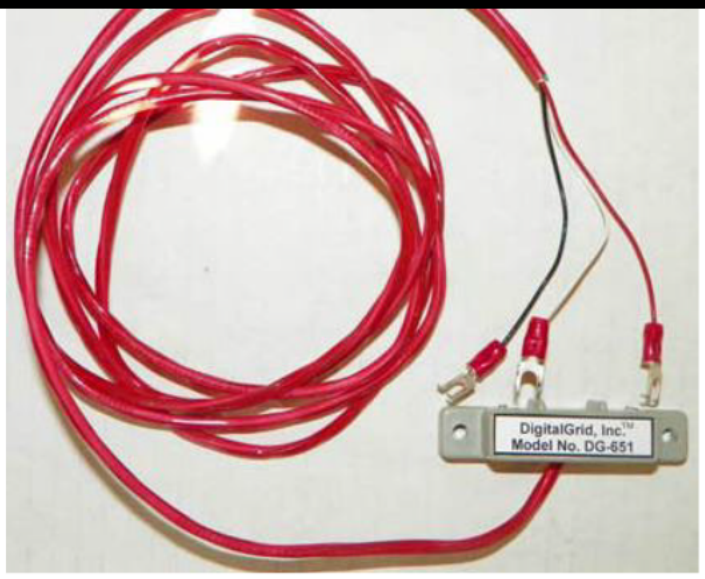
Digital Grid Project Scope Cost EST 2-0414.

One-Line Diagrams, Attachments, and Images

[redacted]



[redacted]



[redacted]

