# Supplement Request Form

## Approved at September 19, 2019 EPAC

## Link to Meeting Minutes

| | |
|---|---|
| **Date Prepared: 8/5/19** | **Project Title: [redacted] Circuit Breaker Automation** |
| **Company/Companies: Eversource CT** | **Project ID Number: CS00180** |
| **Organization: Asset Management** | **Plant Class/(F.P. Type): Distribution Substation** |
| **Project Initiator: [redacted]** | **Project Type: Specific** |
| **Project Manager: [redacted]** | **Capital Investment Part of Original Operating Plan? Yes** |
| **Project Sponsor: [redacted]** | **O&M Expenses Part of the Original Operating Plan? No** |
| **Current Authorized Amount: $320K** | **Estimated in service date(s): 5/31/19** |
| **Supplement Request: $470K** | **Other: N/A** |
| **Total Request: $790K** | |

## Supplement Justification

The [redacted] Circuit Breaker Automation project had an original authorized budget of $320K, which was approved in PowerPlan on 9/25/2017 under the OCRC project approval process. The project was placed in service on May 31, 2019. This supplement requests approval of an additional $470K for an updated total request of $790K.

The original scope included the [redacted]. A crew mobilized in October 2017 but was de-mobilized due to a transformer [redacted] which extended the in-service date.

The original estimate was based on a single breaker automation assuming a DSCADA system was already installed.

The project issued for construction drawings to accomplish the following:

- [redacted]

[redacted] which were the primary drivers for the increased project costs.

## Justification for Additional Resources

The reasons for the project authorization supplement of $470K are summarized below:

1. **Engineering: $41K -** Engineering costs increased due to more circuit breakers and conduit installation design.
2. **Labor: $35K -** Labor costs increased due to increased scope to install a new DSCADA system, [redacted]
3. **Materials: $75K -** Extra materials were required due to the DSCADA system and extra circuit breakers that required automation.
4. **Outside Services $44K** – These costs were not included in the estimate but incurred during the project installation
5. **Indirects: $227K -** Indirect costs increased due to higher direct spending.
6. **AFUDC: $48K -** AFUDC costs were higher due to delayed completion caused by construction crews being redirected due to equipment failures at other substations.

## Supplement Cost Breakdown

The table below provides an overview of the line item categories from the original project estimate and the updated estimate. (*Note: A specific estimate was not completed for this project. The circuit breaker automation projects were a part of a program and this project was approved at the OCRC with no individual estimate*).

***Note: Dollar values are in thousands:***

| Line item Category | Prior Estimate ($) | Updated Estimate ($) | Variance ($) |
|---|---|---|---|
| Engineering | 30 | 71 | 41 |
| Labor | 113 | 148 | 35 |
| Materials/contingency | 10 | 85 | 75 |
| Outside Services | 0 | 44 | 44 |
| **Subtotal Direct Costs** | 153 | 348 | 195 |
| Indirects | 164 | 391 | 227 |
| AFUDC | 3 | 51 | 48 |
| **TOTALS** | **320** | **790** | **470** |

Please see the original authorization documentation attached.

## Supplement Cost Summary

*Note: Dollar values are in thousands:*

| | Prior Authorized | Supplement Request | Total |
|---|---|---|---|
| Capital Additions - Direct | 150 | $161 | $311 |
| Less Customer Contribution | $ - | $ - | $ - |
| Removals Net of Salvage 2% | $3 | $34 | $37 |
| Total Direct Spending | $153 | $195 | $348 |
| Capital Additions - Indirect | $164 | $227 | $391 |
| AFUDC | $3 | $48 | $51 |
| Total Capital Request | $320 | $470 | $790 |
| O&M | $ - | $ - | $ - |
| **Total Request** | $320 | $470 | $790 |

*Note: Dollar values are in thousands:*

Total Supplement Request by year view:

| | 2016 | 2017 | 2018 | 2019 | Total |
|---|---|---|---|---|---|
| Capital Additions Direct | $11 | ($51) | $170 | $30 | $161 |
| Less Customer Contribution | $ - | $ - | $ - | $ - | $ - |
| Removals Net of Salvage 11% | $1 | $9 | $21 | $4 | $34 |
| Total Direct Spending | $12 | ($42) | $191 | $34 | $195 |
| Capital Additions - Indirect | $17 | ($109) | $268 | $52 | $227 |
| AFUDC | $ - | $2 | $27 | $19 | $48 |
| Subtotal Request | $29 | ($149) | $486 | $105 | $470 |
| O&M | $ - | $ - | $ - | $ - | $ - |
| **Total Request** | $29 | ($149) | $486 | $105 | $470 |

Connecticut Light & Power
A Northeast Utilities Company

# Specific Project Proposal - Project #: CS00180

[redacted] - Circuit Breaker Auto

## Work Classification

Category: Substation
Type: SRCA
Type Desc: SS CIRCUIT BREAKER AUTOMATION
Work Type: Other Work

## Ownership / Management

AWC: Tolland
Statewide: No
Owner: [redacted]
Manager:

## Project Information

Status: Prelim Design Approved
SPS #:
AIS Score:
Associated Projects:
Assignment ID:
Patrol Find ID:

## Budget Summary - Preferred Option [redacted]

2017

| ID | Title | Status | Rev # | Contingency | Expenditure Amount | Net Estimate |
|---|---|---|---|---|---|---|
| 1 | [redacted] | Prelim | 0 | 0 % | $315,000 | $315,000 |
| | | | | **2017 Total:** | **$315,000** | **$315,000** |
| | | | | Total Project: | **$315,000** | **$315,000** |

# Specific Project Proposal - Project #: CS00180

[redacted] - Circuit Breaker Auto

## Project Option Summary

| ID | Description | Segments | Preliminary Estimate | Construction Estimate | Variance | IEEE $/CMS | All (w/Storm) | Prfrd |
|---|---|---|---|---|---|---|---|---|
| O1 | [redacted] | 1 | $315,000 | $0 | 100 % | $0.00 | $0.00 | ☑ |

## Segments

| ID | Title | Preliminary Estimate | Construction Estimate | Variance | IEEE $/CMS | All (w/Storm) |
|---|---|---|---|---|---|---|
| 1 | [redacted] | $315,000 | | | $0.00 | $0.00 |

# Specific Project Proposal - Project #: CS00180

[redacted] - Circuit Breaker Auto

## Background / Scope

Issue:

There is an [redacted]

Project Description:

**January 2016** - This is for ENG approval. [redacted] The estimated cost is [redacted] for the 27.6 kV breaker and [redacted] per recloser or $315k total. The ISD is 12/31/17.

Other Considerations:

Revision / ACT Comments:

If we don't do this project, what will happen?

## Environmental

Water Pollution: No Change  Soil Contamination: No Change  Natural Habitats: No Change

Alternatives considered based on Environmental Impact or Description of Aspects  Oil Spill Risks Considered? ☑

Safety Concerns With This Project? ☐

Explain:

## External Stakeholders

Customer Impact / Involvement

Cust. Impacted:  Approx. Pole Count (NU):

Crit. Cust. Impacted:  Approx. Pole Count (Other):

Adjoining Property Owner Consent Required: ☐  Town Hearing Required: ☐

Other Utility Pole Custodian Area: ☐  Easement Required: ☐

State Highway Permit Required: ☐

Relocation / New Service

New Srvc. Contact:  Requestor Type:

Customer Type:  State Highway Project #:

Request Number:  Route #:

# Specific Project Proposal - Project #: CS00180

[redacted] - Circuit Breaker Auto

Segment CS00180-01

## General Information

Segment: 1 - [redacted]
Status: Prelim Design Approved
Segment Type: DSCADA
Town: ENFIELD
Budget Year: 2017
Work Type: Other
Trimming Required: ☐
In Service Date: 12/31/2017
Description: [redacted]

## Itemized Work List

| ID | Major Grid | Minor Grid | Description of Work to be Performed |
|---|---|---|---|
| 1 | [redacted] | [redacted] | [redacted] |

# Specific Project Proposal - Project #: CS00180

[redacted] - Circuit Breaker Auto

Segment CS00180-01

## Estimate

Preliminary Estimate Summary

| | |
|---|---|
| Revision Number: | 0 |
| Contingency: | 0.00 % |
| SubTotal: | $315,000 |
| Contingency Amount: | $0 |
| Estimate: | $315,000 |
| Reimbursement: | $0 |
| Net Amount: | **$315,000** |
| Description: | Automate 1 breaker and 4 reclosers |

| Item Description | CU | $ / Per | Qty | Amount |
|---|---|---|---|---|
| OTHER | 15-ALL14 | [redacted] | [redacted] | $315,000.00 |
| OTHER | | | | |

## Associated / Impacted Devices

| Status | Notes |
|---|---|
| Existi | |
| Existi | |
| Existi | |
| Existi | |
| Existi | |

[redacted]

# Specific Project Proposal - Project #: CS00180

[redacted] - Circuit Breaker Auto

Segment CS00180-01

## Reliability Projection

Title:

Outage Start Date: 01/01/2007 Outage End Date: 12/18/2015 Years History: 8.97

[redacted]