Supplement Request Form

Approved by EPAC Chairmen external to meeting on 04/05/2019
Link to 03/06/19 EPAC Meeting Minutes

Date Prepared: 06/15/18 Revised 03/13/19	**Project Title: [redacted] – Flood Mitigation / Equipment Replacements**
Company/Companies: Eversource CT	**Project ID Number: 201353**
Organization: Transmission	**Plant Class/ (F.P. Type): Distribution Substation**
Project Initiator: [redacted]	**Project Category: Stations – Transformers, Stations – Flooding**
Project Manager: [redacted]	**Project Type: Specific**
Project Sponsor: [redacted]	**Capital Investment Part of Original Operating Plan? Yes**
Current Authorized Amount: $2,509K	**O&M Expenses Part of the Original Operating Plan? No**
Supplement Request: $4,324K	**Estimated in service date(s): 06/24/2019**
Total Request: $6,833K	**Other:**

Supplement Justification

The Westport Flood Mitigation Project has a current authorized budget of $2,509K which was approved in PowerPlan on September 25, 2017. The estimated in-service date for the project is June 24, 2019. This supplement requests approval of an additional $4,324K for an updated total of $6,833K.

[redacted]

This substation project involves coordination with Eversource Distribution Underground Group for the Network Conversion Project identified above. [redacted] Due to the complexity of this project, it will be completed in multiple sequenced phases as follows:

- Phase 1 - network conversion beginning March 3, 2019
- Phase 2 - [redacted]
- Phase 3 - [redacted]

The new projected in-service date is June 24, 2019. The total project spend to date is $4,483K.

The main driver behind this supplement is the use of an inaccurate engineering estimate.

[redacted] project was underestimated in 2016 based on the following factors:

- Construction estimates for test, civil and electrical construction were underestimated compared to the bids received, which were based on a complete design and drawings that were issued for construction.
- In 2016, the use of LCE's was not a common practice and therefore not included in the original estimate.
- The E&S rate in 2016 was 24.6%. The E&S rate in 2018 was 90%. Note on the attached estimates that this change alone increases the cost of the job by $1.7M.

In addition, [redacted] as discussed in line item 5 below.

[redacted] This impacted the overall project schedule by approximately 4 months. This delay attributed to the increased resource costs that are shown under the external resource breakdown. The Town of Westport and Eversource have reached an agreement on the requested outage dates.

Justification for Additional Resources

The reasons for the project authorization supplement of $4,324K are summarized below, by the affected cost categories:

Note: Dollar values are in thousands

Line item Category	Line Item Original Estimate ($K)	Updated Estimate ($K)	Variance ($K)
1. Internal Resources	620	579	(41)
2. Materials	376	657	281
3. Other Outside Services	363	191	(172)
4. External Resources:	-	2,234	2,234
• Electrical / Civil Contractor (McPhee)	0	1,129	1,129
• Test Contractor (HVM)	0	392	392
• Engineering Design & Drafting (TRC)	0	264	264
• P&C Contractor (Cascade)	0	20	20
• Other Engineering Services (Labs)	0	36	36
• Transformer Refurb. Contractor (NASS)	0	202	202
• LCE (TRC)	0	191	191
5. Environmental	0	50	50
6. Lease Agreement	0	101	100
7. Other, including contingency	181	338	157
Subtotal Direct Costs	1,540	4,151	2,610
8. Indirects	909	2350	1,441
9. AFUDC	60	333	273
Total Costs	**$2,509**	**$6,833**	**$4,324**

1. **Internal Resources: ($41K)**

   Internal resources for engineering, pm and construction rep support are being used on the project. However, internal construction resources were not utilized for this project due to scheduling conflicts with other ongoing projects.

2. **Materials: $281K**

   An error was found in the approved PAF. Not all material POs were included when the PAF was written. All material needed to complete this project has been purchased and delivered and is reflected in the number above.

3. **Other Outside Services: ($172K)**

   The revised estimate for Outside Services was determined to be lower than the estimate included in the PAF.

4. **External Resources: $2,234K**

This project was originally estimated to be completed by internal resources. However, internal resources were unable to support this project in 2018 & 2019. RFPs were prepared and sent out for Contractor resources. Major contractors were competitively bid, and the lowest bidders were awarded the work for the project. The reasons for the external resource increases are outlined below, with the associated contractor:

- **Electrical / Civil Contractor (McPhee):** Competitively bid contractor amount. **$1,129K**
- **Test Contractor (HVM):** Competitively bid contractor amount. **$392K**
- **Engineering Design & Drafting (TRC):** Competitively bid contractor amount. **$264K**
- **P&C Contractor (Cascade):** Competitively bid contractor amount. **$20K**
- **Weston & Samson & Contest Analytical Labs:** Competitively bid contractor amount. **$36K**
  - Provided engineering and environmental support.
- **Transformer Refurb. Contractor (NASS):** Competitively bid contractor amount. **$202K**

[redacted]

- **Lead Commissioning Engineer (TRC):** Competitively bid contractor amount. **$191K**

TOTAL: **$2,234K**

5. **Environmental: $50K**

[redacted] Eversource Environmental will continue to monitor, at this time no further actions are required.

6. **Lease Agreement: $100K**

Although Eversource has a 40' wide easement to access the existing substation, a lease agreement was required with the only landowner that surrounds the substation to lease space for construction laydown and access. The necessity of this construction area was not identified during preliminary review of the project.

7. **Other/Contingency: $157K**

[redacted] This will have an anticipated $250K cost impact to the project.

8. **Indirect Costs: $1,441K**

In 2018 the E & S rate increased to 90%, as a result the project increased by $1441K. The E&S rate is expected to be around 40% in 2019.

9. **AFUDC: $273K**

The revised actuals accounted for increased accumulated debt cost over the extended life of the project.

Supplement Cost Summary

Note: Dollar values are in thousands

	Prior Authorized	Supplement Request	Total
Capital Additions - Direct	$1,468	$2,013	$3,481
Less Customer Contribution	$0	$0	$0
Removals Net of Salvage 5%	$72	$597	$669
Total Direct Spending	$1,540	$2,610	$4,150
Capital Additions - Indirect	$909	$1,441	$2,350
AFUDC	$60	$273	$333
Total Capital Request	$2,509	$4,324	$6,833
O&M	$0	$0	$0
Total Request	**$2,509**	**$4,324**	**$6,833**

Note: Dollar values are in thousands:

Total Supplemental Request by year view:

	Prior Years	2018	2019	Total
Capital Additions Direct	$0	$908	$1,105	$2,013
Less Customer Contribution	$0	$0	$0	$0
Removals Net of Salvage 5%	$0	$46	$551	$597
Total Direct Spending	$0	$954	$1,656	$2,610
Capital Additions - Indirect	$0	$788	$653	$1,441
AFUDC	$0	$45	$228	$273
Subtotal Request	$0	$1,787	$2,537	$4,324
O&M	$0	$0	$0	$0
Total Request	**$0**	**$1,787**	**$2,537**	**$4,324**

Please refer to the attached for additional supporting information.