EVERSOURCE
Project Authorization Form

## Operations Project Authorization Form

| | |
|---|---|
| **Date Prepared: 5/3/2018** | **Project Title: West Hyerdale Drive Goshen – DB Cable Replacement** |
| **Company: Eversource Connecticut** | **Project ID Number: CD01057** |
| **Organization: Distribution Engineering** | **Class of Plant: UG/DB Distribution** |
| **Project Initiator:** [redacted] | **Project Category: DB Cable Replacement** |
| **Project Manager:** [redacted] | **Project Type: Specific** |
| **Project Sponsor:** [redacted] | **Project Purpose: Replacement of Aging and Failing DB Infrastructure** |
| **Estimated in service date: December 31, 2018** | **If Transmission Project: PTF? N/A** |
| **Eng. /Constr. Resources Budgeted? No** | **Capital Investment Part of Original Operating Plan? Yes** |
| **Authorization Type: Initial Funding** | **O&M Expenses Part of the Original Operating Plan? Yes** |
| **Total Request: $306, 249** | |

**Financial Requirements:**

**Project Authorization**
ERM: _____

FP&A: _____

**Executive Summary:**

[redacted] The proposed cost of this project is $306,249 and it has a tentative in-service date of December 31, 2018.

**Project Costs Summary:**

| | Prior Authorized | 2017 | 2018 | 2019 | Total |
|---|---|---|---|---|---|
| Capital Additions - Direct | $0 | $0 | $269,498 | $0 | $269,498 |
| Less Customer Contribution | $0 | $0 | $0 | $0 | $0 |
| Removals net Salvage | $0 | $0 | $27,562 | $0 | $27,562 |
| Total - Direct Spending | $0 | $0 | $297,060 | $0 | $297,060 |
| Captial Additions - Indirect | $0 | $0 | $0 | $0 | $0 |
| Subtotal Request | $0 | $0 | $297,060 | $0 | $297,060 |
| AFUDC | $0 | $0 | $0 | $0 | $0 |
| O & M | $0 | $0 | $9,188 | $0 | $9,188 |
| Total Request | $0 | $0 | $306,248 | $0 | $306,249 |

| | Prior Authorized | 20__ | 20__ | 20__+ | Totals |
|---|---|---|---|---|---|
| Capital Additions - Direct | $ - | $ - | $ - | $ - | $ - |
| Less Customer Contribution | - | - | - | - | - |
| Removals net of Salvage _____% | - | - | - | - | - |
| Total - Direct Spending | $ - | $ - | $ - | $ - | $ - |
| Capital Additions - Indirect | - | - | - | - | - |
| Subtotal Request | $ - | $ - | $ - | $ - | $ - |
| AFUDC | - | - | - | - | - |
| Total Capital Request | $ - | $ - | $ - | $ - | $ - |
| O&M | - | - | - | - | - |
| Total Request | $ - | $ - | $ - | $ - | $ - |

**Financial Evaluation**

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

| Direct Capital Costs | Year 1 | Year 2 | Year 3+ | Total |
|---|---|---|---|---|
| Straight Time Labor | | | | |
| Overtime Labor | | | | |
| Outside Services | | | | |
| Materials | | | | |
| Other, including contingency amounts (describe) | | | | |
| Total | | | | |

| Indirect Capital Costs | Year 1 | Year 2 | Year 3+ | Total |
|---|---|---|---|---|
| Indirects/Overheads (including benefits) | | | | |
| Capitalized interest or AFUDC, if any | | | | |
| Total | | | | |

| | | | | |
|---|---|---|---|---|
| Total Capital Costs | | | | |
| Less Total Customer Contribution | | | | |
| **Total Capital Project Costs** | | | | |
| **Total O&M Project Costs** | | | | |

*Note: Explain unique payment provisions, if applicable*

**Future Financial Impacts:**

Provide below the estimated future costs that will result from the project:
*Note: Dollar values are in thousands:*

| Future Costs | Year 20__ | Year 20__ | Year20__ | Year 20__+ | Total Future Project Costs |
|---|---|---|---|---|---|
| Capital | $ - | $ - | $ - | $ - | $ - |
| O&M | - | - | - | - | - |
| Other | - | - | - | - | - |
| TOTAL | $ - | $ - | $ - | $ - | $ - |

Describe the estimated future Capital, O&M and/or Other costs noted above:

**Asset Retirement Obligation (ARO) and/ or Environmental Cleanup Costs (Environmental Liabilities):**

Is there an ARO associated with this project? If yes, please provide details: Yes, The retirement of the existing DB Cable.

Are there other environmental cleanup costs associated with this project? If yes, please provide details There are no environment concerns regarding this project.:

**Technical Justification:**

**Project Need Statement**

[redacted]

**Project Objectives**

[redacted]

**Project Scope**

[redacted]

**Background / Justification**

[redacted]. Since this development was originally installed 1978 with HMP cable and the cable injection application was completed in 2000, it appears that cable has deteriorated to a point where the defective cable warrants replacement.

In addition, in this first segment, we are proposing a second 3" spare conduit from pad to pad for future outage events to accommodate for the replacement of future deflective cable occurrences. [redacted]

[redacted]

**Business Process and / or Technical Improvements**:

[redacted]

**Alternatives Considered with Cost Estimates:**

Since this development was originally installed 1978 with HMP, DB primary cable that is installed random installed and the cable injection application was completed in 2000, it appears that cable has deteriorated to a point where the defective cable warrants replacement.

**Segment 3: West Hyerdale Drive – Three Phase Express Cable Replacement: COST: $ 571,118**

[redacted]

**Segment 4: Weldon Court & West Hyerdale Drive – Three Phase Express Cable Replacement: COST: $ 1,016,759**

[redacted]

| Milestone/Phase Name | Estimated Completion Date |
|---|---|
| Detailed Engineering | April 2018 |
| Construction | December 2018 |
| | |
| | |
| | |

**Regulatory Approvals:**
None.

**Risks and Risk Mitigation Plans:**

| Risk Event | Risk Horizon | Likelihood of Occurrence | Expected Value Cost Exposure ($M) | Risk Mitigation |
|---|---|---|---|---|
| Actual cost higher than estimated due to scope changes. | 2018 | LOW | Project Cost x Risk Factor | 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 | 2018 | LOW | Re-design cost x likelihood | Design to minimize customer impact. Project Preplanning and customer/community outreach |
| Internal construction resources not available to perform the work. | 2018 | LOW | Labor cost x Outside Labor Premium | 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. | 2018 | LOW | Labor cost x Outside Labor Premium | Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost. |
| Materials Shortage or long lead times | 2018 | LOW | Project Delays | Pre-order long lead time material; minimize the use of non-standard and non-stocked material. |
| Storm delays | 2018 | LOW | Labor cost x Outside Labor Premium | If storm activity delays work, we may be forced to use external resources. |

| | | | | |
|---|---|---|---|---|
| System abnormal configuration | 2018 | LOW | Reliability Impacts | 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 | 2018 | LOW | Estimate of time and cost addition for difficulties involved with integration | Before use of new technology ensure support of standards and manufacture. Schedule project to accommodate for extra time or ensure new technology is not on the critical path. |
| Wetlands / Environmentally sensitive area | 2018 | LOW | Known cost or use environmental premium | Use of mats and specialty equipment, only work during certain times of the year |

**References:**

None.

**One-Line Diagrams, Attachments, and Images:**

