EVERSOURCE
Project Authorization Form

Operations Project Authorization Form

Approved at November 13, 2018 EPAC
Link to Meeting Minutes

Date Prepared: 11/01/2018	**Project Title:** [redacted]
Company/ies: Eversource CT, MA, NH	**Project ID Number: TBD**
Organization: System Security	**Class(es) of Plant: Transmission & Distribution Substations**
Project Initiator: [redacted]	**Project Category: Stations - CIP/Security**
Project Manager: [redacted]	**Project Type: Specific**
Project Sponsor: [redacted]	**Project Purpose: Improve Substation Security**
Estimated in service date: December 2019	**If Transmission Project: PTF?**
Eng. /Constr. Resources Budgeted? No	**Capital Investment Part of Original Operating Plan? Yes**
Authorization Type: Full	**O&M Expenses Part of the Original Operating Plan? No**
Total Request: $701K	

Financial Requirements:

Project Authorization

ERM: _____

FP&A: _____

Executive Summary

Funding is being requested in the amount of $701,000 for a project that will [redacted] remains the best option due to competitive pricing and it is a reliable product.

The per state cost breakdown is as follows (dollar values in thousands):

CT		EMA		NH		WMA	
D	T	D	T	D	T	D	T
$149	$101	$103	$72	$110	$126	$7	$33

Connecticut- Distribution

Project Costs Summary

Note: Dollar values are in thousands

	Prior Authorized	2018	2019	2020	Totals
Capital Additions - Direct	$ -	$ 92	$ 20	$ -	$ 113
Less Customer Contribution	$ -	$ -	$ -	$ -	$ -
Removals net of Salvage ____%	$ -	$ -	$ -	$ -	$ -
Total - Direct Spending	$ -	$ 92	$ 20	$ -	$ 113
Capital Additions - Indirect	$ -	$ 0	$ 30	$ -	$ 30
Subtotal Request	$ -	$ 93	$ 50	$ -	$ 143
AFUDC	$ -	$ 2	$ 4	$ -	$ 6
Total Capital Request	$ -	$ 95	$ 54	$ -	$ 149
O&M	$ -	$ -	$ -	$ -	$ -
Total Request	$ -	$ 95	$ 54	$ -	$ 149

Financial Evaluation

Note: Dollar values are in thousands

Direct Capital Costs	Actuals	2018	2019	2020	Total
Straight Time Labor	$ -	$ -	$ 9	$ -	$ 9
Overtime Labor	$ -	$ -			$ -
Outside Services	$ -	$ -	$ 11	$ -	$ 11
Materials	$ -	$ 92	$ -	$ -	$ 92
Other – Vehicles, expenses, Contingency	$ -	$ -	$ 1	$ -	$ 1
Total	$ -	$ 92	$ 20	$ -	$ 113

Indirect Capital Costs		2018	2019	2020	Total
Indirects/Overheads (including benefits)	$ -	$ 0	$ 30	$ -	$ 30
Capitalized interest or AFUDC, if any	$ -	$ 2	$ 4	$ -	$ 6
Total	$ -	$ 3	$ 33	$ -	$ 36

Total Capital Costs	$ -	$ 95	$ 54	$ -	$ 149
Less Total Customer Contribution	$ -	$ -	$ -	$ -	$ -
Total Capital Project Costs	$ -	$ 95	$ 54	$ -	$ 149
Total O&M Project Costs	$ -	$ -	$ -	$ -	$ -

Note: Explain unique payment provisions, if applicable

Connecticut- Transmission

Project Costs Summary

Note: Dollar values are in thousands

	Prior Authorized	2018	2019	2020	Totals
Capital Additions - Direct	$ -	$ 72	$ 16	$ -	$ 88
Less Customer Contribution	$ -	$ -	$ -	$ -	$ -
Removals net of Salvage ____%	$ -	$ -	$ -	$ -	$ -
Total - Direct Spending	$ -	$ 72	$ 16	$ -	$ 88
Capital Additions - Indirect	$ -	$ 0	$ 8	$ -	$ 8
Subtotal Request	$ -	$ 72	$ 24	$ -	$ 96
AFUDC	$ -	$ 2	$ 3	$ -	$ 5
Total Capital Request	$ -	$ 74	$ 26	$ -	$ 101
O&M	$ -	$ -	$ -	$ -	$ -
Total Request	$ -	$ 74	$ 26	$ -	$ 101

Financial Evaluation

Note: Dollar values are in thousands

Direct Capital Costs	Actuals	2018	2019	2020	Total
Straight Time Labor	$ -	$ -	$ 7	$ -	$ 7
Overtime Labor	$ -	$ -			$ -
Outside Services	$ -	$ -	$ 8	$ -	$ 8
Materials	$ -	$ 69	$ -	$ -	$ 69
Other – Vehicles, expenses, Contingency	$ -	$ 3	$ 1	$ -	$ 4
Total	$ -	$ 72	$ 16	$ -	$ 88

Indirect Capital Costs		2018	2019	2020	Total
Indirects/Overheads (including benefits)	$ -	$ 0	$ 8	$ -	$ 8
Capitalized interest or AFUDC, if any	$ -	$ 2	$ 3	$ -	$ 5
Total	$ -	$ 2	$ 10	$ -	$ 13

Total Capital Costs	$ -	$ 74	$ 26	$ -	$ 101
Less Total Customer Contribution	$ -	$ -	$ -	$ -	$ -
Total Capital Project Costs	$ -	$ 74	$ 26	$ -	$ 101
Total O&M Project Costs	$ -	$ -	$ -	$ -	$ -

Note: Explain unique payment provisions, if applicable

EMA- Distribution

Project Costs Summary

Note: Dollar values are in thousands

	Prior Authorized	2018	2019	2020	Totals
Capital Additions - Direct	$ -	$ 63	$ 18	$ -	$ 80
Less Customer Contribution	$ -	$ -	$ -	$ -	$ -
Removals net of Salvage ____%	$ -	$ -	$ -	$ -	$ -
Total - Direct Spending	$ -	$ 63	$ 18	$ -	$ 80
Capital Additions - Indirect	$ -	$ 0	$ 17	$ -	$ 18
Subtotal Request	$ -	$ 63	$ 35	$ -	$ 98
AFUDC	$ -	$ 2	$ 3	$ -	$ 5
Total Capital Request	$ -	$ 65	$ 38	$ -	$ 103
O&M	$ -	$ -	$ -	$ -	$ -
Total Request	$ -	$ 65	$ 38	$ -	$ 103

Financial Evaluation

Note: Dollar values are in thousands

Direct Capital Costs	Actuals	2018	2019	2020	Total
Straight Time Labor	$ -	$ -	$ 10	$ -	$ 10
Overtime Labor	$ -	$ -			$ -
Outside Services	$ -	$ -	$ 7	$ -	$ 7
Materials	$ -	$ 63	$ -	$ -	$ 63
Other – Vehicles, expenses, Contingency	$ -	$ -	$ 1	$ -	$ 1
Total	$ -	$ 63	$ 18	$ -	$ 80

Indirect Capital Costs		2018	2019	2020	Total
Indirects/Overheads (including benefits)	$ -	$ 0	$ 17	$ -	$ 18
Capitalized interest or AFUDC, if any	$ -	$ 2	$ 3	$ -	$ 5
Total	$ -	$ 2	$ 20	$ -	$ 22

Total Capital Costs	$ -	$ 65	$ 38	$ -	$ 103
Less Total Customer Contribution	$ -	$ -	$ -	$ -	$ -
Total Capital Project Costs	$ -	$ 65	$ 38	$ -	$ 103
Total O&M Project Costs	$ -	$ -	$ -	$ -	$ -

Note: Explain unique payment provisions, if applicable

EMA- Transmission

Project Costs Summary

Note: Dollar values are in thousands

	Prior Authorized	2018	2019	2020	Totals
Capital Additions - Direct	$ -	$ 45	$ 14	$ -	$ 59
Less Customer Contribution	$ -	$ -	$ -	$ -	$ -
Removals net of Salvage ____%	$ -	$ -	$ -	$ -	$ -
Total - Direct Spending	$ -	$ 45	$ 14	$ -	$ 59
Capital Additions - Indirect	$ -	$ 0	$ 9	$ -	$ 9
Subtotal Request	$ -	$ 45	$ 23	$ -	$ 69
AFUDC	$ -	$ 1	$ 2	$ -	$ 3
Total Capital Request	$ -	$ 47	$ 25	$ -	$ 72
O&M	$ -	$ -	$ -	$ -	$ -
Total Request	$ -	$ 47	$ 25	$ -	$ 72

Financial Evaluation

Note: Dollar values are in thousands

Direct Capital Costs	Actuals	2018	2019	2020	Total
Straight Time Labor	$ -	$ -	$ 8	$ -	$ 8
Overtime Labor	$ -	$ -			$ -
Outside Services	$ -	$ -	$ 5	$ -	$ 5
Materials	$ -	$ 45	$ -	$ -	$ 45
Other – Vehicles, expenses, Contingency	$ -	$ -	$ 1	$ -	$ 1
Total	$ -	$ 45	$ 14	$ -	$ 59

Indirect Capital Costs		2018	2019	2020	Total
Indirects/Overheads (including benefits)	$ -	$ 0	$ 9	$ -	$ 9
Capitalized interest or AFUDC, if any	$ -	$ 1	$ 2	$ -	$ 3
Total	$ -	$ 1	$ 11	$ -	$ 13
Total Capital Costs	$ -	$ 47	$ 25	$ -	$ 72
Less Total Customer Contribution	$ -	$ -	$ -	$ -	$ -
Total Capital Project Costs	$ -	$ 47	$ 25	$ -	$ 72
Total O&M Project Costs	$ -	$ -	$ -	$ -	$ -

Note: Explain unique payment provisions, if applicable

New Hampshire- Distribution

Project Costs Summary

Note: Dollar values are in thousands

	Prior Authorized	2018	2019	2020	Totals
Capital Additions - Direct	$ -	$ 72	$ 20	$ -	$ 92
Less Customer Contribution	$ -	$ -	$ -	$ -	$ -
Removals net of Salvage ____%	$ -	$ -	$ -	$ -	$ -
Total - Direct Spending	$ -	$ 72	$ 20	$ -	$ 92
Capital Additions - Indirect	$ -	$ 0	$ 14	$ -	$ 15
Subtotal Request	$ -	$ 72	$ 35	$ -	$ 107
AFUDC	$ -	$ 1	$ 2	$ -	$ 3
Total Capital Request	$ -	$ 73	$ 36	$ -	$ 110
O&M	$ -	$ -	$ -	$ -	$ -
Total Request	$ -	$ 73	$ 36	$ -	$ 110

Financial Evaluation

Note: Dollar values are in thousands

Direct Capital Costs	Actuals	2018	2019	2020	Total
Straight Time Labor	$ -	$ -	$ 11	$ -	$ 11
Overtime Labor	$ -	$ -			$ -
Outside Services	$ -	$ -	$ 8	$ -	$ 8
Materials	$ -	$ 72	$ -	$ -	$ 72
Other – Vehicles, expenses, Contingency	$ -	$ -	$ 2	$ -	$ 2
Total	$ -	$ 72	$ 20	$ -	$ 92

Indirect Capital Costs		2018	2019	2020	Total
Indirects/Overheads (including benefits)	$ -	$ 0	$ 14	$ -	$ 15
Capitalized interest or AFUDC, if any	$ -	$ 1	$ 2	$ -	$ 3
Total	$ -	$ 1	$ 16	$ -	$ 17
Total Capital Costs	$ -	$ 73	$ 36	$ -	$ 110
Less Total Customer Contribution	$ -	$ -	$ -	$ -	$ -
Total Capital Project Costs	$ -	$ 73	$ 36	$ -	$ 110
Total O&M Project Costs	$ -	$ -	$ -	$ -	$ -

Note: Explain unique payment provisions, if applicable

New Hampshire- Transmission

Project Costs Summary

Note: Dollar values are in thousands

	Prior Authorized	2018	2019	2020	Totals
Capital Additions - Direct	$ -	$ 85	$ 26	$ -	$ 110
Less Customer Contribution	$ -	$ -	$ -	$ -	$ -
Removals net of Salvage ____%	$ -	$ -	$ -	$ -	$ -
Total - Direct Spending	$ -	$ 85	$ 26	$ -	$ 110
Capital Additions - Indirect	$ -	$ 0	$ 12	$ -	$ 12
Subtotal Request	$ -	$ 85	$ 37	$ -	$ 122
AFUDC	$ -	$ 1	$ 2	$ -	$ 3
Total Capital Request	$ -	$ 86	$ 40	$ -	$ 126
O&M	$ -	$ -	$ -	$ -	$ -
Total Request	$ -	$ 86	$ 40	$ -	$ 126

Financial Evaluation

Note: Dollar values are in thousands

Direct Capital Costs	Actuals	2018	2019	2020	Total
Straight Time Labor	$ -	$ -	$ 14	$ -	$ 14
Overtime Labor	$ -	$ -			$ -
Outside Services	$ -	$ -	$ 10	$ -	$ 10
Materials	$ -	$ 85	$ -	$ -	$ 85
Other – Vehicles, expenses, Contingency	$ -	$ -	$ 2	$ -	$ 2
Total	$ -	$ 85	$ 26	$ -	$ 110

Indirect Capital Costs		2018	2019	2020	Total
Indirects/Overheads (including benefits)	$ -	$ 0	$ 12	$ -	$ 12
Capitalized interest or AFUDC, if any	$ -	$ 1	$ 2	$ -	$ 3
Total	$ -	$ 2	$ 14	$ -	$ 15

Total Capital Costs	$ -	$ 86	$ 40	$ -	$ 126
Less Total Customer Contribution	$ -	$ -	$ -	$ -	$ -
Total Capital Project Costs	$ -	$ 86	$ 40	$ -	$ 126
Total O&M Project Costs	$ -	$ -	$ -	$ -	$ -

Note: Explain unique payment provisions, if applicable

WMA- Distribution

Project Costs Summary

Note: Dollar values are in thousands

	Prior Authorized	2018	2019	2020	Totals
Capital Additions - Direct	$ -	$ 4	$ 1	$ -	$ 5
Less Customer Contribution	$ -	$ -	$ -	$ -	$ -
Removals net of Salvage ____%	$ -	$ -	$ -	$ -	$ -
Total - Direct Spending	$ -	$ 4	$ 1	$ -	$ 5
Capital Additions - Indirect	$ -	$ 0	$ 2	$ -	$ 2
Subtotal Request	$ -	$ 4	$ 3	$ -	$ 7
AFUDC	$ -	$ 0	$ 0	$ -	$ 0
Total Capital Request	$ -	$ 4	$ 3	$ -	$ 7
O&M	$ -	$ -	$ -	$ -	$ -
Total Request	$ -	$ 4	$ 3	$ -	$ 7

Financial Evaluation

Note: Dollar values are in thousands

Direct Capital Costs	Actuals	2018	2019	2020	Total
Straight Time Labor	$ -	$ -	$ 1	$ -	$ 1
Overtime Labor	$ -	$ -			$ -
Outside Services	$ -	$ -	$ 0	$ -	$ 0
Materials	$ -	$ 4	$ -	$ -	$ 4
Other – Vehicles, expenses, Contingency	$ -	$ -	$ 0	$ -	$ 0
Total	$ -	$ 4	$ 1	$ -	$ 5

Indirect Capital Costs		2018	2019	2020	Total
Indirects/Overheads (including benefits)	$ -	$ 0	$ 2	$ -	$ 2
Capitalized interest or AFUDC, if any	$ -	$ 0	$ 0	$ -	$ 0
Total	$ -	$ 0	$ 2	$ -	$ 2

Total Capital Costs	$ -	$ 4	$ 3	$ -	$ 7
Less Total Customer Contribution	$ -	$ -	$ -	$ -	$ -
Total Capital Project Costs	$ -	$ 4	$ 3	$ -	$ 7
Total O&M Project Costs	$ -	$ -	$ -	$ -	$ -

Note: Explain unique payment provisions, if applicable

WMA- Transmission

Project Costs Summary

Note: Dollar values are in thousands

	Prior Authorized	2018	2019	2020	Totals
Capital Additions - Direct	$ -	$ 24	$ 6	$ -	$ 30
Less Customer Contribution	$ -	$ -	$ -	$ -	$ -
Removals net of Salvage ____%	$ -	$ -	$ -	$ -	$ -
Total - Direct Spending	$ -	$ 24	$ 6	$ -	$ 30
Capital Additions - Indirect	$ -	$ 0	$ 2	$ -	$ 2
Subtotal Request	$ -	$ 24	$ 8	$ -	$ 33
AFUDC	$ -	$ 0	$ 0	$ -	$ 0
Total Capital Request	$ -	$ 24	$ 8	$ -	$ 33
O&M	$ -	$ -	$ -	$ -	$ -
Total Request	$ -	$ 24	$ 8	$ -	$ 33

Financial Evaluation

Note: Dollar values are in thousands

Direct Capital Costs	Actuals	2018	2019	2020	Total
Straight Time Labor	$ -	$ -	$ 3	$ -	$ 3
Overtime Labor	$ -	$ -			$ -
Outside Services	$ -	$ -	$ 3	$ -	$ 3
Materials	$ -	$ 24	$ -	$ -	$ 24
Other – Vehicles, expenses, Contingency	$ -	$ -	$ 0	$ -	$ 0
Total	$ -	$ 24	$ 6	$ -	$ 30

Indirect Capital Costs		2018	2019	2020	Total
Indirects/Overheads (including benefits)	$ -	$ 0	$ 2	$ -	$ 2
Capitalized interest or AFUDC, if any	$ -	$ 0	$ 0	$ -	$ 0
Total	$ -	$ 0	$ 2	$ -	$ 3

Total Capital Costs	$ -	$ 24	$ 8	$ -	$ 33
Less Total Customer Contribution	$ -	$ -	$ -	$ -	$ -
Total Capital Project Costs	$ -	$ 24	$ 8	$ -	$ 33
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: No

What functional area(s) will these future costs be funded in? N/A

If this is other than a Reliability Project, please complete the section below;

Provide below the estimated financial benefits that will result from the project:
Note: Dollar values are in thousands:

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

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

What functional area(s) will these benefits be reflected in? N/A

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

Is there an ARO associated with this project? No

Are there other environmental cleanup costs associated with this project? No

Technical Justification:

Project Need Statement

[redacted]

Project Objectives

[redacted]

Project Scope

[redacted]

[redacted]

[redacted]

Background / Justification

[redacted]

[redacted]

[redacted]

Business Process and / or Technical Improvements:

[redacted]

Alternatives Considered with Cost Estimates

N/A

Project Schedule

Milestone/Phase Name	Estimated Completion Date
EPAC	Q4 2018
Purchase	Q4 2018
Installation	Q3 2019

Regulatory Approvals

N/A

Risks and Risk Mitigation Plans

N/A

References

N/A

Project Checklist – Transmission and Substation

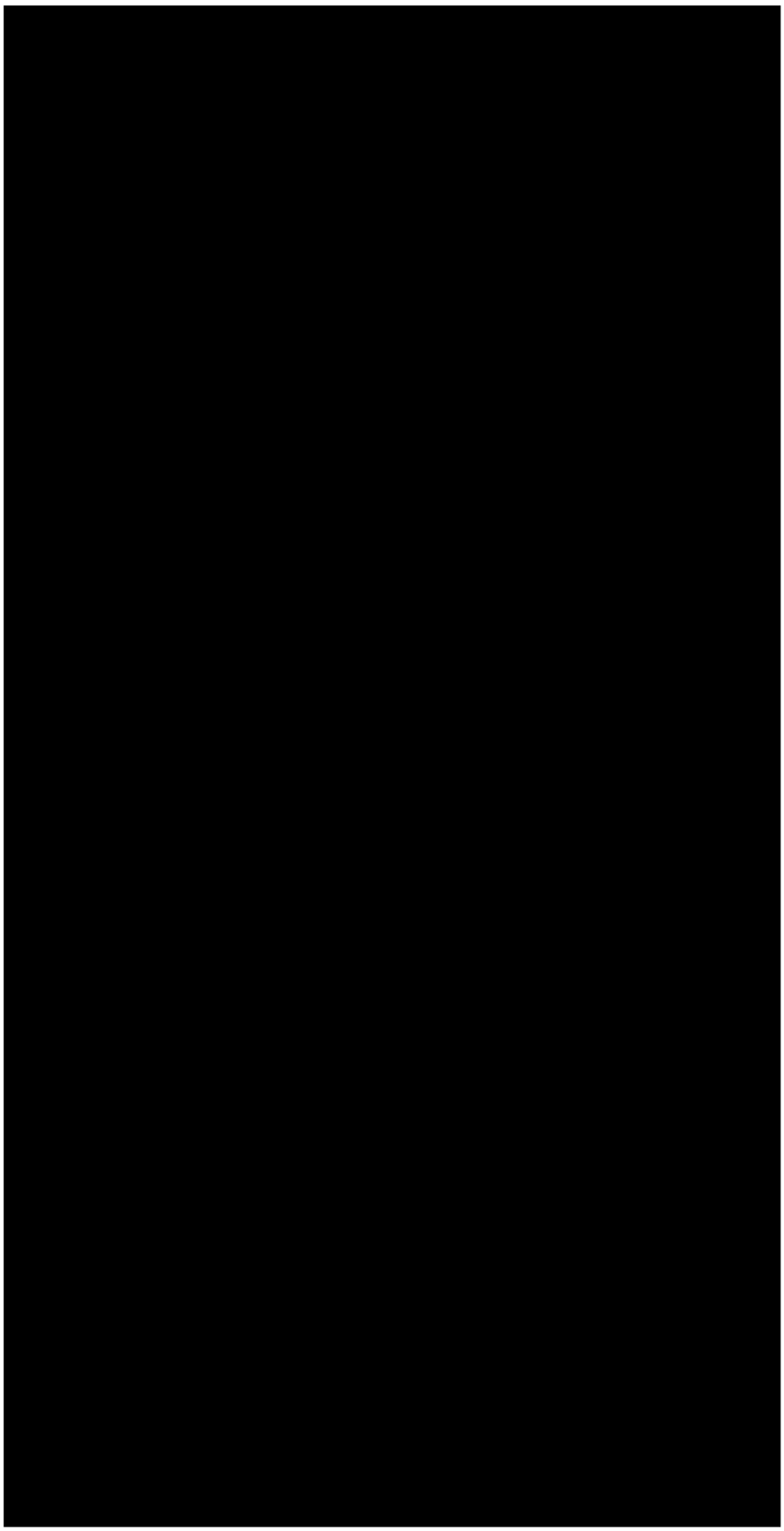
INSTRUCTIONS:
It is the responsibility of the initiator to contact the area disciplines to determine if the project considerations contained in this list are applicable to their project. They should fill out the checklist and determine a transition plan for the purpose of project execution.

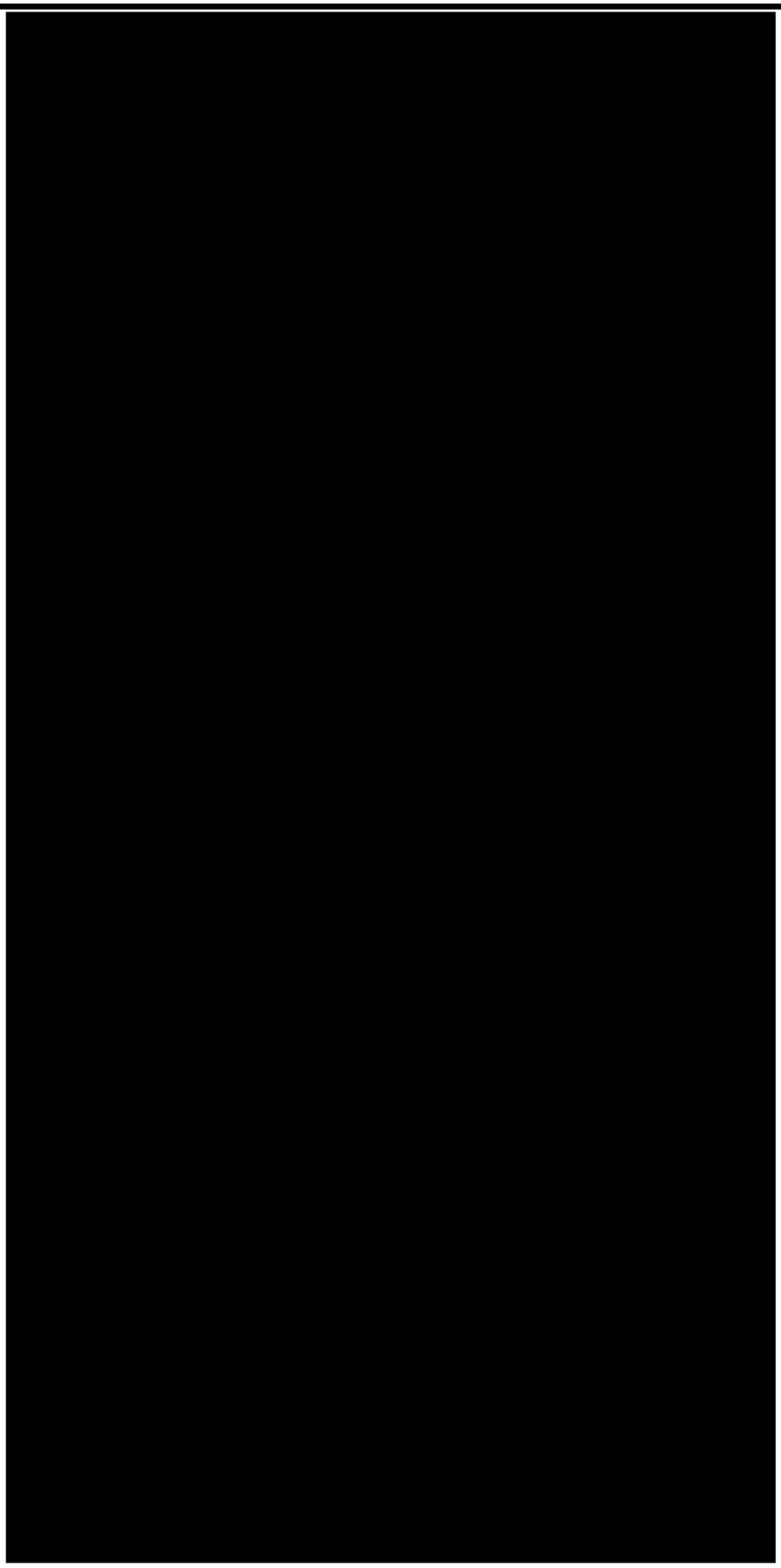
Checklist for Studies and Processes of a Transmission & Substation Capital Project				
Project Name: [redacted]				**PAF No: TBD**
Facility Type: ☒ BPS ☒ BES ☒ PTF ☒ non-PTF ☒ CIP ☒ Distribution				
PLANNING				
Is a NX-9 required?				No
Is an ISO-NE PAC presentation required?				No
Is a PPA required?				No
Is a TCA Application Required?				No
PLANNING/PROTECTION & CONTROLS				
Are RAS/SPS/UVLs affected?				No
OPERATIONS				
Outage Required?	☐ Primary Equipment (Power Transfer)	☐ Secondary Equipment (P&C only)	☒ Outage Not Required	
Do SCLL Conditions Exist?				No
Has an outage schedule been approved?				No
Are Operations & Maintenance procedures/training required?				No
STANDARDS				
Does the project include standard equipment and designs?				No
SUBSTATION ENGINEERING				
Does this impact Revenue Metering				No
Is preliminary short circuit/ breaker duty analysis required?				No
Are there any changes to the baseline audible noise?				No
Is there an impact to the existing ground grid?				No
Is a Transient Over Voltage (TOV) analysis required?				No
P&C ENGINEERING				
OP-22 - Are PMUs and DDR required?				No
If BPS, is an NPCC Directory #4 presentation required?				No

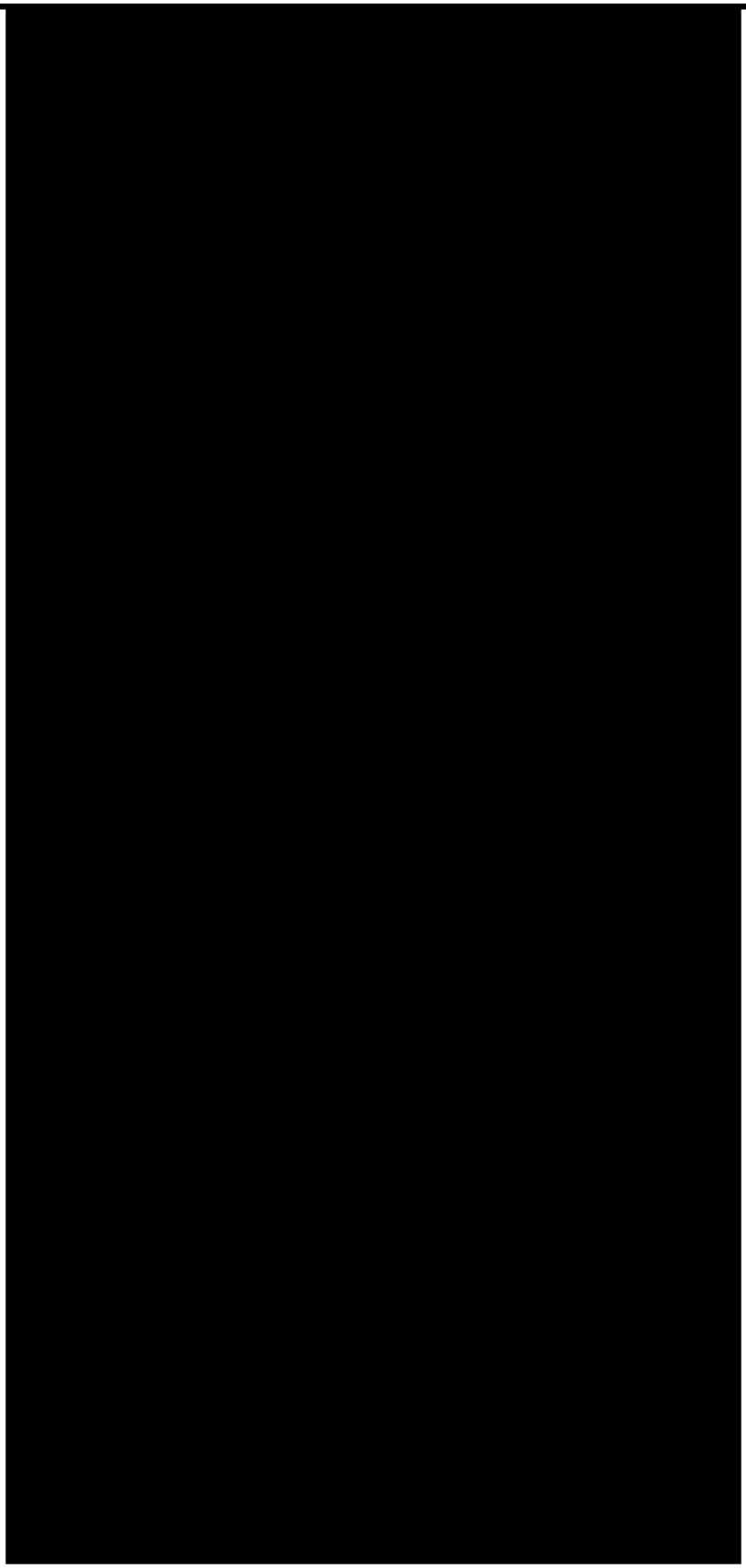
Checklist for Studies and Processes of a Transmission & Substation Capital Project	
Project Name: [redacted]	**PAF No: TBD**

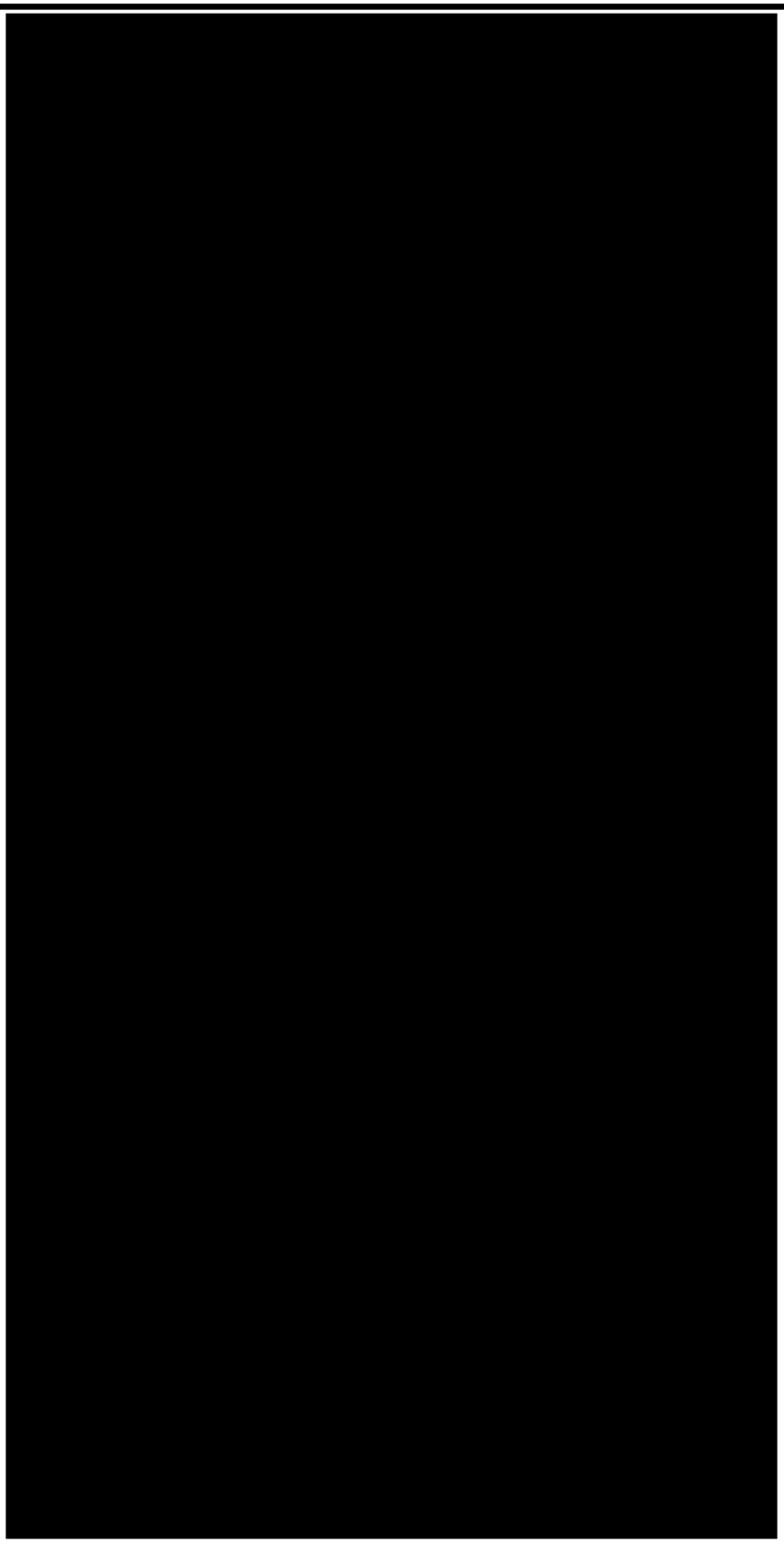
TRANSMISSION LINE ENGINEERING	
Are there any changes that affect the baseline EMF?	No
Are there any changes that affect the baseline EMI?	No
SITING	
Is a Siting filing required?	No
PERMITTING	
Is there any permitting required?	No
SITING & CONSTRUCTION SERVICES (OUTREACH)	
What is the level of outreach expected?	None
INITIATOR	
Has a field constructability review been completed?	No
INVESTMENT RECOVERY	
Does the project require development of an Investment Recovery plan?	No
COST ESTIMATING	
How was the cost estimate prepared?	Estimate was prepared by the Eversource Estimating Team
Who prepared the estimate?	[redacted]
Was the estimate reviewed by Eversource Estimating?	Yes

Attachment 1- Locations









Environmental Systems Corporation
[redacted]
West Hartford, CT 06110
Phone: [redacted]

ES201801150001-4

Environmental Systems Corporation
Intelligent Building Solutions

[redacted]

ESC Job #	0
Purchase Order #	0
Release Line	0
Work Order #	0

Detailed List of Materials

Qty	Part Number	Description	Unit Cost	Extended Cost
[redacted]	[redacted]	[redacted] ***No Warranty Services Included***	[redacted]	$405,062.40
	[redacted]	[redacted]		$44,127.80
	Scope of Work	1. No warranty services included		
		2. Discount based on volume, all 146 appliances and 181 encoders must be ordered on one PO		
		3. Estimate is valid until 6/01/2018		
		Note: All Programming by others		
	Project Parts Cost		Total Material W/O Tax	$449,190.20

Detailed List of Labor

	Type	Labor Description	Unit	Total
[redacted]	Program	Programming	[redacted]	$0.00
	Security Technician	General Installation		$46,187.83
	Project Management	Project Management, scheduling, coordination		$0.00
	Labor Cost		Total Labor	$46,187.83
	Total Quote Price		Total With Tax	$495,378.03

Quote does not include applicable permits or tax

ESTIMATE SUMMARY

Project Title: [redacted]
Project Mgr/Lead: TBD
Project Number: TBD
Est. Revision # 00

Estimate By: JPM
Date of Estimate: 11-15-18
ISD: 12/31/19
Estimate #C-18-388D

ESTIMATE SUMMARY

Estimate Type: Planning

	TOTAL	% of Total	Prior	2018	2019	2020	2021	2022	2023
Construction	$17,340	11.7%			$17,340				
Engineering / Design	$648	0.4%			$648				
Land									
Material	$92,496	62.2%		$92,496					
Project Mgmt. & Sppt.	$1,836	1.2%			$1,836				
Removal									
Test									
Risk / Contingency									
Escalation	$596	0.4%			$596				
Indirects	$29,995	20.2%		$462	$29,533				
AFUDC	$5,881	4.0%		$2,301	$3,580				
Total Cost	**$148,792**	100.0%		**$95,259**	**$53,533**				

Estimate Range

	-25%	-	25%
	$110,000	-	$190,000

COMMENTS:

[redacted]

Project Need:

[redacted]

Project Objectives:

[redacted]

Project Scope:

[redacted]

Assumptions/Clarifications;

Indirect rates based on; [redacted]
Installation is by ESC employees
Installer will work alone and have current access previliges for the substation.
Additional supervisory personnel will not be required during installation.
This update stands alone and additional SCADA, automation or P&C work is not required.
Programming is by Eversource employees

RISKS: - No anticipated Risks

Potential UG Obstructions	$	-
Severe Weather, Delays, OT	$	-
Contractor Change Orders	$	-

ESTIMATE SUMMARY

Project Title: [redacted]

Project Mgr/Lead: TBD

Project Number: TBD

Est. Revision # 00

Estimate By: JPM

Date of Estimate: 11-15-18

ISD: 12/31/19

Estimate #C-18-3881

ESTIMATE SUMMARY

Estimate Type: Planning

	TOTAL	% of Total	Prior	2018	2019	2020	2021	2022	2023
Construction	$13,294	13.2%			$13,294				
Engineering / Design	$648	0.6%			$648				
Land									
Material	$72,118	71.6%		$72,118					
Project Mgmt. & Sppt.	$1,459	1.4%			$1,459				
Removal									
Test									
Risk / Contingency									
Escalation	$463	0.5%			$463				
Indirects	$8,014	8.0%		$361	$7,653				
AFUDC	$4,732	4.7%		$1,986	$2,746				
Total Cost	**$100,728**	100.0%		**$74,465**	**$26,263**				

Estimate Range

	-25%	-	25%
	$80,000	-	$130,000

COMMENTS:

[redacted]

Project Need:

[redacted]

Project Objectives:

[redacted]

Project Scope:

[redacted]

Assumptions/Clarifications;

Indirect rates based on; [redacted]
Installation is by ESC employees
Installer will work alone and have current access previliges for the substation.
Additional supervisory personnel will not be required during installation.
This update stands alone and additional SCADA, automation or P&C work is not required.
Programming is by Eversource employees

RISKS: - No anticipated Risks

Potential UG Obstructions	$	-
Severe Weather, Delays, OT	$	-
Contractor Change Orders	$	-

ESTIMATE SUMMARY

Project Title: [redacted]
Project Mgr/Lead: TBD
Project Number: TBD
Est. Revision # 00

Estimate By: JPM
Date of Estimate: 11-15-18
ISD: 12/31/19
Estimate #E-18-391D

ESTIMATE SUMMARY

Estimate Type: Planning

	TOTAL	% of Total	Prior	2018	2019	2020	2021	2022	2023
Construction	$15,352	15.0%			$15,352				
Engineering / Design	$648	0.6%			$648				
Land									
Material	$62,710	61.1%		$62,710					
Project Mgmt. & Sppt.	$1,243	1.2%			$1,243				
Removal									
Test									
Risk / Contingency									
Escalation	$518	0.5%			$518				
Indirects	$17,676	17.2%		$314	$17,362				
AFUDC	$4,528	4.4%		$1,755	$2,773				
Total Cost	**$102,675**	100.0%		**$64,779**	**$37,896**				

Estimate Range	-25%	-	25%
	$80,000	-	**$130,000**

COMMENTS:

[redacted]

Project Need:

[redacted]

Project Objectives:

[redacted]

Project Scope:

[redacted]

Assumptions/Clarifications;
Indirect rates based on; [redacted]
Installation is by ESC employees
Installer will be escorted for access during installation.
This update stands alone and additional SCADA, automation or P&C work is not required.
Programming and escorting is by Eversource employees

RISKS: - No anticipated Risks

Potential UG Obstructions	$	-
Severe Weather, Delays, OT	$	-
Contractor Change Orders	$	-

ESTIMATE SUMMARY

Project Title: [redacted]
Project Mgr/Lead: TBD
Project Number: TBD
Est. Revision # 00

Estimate By: JPM
Date of Estimate: 11-15-18
ISD: 12/31/19
Estimate #E-18-391I

ESTIMATE SUMMARY

Estimate Type: Planning

	TOTAL	% of Total	Prior	2018	2019	2020	2021	2022	2023
Construction	$12,120	16.8%			$12,120				
Engineering / Design	$648	0.9%			$648				
Land									
Material	$45,273	62.9%		$45,273					
Project Mgmt. & Sppt.	$1,027	1.4%			$1,027				
Removal									
Test									
Risk / Contingency									
Escalation	$414	0.6%			$414				
Indirects	$9,245	12.8%		$226	$9,019				
AFUDC	$3,255	4.5%		$1,267	$1,988				
Total Cost	**$71,982**	100.0%		**$46,766**	**$25,216**				

Estimate Range

-25%	-	**25%**	
$50,000	-	**$90,000**	

COMMENTS:

[redacted]

Project Need:

[redacted]

Project Objectives:

[redacted]

Project Scope:

[redacted]

Assumptions/Clarifications;

Indirect rates based on; [redacted]
Installation is by ESC employees
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RISKS: - No anticipated Risks

Potential UG Obstructions	$	-
Severe Weather, Delays, OT	$	-
Contractor Change Orders	$	-

ESTIMATE SUMMARY

Project Title: [redacted]

Project Mgr/Lead: TBD

Project Number: TBD

Est. Revision # 00

Estimate By: JPM

Date of Estimate: 11-15-18

ISD: 12/31/19

Estimate #P-18-390D

ESTIMATE SUMMARY

Estimate Type: Planning

	TOTAL	% of Total	Prior	2018	2019	2020	2021	2022	2023
Construction	$17,776	16.2%			$17,776				
Engineering / Design	$648	0.6%			$648				
Land									
Material	$71,764	65.5%		$71,764					
Project Mgmt. & Sppt.	$1,404	1.3%			$1,404				
Removal									
Test									
Risk / Contingency									
Escalation	$595	0.5%			$595				
Indirects	$14,650	13.4%		$359	$14,291				
AFUDC	$2,716	2.5%		$1,097	$1,619				
Total Cost	**$109,553**	100.0%		**$73,220**	**$36,333**				

Estimate Range

-25%	-	**25%**	
$80,000	-	**$140,000**	

COMMENTS:

[redacted]

Project Need:

[redacted]

Project Objectives:

[redacted]

Project Scope:

[redacted]

Assumptions/Clarifications;

Indirect rates based on; [redacted]
Installation is by ESC employees
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RISKS: - No anticipated Risks

Potential UG Obstructions	$	-
Severe Weather, Delays, OT	$	-
Contractor Change Orders	$	-

ESTIMATE SUMMARY

Project Title: [redacted]

Project Mgr/Lead: TBD

Project Number: TBD

Est. Revision # 00

Estimate By: JPM

Date of Estimate: 11-15-18

ISD: 12/31/19

Estimate #P-18-3901

ESTIMATE SUMMARY

Estimate Type: Planning

	TOTAL	% of Total	Prior	2018	2019	2020	2021	2022	2023
Construction	$22,624	18.0%			$22,624				
Engineering / Design	$648	0.5%			$648				
Land									
Material	$84,509	67.3%		$84,509					
Project Mgmt. & Sppt.	$1,728	1.4%			$1,728				
Removal									
Test									
Risk / Contingency									
Escalation	$751	0.6%			$751				
Indirects	$11,949	9.5%		$211	$11,738				
AFUDC	$3,365	2.7%		$1,352	$2,013				
Total Cost	**$125,574**	100.0%		**$86,072**	**$39,502**				

Estimate Range	-25%	-	25%
	$90,000	-	**$160,000**

COMMENTS:

[redacted]

Project Need:

[redacted]

Project Objectives:

[redacted]

Project Scope:

[redacted]

Assumptions/Clarifications;

Indirect rates based on; [redacted]
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Programming and escorting is by Eversource employees

RISKS: - No anticipated Risks

Potential UG Obstructions	$	-
Severe Weather, Delays, OT	$	-
Contractor Change Orders	$	-

ESTIMATE SUMMARY

Project Title: [redacted]

Project Mgr/Lead: TBD

Project Number: TBD

Est. Revision # 00

Estimate By: JPM

Date of Estimate: 11-15-18

ISD: 12/31/19

Estimate #W-18-389D

ESTIMATE SUMMARY

Estimate Type: Planning

	TOTAL	% of Total	Prior	2018	2019	2020	2021	2022	2023
Construction	$578	7.9%			$578				
Engineering / Design	$432	5.9%			$432				
Land									
Material	$3,993	54.5%		$3,993					
Project Mgmt. & Sppt.	$271	3.7%			$271				
Removal									
Test									
Risk / Contingency									
Escalation	$38	0.5%			$38				
Indirects	$1,970	26.9%		$20	$1,950				
AFUDC	$45	0.6%		$16	$29				
Total Cost	**$7,327**	100.0%		**$4,029**	**$3,298**				

Estimate Range	-25%	-	25%
	$10,000	-	$10,000

COMMENTS:

[redacted]

Project Need:

[redacted]

Project Objectives:

[redacted]

Project Scope:

[redacted]

Assumptions/Clarifications;

Indirect rates based on; [redacted]
Installation is by ESC employees
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Programming is by Eversource employees

RISKS: - No anticipated Risks

Potential UG Obstructions	$	-
Severe Weather, Delays, OT	$	-
Contractor Change Orders	$	-

ESTIMATE SUMMARY

Project Title: [redacted]

Project Mgr/Lead: TBD

Project Number: TBD

Est. Revision # 00

Estimate By: JPM

Date of Estimate: 11-15-18

ISD: 12/31/19

Estimate #W-18-3891

ESTIMATE SUMMARY

Estimate Type: Planning

	TOTAL	% of Total	Prior	2018	2019	2020	2021	2022	2023
Construction	$4,624	14.1%			$4,624				
Engineering / Design	$648	2.0%			$648				
Land									
Material	$24,145	73.5%		$24,145					
Project Mgmt. & Sppt.	$648	2.0%			$648				
Removal									
Test									
Risk / Contingency									
Escalation	$179	0.5%			$179				
Indirects	$2,359	7.2%		$121	$2,238				
AFUDC	$236	0.7%		$99	$137				
Total Cost	**$32,839**	100.0%		**$24,365**	**$8,474**				

Estimate Range	-25%	-	25%
	$20,000	-	**$40,000**

COMMENTS:

[redacted]

Project Need:

[redacted]

Project Objectives:

[redacted]

Project Scope:

[redacted]

Assumptions/Clarifications;

Indirect rates based on; [redacted]
Installation is by ESC employees
Installer will work alone and have current access previliges for the substation.
Additional supervisory personnel will not be required during installation.
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Programming is by Eversource employees

RISKS: - No anticipated Risks

Potential UG Obstructions	$	-
Severe Weather, Delays, OT	$	-
Contractor Change Orders	$	-