

Liberty Utilities (Granite State Electric) d/b/a Liberty Utilities

DE 16-383 Step Adjustment

Pelham Substation Summary of Costs

Project #8830-18000058 - Substation Build

Planning Criteria

<u>Year</u>	<u>Materials</u>	<u>Internal Labor</u>	<u>Overheads</u>	<u>Vendors</u>	<u>AFUDC</u>	<u>Subtotal</u>	<u>Exclusion</u>	<u>Materials Return</u>	<u>Total</u>
2014	\$0.00	\$605.76	\$0.00	\$7,326.00	\$35.98	\$7,967.74	\$0.00	\$0.00	\$7,967.74
2015	\$0.00	\$7,313.94	\$37,657.51	\$30,959.36	\$3,863.47	\$79,794.28	\$0.00	\$0.00	\$79,794.28
2016	\$37,485.00	\$25,490.08	\$138,188.66	\$225,999.23	\$20,119.45	\$447,282.42	\$0.00	\$0.00	\$447,282.42
2017	<u>\$824,226.11</u>	<u>\$88,595.35</u>	<u>\$1,136,837.57</u>	<u>\$1,766,495.74</u>	<u>\$113,214.85</u>	<u>\$3,929,369.62</u>	<u>(\$39,740)</u>	<u>(\$30,002.55)</u>	<u>\$3,859,627.07</u>
Total	\$861,711.11	\$122,005.13	\$1,312,683.74	\$2,030,780.33	\$137,233.75	\$4,464,414.06	(\$39,740.00)	(\$30,002.55)	\$4,394,671.51

Project #8830-17145101 - Addition of Getaway Cables

<u>Year</u>	<u>Materials</u>	<u>Internal Labor</u>	<u>Overheads</u>	<u>Vendors</u>	<u>AFUDC</u>	<u>Total</u>
2014	\$7,200.00	\$0.00	\$762.27	\$7,968.16	\$60.50	\$15,990.93
2015	\$0.00	\$811.28	\$6,804.45	\$4,646.43	\$1,783.11	\$14,045.27
2016	\$0.00	\$5,048.73	\$8,703.89	\$129,046.08	\$196.78	\$142,995.48
2017	<u>\$1,200.00</u>	<u>\$1,963.41</u>	<u>\$80,878.60</u>	<u>\$186,012.62</u>	<u>\$3,475.76</u>	<u>\$273,530.39</u>
Total	\$8,400.00	\$7,823.42	\$97,149.21	\$327,673.29	\$5,516.15	\$446,562.07

Liberty Utilities (Granite State Electric) d/b/a Liberty Utilities
DE 16-383 Step Adjustment
Pelham Material Costs Project #8830-18000058 Substation Build

<u>Year</u>	<u>Material</u>	<u>Cost</u>	<u>Description</u>
2016	Disconnect Switches	\$37,485	Disconnect switches
	Total 2016 Materials	\$37,485	
2017	SEL Control House	\$445,900	Control House with RTU, 125 VDC battery bank, charger and relay cabinets
2017	Mag Breakers	\$138,078	Purchased eight 15 kV breakers
2017	MODX Switches	\$37,300	Purchased two (2) manually gang-operated 3-phase disconnect switches
2017	Structures and Bus	\$72,371	Aluminum structures and integral web bus
2017	Cable Trench	\$21,634	Purchased 118 linear feet of cable trench
2017	Bus Insulators	\$10,044	Purchased 120 15 kV Bus support insulators
2017	Misc Materials	\$98,899	Includes items such as nuts, bolts, poles, and crossarms
	Total 2017 Materials	\$824,226	

<u>Year</u>	<u>Material Returns</u>	<u>Cost</u>	<u>Description</u>
2017	Misc Materials	\$30,003	Includes items such as pins, bolts, poles, and crossarms
	Total 2017 Materials Return	\$30,003	

<u>Year</u>	<u>Planning Criteria Exclusions</u>	<u>Cost</u>	<u>Description</u>
2017	Circuit Breaker	\$15,342	
2017	Disconnect Switches	\$2,940	
2017	Breaker & Switches Labor	\$8,168	Labor for installation of the circuit breaker and disconnect switches
2017	Relay Cabinet Labor	\$13,290	Installation of Relay Cabinet inside control house
	Total Planning Criteria Exclusions	\$39,740	

Pelham Material Costs Project #8830-17145101 Addition of Getaway Cables

<u>Year</u>	<u>Material</u>	<u>Cost</u>	<u>Description</u>
2014	Steel Reel	\$7,200	Wire Reel
2017	Manhole Covers	\$1,200	Frame and cover for 4-way manhole
	Total Materials	\$8,400	



Over Expenditure Application | 2017

Requesting Region or Group:	LU-East	Date of Request (MM/DD/YY):	8/16/2017
Project Name:	8830-C36430 Pelham Sub-Add 2nd Xfmr and Fdr Pos		
Requesting Region:	LU-East	Sponsor (Name):	Charles Rodrigues
Project Start Date:	1/1/2017	Project Completion Date:	12/31/2017
Original Project Budget (\$):	\$3,520,000	Requested Over Expenditure (\$):	\$405,242
Project Type: (Click appropriate box)	<input type="checkbox"/> Safety <input type="checkbox"/> Mandated <input type="checkbox"/> Growth <input type="checkbox"/> Regulatory Supported <input checked="" type="checkbox"/> Discretionary	Nature of Estimate: (Click appropriate box)	<input type="checkbox"/> Fixed or Firm Price <input checked="" type="checkbox"/> Estimate – Internal <input type="checkbox"/> Estimate - External <input type="checkbox"/> Other (specify details)

Details of Request

Project description
Install substation equipment and facilities at the Pelham #14 Substation in Pelham, NH. Expand the 13 kV Bus in order to accommodate two new Low Profile Distribution Feeders; 14L4 and 14L5. Build the new 13 kV bus to a breaker and a half configuration.

What caused (or is causing) the expected Over Expenditure?
Change order for ledge removal for new Liberty Control House. Also, additional Liberty Labor and associated burdens to program D20 RTU

What will this Over Expenditure achieve? Why is the Over Expenditure necessary?
The over expenditure is associated with the completed, in-service cost of this project.

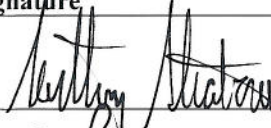
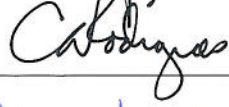

What are the revised project financials as a result of this Over Expenditure? (IRR, NPV, etc.)
The revised cost of this project is \$3,925,242. The cost of this project, including over expenditures, are expected to be capture in the current 2017 GSE Capital Budget.

What are the risks and consequences of not approving an Over Expenditure?
If not approved, the over expenditures will be deferred and will be included in GSE's 2018 Capital Budget.

Are there other pertinent details that may affect the decision making process?
None

Over Expenditure Application | 2017

Approvals and Signatures

	Name	Signature	Date
Requestor	Anthony Strabone		2/15/18
Regional or Functional Leader	Charles Rodrigues		2/15/18
Corporate, SVP Operations			3/26/18
Corporate, VP Finance			
Corporate, President			

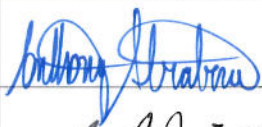

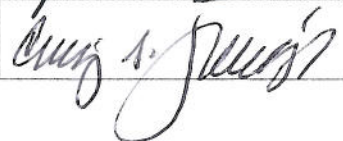
Project Close Out Report **2016**

Requesting Region or Group:	GSECo	Date of Closeout (MM/DD/YY):	12/31/2016
Project Number	8830-C36431		
Project Name:	Pelham-New 14L4 Fdr		
Requesting Region:	New Hampshire	Sponsor (Name):	Brouillard; Chris
Project Champion:	Strabone; Anthony	Project Manager	Strabone; Anthony
Project Start Date:	1/1/2016	Project Completion Date:	12/31/2016
Requested Capital (\$)	\$350,000	Expenditure Included in Approved Budget?	YES

Section 1. Approval

Approval of the Project Closeout and Assessment Report indicates an understanding and formal agreement that the project is ready to be closed. By signing this document, each individual agrees all administrative, financial, and logistical aspects of the project should be concluded, executed, and documented as described herein.

Further, by signing this Report, it is accepted that CWIP (FERC Account 107) should be transferred to Utility in Plant Service (FERC Account 101)

Approver Name	Title	Signature	Date
Anthony Strabone	Project Manager		3/16/17
Brouillard; Chris	Director of Engineering		3/17/17
Craig Jennings	Vice President-Operations and Engineering		3/17/17

Section 2. Final Deliverable/Deployment Checklist

Sponsor to respond to each question. For each "no" response, include an issue in Open Issues section.

Project Close Out Report **2016**

Item	Question	Response
2.1	Do you agree that the product and/or service is ready to be deployed?	Yes
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes
2.3	Do you fully understand and agree to accept all operational requirements, operational risks, maintenance costs, and other limitations and/or constraints imposed as a result of ongoing operations of the product and/or service?	Yes
2.4	Do you agree the project should be closed? If no, please explain:	Yes
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	3
2.6	Product and/or Service Performance	3
2.7	Scope	3
2.8	Cost (Budget)	3
2.9	Schedule	3

Section 3. Project Documentation Checklist

Project Manager Respond to each question. For each "no" response, include an issue in Open Issues section.

Item	Question	Response	
3.1	Have project documentation and other items (e.g., Business Case, Project Plan, Charter, Budget Documents, Status Reports) been prepared, collected, filed, and/or disposed?	Yes	
3.3	Were audits (e.g., project closeout audit) completed and results documented for future reference?	Yes	
3.4	Identify the storage location for the following project documents items:	See below	
Item	Document	Location (e.g., Google Docs, Webspace)	Format
3.4a	Business Case	Local W Drive	Electronic
3.4b	Project Charter	Local W Drive	Electronic
3.4c	Project Plan	Local W Drive	Electronic
3.4d	Budget Documentation and Invoices	Local W Drive	Electronic
3.4e	Status Reports	Local W Drive	Electronic
3.4f	Risks and Issues Log	Local W Drive	Electronic
3.4g	Final deliverable	Local W Drive	Electronic

Project Close Out Report **2016**

3.4h	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.	Local W Drive	Electronic
------	--	---------------	------------

Section 4. Project Team

Project Manager to list resources specified in the Project Plan and used by the project.

Name	Role	Type (e.g., Contractor, Employee)
Patrick O'Neill	OH Line Supervisor	Employee
Leif Korb	FCC	Contractor

Section 5. Project Lessons Learned

Project Team to identify lessons learned specifically for the project. State the lessons learned in terms of a problem (issue). Describe the problem and include any project documentation references (e.g., Project Plan, Issues Log) that provide additional details. Identify recommended improvements to correct a similar problem in the future.

Problem Statement	Problem Description	References	Recommendation
N/A	N/A	N/A	N/A

Section 6. Post-Implementation Support Plans

Project team to identify plans for post-implementation activities after project closeout. Refer to the Benefits Realization review gate for information about the Post-Implementation Review of Business Outcomes deliverable.

Project Close Out Report **2016**

Action	Planned Date	Assigned To	Frequency
Post-Implementation Review of Business Outcomes (actual review)	N/A	N/A	N/A
Post-Implementation Review of Business Outcomes (approval)	N/A	N/A	N/A

Section 7. Open Issues

Project Manager and Functional Lead to describe any open issues and plans for resolution within the context of project closeout. Include an open issue for any "no" responses in the Final Product and/or Service Acceptance Checklist and the Project Artifacts Checklist sections.

Issue	Planned Resolution
N/A	N/A
N/A	N/A
N/A	N/A

Section 8. Financials

Project Manager and Functional Lead to provide details for the following tables.

Financial Descriptor	Amount
Total Actual Project Costs (including all Regional, Corporate and 3 rd party costs)	\$143,195
Total Budgeted amount	\$350,000
Variance	\$206,805

Reasons for Variance	Impact
In order to manage capital spend, and to align with National Grid's schedule of work at the substation, the company decided to undertake UG Construction only in 2016	YEP reduced to \$150k

Project Close Out Report **2016**

Project Manager to list of all work orders associated with project that should be closed once Close Out Report is accepted.

Registry of All Job Codes (Regional, Corporate, LABs)	
Work Order 1	8830-17145101
Work Order 2	
Work Order 3	
Work Order 4	
Work Order 5	

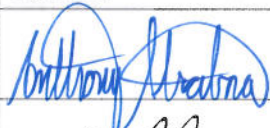


Project Close Out Report **2016**

Requesting Region or Group:	GSECo	Date of Closeout (MM/DD/YY):	12/31/2016
Project Number	8830-C36430		
Project Name:	Pelham Sub-Add 2nd Xfmr and Fdr Pos		
Requesting Region:	New Hampshire	Sponsor (Name):	Brouillard; Chris
Project Champion:	Strabone; Anthony	Project Manager	Strabone; Anthony
Project Start Date:	1/1/2016	Project Completion Date:	12/31/2016
Requested Capital (\$)	\$600,000	Expenditure Included in Approved Budget?	YES

Section 1. Approval

Approval of the Project Closeout and Assessment Report indicates an understanding and formal agreement that the project is ready to be closed. By signing this document, each individual agrees all administrative, financial, and logistical aspects of the project should be concluded, executed, and documented as described herein.

Further, by signing this Report, it is accepted that CWIP (FERC Account 107) should be transferred to Utility in Plant Service (FERC Account 101)

Approver Name	Title	Signature	Date
Anthony Strabone	Project Manager		3/16/17
Brouillard; Chris	Director of Engineering		3/12/17
Craig Jennings	Vice President-Operations and Engineering		3/12/17

Section 2. Final Deliverable/Deployment Checklist

Sponsor to respond to each question. For each "no" response, include an issue in Open Issues section.

Project Close Out Report **2016**

Item	Question	Response
2.1	Do you agree that the product and/or service is ready to be deployed?	Yes
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes
2.3	Do you fully understand and agree to accept all operational requirements, operational risks, maintenance costs, and other limitations and/or constraints imposed as a result of ongoing operations of the product and/or service?	Yes
2.4	Do you agree the project should be closed? If no, please explain:	Yes
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	3
2.6	Product and/or Service Performance	3
2.7	Scope	3
2.8	Cost (Budget)	3
2.9	Schedule	3

Section 3. Project Documentation Checklist

Project Manager Respond to each question. For each "no" response, include an issue in Open Issues section.

Item	Question	Response	
3.1	Have project documentation and other items (e.g., Business Case, Project Plan, Charter, Budget Documents, Status Reports) been prepared, collected, filed, and/or disposed?	Yes	
3.3	Were audits (e.g., project closeout audit) completed and results documented for future reference?	Yes	
3.4	Identify the storage location for the following project documents items:	See below	
Item	Document	Location (e.g., Google Docs, Webspace)	Format
3.4a	Business Case	Local W Drive	Electronic
3.4b	Project Charter	Local W Drive	Electronic
3.4c	Project Plan	Local W Drive	Electronic
3.4d	Budget Documentation and Invoices	Local W Drive	Electronic
3.4e	Status Reports	Local W Drive	Electronic
3.4f	Risks and Issues Log	Local W Drive	Electronic
3.4g	Final deliverable	Local W Drive	Electronic

Project Close Out Report | 2016

3.4h	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.	Local W Drive	Electronic
------	--	---------------	------------

Section 4. Project Team

Project Manager to list resources specified in the Project Plan and used by the project.

Name	Role	Type (e.g., Contractor, Employee)
Mike Kelly	Engineering	Contractor
Ron Pollara	Engineering	Contractor

Section 5. Project Lessons Learned

Project Team to identify lessons learned specifically for the project. State the lessons learned in terms of a problem (issue). Describe the problem and include any project documentation references (e.g., Project Plan, Issues Log) that provide additional details. Identify recommended improvements to correct a similar problem in the future.

Problem Statement	Problem Description	References	Recommendation
N/A	N/A	N/A	N/A

Section 6. Post-Implementation Support Plans

Project team to identify plans for post-implementation activities after project closeout. Refer to the Benefits Realization review gate for information about the Post-Implementation Review of Business Outcomes deliverable.

Project Close Out Report **2016**

Action	Planned Date	Assigned To	Frequency
Post-Implementation Review of Business Outcomes (actual review)	N/A	N/A	N/A
Post-Implementation Review of Business Outcomes (approval)	N/A	N/A	N/A

Section 7. Open Issues

Project Manager and Functional Lead to describe any open issues and plans for resolution within the context of project closeout. Include an open issue for any "no" responses in the Final Product and/or Service Acceptance Checklist and the Project Artifacts Checklist sections.

Issue	Planned Resolution
N/A	N/A
N/A	N/A
N/A	N/A

Section 8. Financials

Project Manager and Functional Lead to provide details for the following tables.

Financial Descriptor	Amount
Total Actual Project Costs (including all Regional, Corporate and 3 rd party costs)	\$447,126
Total Budgeted amount	\$600,000
Variance	\$152,874

Reasons for Variance	Impact
The company postponed ordering materials until 2017 in order to manage overall capital spending.	Did not spend entire budget

Project Close Out Report **2016**

Project Manager to list of all work orders associated with project that should be closed once Close Out Report is accepted.

Registry of All Job Codes (Regional, Corporate, LABs)	
Work Order 1	8830-18000058
Work Order 2	
Work Order 3	
Work Order 4	
Work Order 5	

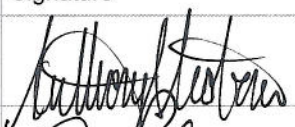
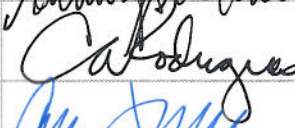

Project Close Out Report **2017**

Requesting Region or Group:	GSECo	Date of Closeout (MM/DD/YY):	12/31/2017
Project Number	8830-C36430		
Project Name:	8830-C36430 Pelham Sub-Add 2nd Xfmr and Fdr Pos		
Requesting Region:	New Hampshire	Sponsor (Name):	Rodrigues; Charles
Project Champion:	Strabone; Anthony	Project Manager	Strabone; Anthony
Project Start Date:	1/1/2017	Project Completion Date:	12/31/2017
Requested Capital (\$)	\$3,520,000	Expenditure Included in Approved Budget?	Yes

Section 1. Approval

Approval of the Project Closeout and Assessment Report indicates an understanding and formal agreement that the project is ready to be closed. By signing this document, each individual agrees all administrative, financial, and logistical aspects of the project should be concluded, executed, and documented as described herein.

Further, by signing this Report, it is accepted that CWIP (FERC Account 107) should be transferred to Utility in Plant Service (FERC Account 101)

Approver Name	Title	Signature	Date
Anthony Strabone	Project Manager		2/15/18
Charles Rodrigues	Director of Engineering		2/15/18
Craig Jennings	Vice President-Operations and Engineering		2/23/18

Project Close Out Report **2017**

Section 2. Final Deliverable/Deployment Checklist

Sponsor to respond to each question. For each "no" response, include an issue in Open Issues section.

Item	Question	Response
2.1	Do you agree that the product and/or service is ready to be deployed?	Yes
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes
2.3	Do you fully understand and agree to accept all operational requirements, operational risks, maintenance costs, and other limitations and/or constraints imposed as a result of ongoing operations of the product and/or service?	Yes
2.4	Do you agree the project should be closed? If no, please explain:	Yes
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	3
2.6	Product and/or Service Performance	3
2.7	Scope	3
2.8	Cost (Budget)	3
2.9	Schedule	3

Section 3. Project Documentation Checklist

Project Manager Respond to each question. For each "no" response, include an issue in Open Issues section.

Item	Question	Response	
3.1	Have project documentation and other items (e.g., Business Case, Project Plan, Charter, Budget Documents, Status Reports) been prepared, collected, filed, and/or disposed?	Yes	
3.3	Were audits (e.g., project closeout audit) completed and results documented for future reference?	Yes	
3.4	Identify the storage location for the following project documents items:	See below	
Item	Document	Location (e.g., Google Docs, Webspace)	Format
3.4a	Business Case	Local W Drive: W:\Engineering\Project Documents Electric	Electronic
3.4b	Project Charter	N/A	Electronic
3.4c	Project Plan	N/A	Electronic
3.4d	Budget Documentation and Invoices	N/A	Electronic
3.4e	Status Reports	N/A	Electronic

Project Close Out Report | 2017

3.4f	Risks and Issues Log	N/A	Electronic
3.4g	Final deliverable	N/A	Electronic
3.4h	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.	N/A	Electronic

Section 4. Project Team

Project Manager to list resources specified in the Project Plan and used by the project.

Name	Role	Type (e.g., Contractor, Employee)
Anthony Strabone	Project Manager	Employee
Ryan Tsantoulis	OH Line Supervisor- Salem	Employee
Mario Barone	Substation Supervisor	Employee
Vanderweil	Engineering	Contractor
Control Point Technologies	Engineering	Contractor
Hooper Corporation	Substation Construction	Contractor

Section 5. Project Lessons Learned

Project Team to identify lessons learned specifically for the project. State the lessons learned in terms of a problem (issue). Describe the problem and include any project documentation references (e.g., Project Plan, Issues Log) that provide additional details. Identify recommended improvements to correct a similar problem in the future.

Project Close Out Report **2017**

Problem Statement	Problem Description	References	Recommendation
GE D20 RTU needed extensive programming	GE D20 RTU is an older vintage Remote Terminal Unit used for SCADA communications. GE provides less than adequate customer service and support for this product line. Liberty personnel spent numerous days programming this unit.	N/A	Liberty will no longer specify GE D20 RTUs and will now be ordering SEL RTACs

Section 6. Post-Implementation Support Plans

Project team to identify plans for post-implementation activities after project closeout. Refer to the Benefits Realization review gate for information about the Post-Implementation Review of Business Outcomes deliverable.

Action	Planned Date	Assigned To	Frequency
Post-Implementation Review of Business Outcomes (actual review)	N/A	N/A	N/A
Post-Implementation Review of Business Outcomes (approval)	N/A	N/A	N/A

Section 7. Open Issues

Project Manager and Functional Lead to describe any open issues and plans for resolution within the context of project closeout. Include an open issue for any "no" responses in the Final Product and/or Service Acceptance Checklist and the Project Artifacts Checklist sections.

Issue	Planned Resolution
N/A	N/A

Project Close Out Report | 2017

Section 8. Financials

Project Manager and Functional Lead to provide details for the following tables.

Financial Descriptor	Amount
Total Actual Project Costs (including all Regional, Corporate and 3 rd party costs)	\$3,925,242
Total Budgeted amount	\$3,520,000
Variance	\$(405,242)

Reasons for Variance	Impact
Change order for ledge removal for new Liberty Control House. Also, additional Liberty Labor to program D20 RTU	Project is over-budget

Project Manager to list of all work orders associated with project that should be closed once Close Out Report is accepted.

Registry of All Job Codes (Regional, Corporate, LABs)	
Work Order 1	8830-18000058
Work Order 2	8830-PEL SUB XFMR
Work Order 3	8830-ACC PELSSXFM
Work Order 4	
Work Order 5	