STATE OF NEW HAMPSHIRE
BEFORE THE
PUBLIC UTILITIES COMMISSION

Docket No. DG 20-105

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
Distribution Service Rate Case

SUPPLEMENTAL TESTIMONY

OF

HEATHER M. TEBBETTS

August 31, 2021

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I. INTRODUCTION AND BACKGROUND

Q. Ms. Tebbetts, please state your full name, business address, and position.

A. My name is Heather M. Tebbetts. My business address is 9 Lowell Road, Salem, New Hampshire. I am Manager of Rates and Regulatory Affairs for Liberty Utilities Service Corp. and am responsible for providing rate-related services for Liberty Utilities (EnergyNorth Natural Gas) Corp. ("Liberty") and Liberty Utilities (Granite State Electric) Corp. ("Granite State").

Q. Did you previously provide testimony in this docket?

A. Yes. I am a co-sponsor of the Direct Testimony Brian R. Frost, Robert A. Mostone, and Heather M. Tebbetts dated July 31, 2020, and of the Rebuttal Testimony of Messrs. Frost, Mostone, and Ms. Tebbetts dated April 29, 2021, which were previously filed in this docket and marked as Exhibits 33 and 48, respectively. My educational background, professional experience, and prior testimony before the New Hampshire Public Utilities Commission (the "Commission") are provided in Exhibit 33.

II. PURPOSE OF TESTIMONY

Q. What is the purpose of your testimony?

A. The purpose of this testimony is to support and reaffirm the Company's request for implementation of a step adjustment to distribution rates for recovery of 2020 plant additions, as described in Section 5.1 of the Settlement Agreement dated June 29, 2021, ("Settlement Agreement") by and between the Company, the Commission Staff (now Department of Energy ("DOE") Staff), and the Office of the Consumer Advocate ("OCA"). The Settlement Agreement was filed previously in this docket as Exhibit 49.

The Commission's Order No. 26,505 (July 30, 2021) (the "Order") accepted the provision of the Settlement Agreement allowing for and capping the first step adjustment at $4.0 million, but rejected its implementation on August 1, 2021, pending additional information to be filed by the Company.[1]

Q. What did the Order state with respect to additional information in support of the first step adjustment?

A. The Order directed Liberty "not to collect any revenue requirement associated [with] the first step adjustment until it files a related request with the Commission containing the same level of detail as specified in the Settlement Agreement for the second step increase and specifically identifying which projects shall be considered for prudence determinations up to but not in excess of the $4 million dollar cap . . . ."[2] The Order stated the Commission would hold a hearing and issue a further determination on the 2020 plant additions found to be necessary to support the revenue requirement cap to be prudently incurred, used, and useful.[3]

Q. Is this testimony provided in response to the Order?

A. Yes. This testimony and the supporting attachments constitute the Company's request for implementation of the first step adjustment per the Order and includes the 2020

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[1] On August 24, 2021, the Company filed a Motion for Rehearing on Implementation of Step Adjustment, which requests that the Commission approve the first step adjustment of $4.0 million to go into effect as of August 1, 2021, per the terms of the Settlement Agreement. The Rehearing Motion is pending. This testimony is provided in compliance with the Order and subject to a reservation of rights as to the Rehearing Motion, and does not waive any claims relative to the Order and implementation of the step adjustment as of August 1, 2021.

[2] Order at 12–13.

[3] Id. at 13.

project documentation as required by the Order. The Company's request provides for an effective date for the step increase as of October 1, 2021, which, as required by the Order, is no sooner than 30 days from the date of this filing.[4]

Q. Are you presenting any attachments with your testimony?

A. Yes. In addition to this testimony, I am presenting the following attachments:

Attachment	Description
Attachment 1	Liberty Utilities Capital Expenditure Policy
Attachment 2	Project Documentation for 2020 Non-Growth Capital Investments
Attachment 3	Bill Impacts

III. <u>2020 CAPITAL PROJECT DOCUMENTATION</u>

Q. Please explain the project documentation in support of implementation of the first step adjustment.

A. The Company seeks approval to commence cost recovery for the non-growth capital projects identified on Appendix 1 to the Settlement Agreement ("Appendix 1"), all of which are used and useful and were placed in service on or before December 31, 2020. Attachment 1 provides the Company's capital expenditure policy that applied to the projects listed in Appendix 1. Attachment 2 provides the detailed project documentation for each of the projects listed in Appendix 1. Attachment 2 at page 1 (Bates 073) is an

[4] The October 1, 2021, implementation date is intended to conform to the Order and does not constitute agreement by the Company to an implementation date later than August 1, 2021, or waiver of its claims in the Rehearing Motion.

update to Appendix 1 at page 1 (Exhibit 49 at Bates 028) and includes a breakdown of budget and spending by year, as required by the Order.

Q. Does Attachment 2 contain all the information required by the Order?

A. Yes. As stated above, the Order directed the Company to provide "the same level of detail as specified in the Settlement Agreement for the second step increase and specifically identifying which projects shall be considered for prudence determinations up to but not in excess of the $4 million dollar cap."[5] Section 5.2 of the Settlement Agreement addresses the documentation requirements for the second step adjustment and requires the Company to provide: (a) the amount of the investments to be included in the step increase (by project) and detailed project descriptions including the initial budget, the final cost, the treatment of any related retirements, and the date each project was booked to plant in-service; and (b) for each project, all Company project documents including, but not limited to, Business Cases, Capital Project Expenditure Applications, Change Order Forms, Project Close Out Reports, and work orders.

Q. Please describe more specifically the information contained in Attachment 2.

A. Consistent with the Company's capital expenditure policy, Attachment 2 provides the backup documentation for the 2020 spending for each of the projects listed in Appendix 1 to the Settlement Agreement (Exhibit 49 at Bates 028), as follows:

- Business case – required for projects greater than $100,000;
- Capital expenditure form;

[5] Order at 12–13.

- Change orders (as necessary); and
- Project close out forms (as necessary) – required for projects that will not have spending in future years.

In accordance with Liberty's capital expenditure policy, certain projects in Appendix 1 do not require some of the aforementioned documentation, as follows:

- Project 8840-1921: Project close out not required because there will be additional spending in 2021.
- Project 8840-1936: Project close out not required because there will be additional spending in 2021.
- Project 8840-2015: The 2019 business case provided the basis for the 2020 charges that were incurred under that project number, providing 2020 change order and project close out form.
- Project 8840-2019: No forms required because the spending in 2020 was carryover from 2019.
- Project 8840-2020: No forms required because the spending in 2020 was carryover from 2019.
- Project 8840-2030: Change order was not completed.
- Project 8840-2038: Project close out forms not required because the project number includes multiple IT projects whereby allocations were charged to EnergyNorth. projects that may have 2021 charges.
- Project 8840-2062: Project was originally under project #8840-1972.

- Project 8840-1820: No forms required because the spending for 2020 was carryover from 2019.
- Project 8843-2014: No forms required because the spending for 2020 was carryover from 2019.

Attachment 2 at page 1 (Bates 073) includes an index of the associated page numbers within Attachment 2 that provide the documentation for each project.

Q. As required by the Order, are the attached documents consistent with the requirements of the Settlement Agreement for the second step adjustment?

A. Yes. These documents are consistent with the information provided in support of the step increases in the Granite State rate case, Docket No. DE 19-064, and are the same types of documentation that will be produced for the second step increase in this docket.

Q. Prior to the Settlement Agreement, did the Company provided much of this information to the Commission Staff and Audit Staff during the discovery phase of this docket?

A. Yes. Although the Order states that the Company did not provide sufficient documentation for implementation of the first step adjustment on August 1, 2021, the Company provided substantial information to Staff prior to the Settlement Agreement. As explained in my rebuttal testimony, filed on April 29, 2021, the Company timely responded to three sets of Staff data requests and three sets of Staff technical session data requests, which included a response to Staff TS 3-31 with the 2020 project budget in the Company's original filing, to be updated later in the process with actual spending amounts. On March 10, 2021, the Company subsequently responded to a follow-up

request from Staff for project documentation consistent with the documentation provided pursuant to the settlement agreement in Docket No. DE 19-064, which was Granite State's most recent distribution rate case. The requested documentation was provided in a supplemental response to Staff TS 3-31. On March 11, 2021, the Company started to receive data requests from the Commission's Audit Staff and subsequently provided all requested backup details for the 2020 step adjustment projects in a timely manner.

Q. Did the Company provide additional supporting project documentation to assist Staff with its review process?

A. Yes. While in the process of its review, Staff sent the Company a list of selected projects from Staff TS 3-31 and asked for additional information. The request identified projects based on the budget-to-actual results. The Company explained the reasons that the selected projects showed variances, noting that many of the projects highlighted by Staff were blanket projects where the actual costs are driven by field conditions that are not known at the time of budget development and not within the Company's control (e.g., leaks requiring repair by capital pipe replacements, meter sets failing inspection and not able to be repaired by temporary maintenance). Notwithstanding individual project variances, the Company noted that, on an overall basis, its total actual project spending in 2020 was in line with the budget. Overall, the Company provided documentation to Staff and Audit Staff for 28 of the 51 non-growth projects included in the first step adjustment.

Q. Were these documents available to the parties at the time they signed the Settlement Agreement and at the time of the July 13, 2021, hearing on the Settlement Agreement?

A. Yes. As stated above, the Company previously collected, organized, and provided these documents to the parties.

Q. Did the parties have opportunity to review these documents prior to signing the Settlement Agreement?

A. Yes. Based on follow up questions and the substance of settlement discussions, the Company believes that Staff and the OCA did review these documents.

Q. Did the Staff or OCA seek to exclude or challenge any of the projects on Appendix 1 of the Settlement Agreement on the basis that they were not prudent?

A. No. The parties accepted the terms of the Settlement Agreement and provided closing statements at the July 13, 2021, hearing in support of the Settlement Agreement.[6]

Q. Do the attachments to your testimony include additional information that was not previously filed in discovery?

A. Yes. In response to the Order, Attachment 2 includes documentation for the 11 projects that were not covered in previous requests from Staff and Audit Staff for backup documentation during the discovery phase and audit.

[6] See Transcript of July 13, 2021, hearing at 136 (Staff) and 134 (OCA).

Q. Overall, does the information provided in Attachment 2 demonstrate that the 2020 projects listed in Appendix 1 were prudent, currently in service, and used and useful, therefore warranting cost recovery?

A. Yes.

Q. Lastly, please explain whether it would be appropriate for the Company to reduce the number of projects included in the first step adjustment to bring the associated revenue requirement "up to but not in excess of the $4 million cap," as stated in the Order.

A. Such a requirement would materially and significantly alter the terms of the approved Settlement Agreement. The $4.0 million cap applies to cost recovery of the revenue requirement for the listed projects but does not apply to the recovery of associated state property taxes for the projects. Section 5.1(a)(iv) of the Settlement Agreement expressly states that "[s]tate property taxes for <u>all</u> projects listed in Appendix 1, calculated using the statutory tax rate in RSA 83-F:2, shall be included in the step adjustment calculation, shall count toward the cap, and shall be given first priority of recovery."[7] In other words, the Settlement Agreement provides for recovery of state utility property taxes assessed on all of the projects listed on Appendix 1, not limited by the $4.0 million cap. If the Company were to eliminate any of the projects in the first step adjustment to remain under the $4.0 million cap, this would eliminate the Company's recovery of state utility property taxes for the excluded projects, which would be inconsistent with the Settlement

[7] Settlement Agreement (Exhibit 49) at Bates 009. The Company notes that the Order "APPROVED" the Settlement Agreement "as set forth and conditioned herein above." Order at 15. The Order did not condition its approval on any changes to Section 5.1(a)(iv).

Agreement. A reduction of projects would reduce the amount of related state utility property taxes, thus altering the recovery of costs, and the balancing of consideration, in the step adjustment.

Q. Does this conclude your testimony?

A. Yes.

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Liberty Way Policy & Procedures

Capital Expenditures
Planning and Management

October 23, 2018
V[3.0]

Version History

Version	Date	Author	Comments
1.0	December 31, 2013	G. Tremblay	Initial Publication
2.0	March 16, 2015	F. Chen Naden	Material updates to policies, procedures, templates and forms used in the planning and management of Capital Expenditures.
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1.0 Executive Summary

Liberty Utilities Co and its subsidiaries (collectively "LU") incur capital expenditures for a variety of projects each year depending on growth trajectories, maturation of assets, statutory requirements, and extraordinary occurrences. Both planned and unplanned capital expenditures designed to meet business needs are to be subject to the policies and procedures in this document.

Five categories will be utilized to organize and prioritize Capital Expenditure requests. The categories are as follows in descending priority:

- Safety
- Mandated
- Growth
- Regulatory Supported
- Discretionary

For **Safety** and **Mandated** initiatives, a Capital Project Expenditure Form ("CPE") Form (Appendix A) must be completed and approved regardless of the project size in order to commence with project activities.

For **Growth**, **Regulatory Supported,** and **Discretionary** initiatives greater than $100,000, a completed Business Case (Appendix B) and CPE Form (excluding the CPE-Financial Summary section) is required for approval to commence with project activities, while projects with estimated costs less than $100,000 will require a CPE Form completed in order to commence with project activities.

For cases where there may be a blanket of projects combining Safety & Mandated with Growth, Regulatory Supported, and Discretionary the process followed for project approval shall be as outlined in section 5.3.

This document also provides direction as to the level of autonomy regional and functional leadership can exercise as well as procedures to address changes, material variances, ongoing reporting, and expenditure closeout.

2.0 Objectives

To define the processes related to approving, monitoring, and reporting capital expenditures to ensure:

- Appropriate documentation is
  - Prepared to reflect proper necessity, scope, cost, and schedule;
  - Documentation is provided as part of the approval process; and
  - Retained in historical records in accordance with regulatory requirements and needs.
- Appropriate authorization is obtained before the start of all projects.
- Consistent evaluation of capital projects across the enterprise.
- Projects are completed within planned time frames, to approved cost allocations and with full scope delivery.
- Material changes to scope, timing, and costs are authorized appropriately by the regional or corporate leadership prior to their occurrence.

- Effective and efficient deployment of capital resources across the enterprise are managed by regional leadership such that reallocation of capital according to evolving requirements, and priorities change within the region can be executed.
- Financial gains and ancillary benefits used to justify initiatives are achieved and impacts are reflected in subsequent monetary budgeting activities.

3.0 Definitions

Capital projects are projects which are net new to the company or spend which results in the furtherance to the life of an asset. Capital projects at LU are broken into five categories used to assess proposed projects. Respective definitions are provided below. These categories are to be used in both the development of regional capital projects and during the monitoring phase once projects are approved.

3.1 Blanket Projects

Blanket Projects are various smaller capital initiatives that are grouped together to constitute a total spend for projects with similar scope.

3.2 Capital Project

A capital project, both planned and unplanned, are designed to achieve stated objectives where one of the outcomes is materialization of, or improvement to, assets that can be listed on the company's Statement of Financial Position.

3.3 Discretionary

All other capital expenditure projects that do not fit within the four prior grouping will be grouped under the "Discretionary" category. The merits of each project will be assessed individually.

The following definitions are commonly used terms in this document. To prevent misunderstandings, or misinterpretations, explicit definition is provided below.

3.4 Functional Lead

Functional Leads provide corporate strategy, policy and procedural definition for their respective area of knowledge. They are accountable for defining and maintaining the framework under which regional businesses operate.

3.5 Growth

Expenditures categorized as "Growth" are those used to expand the physical plant. For example projects such as extending distribution mains or services, installation of new feeders, and expansion of substations. For capital expenditures where a gas, electric, or water system Line Extension Policy exists and is supported through approved regulations, the management and reporting of individual transactions is exempt from this policy. Rather, activities will be aggregating into a portfolio and managed as a grouped entity.

3.6 Growth Portfolio

To avoid the burdensome chore of administering and reporting on individual customer connections or line extension as independent projects, Growth projects are to be pooled into a group named "Growth Portfolio".

3.7 IT Capital Portfolio

For any LU software application in any work process or functional group the procedure would follow the PMO -1.0 – Work-In-Take Process.

3.8 Mandated (by regulations or laws)

Expenditures categorized as "Mandated" are those used to meet statutory or regulatory compliance. To qualify for inclusion in this category, proposed initiatives must provide a copy of any applicable legislation, statute or regulation.

3.9 Project Champion

On behalf of the Project Sponsor, the Project Champion is accountable for completing project documentation and facilitating approvals. In some scenarios, the project champion may be the Project Manager; however it is acknowledged that many permutations exist where the two roles are separate. In the absence of a Project Manager, the Project Champion is responsible for ensuring appropriate job codes are established in Oakville and the regional utilities.

3.10 Project Completion

The Project Completion is dictated by the handover of the final product to the operations group and the closing of all the contracts and work order associated to the project spend

3.11 Project Manager

The Project Manager is the individual tasked to drive the project on behalf of the project sponsor and achieve the stated objectives. Where a Project Manager has been assigned, they are responsible for adhering to the required documentation (i.e. Business Case and/or CPE), in additional to obtaining relevant FWO codes via the regional LU accounting teams. Project Managers, in the absence of explicit direction, will always abide by Project Management Body of Knowledge principles.

3.12 Project Sponsor

The Project Sponsor is the individual with demonstrable interest in the outcome of a project who is ultimately responsible for securing financial and workforce resources to achieve stated objectives.

3.13 Regional President

Regional Presidents, also referred to as the Regional Lead, oversee their respective utilities and are accountable for achieving financial and operating metrics for their respective businesses. Regional Presidents have authority over workforce and capital resources granted to them provided that utilization is consistent with established corporate policies.

3.14 Regulatory Supported

Expenditures categorized as "Regulatory Supported" are those used to implement projects where special regulatory mechanisms have been established to accelerate the financial returns of specific initiatives.

3.14 Safety

Expenditures categorized as "Safety" are those used to reduce workplace hazards, accidents and exposure to harmful situations and substances. It is noted that expenditures addressing imminent dangers would be completed when identified.

4.0 Capital Planning vs Capital Budget Process

The journey to define capital budgets is often an iterative process characterized by the need for timely and accurate information in order to make informed decisions. The act of

developing a budget is outside the scope of this document. For illustration purposes, Appendix G depicts a simplified budgeting process typically carried out annually between LU and the ultimate parent company, Algonquin Power and Utilities ("APUC").

In Summary, the Corporate Long Term Model is the driver for setting the capital budget for a succeeding year. At the time of forming a succeeding year's capital budget, a preliminary Business Case and/or CPE Form (using the templates provided in Appendix A & B) may be submitted for each project prior to the conclusion of the Corporate Long Term Model.

Once the Corporate Long Term Model and related capital budget is set by the APUC Board, Regional Liberty leadership are responsible throughout the successive year for planning the projects that fall within that year's set capital budget, inclusive of review and approval of CPE Forms and Business Cases not already submitted as part of the capital budget formation process (See Appendix G).

The blue boxes represent tasks that are usually completed within LU exclusively while green boxes depict activities with varying levels of APUC, or Liberty Power Co. ("LPCo"), participation. The contents of this document define requirements and practices related to the act of executing, or expending, the capital budgets. As such, red areas are focal points for this document, while blue areas are spheres of influence.

In preparation for, and in response to, various Board of Director functions, activities on the left side of the cycle shown in Appendix G would be completed in the first half of the year in an idealized scenario; whereas the right side of the process would be completed in the second half.

4.1 Assumptions

- As an input to the procedures outlined in this document, it is assumed all LU capital budgets are developed and approved outside of the activities governed by this document. This document details how expenditures are planned and monitored but does provide direction as to how budgets are to be derived in conjunction with APUC or LPCo.
- Capital projects submitted as part of the annual budget process are approved as part of the larger capital expenditure envelope of spend for any given year. Prior to actual spend on a specific project, the respective LU region will have to follow procedures noted under section 5 of this document.
- This Policy assumes that Regional and APUC Boards have authorize the envelope of spend for the succeeding years Capital Program.
- This Policy assumes that the regional accounting teams have utilized US Generally Accepted Accounting Principles (US GAAP) is assessing capitalization of spend on the respective capital projects For a further discussion on this process please see the Liberty Capitalization Procedure.(http://community.libertyutilities.com/FinanceAndAdministration/Guidelines%20and%20Procedures/Processes/Liberty%20Utilities%20Capitalization%20Procedure%20-V1.pdf)
- As an input to the procedures in this document, budgets assigned to regions or functional groups are the responsibility of those parties. As such minor variances to approved projects or portfolios are to be handled within given budgets.
- The Integrated Technology (IT) Project Management Office's (PMO) Work In Take (WIT) process is outlined within the PMO -1.0 – Work In Take Process and should be followed in accordance to the rules set forth in that document as is beyond the scope of this procedure. For assistance on this process please contact the LABS IT Group.

- Regulatory approved line extension policies outlining specific eligibility criteria and rates of return exist outside of content represented in this document. Expenditures exercised under granted customer connection budgets are exempt from this policy.
- All LPCo Business Development projects which follow the stage gating process, are excluded from this document and should be governed under the APMM (Algonquin Project Management Methodology) policy.

5.0 Applications for Capital Expenditure Approval

All project submissions will have a completed financial assessment pursuant to the following thresholds:

- Safety and Mandated projects will require a completed CPE Form (Appendix A).
- Growth, Regulatory Supported, and Discretionary projects with a capital cost below $100,000 will require a completed CPE Form
- Growth, Regulatory Supported, and Discretionary projects with a capital cost greater than $100,000 will require a completed Business Case (Appendix B) as well as a CPE form. Note: the Financial Summary section of the CPE form will not be a requirement as this information is captured within the accompanied business case
- In the event that there is an unexpected, or emergency service disruption which requires immediate capital spend without sufficient time to follow the protocols noted in this policy, the capital spend can be spent on an emergency basis, however, within five (5) business days after the emergency event occurring a CPE form must be completed and submitted for approval pursuant to section 5.2.
- All Blanket Projects combining Safety & Mandated with Growth, Regulatory Supported, and Discretionary shall follow section 5.3.
- All Unplanned Projects will follow those rules outlined in section 5.4 below.
- In summary, the below table outlines the required documentation that will be discussed in sections 5.2 to 5.4:

Table 1: Capital Expenditure Documentation by Category

Category	Amount	CPE	Business Case	Project Close Out Report	Over Expenditure Application
Safety & Mandated	**All amounts**	**Required**	**N/A**	**Required**	**When necessary**
Growth, Regulatory Supported, Discretionary	**<$100,000**	**Required**	**N/A**	**Required**	**When necessary**
Growth, Regulatory Supported, Discretionary	**>100,000**	**Required (Cost Sections not required)**	**Required**	**Required**	**When necessary**

Instructions for filling out the CPE Forms and Business Cases along with best practices for project estimation and key project metrics can be found in section 6.1 and 6.2 respectively.

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In preparation for, and in response to, various Board of Director functions, activities on the left side of the cycle shown in Appendix G would be completed in the first half of the year in an idealized scenario; whereas the right side of the process would be completed in the second half.

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All project submissions will have a completed financial assessment pursuant to the following thresholds:

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- Growth, Regulatory Supported, and Discretionary projects with a capital cost greater than $100,000 will require a completed Business Case (Appendix B) as well as a CPE form. Note: the Financial Summary section of the CPE form will not be a requirement as this information is captured within the accompanied business case
- In the event that there is an unexpected, or emergency service disruption which requires immediate capital spend without sufficient time to follow the protocols noted in this policy, the capital spend can be spent on an emergency basis, however, within five (5) business days after the emergency event occurring a CPE form must be completed and submitted for approval pursuant to section 5.2.
- All Blanket Projects combining Safety & Mandated with Growth, Regulatory Supported, and Discretionary shall follow section 5.3.
- All Unplanned Projects will follow those rules outlined in section 5.4 below.
- In summary, the below table outlines the required documentation that will be discussed in sections 5.2 to 5.4:

Table 1: Capital Expenditure Documentation by Category

Category	Amount	CPE	Business Case	Project Close Out Report	Over Expenditure Application
Safety & Mandated	**All amounts**	**Required**	**N/A**	**Required**	**When necessary**
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Instructions for filling out the CPE Forms and Business Cases along with best practices for project estimation and key project metrics can be found in section 6.1 and 6.2 respectively.

For multiyear projects, budgets are defined annually. Every effort will be made to support the capital resources required for multiyear projects.

5.1 Communications of Approvals and Approval Limits

The approval limits for the creation of work orders within the LU financial systems are outlined in Table 2.

Table 2: Work Order Approval Limits

Location	Role	Work Order Value
Corporate	Exec Team Member (CEO, CFO, COO, Vice Chair)	Over 5,000,000
Corporate	Senior VP Operations	Up to $5,000,000
Regional	Regional President	Up to $3,000,000
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Approvals for purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

5.2 Planned and Budgeted Safety and Mandated Projects

Expenditures categorized as Safety or Mandated in the approved budget are authorized to commence provided that each project has a completed and approved CPE Form. Project details must be entered into the Clarity financial system. Each project should be entered as follows:

- Blanket/Program Project work orders will be established annually to capture work that is part of the normal business cycle and utilizes standard construction materials, methods, and resources.
- The CPE Form will be utilized to summarize the scope, cost, and schedule for blanket projects. The form shall be updated annually as part of the Approval process.
- Specific Projects will be established and budgeted to reflect work of a unique, one-time project nature. A CPE Form will be required for such projects prior to commencement of construction.

Once a project has started, material changes to the timing or variances relative to initial cost will be captured and reported pursuant to section 7 of this policy. A material change to the timing of a project is defined as the movement of an in service date from the scheduled quarter and in to a new one.

5.3 Planned and Budgeted Growth, Regulatory Supported/Discretionary Projects

Projects included in the budget as Growth, Regulatory Supported or Discretionary groups and projected to have a cost of less than $100,000 will require a completed CPE Form and follow a similar approval process to that of Safety and Mandated projects.

Projects included in the budget as Growth, Regulatory Supported or Discretionary groups and projected to have a cost of greater than $100,000 will require a more robust review of the project to assess its scope, schedule and benefits.

For projects over $100,000, a business case must be completed along with a CPE Form as outlined in section 5.0 above. A blanket Business Case can be used for projects where many smaller transactions collate in to one initiative. Similarly, a business case can be used for a portfolio of activities.

The Project Manager (or Champion) is responsible for the preparation of the business case documenting all aspects of the project including cash flow, Internal Rate of Return (IRR) calculation and schedule. After the business case is prepared, approvals are obtained pursuant to section 5.1 of this policy.

All projects in these categories will be assessed based on the following criteria in descending importance

- IRR
- Operational risk
- Business objectives

5.4 Unplanned Projects

Projects that are deemed unplanned will be those projects that were not allotted for in the annual capital planning process or approved within the final annual budget book document. The unplanned projects will be reviewed and approved pursuant to the same manner as noted in sections 5.1 to 5.3 of this document.

5.5 Variances to Budget or Schedule

Any project variances must be approved pursuant to approval limits noted in section 5.1 of this document.

Variances are defined as

- The overall out of scope project costs that draw the full approved estimated project contingency and overrun the respective cost category items outlined in the business case or CPE form; or
- Expected completion date extends beyond originally defined fiscal year impacting capital budgets or stated business case objectives, or
- Scope of deliverables is materially different from what was chartered and approved in the business case.

For multiyear projects, monetary variances are to be tracked both an annual and total project basis. Reporting is carried out pursuant to section 7.2 of this policy.
Material changes in schedule are defined as any delay resulting in a completion date outside of the original scheduled operating quarter. Regional leadership is responsible to manage delays and changes in cash flow to ensure financial metrics are sustained for their respective businesses. The Project Manager is accountable to communicate expected variances to regional leadership when identified, ideally before the variance has occurred. All schedule and cost variances are to be inputted into clarity to accurately reflect any scope growth or project delays.

No expenditure shall be made to cause a project to be over-budget without formal approval unless the delay results in adversely affecting the project or the operation of the company. In case of an emergency the Regional President should take appropriate action to preserve life and public safety.

6.0 Capital Expenditure Documentation

Samples of templates are provided in the appendices. Standalone versions of the documents can be separately obtained on the Community SharePoint.

6.1 Business Case

As noted in Table 1 of this document, both planned and unplanned projects classed as a Growth, Regulatory Supported or Discretionary projects and having a value greater than $100,000 will require a completed business case.

It is the responsibility of the Project Manager, or Champion, to prepare the business case, with assistance from appropriate stakeholders (See Appendix B). The key sections found in the Business Case form and the general guidelines required to successfully complete this stage of the project planning process are outlined as follows:

- **Project ID#:** This represents the unique project code that defines the project during the budget cycle
- **Project Scope Statement:** This may include but is not limited to deliverables associated to the project, the acceptance criteria, what will not be included in the project, and any assumptions or constraints
- **Background:** This section shall:
  - Describe the current operational asset and risk of not carrying out the respective capital project.
  - Describe any related project previously approved for this project and any funds previously spent that are related to this proposal.
  - Describe the decision criteria used in evaluating the alternatives. i.e. Work process improvement, system improvement, etc.
- **Recommendation/Objective:** This section should look to answer why the Project Scope Statement is looking to be resolved along with the recommended actions or purpose the investment serves for the business (i.e. the asset has reached the end of its useful life, it provides the opportunity to increase site profitability, improves safety, etc.).
- **Alternatives/Options:** Describe reasonably viable alternatives and associated analysis (i.e. pro/con, what if, scenario, etc.), where applicable.
- **Financial Assessment/Cost Estimates:** This section should outline a summary of the project cash flows as broken down in the Business Case template. In addition, the Unlevered Rate of Return (IRR) and basis of estimate will be required in order to address the reasonability of the estimate. Examples of estimating techniques include but are not limited to bidding the scope of work, internal top-down estimate based on historical data points and expert judgement, and parametric estimating techniques. The risk profile of the estimating technique utilized can be summarized in the AACE Estimate Class table below.
- In summary, as the maturity level of the project increases the accuracy of the estimate improves, meaning there is less risk in the variability of the scope. The below Table

may be used as a guideline and or reference for projects greater than $10M in value in estimating project contingencies:

Table 3: AACE Estimation Class (Policy 18R-97 P. 3)

Estimate Class (Indicate AACE class; estimate should achieve a Class 3 when possible)				
Estimate Class	**Maturity Level** (% of complete definition)	**End Usage** (typical purpose of estimate)	**Methodology** (typical estimating method)	**Expected Accuracy Range** (high/low)
Class 5	0% to 2%	Concept screening	Capacity factored, parametric models, judgement	L: -20% to -50% H: +30% to +100%
Class 4	1% to 15%	Study or feasibility	Equipment factored of parametric models	L: -15% to -30% H: +20% to +50%
Class 3	10% to 40%	Budget authorization or control	Semi-detailed unit costs with assembly level line items	L: -10% to -20% H: +10% to +30%
Class 2	30% to 75%	Control or bid/tender	Detailed unit cost with forced detailed take-off	L: -5% to -15% H: +5% to +20%
Class 1	65% to 100%	Check estimate or bid/tender	Detailed unit cost with detailed take-off	L: -3% to -10% H: +3% to +15%

Note. Reprinted from "Cost Estimate Classification System - As Applied in Engineering, Procurement, and Construction for the Process Industries", by Larry R Dysert AACE International Practice No 18R-97. Retrieved from Rev March 1, 2016.

- **Schedule:** When available a high level logic driven schedule should be produced (via a project planning software tool where applicable) in order to address the key milestone dates
- **Risk Assessment:** Describe the inherent risk associated with not carrying out this project, including impact on the utility customer.

In summary, the Project Managers and Champions are required to exercise professional judgment in the preparation of businesses cases. Information presented and the effort invested in a business case should be tempered against the magnitude of the request. In all cases the document should always seek to provide full and accurate details to support sound decision making.

6.2 Capital Project Expenditure Form

A CPE form is required to be completed in full for all projects under $100,000 as this document triggers the creation of the job within the accounting software tool.

If a project has a value greater than $100,000 a business case is required to be submitted in conjunction with the CPE. In these instances, the Financial Summary section of the CPE is skipped as these data items will be covered in the business case.

6.3 Change Orders

Should an approved project require a spend change outside of the original scope of work, a change order form (Appendix D) will need to be completed and approved on a two tier system:

- Each change order will require approval subject to the approval limits pursuant to the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group; and

- If the cumulative amount of change orders plus the original approved project cost now exceed the approval limit of the initial approver, an approver from the next approval threshold will be required.
    - *For instance, for a $400,000 dollar project the payment approval listing would require an initial approval from Senior Director or Director. If subsequent to the initial approval the cumulative change orders total $110,000, that would bring the total project cost to $510,000 and now also require an approval from the Regional President (LU).*

It is important to note, that in certain circumstances, the Local Commissions requirements will dictate the threshold for the required submission of the Change Order Form, however, it is under the discretion of the project team to manage the change for the project pursuant to the change order form outlined in this document.

6.4 Project Closeout Report

As a vital aspect of any project, closeout is the physical turnover of deliverables from the project team to the operational group. Every project must complete this step irrespective of project size. A template is provided in Appendix E.

All capital projects require a formal close-out to be conducted; multiyear projects do not require annual close out reports. The report will be prepared by the Project Manager in consultation with Functional Leads or regional Subject Matter Experts. Closeouts must be signed off by the Project Sponsor and are due within 90 days of the project completion date.

7.0 Reporting

The reporting on capital projects is carried through three forms:

- Monthly Operations Review
- Monthly Capital Project Reporting
- Monthly Cash Spend Reporting

7.1 The Monthly Operations Review

On a monthly basis, the Financial Planning & Analysis (FP&A) schedule a meeting to review both regional operating performance and Capital Expenditure variances by region.

7.1.1 Stakeholders Attending the Meeting

- Vice President, Senior Manager, Manager, and the Senior Analyst from FP&A Oakville
- Senior CAPEX Project Analyst, and Director of Capital Planning
- Senior Vice President of Operations
- Regional Presidents (Optional)
- Regional Finance heads

7.1.2 Standing Agenda

The following is the core agenda for each meeting by Regional Presidents and Finance Heads:

1.0 Discussion on Major Regional Based Initiatives
2.0 Discussion on Health and Safety Results (YTD)
    2.1 Recordable Incident Rate (RIR)
    2.2 Lost Time Incident Rate (LTIR)
    2.3 Motor Vehicle Accident Rate (MVAR)

3.0 Financial Performance
- 3.1 Review of Income Statements variances
- 3.2 Distribution Business Group Profit Bridge
- 3.3 Overall Profit by Line of Business and State
- 3.4 Capex variance discussions on overall regional variances

7.2 Monthly Capital Project Reporting

The definition of a major capital project are those projects that have an accrual accounting annual spend of greater than $1M. On a monthly basis a meeting will be held by each regional engineering teams to review project status. Project status will be noted in the Monthly Capital Project Reporting template (see Appendix C). The report and resultant meeting will address a brief discussion on risk, cost, and schedule. Key aspects of the report will cover: Subsequent to the meeting, the engineering teams shall share the monthly report to the regional accounting teams for inclusion in the monthly management report at the regional accounting team's discretion.

- Estimate at Completion (EAC)
  - EAC represents the latest contract values, approved or unapproved changed orders, and any potential changes
- Budget: Includes the annual board approved budget as outlined per the budget book
- Actual Cost (AC) including:
  - Year to Date (YTD); and
  - Project to Date (PTD) accrual accounting values
- Color coded matrix outlining status of risk, schedule; and cost.
  - Green - no issues
  - Yellow - potential issues
  - Red - major issues

7.3 Monthly Cash Spend Reporting

On a monthly basis after the Monthly Operations meeting, the capital planning group will prepare a Clarity based report outlining the new accruals forming the beginning and ending accrual by month for the current year. The regional finance heads will be responsible for populating this report with actual cash spend to date along with a project based estimate to complete highlighting the monthly major project cash payment impacts caused in the respective monthly update.

APPENDIX A: Capital Project Expenditure Form

Liberty Utilities
WATER | GAS | ELECTRIC

Liberty Way Policy & Procedures

Capital Expenditures
Planning and Management

October 23, 2018
V[3.0]

Version History

Version	Date	Author	Comments
1.0	December 31, 2013	G. Tremblay	Initial Publication
2.0	March 16, 2015	F. Chen Naden	Material updates to policies, procedures, templates and forms used in the planning and management of Capital Expenditures.
2.1	September 21, 2015	F. Chen Naden	Increased threshold from $25,000 to $50,000
3.0	October 23, 2018	J. Peellegoda; R, Caputo	Update to overall policy

Table of Contents

1.0 Executive Summary

Liberty Utilities Co and its subsidiaries (collectively "LU") incur capital expenditures for a variety of projects each year depending on growth trajectories, maturation of assets, statutory requirements, and extraordinary occurrences. Both planned and unplanned capital expenditures designed to meet business needs are to be subject to the policies and procedures in this document.

Five categories will be utilized to organize and prioritize Capital Expenditure requests. The categories are as follows in descending priority:

- Safety
- Mandated
- Growth
- Regulatory Supported
- Discretionary

For **Safety** and **Mandated** initiatives, a Capital Project Expenditure Form ("CPE") Form (Appendix A) must be completed and approved regardless of the project size in order to commence with project activities.

For **Growth**, **Regulatory Supported,** and **Discretionary** initiatives greater than $100,000, a completed Business Case (Appendix B) and CPE Form (excluding the CPE-Financial Summary section) is required for approval to commence with project activities, while projects with estimated costs less than $100,000 will require a CPE Form completed in order to commence with project activities.

For cases where there may be a blanket of projects combining Safety & Mandated with Growth, Regulatory Supported, and Discretionary the process followed for project approval shall be as outlined in section 5.3.

This document also provides direction as to the level of autonomy regional and functional leadership can exercise as well as procedures to address changes, material variances, ongoing reporting, and expenditure closeout.

2.0 Objectives

To define the processes related to approving, monitoring, and reporting capital expenditures to ensure:

- Appropriate documentation is
  - Prepared to reflect proper necessity, scope, cost, and schedule;
  - Documentation is provided as part of the approval process; and
  - Retained in historical records in accordance with regulatory requirements and needs.
- Appropriate authorization is obtained before the start of all projects.
- Consistent evaluation of capital projects across the enterprise.
- Projects are completed within planned time frames, to approved cost allocations and with full scope delivery.
- Material changes to scope, timing, and costs are authorized appropriately by the regional or corporate leadership prior to their occurrence.

- Effective and efficient deployment of capital resources across the enterprise are managed by regional leadership such that reallocation of capital according to evolving requirements, and priorities change within the region can be executed.
- Financial gains and ancillary benefits used to justify initiatives are achieved and impacts are reflected in subsequent monetary budgeting activities.

3.0 Definitions

Capital projects are projects which are net new to the company or spend which results in the furtherance to the life of an asset. Capital projects at LU are broken into five categories used to assess proposed projects. Respective definitions are provided below. These categories are to be used in both the development of regional capital projects and during the monitoring phase once projects are approved.

3.1 Blanket Projects

Blanket Projects are various smaller capital initiatives that are grouped together to constitute a total spend for projects with similar scope.

3.2 Capital Project

A capital project, both planned and unplanned, are designed to achieve stated objectives where one of the outcomes is materialization of, or improvement to, assets that can be listed on the company's Statement of Financial Position.

3.3 Discretionary

All other capital expenditure projects that do not fit within the four prior grouping will be grouped under the "Discretionary" category. The merits of each project will be assessed individually.

The following definitions are commonly used terms in this document. To prevent misunderstandings, or misinterpretations, explicit definition is provided below.

3.4 Functional Lead

Functional Leads provide corporate strategy, policy and procedural definition for their respective area of knowledge. They are accountable for defining and maintaining the framework under which regional businesses operate.

3.5 Growth

Expenditures categorized as "Growth" are those used to expand the physical plant. For example projects such as extending distribution mains or services, installation of new feeders, and expansion of substations. For capital expenditures where a gas, electric, or water system Line Extension Policy exists and is supported through approved regulations, the management and reporting of individual transactions is exempt from this policy. Rather, activities will be aggregating into a portfolio and managed as a grouped entity.

3.6 Growth Portfolio

To avoid the burdensome chore of administering and reporting on individual customer connections or line extension as independent projects, Growth projects are to be pooled into a group named "Growth Portfolio".

3.7 IT Capital Portfolio

For any LU software application in any work process or functional group the procedure would follow the PMO -1.0 – Work-In-Take Process.

3.8 Mandated (by regulations or laws)

Expenditures categorized as "Mandated" are those used to meet statutory or regulatory compliance. To qualify for inclusion in this category, proposed initiatives must provide a copy of any applicable legislation, statute or regulation.

3.9 Project Champion

On behalf of the Project Sponsor, the Project Champion is accountable for completing project documentation and facilitating approvals. In some scenarios, the project champion may be the Project Manager; however it is acknowledged that many permutations exist where the two roles are separate. In the absence of a Project Manager, the Project Champion is responsible for ensuring appropriate job codes are established in Oakville and the regional utilities.

3.10 Project Completion

The Project Completion is dictated by the handover of the final product to the operations group and the closing of all the contracts and work order associated to the project spend

3.11 Project Manager

The Project Manager is the individual tasked to drive the project on behalf of the project sponsor and achieve the stated objectives. Where a Project Manager has been assigned, they are responsible for adhering to the required documentation (i.e. Business Case and/or CPE), in additional to obtaining relevant FWO codes via the regional LU accounting teams. Project Managers, in the absence of explicit direction, will always abide by Project Management Body of Knowledge principles.

3.12 Project Sponsor

The Project Sponsor is the individual with demonstrable interest in the outcome of a project who is ultimately responsible for securing financial and workforce resources to achieve stated objectives.

3.13 Regional President

Regional Presidents, also referred to as the Regional Lead, oversee their respective utilities and are accountable for achieving financial and operating metrics for their respective businesses. Regional Presidents have authority over workforce and capital resources granted to them provided that utilization is consistent with established corporate policies.

3.14 Regulatory Supported

Expenditures categorized as "Regulatory Supported" are those used to implement projects where special regulatory mechanisms have been established to accelerate the financial returns of specific initiatives.

3.14 Safety

Expenditures categorized as "Safety" are those used to reduce workplace hazards, accidents and exposure to harmful situations and substances. It is noted that expenditures addressing imminent dangers would be completed when identified.

4.0 Capital Planning vs Capital Budget Process

The journey to define capital budgets is often an iterative process characterized by the need for timely and accurate information in order to make informed decisions. The act of

developing a budget is outside the scope of this document. For illustration purposes, Appendix G depicts a simplified budgeting process typically carried out annually between LU and the ultimate parent company, Algonquin Power and Utilities ("APUC").

In Summary, the Corporate Long Term Model is the driver for setting the capital budget for a succeeding year. At the time of forming a succeeding year's capital budget, a preliminary Business Case and/or CPE Form (using the templates provided in Appendix A & B) may be submitted for each project prior to the conclusion of the Corporate Long Term Model.

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- The CPE Form will be utilized to summarize the scope, cost, and schedule for blanket projects. The form shall be updated annually as part of the Approval process.
- Specific Projects will be established and budgeted to reflect work of a unique, one-time project nature. A CPE Form will be required for such projects prior to commencement of construction.

Once a project has started, material changes to the timing or variances relative to initial cost will be captured and reported pursuant to section 7 of this policy. A material change to the timing of a project is defined as the movement of an in service date from the scheduled quarter and in to a new one.

5.3 Planned and Budgeted Growth, Regulatory Supported/Discretionary Projects

Projects included in the budget as Growth, Regulatory Supported or Discretionary groups and projected to have a cost of less than $100,000 will require a completed CPE Form and follow a similar approval process to that of Safety and Mandated projects.

Projects included in the budget as Growth, Regulatory Supported or Discretionary groups and projected to have a cost of greater than $100,000 will require a more robust review of the project to assess its scope, schedule and benefits.

For projects over $100,000, a business case must be completed along with a CPE Form as outlined in section 5.0 above. A blanket Business Case can be used for projects where many smaller transactions collate in to one initiative. Similarly, a business case can be used for a portfolio of activities.

The Project Manager (or Champion) is responsible for the preparation of the business case documenting all aspects of the project including cash flow, Internal Rate of Return (IRR) calculation and schedule. After the business case is prepared, approvals are obtained pursuant to section 5.1 of this policy.

All projects in these categories will be assessed based on the following criteria in descending importance

- IRR
- Operational risk
- Business objectives

5.4 Unplanned Projects

Projects that are deemed unplanned will be those projects that were not allotted for in the annual capital planning process or approved within the final annual budget book document. The unplanned projects will be reviewed and approved pursuant to the same manner as noted in sections 5.1 to 5.3 of this document.

5.5 Variances to Budget or Schedule

Any project variances must be approved pursuant to approval limits noted in section 5.1 of this document.

Variances are defined as

- The overall out of scope project costs that draw the full approved estimated project contingency and overrun the respective cost category items outlined in the business case or CPE form; or
- Expected completion date extends beyond originally defined fiscal year impacting capital budgets or stated business case objectives, or
- Scope of deliverables is materially different from what was chartered and approved in the business case.

For multiyear projects, monetary variances are to be tracked both an annual and total project basis. Reporting is carried out pursuant to section 7.2 of this policy.
Material changes in schedule are defined as any delay resulting in a completion date outside of the original scheduled operating quarter. Regional leadership is responsible to manage delays and changes in cash flow to ensure financial metrics are sustained for their respective businesses. The Project Manager is accountable to communicate expected variances to regional leadership when identified, ideally before the variance has occurred. All schedule and cost variances are to be inputted into clarity to accurately reflect any scope growth or project delays.

No expenditure shall be made to cause a project to be over-budget without formal approval unless the delay results in adversely affecting the project or the operation of the company. In case of an emergency the Regional President should take appropriate action to preserve life and public safety.

6.0 Capital Expenditure Documentation

Samples of templates are provided in the appendices. Standalone versions of the documents can be separately obtained on the Community SharePoint.

6.1 Business Case

As noted in Table 1 of this document, both planned and unplanned projects classed as a Growth, Regulatory Supported or Discretionary projects and having a value greater than $100,000 will require a completed business case.

It is the responsibility of the Project Manager, or Champion, to prepare the business case, with assistance from appropriate stakeholders (See Appendix B). The key sections found in the Business Case form and the general guidelines required to successfully complete this stage of the project planning process are outlined as follows:

- **Project ID#:** This represents the unique project code that defines the project during the budget cycle
- **Project Scope Statement:** This may include but is not limited to deliverables associated to the project, the acceptance criteria, what will not be included in the project, and any assumptions or constraints
- **Background:** This section shall:
  - Describe the current operational asset and risk of not carrying out the respective capital project.
  - Describe any related project previously approved for this project and any funds previously spent that are related to this proposal.
  - Describe the decision criteria used in evaluating the alternatives. i.e. Work process improvement, system improvement, etc.
- **Recommendation/Objective:** This section should look to answer why the Project Scope Statement is looking to be resolved along with the recommended actions or purpose the investment serves for the business (i.e. the asset has reached the end of its useful life, it provides the opportunity to increase site profitability, improves safety, etc.).
- **Alternatives/Options:** Describe reasonably viable alternatives and associated analysis (i.e. pro/con, what if, scenario, etc.), where applicable.
- **Financial Assessment/Cost Estimates:** This section should outline a summary of the project cash flows as broken down in the Business Case template. In addition, the Unlevered Rate of Return (IRR) and basis of estimate will be required in order to address the reasonability of the estimate. Examples of estimating techniques include but are not limited to bidding the scope of work, internal top-down estimate based on historical data points and expert judgement, and parametric estimating techniques. The risk profile of the estimating technique utilized can be summarized in the AACE Estimate Class table below.
- In summary, as the maturity level of the project increases the accuracy of the estimate improves, meaning there is less risk in the variability of the scope. The below Table

may be used as a guideline and or reference for projects greater than $10M in value in estimating project contingencies:

Table 3: AACE Estimation Class (Policy 18R-97 P. 3)

Estimate Class (Indicate AACE class; estimate should achieve a Class 3 when possible)				
Estimate Class	**Maturity Level** (% of complete definition)	**End Usage** (typical purpose of estimate)	**Methodology** (typical estimating method)	**Expected Accuracy Range** (high/low)
Class 5	0% to 2%	Concept screening	Capacity factored, parametric models, judgement	L: -20% to -50% H: +30% to +100%
Class 4	1% to 15%	Study or feasibility	Equipment factored of parametric models	L: -15% to -30% H: +20% to +50%
Class 3	10% to 40%	Budget authorization or control	Semi-detailed unit costs with assembly level line items	L: -10% to -20% H: +10% to +30%
Class 2	30% to 75%	Control or bid/tender	Detailed unit cost with forced detailed take-off	L: -5% to -15% H: +5% to +20%
Class 1	65% to 100%	Check estimate or bid/tender	Detailed unit cost with detailed take-off	L: -3% to -10% H: +3% to +15%

Note. Reprinted from "Cost Estimate Classification System - As Applied in Engineering, Procurement, and Construction for the Process Industries", by Larry R Dysert AACE International Practice No 18R-97. Retrieved from Rev March 1, 2016.

- **Schedule:** When available a high level logic driven schedule should be produced (via a project planning software tool where applicable) in order to address the key milestone dates
- **Risk Assessment:** Describe the inherent risk associated with not carrying out this project, including impact on the utility customer.

In summary, the Project Managers and Champions are required to exercise professional judgment in the preparation of businesses cases. Information presented and the effort invested in a business case should be tempered against the magnitude of the request. In all cases the document should always seek to provide full and accurate details to support sound decision making.

6.2 Capital Project Expenditure Form

A CPE form is required to be completed in full for all projects under $100,000 as this document triggers the creation of the job within the accounting software tool.

If a project has a value greater than $100,000 a business case is required to be submitted in conjunction with the CPE. In these instances, the Financial Summary section of the CPE is skipped as these data items will be covered in the business case.

6.3 Change Orders

Should an approved project require a spend change outside of the original scope of work, a change order form (Appendix D) will need to be completed and approved on a two tier system:

- Each change order will require approval subject to the approval limits pursuant to the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group; and

- If the cumulative amount of change orders plus the original approved project cost now exceed the approval limit of the initial approver, an approver from the next approval threshold will be required.
    - *For instance, for a $400,000 dollar project the payment approval listing would require an initial approval from Senior Director or Director. If subsequent to the initial approval the cumulative change orders total $110,000, that would bring the total project cost to $510,000 and now also require an approval from the Regional President (LU).*

It is important to note, that in certain circumstances, the Local Commissions requirements will dictate the threshold for the required submission of the Change Order Form, however, it is under the discretion of the project team to manage the change for the project pursuant to the change order form outlined in this document.

6.4 Project Closeout Report

As a vital aspect of any project, closeout is the physical turnover of deliverables from the project team to the operational group. Every project must complete this step irrespective of project size. A template is provided in Appendix E.

All capital projects require a formal close-out to be conducted; multiyear projects do not require annual close out reports. The report will be prepared by the Project Manager in consultation with Functional Leads or regional Subject Matter Experts. Closeouts must be signed off by the Project Sponsor and are due within 90 days of the project completion date.

7.0 Reporting

The reporting on capital projects is carried through three forms:

- Monthly Operations Review
- Monthly Capital Project Reporting
- Monthly Cash Spend Reporting

7.1 The Monthly Operations Review

On a monthly basis, the Financial Planning & Analysis (FP&A) schedule a meeting to review both regional operating performance and Capital Expenditure variances by region.

7.1.1 Stakeholders Attending the Meeting

- Vice President, Senior Manager, Manager, and the Senior Analyst from FP&A Oakville
- Senior CAPEX Project Analyst, and Director of Capital Planning
- Senior Vice President of Operations
- Regional Presidents (Optional)
- Regional Finance heads

7.1.2 Standing Agenda

The following is the core agenda for each meeting by Regional Presidents and Finance Heads:

1.0 Discussion on Major Regional Based Initiatives
2.0 Discussion on Health and Safety Results (YTD)
    2.1 Recordable Incident Rate (RIR)
    2.2 Lost Time Incident Rate (LTIR)
    2.3 Motor Vehicle Accident Rate (MVAR)

3.0 Financial Performance
- 3.1 Review of Income Statements variances
- 3.2 Distribution Business Group Profit Bridge
- 3.3 Overall Profit by Line of Business and State
- 3.4 Capex variance discussions on overall regional variances

7.2 Monthly Capital Project Reporting

The definition of a major capital project are those projects that have an accrual accounting annual spend of greater than $1M. On a monthly basis a meeting will be held by each regional engineering teams to review project status. Project status will be noted in the Monthly Capital Project Reporting template (see Appendix C). The report and resultant meeting will address a brief discussion on risk, cost, and schedule. Key aspects of the report will cover: Subsequent to the meeting, the engineering teams shall share the monthly report to the regional accounting teams for inclusion in the monthly management report at the regional accounting team's discretion.

- Estimate at Completion (EAC)
  - EAC represents the latest contract values, approved or unapproved changed orders, and any potential changes
- Budget: Includes the annual board approved budget as outlined per the budget book
- Actual Cost (AC) including:
  - Year to Date (YTD); and
  - Project to Date (PTD) accrual accounting values
- Color coded matrix outlining status of risk, schedule; and cost.
  - Green - no issues
  - Yellow - potential issues
  - Red - major issues

7.3 Monthly Cash Spend Reporting

On a monthly basis after the Monthly Operations meeting, the capital planning group will prepare a Clarity based report outlining the new accruals forming the beginning and ending accrual by month for the current year. The regional finance heads will be responsible for populating this report with actual cash spend to date along with a project based estimate to complete highlighting the monthly major project cash payment impacts caused in the respective monthly update.

APPENDIX A: Capital Project Expenditure Form

Project Name:			
Financial Work Order (FWO):		**Project ID #:**	
Requesting Region or Group:		**Date of Request (MM/DD/YY):**	Click to select date
Project Sponsor:		**Project Start Date:**	
Project Lead:		**Project End Date:**	
Prepared by:		**Requested Capital ($)**	
Planned or Unplanned Projects:	☐ Planned ☐Unplanned		
Project Type: (Click appropriate boxes)	☐ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported ☐ Discretionary		

Details of Request

Project description

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?
GUIDANCE: If yes, please detail the specific assets that will be removed: 1. *Original Cost of Plant to be removed (if known):* 2. *What is the replacement cost of the plant being removed (if original cost not known)?* 3. *Original Work Order of Plant to be removed (if known):* 4. *Is the Plant being removed reusable?* 5. *What is the year of original installation of the plant being removed*

What alternatives were evaluated and why were they rejected?

Project Name:			
Financial Work Order (FWO):		**Project ID #:**	
Requesting Region or Group:		**Date of Request (MM/DD/YY):**	Click to select date
Project Sponsor:		**Project Start Date:**	
Project Lead:		**Project End Date:**	
Prepared by:		**Requested Capital ($)**	
Planned or Unplanned Projects:	☐ Planned ☐Unplanned		
Project Type: (Click appropriate boxes)	☐ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported ☐ Discretionary		

Details of Request

Project description

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Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?
GUIDANCE: If yes, please detail the specific assets that will be removed: 1. *Original Cost of Plant to be removed (if known):* 2. *What is the replacement cost of the plant being removed (if original cost not known)?* 3. *Original Work Order of Plant to be removed (if known):* 4. *Is the Plant being removed reusable?* 5. *What is the year of original installation of the plant being removed*

What alternatives were evaluated and why were they rejected?

What are the risks and consequences of not approving this expenditure?

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.

Are there other pertinent details that may affect the decision making process?

Complete the Financial Summary table only if:
- **Project is less than $100,000**

Financial Summary

Next Anticipated Test Year		**Was this Capital Project included in the current year's Board Approved Budget?**	☐ Yes ☐ No
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☐1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?			
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:	☐Fixed or Firm Price ☐Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)			

Approvals and Signatures

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			Click here to enter a date.
Senior Manager: :	Up to $50,000			Click here to enter a date.
Senior Director/Director:	Up to $250,000			Click here to enter a date.
State President / Senior VP / VP:	Up to $500,000			Click here to enter a date.
Regional President:	Up to $3,000,000			Click here to enter a date.
Corporate - Sr VP Operations:	Up to $5,000,000			Click here to enter a date.
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

APPENDIX B: Business Case Template

Project Overview			
Project Name:		**Date Prepared:**	Click here to enter a date.
Project ID#:	Click here to enter text.	**Cost Estimate:**	
Project Sponsor:	Click here to enter text.	**Project Start Date:**	Click here to enter a date.
Project Lead:	Click here to enter text.	**Project End Date:**	Click here to enter a date.
Prepared By:	Click here to enter text.	**Planned or Unplanned Projects:**	☐ Planned ☐Unplanned
Project Type (click appropriate boxes):	☐ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported ☐ Discretionary		
Project Scope Statement (Insert the scope of work, major deliverables, assumptions, and constraints)			
Background (Insert description of current operational arrangement, and brief history of project & asset)			
Recommendation/Objective (Insert the unique problem this project is looking to resolve)			
Alternatives/Options (Describe all reasonably viable alternatives. Discuss the viability of each and provide reasons if rejected)			
Financial Assessment/Cost Estimates (Double click embedded excel file to update; include contingency allowance in excel file)			

Next Anticipated Test Year	Click to select a date	**Was this Capital Project included in the current year's Board Approved Budget?**	☐ Yes ☐ No
Regulatory Lag (Click appropriate box)	☐Less than 6 Months ☐6-12 Months ☐1 to 3 years ☐Greater than 3 years		

Category	Total Already Approved	2018	2019	Beyond 2019	Total
Internal Labour (including labour and travel)	$ -	$ -	$ -	$ -	$ -
Materials (including consumables)	$ -	$ -	$ -	$ -	$ -
Equipment (rental equipment)	$ -	$ -	$ -	$ -	$ -
Contactor/Subcontractor (including consultants)	$ -	$ -	$ -	$ -	$ -
AFUDC ($)					

Unlevered Internal Rate of Return: Click here to enter text.

Basis of Estimate: *Provide brief explanation on basis of estimate, activities completed to determine costs*

For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:

Schedule
(List key milestone dates)

Key Milestone Description	Forecast Start Date	Forecast End Date
	Click here to enter a date.	Click here to enter a date.

Risk Assessment
(Please describe the risk of not completing the project)

Trade Finance
(Is there a possibility to apply trade finance products to this project? See Capital Planning for further clarification)

Supporting Documentation
(Reference drawings, condition assessment reports, vendor quotations, etc. Attach document or where possible include hyperlink to file located on shared server or SharePoint)

Approvals and Signatures

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			Click here to enter a date.
Senior Manager: :	Up to $50,000			Click here to enter a date.
Senior Director/Director:	Up to $250,000			Click here to enter a date.
State President / Senior VP / VP:	Up to $500,000			Click here to enter a date.
Regional President:	Up to $3,000,000			Click here to enter a date.
Corporate - Sr VP Operations:	Up to $5,000,000			Click here to enter a date.
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

APPENDIX C: Monthly Capital Project Reporting

Monthly Capital Project Reporting

For Period End:

		Previous Year			Current Year					Overall Project Metrics										
Budget #	FWO/Project #	A Budget	B Actual Costs	C Variance (B - A)	D Clarity Approved Budget	E Actual Costs	F Estimate to Complete	G Total Estimate at Completion Cost (E+F)	H Projected Variance (E + F - D)	I Total Project Budget	J Total Project Estimate at Completion B + G + [2019 if needed]	K Total Project Variance (J - I)	Project Manager	Percent Complete	Scope	Schedule	Cost	Risks	Quality	Comments
TR-124	SMAPLE	$ 1,000,000	$ 1,000,000	$ -	$ 1,000,000	$ 1,000,000	$ 50,000	$ 1,050,000	$ 50,000	$ 2,000,000	$ 2,050,000	$ 50,000	John Doe	100%	🟩	🟨	🟥	🟩	🟩	E 100% complete, P 100% complete, C 100% complete
				$ -				$ -	$ -	$ -	$ -	$ -			Scope	Schedule	Cost	Risks	Quality	
				$ -				$ -	$ -	$ -	$ -	$ -			Scope	Schedule	Cost	Risks	Quality	
				$ -				$ -	$ -	$ -	$ -	$ -			Scope	Schedule	Cost	Risks	Quality	
				$ -				$ -	$ -	$ -	$ -	$ -			Scope	Schedule	Cost	Risks	Quality	
				$ -				$ -	$ -	$ -	$ -	$ -			Scope	Schedule	Cost	Risks	Quality	
				$ -				$ -	$ -	$ -	$ -	$ -			Scope	Schedule	Cost	Risks	Quality	
				$ -				$ -	$ -	$ -	$ -	$ -			Scope	Schedule	Cost	Risks	Quality	
				$ -				$ -	$ -	$ -	$ -	$ -			Scope	Schedule	Cost	Risks	Quality	
				$ -				$ -	$ -	$ -	$ -	$ -			Scope	Schedule	Cost	Risks	Quality	
				$ -				$ -	$ -	$ -	$ -	$ -			Scope	Schedule	Cost	Risks	Quality	
				$ -				$ -	$ -	$ -	$ -	$ -			Scope	Schedule	Cost	Risks	Quality	
				$ -				$ -	$ -	$ -	$ -	$ -			Scope	Schedule	Cost	Risks	Quality	
Regional Total		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -								

APPENDIX D: Change Order Form

Project Overview			
Reason for Change: (Please Provide a brief explanation for the cause of the change order)			
Project ID:	Click here to enter text.	**Project Name:**	Click here to enter a date.
Change Order Name:	Click here to enter text.	**Date Prepared:**	Click here to enter a date.
Change Order #:	Click here to enter text.	**Financial Work Order (FWO):**	
Project Sponsor:	Click here to enter text.	**Revised Start Date:**	Click here to enter a date.
Project Lead:	Click here to enter text.	**Revised End Date:**	Click here to enter a date.
Prepared By:	Click here to enter text.	**Change Type**	☐ In Scope ☐ Out of Scope
Project Contingency Available?	☐ Yes ☐ No	**If No is Selected, Please specify source of funds**	

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

Category	Original Project Value	Previous Approved Changes	Current Change Order Amount	Total
Internal Labour (including labour and travel)	$ -	$ -	$ -	$ -
Materials (including consumables)	$ -	$ -	$ -	$ -
Equipment (rental equipment)	$ -	$ -	$ -	$ -
Contactor/Subcontractor (including consultants)	$ -	$ -	$ -	$ -
Total	$ -	$ -	$ -	$ -

Updated Unlevered Internal Rate of Return: Click here to enter text.

Basis of Current Change Order Amount: *Provide brief explanation on basis of the requested amount (i.e. revised contract amount, estimate based on revised engineering design, etc)*
Click here to enter text.

Schedule Impacts
(As a result of the Change Order, where applicable, List the Impacts to schedule)

Baseline Schedule (BL)	New Forecast (NF)	Variance (BL – NF)
Click here to enter a date.	Click here to enter a date.	Click here to enter a date.
Click here to enter a date.	Click here to enter a date.	Click here to enter a date.
Click here to enter a date.	Click here to enter a date.	Click here to enter a date.
Click here to enter a date.	Click here to enter a date.	Click here to enter a date.

Click here to enter a date.	Click here to enter a date.	Click here to enter a date.
Click here to enter a date.	Click here to enter a date.	Click here to enter a date.
Click here to enter a date.	Click here to enter a date.	Click here to enter a date.
Click here to enter a date.	Click here to enter a date.	Click here to enter a date.

Approvals and Signatures

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			Click here to enter a date.
Senior Manager: :	Up to $50,000			Click here to enter a date.
Senior Director/Director:	Up to $250,000			Click here to enter a date.
State President / Senior VP / VP:	Up to $500,000			Click here to enter a date.
Regional President:	Up to $3,000,000			Click here to enter a date.
Corporate - Sr VP Operations:	Up to $5,000,000			Click here to enter a date.
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

APPENDIX E: Project Closeout Report

Requesting Region or Group:		**Date of Closeout (MM/DD/YY):**	Click to select date
Project Name:			
Requesting Region:		**Sponsor** (Name):	
Project Champion:		**Project Champion**	
Project Status	☐In Service ☐Complete ☐ Closed		
Project Start Date:	Click to select date	**Project Completion Date:**	Click to select date
Requested Capital ($)		**Expenditure Included in Approved Budget?**	☐Yes ☐No

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
	Project Lead		
	Project Sponsor		
	Operations Manager		
	Accounting Manager		

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 ☐ No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes ☐ No ☐
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 ☐ No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes ☐ No ☐
2.5	Do you agree the project should be closed? If no, please explain:	Yes ☐ No ☐

Item	Question	Response
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	/5
2.6	Product and/or Service Performance	/5
2.7	Scope	/5
2.8	Cost (Budget)	/5
2.9	Schedule	/5

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 ☐ No ☐
3.3	Were audits (e.g., project closeout audit) completed and results documented for future reference?		Yes ☐ No ☐
3.4	Identify the storage location for the following project documents items:		
Item	**Document**	**Location (e.g., Google Docs, Webspace)**	**Format**
3.4a	Business Case		☐ Electronic ☐ Manual
3.4b	If available, the Final Project Schedule		☐ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices		☐ Electronic ☐ Manual
3.4d	Status Reports		☐ Electronic ☐ Manual
3.4e	Risks and Issues Log		☐ Electronic ☐ Manual
3.4f	Final deliverable		☐ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

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)

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). If available please include a Lesson Learned Log in the attached. Please summarize the top three issues on the project and the recommended improvements to correct a similar problem in the future.

Problem Statement	Problem Description	References	Recommendation

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

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			

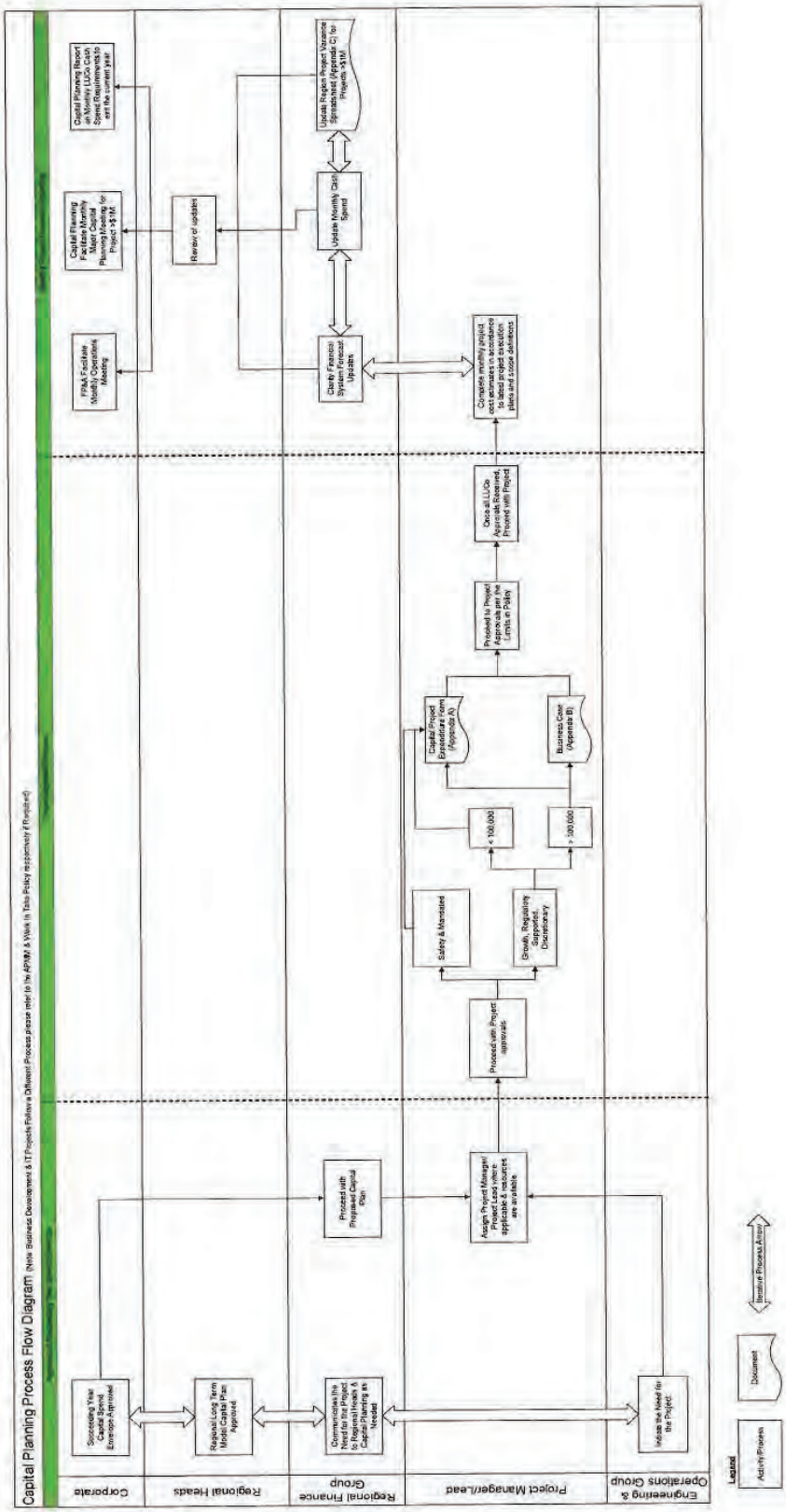
Total Project Costs ($)			

Reasons for Variance	**Impact**
Cause 1	$
Cause 2	$
Cause 3	$

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

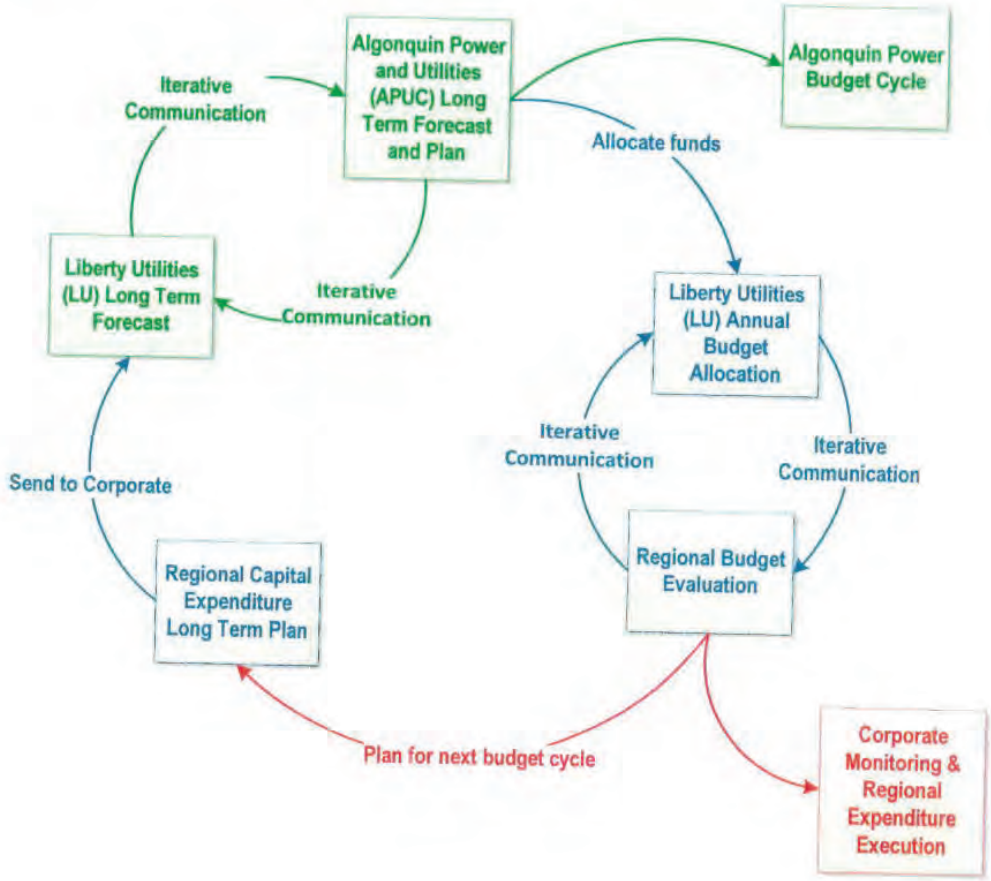
Registry of All Job Codes (Regional, Corporate, LABs)

APPENDIX F: Process Flow Diagram


Capital Planning Process Flow Diagram
Corporate
Regional Heads
Regional Finance Group
Project Manager/Lead
Engineering & Operations Group
Socializing Year Capital Spend Envelope Approved
Regional Long Term Model Capital Plan Approve
Communicate the Need for the Project to Regional Heads & Capital Planning as Needed
Initiate the Need for the Project
Proceed with Proposed Capital Plan
Assign Project Manager/ Project Lead when approvals & resources are available
Proceed with Project approvals
Safety & Mandated
Growth, Regulatory Supported, Discretionary
< 100,000
> 100,000
Capital Project Expenditure form (Appendix A)
Business Case (Appendix B)
Proceed to Project Approvals per the Limits in Policy
Once all LLCs Approvals Received, Proceed with Project
Complete monthly project updates and forecasts to latest project execution plans and scope definitions
Clarity Financial System Forecast Updates
Update Monthly Cash Spend
Update Region Project Variance spreadsheet (Appendix C) for Projects >$10
FP&A Facilitate Monthly Operations Meeting
Capital Planning Facilitate Monthly Major Capital Planning Meeting for Projects > $10
Review or updates
Capital Planning Report and Model LLCs on the Spend Requirements to end the current year
Legend
Activity/Process
Document
Iterative Process Arrow

Page 34 of 36

APPENDIX G: Capital Budget Cycle



Feedback Comment Tracker (DRAFT DOCUMENT PURPOSES ONLY)

Feedback Group	Feedback Individual	Submitted for Feedback	Sign-off Received
Corporate Procurement	L. DeCamaret R. Borin	8/15/18	8/16/18
Internal Audit	D. Gilpin C. Spriggs	8/17/18	8/23/18
SVP Operations	G. Tremblay	9/19/18	9/20/18
Finance – West	C. Alario	10/16/18	10/16/18
Finance – Central	T. Sanderson	10/16/18	10/16/18
Finance - East	P. Dawes	10/16/18	10/16/18
Engineering – West	R. Dalton (CA)	10/16/18	10/16/18
Engineering – West	J. Matthews (AZ)	10/16/18	10/16/18
Engineering – Central	B. Mertens	10/16/18	10/16/18
Engineering – East	G Munroe (MA)	10/16/18	10/16/18
Engineering – East	R MacDonald (NH)	10/16/18	10/16/18
Engineering – East	H. Woods (GA)	10/16/18	10/16/18
Regulatory – West	E. Jackson	10/16/18	10/16/18
Regulatory – Central	C. Krygier	10/16/18	10/16/18
Regulatory – East	V Duffy (MA)	10/16/18	10/16/18
Regulatory – East	S Mullen (NH)	10/16/18	10/16/18
Regulatory – East	P Bouxsein (GA)	10/16/18	10/16/18
Regulatory – Corporate	G. Girardi	10/16/18	10/16/18
Regulatory – Corporate	P Eichler	10/16/18	10/16/18
Regional Heads – West	G Sorensen	10/16/18	10/16/18
Regional Heads – Central	D Swain	10/16/18	10/16/18
Regional Heads – East	J Sweeney	10/16/18	10/16/18
Treasurer	A Kacprzak		11/29/2018
CFO	D Bronicheski		01/02/2019

Liberty Utilities (EnergyNorth Natural Gas) d/b/a Liberty
Non-Growth Projects Placed in Service During 2020
Attachment 2

Project Number	Project Name	Priority	Budget	12/31/2020 Spend	In service $$*	In service Date	Attachment 2 Page #
8840-1911	Main Replacement LPP-Restoration	4. Regulatory Programs	$4,114,376	$5,416,011	$5,419,088	various	2
8840-1912	Install Main Baboosic Lake Rd at FE Everett Turnpike	5. Discretionary	$0	($21,278)	($21,278)	carryover from 2019	12
8840-1921	Upgrade Synergi Software	5. Discretionary	$60,000	$71,545	$71,545	5/31/2020	N/A
8840-1933	Tilton Control panel replacement	1. Safety	$0	$124,956	$124,956	12/31/2020	22
8840-1936	Locusview place holder	5. Discretionary	$15,000	$71,267	$71,267	12/31/2020	28
8840-1945	Placeholder for Gas Training & Development	5. Discretionary	$0	($534)	($534)	2019	N/A
8840-1953	Relocation of Engineering from Londonderry to Manchester	5. Discretionary	$0	$4,000	$4,000	5/3/2019	37
8840-2002	Meter Protection Program	2. Mandated	$300,000	$647,380	$797,741	12/31/2020	49
8840-2003	Cathodic Protection Program	2. Mandated	$400,000	$565,735	$565,735	12/31/2020	61
8840-2004	Replacement Services Random (Non Leaks)	2. Mandated	$350,000	$648,083	$629,257	12/31/2020	73
8840-2005	Replacement Services Random (Due to Leaks)	2. Mandated	$550,000	$606,382	$606,382	12/31/2020	85
8840-2008	Corrosion & Miscellaneous Fitting	2. Mandated	$150,000	$286,035	$308,724	12/31/2020	95
8840-2009	Valve Installation/Replacement	2. Mandated	$85,000	$21,910	$21,910	12/31/2020	105
8840-2010	Leak Repairs	2. Mandated	$1,000,000	$2,059,770	$2,139,714	7/7/2020 & 12/31/2020	114
8840-2011	Main Replacement LPP	4. Regulatory Programs	$8,601,098	$7,193,378	$7,193,378	various	128
8840-2013	Main Replacement Fitting LPP	5. Discretionary	$740,501	$736,551	$736,551	12/31/2020	136
8840-2014	K Meter Replacement Program	5. Discretionary	$430,000	$275,342	$275,342	12/31/2020	148
8840-2015	Aldyl-A Replacement Program	5. Discretionary	$0	$80,424	$80,424	carryover from billing related to city repaving	158
8840-2016	Main Replacement Reactive	5. Discretionary	$500,000	$545,410	$545,410	various	164
8840-2018	Purchase Misc Capital Equipment & Tools	1. Safety	$280,000	$423,950	$423,950	various	177
8840-2019	Regulator removal Hi line LOU	5. Discretionary	$50,000	$1,956	$1,956	8/12/2020	N/A
8840-2020	SCADA Capital Improvements	5. Discretionary	$80,000	$129	$129	2/3/2020	N/A
8840-2023	Main Replacement City/State Construction	2. Mandated	$4,654,819	$6,763,471	$7,415,807	various	191
8840-2025	Service Replacement Fitting City/State Construction	2. Mandated	$303,000	$293,531	$293,531	12/31/2020	203
8840-2026	LNG/LPG Capital Improvements	2. Mandated	$100,000	$105,941	$105,941	12/11/2020	211
8840-2028	Gas System Control & Regulation (ENG)	5. Discretionary	$350,000	$563,291	$400,008	various	224
8840-2029	Pre-Code Steel Pipe Protection Program/Replacement	2. Mandated	$268,778	$63,836	$63,836	12/31/2020	236
8840-2030	IT - Software, Equipment & Infrastructure	5. Discretionary	$50,000	$63,413	$63,413	5/1/2020	244
8840-2031	Gas System Planning & Reliability	5. Discretionary	$2,900,000	$1,409,927	$1,409,927	various	251
8840-2038	IT Systems Allocations - Corporate	5. Discretionary	$55,000	$195,891	$195,891	12/31/2020	262
8840-2039	Dresser Coupling Replacement Program	2. Mandated	$500,000	$466,494	$466,494	12/31/2020	319
8840-2043	iRestore System Enhancements	5. Discretionary	$200,000	$428,565	$347,138	12/31/2020	327
8840-2044	Flir Cameras - Security -Manchester	5. Discretionary	$986,000	$717,164	$717,164	12/19/2020	345
8840-2062	GIS Mapping	5. Discretionary	$0	$273,898	$273,898	12/31/2020	352
8840-2066	RTU Replacement Program	5. Discretionary	$60,000	$34,289	$34,289	12/31/2020	362
8840-2084	Electric Meter Worker Meter Training/Testing Wall	1.Safety	$0	$24,926	$24,926	7/31/2020	370
8840-2090	Transportation Fleet and Equipment Purchases	5. Discretionary	$2,663,000	$1,739,571	$1,739,571	various	381
8840-2091	Meter Work Project (Meter Purchases)	2. Mandated	$1,000,000	$1,347,759	$1,502,257	various	392
8840-2093	EN Facilities Capital Improvements	5. Discretionary	$600,000	$520,763	$520,763	various	407
8840-2094	Install Security Equipment - EN Facilities	2. Mandated	$50,000	$37,561	$37,561	various	418
8840-2096	Liberty @ Centre Vault Door	2. Mandated	$0	$7,740	$7,740	9/3/2020	428
8843-1820	Keene Propane Air Plant Meter Install	5. Discretionary	$0	$12,233	$12,233	in service 2018, $$ carryover	N/A
8843-2002	Replacement Services Random	2. Mandated	$10,000	$286	$286	in service 2019, $$ carryover	438
8843-2009	Service Replacement City/State Construction	2. Mandated	$25,000	$313	$313	in service 2019, $$ carryover	446
8843-2011	Main Replacement LPP	2. Mandated	$441,706	$368,119	$368,119	various	454
8843-2012	Capital Tools/Equipment	5. Discretionary	$35,000	$2,426	$2,426	12/31/2020	462
8843-2014	Gas System Planning & Reliability	5. Discretionary	$0	$1,353	$1,353	in service 2019, $$ carryover	N/A
8843-2090	Transportation Fleet and Equipment Purchases	5. Discretionary	$198,000	($3,435)	($3,435)	8/31/2020, credit for vehicle upfitting	N/A
8843-2093	Facility Improvements & Additions - Keene	5. Discretionary	$25,000	$64,185	$64,185	11/30/2020	493
8843-2044	Flir Cameras - Security-Keene	5. Discretionary	$364,000	$535,845	$128,292	various	481
8843-2022	Propane Boiler Replacement	5. Discretionary	$0	$16,842	$16,842	10/23/2020	470
		Total	$35,682,235	$35,957,683	**$36,206,417**		

*In Service amounts may be greater than 2020 spend because there was spending in prior years for jobs put in service in 2020
All gray areas are projects that are not included in the final step adjustment

Liberty Utilities

Capital Project Expenditure Form | 2020

Project Name:	Main Replacement LPP- Restoration		
Financial Work Order (FWO):	TBD	**Project ID #:**	8840-1911
Requesting Region or Group:	New Hampshire-Granite State	**Date of Request (MM/DD/YY):**	1/17/2020
Project Sponsor:	Charles Rodrigues	**Project Start Date:**	1/17/2020
Project Lead:	Brian Frost	**Project End Date:**	12/31/2020
Prepared by:	Ryan Patnode	**Requested Capital ($)**	$4,114,376
Planned or Unplanned Projects:	☒ Planned ☐Unplanned		
Project Type: (Click appropriate boxes)	☒ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported ☐ Discretionary		

Details of Request

Project description

Restoration paving for main replacement job's completed in previous years. Expected 20 remaining projects to be paved in 2020. Restoration is done in conjunction with city timing and permits completed by our contractors.

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

No

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

Permitting will be completed by contractors prior to beginning work.

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?

GUIDANCE: If yes, please detail the specific assets that will be removed: NO

1. *Original Cost of Plant to be removed (if known): NO*
2. *What is the replacement cost of the plant being removed (if original cost not known)? NO*
3. *Original Work Order of Plant to be removed (if known): NA*
4. *Is the Plant being removed reusable? NO*
5. *What is the year of original installation of the plant being removed: No*

What alternatives were evaluated and why were they rejected?

Liberty Utilities Capital Project Expenditure Form | 2020

What are the risks and consequences of not approving this expenditure?
Existing project have to be restored for public safety and town requirements.

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.
Project will follow standard operation procedures.

Are there other pertinent details that may affect the decision making process?
NO

Complete the Financial Summary table only if:

- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year		**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No
Regulatory Lag	☐ Less than 6 months ☐6 – 12 months ☒1 – 3 years ☐Greater than three years		

Liberty Utilities

Capital Project Expenditure Form | 2020

(Click appropriate box)			
Which regulatory constructs will be used for recovering this capital spend?			
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:[i]	☐Fixed or Firm Price ☒Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)	$4,114,376		
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)			

Approvals and Signatures[ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			Click here to enter a date.
Senior Manager:	Up to $50,000			Click here to enter a date.
Senior Director/Director:	Up to $250,000	Charles Rodrigues	CRodrigues	February 1, 2020
Senior VP/VP:	Up to $500,000	RICHARD MACDONALD	Richard MacDonald	2/10/2020
State President:	Up to $500,000	SUSAN FLECK		Click here to enter a date. 2/5/2020
Regional President:	Up to $3,000,000			Click here to enter a date. 2/26/2020
Corporate – Sr. VP Operations:	Up to $5,000,000			Click here to enter a date.

Liberty Utilities Capital Project Expenditure Form 2020

Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Liberty Utilities

Change Order Form

2020

Project Overview			
Reason for Change: Job costs from calendar year 2019 rolled to first quarter of 2020.			
Project ID:	8840-1911	Project Name:	Main Replacement LPP-Restoration
Change Order Name:	8840-1911-2 (2020)	Date Prepared:	
Change Order #:	8840-1911 2020 Change order	Financial Work Order (FWO):[i]	
Project Sponsor:	Charles Rodrigues	Revised Start Date:	1/1/2020
Project Lead:	Brian Frost	Revised End Date:[ii]	12/31/2020
Prepared By:		Change Type[iii]	x In Scope ☐ Out of Scope
Project Contingency Available?	☐ Yes ☒ No	If No is Selected, Please specify source of funds:[iv]	8840-2027 Reserve for Unidentified Growth ENG

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

Category	Original Project Value	Previous Approved Charges	Current Change Order Amount	Total
Internal Labor				
Materials				
Equipment				
Contractor/Subcontractor				
Burdens/Overheads				
AFUDC				
Total Project Cost	$4,114,376		$1,385,624	**$5,500,000**

Updated Unlevered Internal Rate of Return:

Basis of Current Change Order Amount:

Original project estimate covered final paving restoration for leak prone main and service completed in calendar year 2019. There were 3 significant costs that carried over into first quarter of 2020:

- Construction in Hudson, NH extended to Nov. and Dec. so billing not received till 2020
- City of Concord, NH did not bill pavement damage fees for 2019 projects until Jan 2020
- Liberty had a disputed invoice with contractor on 401911-37614 Mast Rd Manchester project so that invoice was not finalized till 2020.

Schedule Impacts
(As a result of the Change Order, where applicable. List the Impacts to schedule)

Baseline Schedule (BL)	New Forecast (NF)	Variance (BL – NF)

Liberty Utilities

Change Order Form

2020

Approvals and Signatures[i]

Approved By[ii]				
Role	Approval Authority Limit	Name	Signature	Date
Manager / Staff (requisitioner/buyer):	Up to $25,000	Brian Frost	Brian R. Frost	9/16/2020
Senior Manager: :	Up to $50,000			
Senior Director/Director:	Up to $250,000		CaRodrigues	9/16/2020
State President / Senior VP / VP:	Up to $500,000		Richard MacDonald Digitally signed by Richard MacDonald Date: 2020.09.23 09:57:18 -04'00'	
Regional President:	Up to $3,000,000			
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] The Financial Work Order Section captures the work order this change falls under when the job was initially set-up
[ii] The Revised project end date is dependent on changes in scope that may deviate the schedule from the original plan
[iii] The Change type for In scope or Out of scope changes fall within the following scenario:

- In Scope changes are deviations of scope from the original plan and approved budget that align to the original scope of the project but have revised pricing as a result of changes in pricing of labour, materials, and equipment
- Out of Scope changes are scope changes that were not originally planned for in the project baselines and approved budget. Examples of this type of change are related to changes in technology, missed deliverables, a change in the project design altering the scope of the project, etc.

(v) In cases where the project no longer has contingency to cover project change orders, please specify any other sources of funds that would address the project variance (i.e. not exceeding another project, delaying scope of another project, etc)

* Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report 2020

Requesting Region or Group:	Liberty Utilities- NH-Gas Operations	**Date of Closeout (MM/DD/YY):**	3/8/2021
Project Name:	Main Replacement LPP-Restoration 8840-1911		
Requesting Region:	NH	**Sponsor** (Name)**:**	Robert Mostone
Project Champion:	Brian Frost	**Project ID**	
Project Status	X In Service ☐Complete ☐ Closed		
Project Start Date:		**Project Completion Date:**	
Requested Capital ($)	$4,114,376	**Expenditure Included in Approved Budget?**	X Yes ☐No

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
Brian Frost	Project Lead	Brian R. Frost Digitally signed by Brian R. Frost Date: 2021.03.08 10:35:04 -05'00'	3/8/2021
Robert Mostone	Project Sponsor	Robert Mostone Digitally signed by Robert Mostone Date: 2021.03.08 13:20:28 -05'00'	
	Operations Manager		
	Accounting Manager		

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 ☒ No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes ☒ No ☐
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 ☒ No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes ☒ No ☐

Item	Question	Response
2.5	Do you agree the project should be closed? If no, please explain:	Yes ☒ No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	5/5
2.7	Scope	5/5
2.8	Cost (Budget)	5/5
2.9	Schedule	5/5

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 ☒ No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?		Yes ☒ No ☐
3.4	Identify the storage location for the following project documents items:		
Item	**Document**	**Location (e.g., Google Docs, Webspace)**	**Format**
3.4a	Business Case	Operations finance Sharepoint	☒ Electronic ☐ Manual
3.4b	If available, the Final Project Schedule	N/A	☐ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices	W drive and Accounts Payable	☒ Electronic ☐ Manual
3.4d	Status Reports	See accounting monthly reports	☒ Electronic ☐ Manual
3.4e	Risks and Issues Log	N/A	☐ Electronic ☐ Manual
3.4f	Final deliverable	See Wennsoft unitized projects	☒ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team [ii]

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

Name	Role	Type (e.g., Contractor, Employee)
Brian Frost	Project Manager	Employee

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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the 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 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
Pavement degradation fee billing at end of year	Follow up with cities in November so billing received same calendar year

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			

External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$4,114,376	**$5,416,011**	($1,301,635)

Reasons for Variance	Impact
Change order #1	$1,385,624
Cause 3	$

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)

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project
[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Capital Project Expenditure Form 2020

Project Name:	Upgrade Synergi Software		
Financial Work Order (FWO):		**Project ID #:**	8840-1921
Requesting Region or Group:	EnergyNorth	**Date of Request (MM/DD/YY):**	4/15/2020
Project Sponsor:	Andrew Bernier	**Project Start Date:**	1/1/2020
Project Lead:	Brian Frost	**Project End Date:**	12/31/2020
Prepared by:	Brian Frost	**Requested Capital ($)**	$ 60,000
Planned or Unplanned Projects:	☒ Planned ☐Unplanned		
Project Type: (Click appropriate boxes)	☐ Safety ☐ Mandated ☒ Growth ☐ Regulatory Supported ☐ Discretionary		

Details of Request

Project description

This project will create an updated DNVGL Synergi network analysis model for the NH gas transmission and distribution system. The DNVGL Synergi network analysis model takes customer meter usage and mapping data to create a virtual model of NH's gas transmission and distribution system. This model is used to make decisions about growth and opportunities within the gas system. The data within NH's current model was last updated in 2016, therefore, ability to make growth decisions regarding new customer growth and Granite Bridge alternatives is hampered.

`

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

Yes. Exact locations unknown till identified. This software model evaluates the effect of new connections on the distribution system.

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

NA

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?

GUIDANCE: If yes, please detail the specific assets that will be removed: Yes, dependent on individual purchase

1. *Original Cost of Plant to be removed (if known):*
2. *What is the replacement cost of the plant being removed (if original cost not known)?*
3. *Original Work Order of Plant to be removed (if known):*
4. *Is the Plant being removed reusable?*
5. *What is the year of original installation of the plant being removed*

Liberty Utilities WATER · GAS · ELECTRIC

Capital Project Expenditure Form 2020

No

What alternatives were evaluated and why were they rejected?

The alternative would continue with the existing model and be extremely conservative with growth opportunities. Liberty would be passing up many growth opportunities and have trouble meeting its customer growth target.

What are the risks and consequences of not approving this expenditure?

Unlikely to be able to achieve company customer growth targets.

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.

All standard safety procedures will be followed in use or equipment and tools

Are there other pertinent details that may affect the decision making process?

No

Capital Project Expenditure Form | 2020

Complete the Financial Summary table only if:
- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year	**2021**	**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☐1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?			
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:[i]	☒Fixed or Firm Price ☐Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$60,000		

Approvals and Signatures[ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000	Brain Frost Operations Engineering	Brian R. Frost	April 15, 2020
Senior Manager:	Up to $50,000	Andrew Bernier Manager, Engineering	Andrew Bernier Digitally signed by Andrew Bernier Date: 2020.04.15 11:55:26 -04'00'	Click here to enter a date.
Senior Director/Director:	Up to $250,000			Click here to enter a date.

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Capital Project Expenditure Form | 2020

Senior VP/VP:	Up to $500,000	Richard MacDonald VP operations		
State President:	Up to $500,000	Susan Fleck President, NH		Click here to enter a date.
Regional President:	Up to $3,000,000	James Sweeney East President		Click here to enter a date.
Corporate – Sr. VP Operations:	Up to $5,000,000			Click here to enter a date.
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

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Change Order Form

2020

Project Overview			
Reason for Change: (Please Provide a brief explanation for the cause of the change order)			
Project ID:	8840-1921	**Project Name:**	Upgrade Synergi Software
Change Order Name:	Invoice Timing	**Date Prepared:**	08/03/2020
Change Order #:	1	**Financial Work Order (FWO):**[i]	
Project Sponsor:		**Revised Start Date:**	
Project Lead:	Brian Frost	**Revised End Date:**[ii]	
Prepared By:	Brian Frost	**Change Type**[iii]	X In Scope ☐ Out of Scope
Project Contingency Available?	☐ Yes ☐ No	**If No is Selected, Please specify source of funds**[iv]	

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

Category	Original Project Value	Previous Approved Charges	Current Change Order Amount	Total
Internal Labor				
Materials				
Equipment				
Contractor/Subcontractor				
Burdens/Overheads				
AFUDC				
Total Project Cost	**$60,000**	**$60,000**	**$11,544.81**	**$71,544.81**

Updated Unlevered Internal Rate of Return:

Basis of Current Change Order Amount: *Provide brief explanation on basis of the requested amount (i.e. revised contract amount, estimate based on revised engineering design, etc)*
Invoice from 2019 calendar year and associated burdens was carried over into early January 2020.

Schedule Impacts
(As a result of the Change Order, where applicable, List the Impacts to schedule)

Baseline Schedule (BL)	New Forecast (NF)	Variance (BL – NF)

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Change Order Form

2020

Approvals and Signatures[v]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000	Brian Frost	Brian R. Frost	8/3/2020
Senior Manager: :	Up to $50,000	Andy Bernier	Andrew Bernier Digitally signed by Andrew Bernier Date: 2020.08.04 09:31:27 -04'00'	8/4/2020
Senior Director/Director:	Up to $250,000	Charles Rodrigues	Charles Rodrigues Digitally signed by Charles Rodrigues Date: 2020.08.12 20:56:44 -04'00'	
State President / Senior VP / VP:	Up to $500,000			
Regional President:	Up to $3,000,000			
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] The Financial Work Order Section captures the work order this change falls under when the job was initially set-up
[ii] The Revised project end date is dependent on changes in scope that may deviate the schedule from the original plan
[iii] The Change type for In scope or Out of scope changes fall within the following scenario:

- In Scope changes are deviations of scope from the original plan and approved budget that align to the original scope of the project but have revised pricing as a result of changes in pricing of labour, materials, and equipment
- Out of Scope changes are scope changes that were not originally planned for in the project baselines and approved budget. Examples of this type of change are related to changes in technology, missed deliverables, a change in the project design altering the scope of the project, etc.

iv In cases where the project no longer has contingency to cover project change orders, please specify any other sources of funds that would address the project variance (i.e. not executing another project, delaying scope of another project, etc)

[v] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Capital Project Expenditure Form 2020

Project Name:	Tilton LNG SCADA Control Panel Replace		
Financial Work Order (FWO):		**Project ID #:**	
Requesting Region or Group:		**Date of Request (MM/DD/YY):**	
Project Sponsor:	Norman Gallagher	**Project Start Date:**	4/15/2020
Project Lead:	David Sandrelli	**Project End Date:**	12/30/2020
Prepared by:	David Sandrelli	**Requested Capital ($)**	$75,000.00
Planned or Unplanned Projects:	☒ Planned ☐Unplanned		
Project Type: (Click appropriate boxes)	☒ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported ☐ Discretionary		

Details of Request

Project description
Provide replacement for the existing AB SLC 5/03 PLC

`

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.
No

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?
None

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?
GUIDANCE: If yes, please detail the specific assets that will be removed: 1. *Original Cost of Plant to be removed (if known):* 2. *What is the replacement cost of the plant being removed (if original cost not known)?* 3. *Original Work Order of Plant to be removed (if known):* 4. *Is the Plant being removed reusable? NO* 5. *What is the year of original installation of the plant being removed*

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Capital Project Expenditure Form 2020

What alternatives were evaluated and why were they rejected?

What are the risks and consequences of not approving this expenditure?
Decreased reliability to LNG Plant

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.
No HSS concerns

Are there other pertinent details that may affect the decision making process?

Capital Project Expenditure Form 2020

Complete the Financial Summary table only if:
- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year		**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☐1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?			
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:[i]	☐Fixed or Firm Price ☐Estimate – Internal ☒Estimate – External ☐Other (specify details) Click here to enter text.		
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)	20,000		
Cost of Materials ($)	40,000		
Cost of Construction ($)	15,000		
External Costs ($)	65,000		
Internal Costs ($)	10,000		
Other ($)			
AFUDC ($)			
Total Project Costs ($)	75,000		

Approvals and Signatures[ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			Click here to enter a date.
Senior Manager:	Up to $50,000			Click here to enter a date.
Senior Director/Director:	Up to $250,000		Norman Gallagher Digitally signed by Norman Gallagher Date: 2020.04.27 11:56:39 -04'00'	Click here to enter a date.
Senior VP/VP:	Up to $500,000			

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Capital Project Expenditure Form 2020

State President:	Up to $500,000			Click here to enter a date.
Regional President:	Up to $3,000,000			Click here to enter a date.
Corporate – Sr. VP Operations:	Up to $5,000,000			Click here to enter a date.
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

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Change Order Form

2020

Project Overview			
Reason for Change: (Please Provide a brief explanation for the cause of the change order)			
Project ID:	8840-1933	**Project Name:**	Tilton Control panel replacement
Change Order Name:	2020 Tilton control replacement completion	**Date Prepared:**	4/27/2020
Change Order #:	8840-1933-1	**Financial Work Order (FWO):**[i]	
Project Sponsor:	Richard MacDonald	**Revised Start Date:**	1/1/2019
Project Lead:	Norm Gallagher	**Revised End Date:**[ii]	12/31/2020
Prepared By:		**Change Type**[iii]	x In Scope ☐ Out of Scope
Project Contingency Available?	☐ Yes ☒ No	**If No is Selected, Please specify source of funds**[iv]	2" Jamesbury Replacement Program

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

Category	Original Project Value	Previous Approved Charges	Current Change Order Amount	Total
Internal Labor				
Materials				
Equipment				
Contractor/Subcontractor				
Burdens/Overheads				
AFUDC				
Total Project Cost	$150,000		**$60,000**	**$210,000**

Updated Unlevered Internal Rate of Return:

Basis of Current Change Order Amount: *Provide brief explanation on basis of the requested amount (i.e. revised contract amount, estimate based on revised engineering design, etc)*
Click here to enter text.

Schedule Impacts
(As a result of the Change Order, where applicable, List the Impacts to schedule)

Baseline Schedule (BL)	New Forecast (NF)	Variance (BL – NF)

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Change Order Form

2020

Approvals and Signatures[v]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			
Senior Manager: :	Up to $50,000			
Senior Director/Director:	Up to $250,000	Norman Gallagher	Norman Gallagher Digitally signed by Norman Gallagher Date: 2020.04.27 12:00:48 -04'00'	
State President / Senior VP / VP:	Up to $500,000			
Regional President:	Up to $3,000,000			
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] The Financial Work Order Section captures the work order this change falls under when the job was initially set-up
[ii] The Revised project end date is dependent on changes in scope that may deviate the schedule from the original plan
[iii] The Change type for In scope or Out of scope changes fall within the following scenario:

- In Scope changes are deviations of scope from the original plan and approved budget that align to the original scope of the project but have revised pricing as a result of changes in pricing of labour, materials, and equipment
- Out of Scope changes are scope changes that were not originally planned for in the project baselines and approved budget. Examples of this type of change are related to changes in technology, missed deliverables, a change in the project design altering the scope of the project, etc.

iv In cases where the project no longer has contingency to cover project change orders, please specify any other sources of funds that would address the project variance (i.e. not executing another project, delaying scope of another project, etc)

[v] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report | 2020

Requesting Region or Group:	Liberty Utilities- NH-Gas Operations	**Date of Closeout (MM/DD/YY):**	15 December 2020
Project Name:	Tilton Control panel replacement 8840-1933		
Requesting Region:		**Sponsor** (Name)**:**	Richard Macdonald
Project Champion:	Norm Gallagher	**Project ID**	
Project Status	X In Service X Complete X Closed		
Project Start Date:		**Project Completion Date:**	15DEC20
Requested Capital ($)	$0	**Expenditure Included in Approved Budget?**	X Yes ☐No

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
David Sandrelli	Project Lead	DAVID SANDRELLI	3/17/21
	Project Sponsor		
	Operations Manager		
	Accounting Manager		

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 X No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes X No ☐
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 X No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes X No ☐

Item	Question	Response
2.5	Do you agree the project should be closed? If no, please explain:	Yes X No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	5/5
2.7	Scope	4/5
2.8	Cost (Budget)	5/5
2.9	Schedule	5/5

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 X No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?		Yes X No ☐
3.4	Identify the storage location for the following project documents items:		
Item	**Document**	**Location (e.g., Google Docs, Webspace)**	**Format**
3.4a	Business Case	W:\Control\Production\Projects\2020 Business Cases-CAPEX	X Electronic ☐ Manual
3.4b	If available, the Final Project Schedule		☐ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices	\\utilities.local\users\nh\dsandrelli\Documents\Purchasing\Accurate Inst. Services	X Electronic ☐ Manual
3.4d	Status Reports		☐ Electronic ☐ Manual
3.4e	Risks and Issues Log		☐ Electronic ☐ Manual
3.4f	Final deliverable		☐ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team [ii]

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

Name	Role	Type (e.g., Contractor, Employee)
Accurate Instruments	Design and install system	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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the recommended improvements to correct a similar problem in the future.

Problem Statement	Problem Description	References	Recommendation
None			

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
None	

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			

Project Close Out Report 2020

External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$0	$ 124,956	($124,956)

Reasons for Variance	Impact
Change order #1	$60,000

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)
401933-364301 PLC Replacement x Spare Parts for PLC x Wonderware CPU 2 and license x PLC HMI Programing x Build Manual Control panel x Discovery and Documentation
401933-364301 Manual Control Panel AIS 401933-364301 Installation & Commissioning AIS

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project

[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Capital Project Expenditure Form 2020

Project Name:	GPS Mapping Equipment		
Financial Work Order (FWO):		**Project ID #:**	8840-1936
Requesting Region or Group:	Energy North	**Date of Request (MM/DD/YY):**	1/9/2020
Project Sponsor:	Charles Rodrigues	**Project Start Date:**	1/1/2020
Project Lead:	Brian Frost	**Project End Date:**	12/31/2020
Prepared by:	Andrew Bernier	**Requested C30apital ($)**	$15,000
Planned or Unplanned Projects:	☒ Planned ☐Unplanned		
Project Type: (Click appropriate boxes)	☐ Safety ☒ Mandated ☒ Growth ☐ Regulatory Supported ☐ Discretionary		
Spending Rationale:	☒ Growth ☐ Improvement ☐ Replenishment		

Details of Request

Project description

This project purchases additional GPS mapping equipment to support the company's NH regulatory requirement to GPS locate all new or replacement gas main and service pipes that are installed. The company currently has 42 handheld survey grade GPS units that are being 100% utilized to support field construction activities. In 2019 additional contractor construction resources are being fielded to NH to support the company's capital expenditure program. It is proposed to purchase approximately 12 additional handheld GPS units, and 1-2 real time correction base stations that will interface with the company's proposed Project One GIS mapping system.

2020 – these funds will be used to complete installation of equipment /hardware and additional tablets and antennas

`

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

Yes, this expenditure supports growth by providing the tools and equipment needed to implement growth construction without regulatory noncompliance violations.

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

N/A.

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?

GUIDANCE: If yes, please detail the specific assets that will be removed:

1. *Original Cost of Plant to be removed (if known):*
2. *What is the replacement cost of the plant being removed (if original cost not known)?*
3. *Original Work Order of Plant to be removed (if known):*
4. *Is the Plant being removed reusable?*
5. *What is the year of original installation of the plant being removed*

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Capital Project Expenditure Form 2020

No.

What alternatives were evaluated and why were they rejected?

Alternatives evaluated were to rent additional equipment or to do nothing. Renting additional equipment protects the company against regulatory noncompliance violations, but incurs additional OPEX costs. Doing nothing exposes the company to regulatory noncompliance violations.

What are the risks and consequences of not approving this expenditure?

The risk of not completing this expenditure is a regulatory noncompliance violation.

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.

N/A.

Are there other pertinent details that may affect the decision making process?

No.

Complete the Financial Summary table only if:

- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year		**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☒1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?			
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please	☐Fixed or Firm Price ☒Estimate – Internal ☐Estimate – External ☐Other (specify details) N/A		

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Capital Project Expenditure Form 2020

specify the percent complete: [i]			
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$15,000		$15,000

Approvals and Signatures [ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000	Brian Frost Senior Engineer		
Senior Manager:	Up to $50,000	Andrew Bernier Manager Gas Engineering	Andrew Bernier Digitally signed by Andrew Bernier Date: 2020.03.23 13:36:07 -04'00'	
Senior Director/Director:	Up to $250,000	Charles Rodrigues Director, Engineering	Charles Rodrigues Digitally signed by Charles Rodrigues Date: 2020.03.23 17:29:17 -04'00'	
Senior VP/VP:	Up to $500,000		Rich MacDonald Digitally signed by Rich MacDonald Date: 2020.03.26 10:30:10 -04'00'	
State President:	Up to $500,000		Susan Fleck Digitally signed by Susan Fleck Date: 2020.04.09 09:03:55 -04'00'	
Regional President:	Up to $3,000,000			
Corporate – Sr. VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			
Finance (East) – Vice President, Finance & Administration:	All Requests	Peter Dawes VP, Finance & Administration		

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

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Change Order Form

2020

Project Overview			
Reason for Change: (Delay in receiving GPS Units from Vendor. Software ordered in 2019, not received until 2020)			
Project ID:	8840-1936	**Project Name:**	Locus View/ GPS mapping
Change Order Name:	Locus View/ GPS mapping	**Date Prepared:**	7/28/2020
Change Order #:		**Financial Work Order (FWO):**[i]	401936-39801
Project Sponsor:	Charles Rodrigues	**Revised Start Date:**	
Project Lead:	Brian Frost	**Revised End Date:**[ii]	
Prepared By:	Andrew Bernier	**Change Type**[iii]	x In Scope ☐ Out of Scope
Project Contingency Available?	☐ Yes ☒ No	**If No is Selected, Please specify source of funds**[iv]	

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

Category	Original Project Value	Previous Approved Charges	Current Change Order Amount	Total
Internal Labor				
Materials				
Equipment	$15,000			$43,226.95
Contractor/Subcontractor				
Burdens/Overheads				$12,748
AFUDC				
Total Project Cost	**$15,000**			$55,975

Updated Unlevered Internal Rate of Return:

Basis of Current Change Order Amount: *Provide brief explanation on basis of the requested amount (i.e. revised contract amount, estimate based on revised engineering design, etc)*
Delay in receiving GPS Units from Vendor. Software ordered in 2019, not received till 2020. The 2019 budget was $300,000 versus actual spend $203,883

Schedule Impacts
(As a result of the Change Order, where applicable, List the Impacts to schedule)

Baseline Schedule (BL)	New Forecast (NF)	Variance (BL – NF)
Completion by end of 2019	January 2020	

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Change Order Form

2020

Approvals and Signatures[v]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000	Andrew Bernier	Andrew Bernier Digitally signed by Andrew Bernier Date: 2020.07.28 08:32:00 -04'00'	07/28/2020
Senior Manager: :	Up to $50,000			
Senior Director/Director:	Up to $250,000	Charles Rodrigues	Charles Rodrigues Digitally signed by Charles Rodrigues Date: 2020.07.28 13:02:40 -04'00'	07/28/2020
State President / Senior VP / VP:	Up to $500,000		Richard MacDonald Digitally signed by Richard MacDonald Date: 2020.07.31 09:37:27 -04'00'	
Regional President:	Up to $3,000,000			
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] The Financial Work Order Section captures the work order this change falls under when the job was initially set-up
[ii] The Revised project end date is dependent on changes in scope that may deviate the schedule from the original plan
[iii] The Change type for In scope or Out of scope changes fall within the following scenario:

- In Scope changes are deviations of scope from the original plan and approved budget that align to the original scope of the project but have revised pricing as a result of changes in pricing of labour, materials, and equipment
- Out of Scope changes are scope changes that were not originally planned for in the project baselines and approved budget. Examples of this type of change are related to changes in technology, missed deliverables, a change in the project design altering the scope of the project, etc.

iv In cases where the project no longer has contingency to cover project change orders, please specify any other sources of funds that would address the project variance (i.e. not executing another project, delaying scope of another project, etc)

[v] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

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Change Order Form

2020

Project Overview			
Reason for Change: Delay in receiving equipment, additional labor and burdens required at end of 2020.			
Project ID:	8840-1936	**Project Name:**	Locus View/GPS mapping
Change Order Name:	8840-1936 #2	**Date Prepared:**	1/28/2021
Change Order #:	8840-1936 2020 Change order #2	**Financial Work Order (FWO):**[i]	
Project Sponsor:	Charles Rodrigues	**Revised Start Date:**	1/1/2020
Project Lead:	Brian Frost	**Revised End Date:**[ii]	12/31/2020
Prepared By:	Ryan Patnode	**Change Type**[iii]	x In Scope ☐ Out of Scope
Project Contingency Available?	☒ Yes ☐ No	**If No is Selected, Please specify source of funds**[iv]	

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

Category	Original Project Value	Previous Approved Charges	Current Change Order Amount	Total
Internal Labor				
Materials				
Equipment				
Contractor/Subcontractor				
Burdens/Overheads				
AFUDC				
Total Project Cost	$15,000	**$54,500**	$1,767	**$71,267**

Updated Unlevered Internal Rate of Return:

Provide brief explanation on basis of the requested amount (i.e revised contract amount, estimate based on revised engineering design, etc) tough pad computer tablets did not invoice back to NH until January 2020 when they were received initial scheduled for December 2019. Two additional cisco network switches needed to be ordered for Tilton location that were identified during equipment installation. Additional few hours required at end of 2020.

Basis of Current Change Order Amount:

Click here to enter text.

Schedule Impacts
(As a result of the Change Order, where applicable, List the Impacts to schedule)

Baseline Schedule (BL)	New Forecast (NF)	Variance (BL – NF)

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Change Order Form

2020

Approvals and Signatures[v]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			
Senior Manager: :	Up to $50,000	Andrew Bernier Sr. Manager, Engineering - Gas	Andrew Bernier Digitally signed by Andrew Bernier Date: 2021.02.04 08:41:36 -05'00'	
Senior Director/Director:	Up to $250,000	Charles Rodrigues Director, Engineering	Charles Rodrigues Digitally signed by Charles Rodrigues Date: 2021.02.04 08:55:22 -05'00'	
State President / Senior VP / VP:	Up to $500,000	Richard MacDonald VP Operations	Richard MacDonald Digitally signed by Richard MacDonald Date: 2021.02.04 16:40:17 -05'00'	
Regional President:	Up to $3,000,000			
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] The Financial Work Order Section captures the work order this change falls under when the job was initially set-up
[ii] The Revised project end date is dependent on changes in scope that may deviate the schedule from the original plan
[iii] The Change type for In scope or Out of scope changes fall within the following scenario:

- In Scope changes are deviations of scope from the original plan and approved budget that align to the original scope of the project but have revised pricing as a result of changes in pricing of labour, materials, and equipment
- Out of Scope changes are scope changes that were not originally planned for in the project baselines and approved budget. Examples of this type of change are related to changes in technology, missed deliverables, a change in the project design altering the scope of the project, etc.

iv In cases where the project no longer has contingency to cover project change orders, please specify any other sources of funds that would address the project variance (i.e. not executing another project, delaying scope of another project, etc)

[v] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

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Change Order Form

2020

Project Overview			
Reason for Change: (Delay in receiving equipment, additional network switches needed.)			
Project ID:	8840-1936	**Project Name:**	Locus View/ GPS mapping
Change Order Name:	Locus View/ GPS mapping	**Date Prepared:**	12/24/2020
Change Order #:	1	**Financial Work Order (FWO):**[i]	
Project Sponsor:	Charles Rodrigues	**Revised Start Date:**	
Project Lead:	Brian Frost	**Revised End Date:**[ii]	
Prepared By:	Brian Frost	**Change Type**[iii]	X In Scope ☐ Out of Scope
Project Contingency Available?	☐ Yes ☒ No	**If No is Selected, Please specify source of funds**[iv]	

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

Category	Original Project Value	Previous Approved Charges	Current Change Order Amount	Total
Internal Labor				
Materials				
Equipment	$15,000		$54,500	$69,500
Contractor/Subcontractor				
Burdens/Overheads				
AFUDC				
Total Project Cost	**$15,000**			**$69,500**

Updated Unlevered Internal Rate of Return:

Basis of Current Change Order Amount: *Provide brief explanation on basis of the requested amount (i.e. revised contract amount, estimate based on revised engineering design, etc)*
Toughpad computer tablets did not invoice back to NH until January 2020 when they were scheduled for December 2019. Two additional Cisco network switches needed to be ordered for Tilton location that were identified during equipment installation.

Schedule Impacts
(As a result of the Change Order, where applicable, List the Impacts to schedule)

Baseline Schedule (BL)	New Forecast (NF)	Variance (BL – NF)
Completion by end of 2019	December 31, 2020	

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Change Order Form

2020

Approvals and Signatures[v]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000	Brian Frost	Brian R. Frost	12/24/2020 Brian R. Frost Digitally signed by Brian R. Frost Date: 2021.01.11 15:02:04 -05'00'
Senior Manager: :	Up to $50,000			
Senior Director/Director:	Up to $250,000			
State President / Senior VP / VP:	Up to $500,000		Richard MacDonald Digitally signed by Richard MacDonald Date: 2021.01.11 14:59:41 -05'00'	
Regional President:	Up to $3,000,000			
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] The Financial Work Order Section captures the work order this change falls under when the job was initially set-up
[ii] The Revised project end date is dependent on changes in scope that may deviate the schedule from the original plan
[iii] The Change type for In scope or Out of scope changes fall within the following scenario:

- In Scope changes are deviations of scope from the original plan and approved budget that align to the original scope of the project but have revised pricing as a result of changes in pricing of labour, materials, and equipment
- Out of Scope changes are scope changes that were not originally planned for in the project baselines and approved budget. Examples of this type of change are related to changes in technology, missed deliverables, a change in the project design altering the scope of the project, etc.

iv In cases where the project no longer has contingency to cover project change orders, please specify any other sources of funds that would address the project variance (i.e. not executing another project, delaying scope of another project, etc)

[v] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

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BUSINESS CASE

PROJECT TITLE: RELOCATION OF GAS ENGINEERING FROM LONDONDERRY TO MANCHESTER

PROJECT SPONSOR: **RICHARD FOLEY**

PROJECT LEAD: **DOUG DORN**

DATE: **03/06/18**

PROJECT ID: 8840 - 1953

BUSINESS PLAN NUMBER:

Recommendation:

This project is to move the Gas Engineering department from Londonderry NH to Manchester NH to improve the workflow and communication between Engineering and Operations.

Background

With space limitations in Londonderry and make better use of Londonderry space we will relocate the gas engineering department to the Manchester office. Additionally this will help promote efficiencies between gas engineering and gas operations in job planning and design. To accomplish this task we need to remove all the current cubes and replace with smaller ones. We will replace all the flooring and also build three offices to accommodate managers. New cubes will come from the customer service department in Lebanon that are not being used to help overall cost of the project.

Alternatives/Options

None

Financial Assessment

This request is based on the historical spending and review of prior projects as well as estimates received associated with the required reconfiguration.

Risk Assessment and Qualitative Evaluation

Implementation/Action Plan

These expenditure are expected to take place over 2019

Reviewed by:

Director/VP:

Finance:

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LIBERTY UTILITIES - CAPITAL PROJECT EXPENDITURE APPLICATION

DIVISION/COMPANY: **Capital / EnergyNorth Natural Gas**	HOME OFFICE REF #: **8840-1833**
PROJECT TITLE: Relocation of Gas Engineering from Londonderry to Manchester	EXPECTED PROJECT TOTAL: **$170,000**
PROJECT TYPE (circle one): System Maint / **System improvement** / Growth /	
PROJECT START DATE: **1/1/2018**	PROJECT END DATE: **12/31/2018**
CURRENT UTILITY EARNINGS STATUS:	JOB COST/FWO #:

Type of Capital Project:

- ☐ **Growth**
- ■ **Improvement Upgrades**
- ☐ **Infrastructure Replacement**

PROJECT DESCRIPTION & LOCATION:
Reconfigure the space in the Manchester operations center at 130 Elm St Manchester to accommodate the move of the Gas Engineering employees and equipment

IS THIS PROJECT GROWTH RELATED? IF "YES", DESCRIBE THE SPECIFIC LOCATION (MAP) AND LIST APPLICABLE DEVELOPERS WHERE GROWTH WILL OCCUR (CONSULT WITH DEVELOPMENT SERVICES REGARDING FUNDING).
No

PERMITTING REQUIREMENTS, INCLUDING POTENTIAL IMPACT ON EXISTING PERMITS, AND TIMING OF AND RISKS ASSOCIATED WITH OBTAINING APPROPRIATE PERMITS FOR PROJECT.
Small amount of permitting may be required for interior space reconfiguration.

COST ESTIMATE FOR TOTAL PROJECT, NATURE OF ESTIMATE (FIRM FIXED PRICE, INTERNALLY OR EXTERNALLY GENERATED), TIMING OF SPENDING BY QUARTER, AND RISKS ASSOCIATED WITH COST ESTIMATES.
Estimates based on proposals received to perform the work.

WILL THERE BE ASSETS GREATER THAN $5,000 THAT ARE CURRENTLY IN SERVICE REMOVED AS A RESULT OF THIS PROJECT?

No. Consideration will be needed for the removal of assets from Granite State Electric and assigned to EnergyNorht Natural Gas for excess cubicles being moved from Lebanon.

Business Case

IF YES, PLEASE DETAIL THE SPECIFIC ASSETS THAT WILL BE REMOVED:

1. Original Cost of Plant to be removed (if known):**Not known**
2. What is the replacement cost of the plant being removed (if original cost not known)? **Not known**
3. Original Work Order of Plant to be removed (if known): **Not known**
4. Is the Plant being removed reusable? **No**
5. What is the year of original installation of the plant being removed? **Varied**

PROPOSED SOURCE OF FUNDS (COMPANY, DEVELOPER LXA, HUF, ETC.)
Unknown at this time

CATEGORY & STATUS OF PROJECT (tick as appropriate)	
Safety	
Mandated	
Impending Regulatory Obligation	
Rate Recovery-Immediate Return	
Rate Recovery (3 to 6 months)	
Rate Recovery (6 to 12 months)	X
Rate Recovery (12 to 18 months)	
Was this Capital Expenditure included in the Annual Budget?	**No**

FINANCIAL SUMMARY		
NEXT ANTICIPATED TEST YEAR		
Rate Recovery (over 18 months)		
Will this, and other approved projects, cause a rate shock	**No**	If yes, is customer affordability an issue?
Have Health & Safety implications been considered?	**Yes**	
Has Environmental Compliance review been done?	**Yes**	
Has Tech Services review been done?	**Yes**	

ANALYSIS OF PROJECT VALUE	
Design/Engineering	
External contractor costs	
Internal costs	
Other costs (contingency)	
Working capital requirements	
Project Total Cost	**$170,000**

CAPITAL EXPENDITURE BUDGET UTILIZATION	Authorized Amount	To be spent in: Current Year	Future Years
(A) Capital budget	**$170,000**	**$170,000**	
(B) Over (under) run vs. Budget			
(C) (A+B) Total Estimated Project Cost			
(D) Less Approved Spend to Date			
(E) Less Future Approval Requests			
(F) (C-D-E) Approval Amount Requested (current application)			

	Name	Signature	Date
Requesting Party	Doug Dorn	DDorn Digitally signed by DDorn	Richard Foley
Director – Capital Projects & Planning	Richard Foley		
President – LU East			3/7/19
Vice President Finance		Peter Dawes Digitally signed by Peter Dawes	
CFO			
CEO			

Attachment:

Page 4 of 4

Liberty Utilities

Capital Project Expenditure Form | 2019

Project Name:	Relocation of Engineering from Londonderry to Manchester		
Financial Work Order (FWO):		**Project ID #:**	8840 - 1953
Requesting Region or Group:	East-NH	**Date of Request (MM/DD/YY):**	3/6/2019
Project Sponsor:	Rich Foley	**Project Start Date:**	04/01/2019
Project Lead:	Doug Dorn	**Project End Date:**	05/30/2019
Prepared by:	Doug Dorn	**Requested Capital ($)**	170,000
Planned or Unplanned Projects:	☐ Planned ☒ Unplanned		
Project Type: (Click appropriate boxes)	☐ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported ☒ Discretionary		

Details of Request

Project description

To make better use of Londonderry space we will relocate the gas engineering department to the Manchester office which will put all of gas engineering department in the same space making it more efficient for them. To accomplish this task we need to remove all the current cubes and replace with smaller ones. We will replace all the flooring and also build three offices to accommodate managers. New cubes will come from the customer service department in Lebanon that are not being used to help overall cost of the project.

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

No

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

Minor permits will be required for the office builds. This will be no concern.

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?

GUIDANCE: If yes, please detail the specific assets that will be removed:

1. *Original Cost of Plant to be removed (if known):* Unknown value
2. *What is the replacement cost of the plant being removed (if original cost not known)?* unknown
3. *Original Work Order of Plant to be removed (if known):* Unknown
4. *Is the Plant being removed reusable?* Yes

Liberty Utilities Capital Project Expenditure Form 2019

5. *What is the year of original installation of the plant being removed Unknown*

The old cubes will be stored and reused in other locations as needed.

What alternatives were evaluated and why were they rejected?

There really is no other alternatives as we are out of space at other locations, including Londonderry which is the reason for the move.

What are the risks and consequences of not approving this expenditure?

The risk is we have no real room for expansion in Manchester and the engineers continued to be split at separate locations.

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.

DNA

Are there other pertinent details that may affect the decision making process?

DNA

Complete the Financial Summary table only if:

- **Project is less than $100,000**

Financial Summary

Next Anticipated Test Year		**Was this Capital Project included in the current year's Board Approved Budget?**	☐ Yes ☐ No
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☐1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?			
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please	☐Fixed or Firm Price ☐Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		

Liberty Utilities **Capital Project Expenditure Form** | **2019**

specify the percent complete:[i]			
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)	75		
External Costs ($)	40		
Internal Costs ($)	7		
Other ($)	48		
AFUDC ($)			
Total Project Costs ($)	170,000		$ 170,000

Approvals and Signatures[ii]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			
Senior Manager: :	Up to $50,000	Doug Dorn	DDorn Digitally signed by DDorn DN: cn=DDorn, o, ou, email=douglas.dorn@libertyutilities.com, c=US Date: 2019.03.06 11:00:10 -05'00'	
Senior Director/Director:	Up to $250,000	Rich Foley	Richard Foley Digitally signed by Richard Foley DN: cn=Richard Foley, o=Liberty Utilities, ou, email=richard.foley@libertyutilities.com, c=US Date: 2019.03.06 11:27:54 -05'00'	
Finance Director	Up to $250,000	Cynthia Trottier	Cynthia Trottier Digitally signed by Cynthia Trottier Date: 2019.03.06 13:22:13 -05'00'	
State President / Senior VP / VP:	Up to $500,000	Sue Fleck		3/7/19
Regional President:	Up to $3,000,000			
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report | 2019

Requesting Region or Group:	Liberty Utilities – EN-NH	**Date of Closeout (MM/DD/YY):**	3-18-2020
Project Name:	**Relocation of Engineering from Londonderry to Manchester**		
Requesting Region:	New Hampshire	**Sponsor** (Name)**:**	Richard Foley
Project Champion:	Douglas Dorn	**Project ID**	8840-1953
Project Status	X In Service ☐Complete ☐ Closed		
Project Start Date:	3/15/2019	**Project Completion Date:**	4/30/2019
Requested Capital ($)	130,000	**Expenditure Included in Approved Budget?**	X Yes ☐No

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
Douglas Dorn	Project Lead	DDorn Digitally signed by DDorn DN: cn=DDorn, o, ou, email=douglas.dorn@libertyutilities.com, c=US Date: 2020.03.18 15:25:33 -04'00'	
Richard Foley	Project Sponsor	Richard Foley Digitally signed by Richard Foley DN: cn=Richard Foley, o=Liberty Utilities, ou, email=richard.foley@libertyutilities.com, c=US Date: 2020.03.26 07:50:58 -04'00'	
Mark Parker	Operations Manager		
Phillip Greene	Accounting Manager		

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 ☒ No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes ☒ No ☐
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 ☒ No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes ☒ No ☐
2.5	Do you agree the project should be closed? If no, please explain:	Yes ☒ No ☐

Item	Question	Response
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	5/5
2.7	Scope	5/5
2.8	Cost (Budget)	5/5
2.9	Schedule	5/5

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 ☒ No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?		Yes ☒ No ☐
3.4	Identify the storage location for the following project documents items:		
Item	**Document**	**Location (e.g., Google Docs, Webspace)**	**Format**
3.4a	Business Case	W Drive	☒ Electronic ☐ Manual
3.4b	If available, the Final Project Schedule	NA	☐ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices	W Drive	☒ Electronic ☐ Manual
3.4d	Status Reports	NA	☐ Electronic ☐ Manual
3.4e	Risks and Issues Log	NA	☐ Electronic ☐ Manual
3.4f	Final deliverable	NA	☐ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team [ii]

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

Name	Role	Type (e.g., Contractor, Employee)
Douglas Dorn	Project Manager	Employee
Richard Foley	Project Sponsor	Employee
Shawn Raleigh	Site Lead	Employee

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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the recommended improvements to correct a similar problem in the future.

Problem Statement	Problem Description	References	Recommendation
None			

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
None	

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$130,000	$73,737	+$56,263

+

Reasons for Variance	Impact
Cause 1 Completed most of the work in house	$ $56,263 in savings to budget
Cause 2	$
Cause 3	$

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)

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project
[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Capital Project Expenditure Form 2020

Project Name:	Meter Protection Program		
Financial Work Order (FWO):		**Project ID #:**	8840-2002
Requesting Region or Group:	Energy North	**Date of Request (MM/DD/YY):**	3/23/2020
Project Sponsor:	Richard MacDonald	**Project Start Date:**	1/1/2020
Project Lead:	Robert Mostone	**Project End Date:**	12/31/2020
Prepared by:	Ryan Patnode	**Requested Capital ($)**	$300,000
Planned or Unplanned Projects:	☒ Planned ☐Unplanned		
Project Type: (Click appropriate boxes)	☐ Safety ☒ Mandated ☐ Growth ☐ Regulatory Supported ☐ Discretionary		

Details of Request

Project description

This program projects will protect customer meter sets. The primary driver for the meter protection program is to preserve customer meter sets that are at risk of being hit by vehicles. This program will allow Liberty Utilities to protect residential and commercial meter sets that could be hit by vehicles and cause leaks. The meter protection will be contacted first before the meter set and prevent hazardous leaks from resulting.

Includes:
Residential & Commercial installation of meter protection.

`

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

No

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

NA

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?

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Capital Project Expenditure Form 2020

GUIDANCE: If yes, please detail the specific assets that will be removed: NA

1. *Original Cost of Plant to be removed (if known):*
2. *What is the replacement cost of the plant being removed (if original cost not known)?*
3. *Original Work Order of Plant to be removed (if known):*
4. *Is the Plant being removed reusable?*
5. *What is the year of original installation of the plant being removed*

What alternatives were evaluated and why were they rejected?

No viable alternatives. Risk of rejecting the overall project detailed below.

What are the risks and consequences of not approving this expenditure?

Exposed meters leave a potential risk of vehicles contacting meters. This exposure could cause hazardous leaks.

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.

All standard safety procedures will be followed in project execution.

Are there other pertinent details that may affect the decision making process?

No

Liberty Utilities Capital Project Expenditure Form 2020

Complete the Financial Summary table only if:
- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year	**2021**	**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☐1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?			
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:[i]	☐Fixed or Firm Price ☐Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$300,000		

Approvals and Signatures[ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			Click here to enter a date.
Senior Manager:	Up to $50,000			Click here to enter a date.
Senior Director/Director:	Up to $250,000	Robert Mostone Gas operations	Robert Mostone Digitally signed by Robert Mostone Date: 2020.03.26 11:40:41 -04'00'	Click here to enter a date.
Senior VP/VP:	Up to $500,000	Richard MacDonald VP operations	Rich MacDonald Digitally signed by Rich MacDonald Date: 2020.04.09 10:53:35 -04'00'	

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Capital Project Expenditure Form | 2020

State President:	Up to $500,000	Susan Fleck President, NH	Susan Fleck Digitally signed by Susan Fleck Date: 2020.04.10 09:06:26 -04'00'	Click here to enter a date.
Regional President:	Up to $3,000,000			Click here to enter a date.
Corporate – Sr. VP Operations:	Up to $5,000,000			Click here to enter a date.
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Liberty Utilities WATER | GAS | ELECTRIC

Change Order Form

2020

Project Overview			
Reason for Change: In adequate Funding to support activity level of this Mandated Program			
Project ID:	8840-2002	**Project Name:**	Meter Protection Program
Change Order Name:	8840-2002	**Date Prepared:**	10/20/2020
Change Order #:	8840-2002 2020 Change order	**Financial Work Order (FWO):**[i]	
Project Sponsor:	Richard MacDonald	**Revised Start Date:**	1/1/2020
Project Lead:	Robert Mostone	**Revised End Date:**[ii]	12/31/2020
Prepared By:	Robert Mostone	**Change Type**[iii]	x In Scope ☐ Out of Scope
Project Contingency Available?	☒ Yes ☐ No	**If No is Selected, Please specify source of funds**[iv]	

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

Category	Original Project Value	Previous Approved Charges	Current Change Order Amount	Total
Internal Labor				
Materials				
Equipment				
Contractor/Subcontractor				
Burdens/Overheads				
AFUDC				
Total Project Cost	$300,000		$130,000	**$430,000**

Updated Unlevered Internal Rate of Return:

Basis of Current Change Order Amount: Meter Protection required at customer locations where meters are susceptible to vehicular traffic or equipment damage. These location are determined during required service line inspections. We also received notification from the PUC to review all drive-through that have meter sets in the vicinity of the drive-through area shall have meter protection.

-
-

Schedule Impacts
(As a result of the Change Order, where applicable, List the Impacts to schedule)

Baseline Schedule (BL)	New Forecast (NF)	Variance (BL – NF)

Liberty Utilities WATER | GAS | ELECTRIC

Change Order Form

2020

Approvals and Signatures[v]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			
Senior Manager: :	Up to $50,000			
Senior Director/Director:	Up to $250,000	Robert Mostone Director Gas		10/20/2020
State President / Senior VP / VP:	Up to $500,000			
Regional President:	Up to $3,000,000			
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] The Financial Work Order Section captures the work order this change falls under when the job was initially set-up
[ii] The Revised project end date is dependent on changes in scope that may deviate the schedule from the original plan
[iii] The Change type for In scope or Out of scope changes fall within the following scenario:

- In Scope changes are deviations of scope from the original plan and approved budget that align to the original scope of the project but have revised pricing as a result of changes in pricing of labour, materials, and equipment
- Out of Scope changes are scope changes that were not originally planned for in the project baselines and approved budget. Examples of this type of change are related to changes in technology, missed deliverables, a change in the project design altering the scope of the project, etc.

iv In cases where the project no longer has contingency to cover project change orders, please specify any other sources of funds that would address the project variance (i.e. not executing another project, delaying scope of another project, etc)

[v] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

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Change Order Form

2020

Project Overview			
Reason for Change: Under in other EnergyNorth capital target allowed for additional spend.			
Project ID:	8840-2002	**Project Name:**	Meter Protection Program
Change Order Name:	8840-2002	**Date Prepared:**	1/28/2021
Change Order #:	8840-2002 2020 Change order #2	**Financial Work Order (FWO):**[i]	
Project Sponsor:	Richard MacDonald	**Revised Start Date:**	1/1/2020
Project Lead:	Robert Mostone	**Revised End Date:**[ii]	12/31/2020
Prepared By:		**Change Type**[iii]	x In Scope ☐ Out of Scope
Project Contingency Available?	☒ Yes ☐ No	**If No is Selected, Please specify source of funds**[iv]	8840-2014 K Meter Replacement Program & 8840-2020 SCADA improvements

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

Category	Original Project Value	Previous Approved Charges	Current Change Order Amount	Total
Internal Labor				
Materials				
Equipment				
Contractor/Subcontractor				
Burdens/Overheads				
AFUDC				
Total Project Cost	$300,000	**$130,000**	$217,380	**$647,380**

Updated Unlevered Internal Rate of Return:

Meter projection required at customer locations where meters are susceptible to vehicular traffic or equipment damage. These location are determined during required service line inspections. We also received notification form the PUC to review all drive-through that have meter sets in vicinity of the drive through area shall have meter projection. This requirement along with other project under runs allowed additional project spend.

Basis of Current Change Order Amount:

Click here to enter text.

Schedule Impacts
(As a result of the Change Order, where applicable, List the Impacts to schedule)

Baseline Schedule (BL)	New Forecast (NF)	Variance (BL – NF)

Liberty Utilities WATER | GAS | ELECTRIC

Change Order Form

2020

Approvals and Signatures[v]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			
Senior Manager: :	Up to $50,000			
Senior Director/Director:	Up to $250,000	Robert Mostone Director Gas	Robert Mostone Digitally signed by Robert Mostone Date: 2021.02.03 10:32:00 -05'00'	
State President / Senior VP / VP:	Up to $500,000	Richard MacDonald VP Operations	Richard MacDonald Digitally signed by Richard MacDonald Date: 2021.02.03 14:47:04 -05'00'	
Regional President:	Up to $3,000,000	James Sweeney East region VP		
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] The Financial Work Order Section captures the work order this change falls under when the job was initially set-up
[ii] The Revised project end date is dependent on changes in scope that may deviate the schedule from the original plan
[iii] The Change type for In scope or Out of scope changes fall within the following scenario:

- In Scope changes are deviations of scope from the original plan and approved budget that align to the original scope of the project but have revised pricing as a result of changes in pricing of labour, materials, and equipment
- Out of Scope changes are scope changes that were not originally planned for in the project baselines and approved budget. Examples of this type of change are related to changes in technology, missed deliverables, a change in the project design altering the scope of the project, etc.

iv In cases where the project no longer has contingency to cover project change orders, please specify any other sources of funds that would address the project variance (i.e. not executing another project, delaying scope of another project, etc)

[v] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report | 2020

Requesting Region or Group:	Liberty Utilities-NH-Gas Operations	**Date of Closeout (MM/DD/YY):**	3/9/2021
Project Name:	Meter Protection Program		
Requesting Region:	NH	**Sponsor** (Name)**:**	Richard MacDonald
Project Champion:	Robert Mostone	**Project Champion**	
Project Status	☐In Service ☐Complete ☐ Closed		
Project Start Date:		**Project Completion Date:**	
Requested Capital ($)	$300,000	**Expenditure Included in Approved Budget?**	☐Yes ☐No

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
Robert Mostone	Project Lead		3/09/2021
Richard MacDonald	Project Sponsor	Richard G. MacDonald	3/10/2021
	Operations Manager		
	Accounting Manager		

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 ☒ No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes ☒ No ☐
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 ☒ No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes ☒ No ☐

Item	Question	Response
2.5	Do you agree the project should be closed? If no, please explain:	Yes ☒ No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	5/5
2.7	Scope	5/5
2.8	Cost (Budget)	5/5
2.9	Schedule	5/5

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 ☒ No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?		Yes ☒ No ☐
3.4	Identify the storage location for the following project documents items:		
Item	**Document**	**Location (e.g., Google Docs, Webspace)**	**Format**
3.4a	Business Case	See W Drive	☒ Electronic ☐ Manual
3.4b	If available, the Final Project Schedule	Blanket Project on going each year	☐ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices	Labor Cost	☒ Electronic ☐ Manual
3.4d	Status Reports	Job Orders in Wennsoft	☒ Electronic ☐ Manual
3.4e	Risks and Issues Log	N/A	☐ Electronic ☐ Manual
3.4f	Final deliverable	See Wennsoft for project details and associated costs	☒ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team [ii]

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

Name	Role	Type (e.g., Contractor, Employee)
Robert Mostone	Director Operations	Employee

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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the 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 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
No Issues to Report	

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)	$300,000	$647,380	$347,380

Project Close Out Report 2020

External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$300,000	**$647,380**	($347,380)

Reasons for Variance	Impact
Change order #1	$130,00
Change order #2	$217,380
Cause 3	$

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)
Blanket Project See Wennsoft

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project
[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Capital Project Expenditure Form 2020

Project Name:	Cathodic Protection Program		
Financial Work Order (FWO):	8840-2003	**Project ID #:**	8840-2003
Requesting Region or Group:	New Hampshire	**Date of Request (MM/DD/YY):**	1/23/20
Project Sponsor:	Charles Rodrigues	**Project Start Date:**	1/1/20
Project Lead:	Peter Chivers	**Project End Date:**	12/31/2020
Prepared by:	Peter Chivers	**Requested Capital ($)**	**$400,000**
Planned or Unplanned Projects:	☒ Planned ☐Unplanned		
Project Type: (Click appropriate boxes)	☐ Safety ☒ Mandated ☐ Growth ☐ Regulatory Supported ☐ Discretionary		

Details of Request

Project description

The Cathodic Protection blanket provides funding necessary to complete capital projects required to maintain the operate the cathodic protection system in accordance with Part 192, Subpart I, Requirements for Corrosion Control. Capital projects include:

- New and replacement test stations
- New and replacement rectifiers
- Installation of bond wires
- Recoating of pipes
- Installation of insulators
- Other capital work required to maintain the cathodic protection system

`

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

No

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

Each job needs to be permitted. This is a blanket work order so many types of jobs may be done. There may be some environmental impact.

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?

No.

What alternatives were evaluated and why were they rejected?

None were evaluated.

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Capital Project Expenditure Form 2020

What are the risks and consequences of not approving this expenditure?
Compliance risk

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.
All project will be executed in accordance with company procedures.

Are there other pertinent details that may affect the decision making process?
No.

Complete the Financial Summary table only if:

- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year	**2021**	**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☒1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?			
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:[i]	☐Fixed or Firm Price ☒Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)	$400,000		
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$400,000		

Approvals and Signatures[ii]

Approved By:

Liberty Utilities WATER · GAS · ELECTRIC

Capital Project Expenditure Form 2020

Role	Approval Limit	Name	Signature	Date
Manager / Staff (requisitioner/buyer):	Up to $25,000	Peter Chivers	Peter Chivers Digitally signed by Peter Chivers Date: 2020.03.17 11:56:22 -04'00'	Click here to enter a date.
Senior Manager:	Up to $50,000		Andrew Bernier Digitally signed by Andrew Bernier Date: 2020.03.23 13:36:55 -04'00'	Click here to enter a date.
Senior Director/Director:	Up to $250,000	Charles Rodrigues Director, Engineering	Charles Rodrigues Digitally signed by Charles Rodrigues Date: 2020.03.23 17:28:14 -04'00'	Click here to enter a date.
Senior VP/VP:	Up to $500,000		Rich MacDonald Digitally signed by Rich MacDonald Date: 2020.03.26 10:31:54 -04'00'	
State President:	Up to $500,000		Susan Fleck Digitally signed by Susan Fleck Date: 2020.04.09 09:08:40 -04'00'	Click here to enter a date.
Regional President:	Up to $3,000,000			Click here to enter a date.
Corporate – Sr. VP Operations:	Up to $5,000,000			Click here to enter a date.
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

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Capital Project Business Case 2020

NOTE: This form is required for planned Growth, Regulatory Supported, and Discretionary projects as well as combined blanket projects for Safety and Mandated with Growth, Regulatory Supported, and Discretionary Projects with a spend greater than $100,000 and all unplanned projects. All other Project types can utilize the Capital Expenditure Application Form.

Project Overview			
Project Name:	Cathodic Protection Program	**Date Prepared:**	3-16-20
Project ID#:	8840-2003	**Cost Estimate:**	$400,000
Project Sponsor:	Charles Rodrigues	**Project Start Date:**	1/1/2020
Project Lead:	Peter Chivers	**Project End Date:**	12/31/2020
Prepared By:	Peter Chivers	**Planned or Unplanned Projects:**	X Planned ☐Unplanned
Project Type (click appropriate boxes)**:**	☐ Safety ☒ Mandated ☐ Growth ☐ Regulatory Supported Discretionary		
Spending Rationale:	☐ Growth ☐ Improvement ☐ Replenishment		

Project Scope Statement
(Insert the scope of work, major deliverables, assumptions, and constraints)

The Cathodic Protection blanket provides funding necessary to complete capital projects required to maintain the operate the cathodic protection system in accordance with Part 192, Subpart I, Requirements for Corrosion Control. Capital projects include:

- New and replacement test stations
- New and replacement rectifiers
- Installation of bond wires
- Recoating of pipes
- Installation of insulators
- Other capital work required to maintain the cathodic protection system

Background
(Insert description of current operational arrangement, and brief history of project & asset)

This blanket is recurring each year and the amount is based on historical amounts.

Recommendation/Objective
(Insert the unique problem this project is looking to resolve)

This program monitors, mitigates, and prevents corrosion on metallic pipeline components in accordance with state and federal regulations.

Alternatives/Options
(Describe all reasonably viable alternatives. Discuss the viability of each and provide reasons if rejected)

None.

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

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Capital Project Business Case 2020

Next Anticipated Test Year	**2021**	**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No

Regulatory Lag
(Click appropriate box) ☐Less than 6 Months ☐6-12 Months ☒1 to 3 years ☐Greater than 3 years

Category	Total Already Approved	2020	2021	Beyond 2021	Total
Internal Labor					
Materials					
Equipment					
Contractor/ Subcontractor		$400,000			
AFUDC					
Total Project Cost		**$400,000**			

Unlevered Internal Rate of Return:

Basis of Estimate: Historical amounts.

For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:

Schedule
(List key milestone dates)

Key Milestone Description	Forecast Start Date	Forecast End Date

Risk Assessment
(Please describe the risk of not completing the project)

Compliance risk.

Trade Finance
(Is there a possibility to apply trade finance products to this project? See Capital Planning for further clarification)

No.

Supporting Documentation
(Reference drawings, condition assessment reports, vendor quotations, etc. Attach document or where possible include hyperlink to file located on shared server or SharePoint)

Liberty Utilities WATER · GAS · ELECTRIC

Capital Project Business Case | 2020

None.

Approvals and Signatures[i]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000	Peter Chivers	Peter Chivers Digitally signed by Peter Chivers Date: 2020.03.17 11:55:46 -04'00'	
Senior Manager: :	Up to $50,000			
Senior Director/Director:	Up to $250,000	Charles Rodrigues Director, Engineering	Charles Rodrigues Digitally signed by Charles Rodrigues Date: 2020.03.23 15:55:24 -04'00'	
Senior Vice President/ Vice President	Up to $500,000		Rich MacDonald Digitally signed by Rich MacDonald Date: 2020.03.26 10:31:08 -04'00'	
State President:	Up to $500,000		Susan Fleck Digitally signed by Susan Fleck Date: 2020.04.09 09:06:24 -04'00'	
Regional President:	Up to $3,000,000			
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

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Change Order Form

2020

Project Overview			
Reason for Change: Project not able to achieve initial year budget reduction.			
Project ID:	8840-2003	**Project Name:**	Cathodic Protection Program
Change Order Name:	Cathodic Protection Program Change 1	**Date Prepared:**	12/28/2020
Change Order #:	8840-2003-1	**Financial Work Order (FWO):**[i]	
Project Sponsor:	Charles Rodrigues	**Revised Start Date:**	1/1/2020
Project Lead:	Deborah Regis	**Revised End Date:**[ii]	12/31/2020
Prepared By:	Ryan Patnode	**Change Type**[iii]	x In Scope ☐ Out of Scope
Project Contingency Available?	☒ Yes ☐ No	**If No is Selected, Please specify source of funds**[iv]	

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

Category	Original Project Value	Previous Approved Charges	Current Change Order Amount	Total
Internal Labor				
Materials				
Equipment				
Contractor/Subcontractor				
Burdens/Overheads				
AFUDC				
Total Project Cost	$400,00		**$150,000**	**$550,00**

Updated Unlevered Internal Rate of Return:

Basis of Current Change Order Amount: *The cathodic protection provides funding necessary to complete capital projects required to maintain and operate cathodic protection system in accordance with part 192, subpart I requirements for corrosions control. Project expected to complete and spend relatively similar volume of work in 2020 as 2019. Initial budget reduced $400k to achieve overall company targets. However as a result of other EnergyNorth project underruns opportunity to spend to initial need.*
Click here to enter text.

Schedule Impacts
(As a result of the Change Order, where applicable, List the Impacts to schedule)

Baseline Schedule (BL)	New Forecast (NF)	Variance (BL – NF)

Liberty Utilities WATER | GAS | ELECTRIC

Change Order Form

2020

Approvals and Signatures[v]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			
Senior Manager: :	Up to $50,000			
Senior Director/Director:	Up to $250,000	Charles Rodrigues Engineering	Charles Rodrigues Digitally signed by Charles Rodrigues Date: 2020.12.28 13:57:46 -05'00'	12/28/2020
State President / Senior VP / VP:	Up to $500,000	Richard Macdonald, VP Operations	Richard MacDonald Digitally signed by Richard MacDonald Date: 2021.01.04 11:58:31 -05'00'	
Regional President:	Up to $3,000,000	James Sweeney, President East Region		
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] The Financial Work Order Section captures the work order this change falls under when the job was initially set-up
[ii] The Revised project end date is dependent on changes in scope that may deviate the schedule from the original plan
[iii] The Change type for In scope or Out of scope changes fall within the following scenario:

- In Scope changes are deviations of scope from the original plan and approved budget that align to the original scope of the project but have revised pricing as a result of changes in pricing of labour, materials, and equipment
- Out of Scope changes are scope changes that were not originally planned for in the project baselines and approved budget. Examples of this type of change are related to changes in technology, missed deliverables, a change in the project design altering the scope of the project, etc.

iv In cases where the project no longer has contingency to cover project change orders, please specify any other sources of funds that would address the project variance (i.e. not executing another project, delaying scope of another project, etc)

[v] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report 2020

Requesting Region or Group:	Liberty Utilities-NH- Gas Operations	**Date of Closeout (MM/DD/YY):**	3/31/21
Project Name:	Cathodic Protection Program 8840-2003		
Requesting Region:	NH	**Sponsor** (Name):	Andrew Bernier
Project Champion:	Peter Chivers	**Project Champion**	
Project Status	☐In Service ☐Complete X Closed		
Project Start Date:	1/1/20	**Project Completion Date:**	12/31/20
Requested Capital ($)	$400,000	**Expenditure Included in Approved Budget?**	XYes ☐No

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
Peter Chivers	Project Lead	Peter Chivers Digitally signed by Peter Chivers Date: 2021.03.31 15:40:14 -04'00'	
Andrew Bernier	Project Sponsor	Andrew Bernier Digitally signed by Andrew Bernier Date: 2021.04.01 07:11:00 -04'00'	
	Operations Manager		
	Accounting Manager		

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 ☒ No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes ☒ No ☐
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 ☒ No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes ☒ No ☐

Item	Question	Response
2.5	Do you agree the project should be closed? If no, please explain:	Yes ☒ No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	5/5
2.7	Scope	5/5
2.8	Cost (Budget)	5/5
2.9	Schedule	5/5

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 ☒ No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?		Yes ☐ No ☒
3.4	Identify the storage location for the following project documents items:		
Item	**Document**	**Location (e.g., Google Docs, Webspace)**	**Format**
3.4a	Business Case	See W Drive	☒ Electronic ☐ Manual
3.4b	If available, the Final Project Schedule	Blanket Project on going each year	☐ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices	Labor Cost	☒ Electronic ☐ Manual
3.4d	Status Reports	Job Orders in Wennsoft	☒ Electronic ☐ Manual
3.4e	Risks and Issues Log	N/A	☐ Electronic ☐ Manual
3.4f	Final deliverable	See Wennsoft for project details and associated costs	☒ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team[ii]

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

Name	Role	Type (e.g., Contractor, Employee)
Various Operations Dept personnel		

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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the 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 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
No Issues to Report	

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			

External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$400,000	**$565,735**	($165,735)

Reasons for Variance	Impact
Change order #1	$150,000
Change order #2	$11,000
Cause 3	$

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)
Blanket Project See Wennsoft

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project

[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Liberty Utilities

Capital Project Expenditure Form 2020

Project Name:	Replacement Services Random (Non Leaks)		
Financial Work Order (FWO):		**Project ID #:**	8840-2004
Requesting Region or Group:	Energy North	**Date of Request (MM/DD/YY):**	3/23/2020
Project Sponsor:	Richard MacDonald	**Project Start Date:**	1/1/2020
Project Lead:	Robert Mostone	**Project End Date:**	12/31/2020
Prepared by:	Ryan Patnode	**Requested Capital ($)**	$350,000
Planned or Unplanned Projects:	☒ Planned ☐Unplanned		
Project Type: (Click appropriate boxes)	☐ Safety ☒ Mandated ☐ Growth ☐ Regulatory Supported ☐ Discretionary		

Details of Request

Project description

This project is for random services replacement (non-leaks).The Blanket supports Construction-Maintenance capital projects for service replacement (non-leaks).

Includes:

- Turning gas service off and back on when capital work is being completed in the street and/or maintain service to a building on bottle gas for the duration of the capital work
- Improve safety and reliability

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

No

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

Licensing and Environmental Permitting as required.

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?

GUIDANCE: If yes, please detail the specific assets that will be removed: Removal per individual job

1. *Original Cost of Plant to be removed (if known):*
2. *What is the replacement cost of the plant being removed (if original cost not known)?*
3. *Original Work Order of Plant to be removed (if known):*
4. *Is the Plant being removed reusable?*
5. *What is the year of original installation of the plant being removed*

Liberty Utilities Capital Project Expenditure Form 2020

What alternatives were evaluated and why were they rejected?
No viable alternatives. Risk of rejecting the project detailed below.

What are the risks and consequences of not approving this expenditure?
Risk of not approved jeopardize reliable service to customers. The contingent project has the potential to create the need to replace aging existing services. Funding needed to ensure the ability to replace services identified as needed.

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.
All standard safety procedures will be followed in project execution.

Are there other pertinent details that may affect the decision making process?
No

Liberty Utilities

Capital Project Expenditure Form | 2020

Complete the Financial Summary table only if:
- Project is less than $100,000; or
- Project category is *Mandated* or *Safety* (Business Case Form not required)

Financial Summary

Next Anticipated Test Year	**2021**	**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☒1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?			
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:[i]	☐Fixed or Firm Price ☐Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$350,000		

Approvals and Signatures[ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			Click here to enter a date.
Senior Manager:	Up to $50,000			Click here to enter a date.
Senior Director/Director:	Up to $250,000	Robert Mostone Gas operations	Robert Mostone Digitally signed by Robert Mostone Date: 2020.03.26 11:41:54 -04'00'	Click here to enter a date.
Senior VP/VP:	Up to $500,000	Richard MacDonald VP operations	Rich MacDonald Digitally signed by Rich MacDonald Date: 2020.04.09 10:52:47 -04'00'	

Liberty Utilities Capital Project Expenditure Form 2020

State President:	Up to $500,000	Susan Fleck President, NH	Susan Fleck Digitally signed by Susan Fleck Date: 2020.04.30 09:09:42 -04'00'	Click here to enter a date.
Regional President:	Up to $3,000,000			Click here to enter a date.
Corporate – Sr. VP Operations:	Up to $5,000,000			Click here to enter a date.
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Liberty Utilities

Change Order Form

2020

Project Overview			
Reason for Change: Service replacement volume for non-leaks C&M exceeded initial estimates.			
Project ID:	8840-2004	**Project Name:**	Replacement Service Random (Non Leaks)
Change Order Name:	Replacement Service Random (Non Leaks)	**Date Prepared:**	11/25/2020
Change Order #:	8840-2004	**Financial Work Order (FWO):**[i]	
Project Sponsor:	Richard MacDonald	**Revised Start Date:**	1/01/2020
Project Lead:	Robert Mostone	**Revised End Date:**[ii]	12/31/2020
Prepared By:	Robert Mostone	**Change Type**[iii]	☒ In Scope ☐ Out of Scope
Project Contingency Available?	☒ Yes ☐ No	**If No is Selected, Please specify source of funds:**[iv]	

Financial Assessment/Cost Estimate:
(Double click embedded excel file to update; include contingency allowance in excel file)

Category	Original Project Value	Previous Approved Charges	Current Change Order Amount	Total
Internal Labor				
Materials				
Equipment				
Contractor/Subcontractor				
Burdens/Overheads				
AFUDC				
Total Project Cost	**$350,000**		**$100,000**	**$450,000**

Updated Unlevered Internal Rate of Return:

Basis of Current Change Order Amount: This Project is for random service replacement (Non Leaks). The Blanket Supports Construction & Maintenance capital projects for service replacement. This includes Turning gas service off and back on when capital work is being completed in the street and or maintain service to a building on bottle gas for the duration of the capital work. Improve safety and reliability. The increase in cost is due to budget reduction and mandated work that was required. We had unexpected cost due Badger Daylighting, JDH Energy Solutions (Welding Inspector)

Schedule Impacts
(As a result of the Change Order, where applicable, List the Impacts to schedule)

Baseline Schedule (BL)	New Forecast (NF)	Variance (BL – NF)
$350,000	$450,000	$450,000

LUCo Change Order Form
Page 1
Rev. 00

Liberty Utilities

Change Order Form

2020

Approvals and Signatures[v]

Approved By:				
Role	Approval Authority Limit	Name	Signature	Date
Manager / Staff (requisitioner/buyer):	Up to: $25,000			
Senior Manager: :	Up to: $50,000			
Senior Director/Director:	Up to $250,000	Robert Mostone Director, Gas Operations		11/25/2020
State President / Senior VP / VP:	Up to $500,000	Richard MacDonald VP, Gas Operations	Richard MacDonald Digitally signed by Richard MacDonald Date: 2020.11.30 11:02:16 -05'00'	
State President / Senior VP / VP:	Up to $500,000	Susan Fleck President - LUNH		
Regional President	Up to $3,000,000			
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] The Financial Work Order Section captures the work order this change falls under when the job was initially set-up
[ii] The Revised project end date is dependent on changes in scope that may deviate the schedule from the original plan
[iii] The Change type for In scope or Out of scope changes fall within the following scenario:

- In Scope changes are deviations of scope from the original plan and approved budget that align to the original scope of the project but have revised pricing as a result of changes in pricing of labour, materials, and equipment
- Out of Scope changes are scope changes that were not originally planned for in the project baselines and approved budget. Examples of this type of change are related to changes in technology, missed deliverables, a change in the project design altering the scope of the project, etc.

[iv] In cases where the project no longer has contingency to cover project change orders, please specify any other sources of funds that would address the project variances (i.e. not executing another project, delaying scope of another project, etc)

[v] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Liberty Utilities WATER | GAS | ELECTRIC

Change Order Form

2020

Project Overview			
Reason for Change: Service replacement volume for non-leaks C&M continues to exceeded current forecast.			
Project ID:	8840-2004	**Project Name:**	Replacement Services Random (Non Leaks)
Change Order Name:	Replacement Services Random Change 2	**Date Prepared:**	12/28/2020
Change Order #:	8840-2004-2	**Financial Work Order (FWO):**[i]	
Project Sponsor:	Richard Macdonald	**Revised Start Date:**	1/1/2020
Project Lead:	Robert Mostone	**Revised End Date:**[ii]	12/31/2020
Prepared By:	Robert Mostone	**Change Type**[iii]	☐ In Scope ☐ Out of Scope
Project Contingency Available?	☒ Yes ☐ No	**If No is Selected, Please specify source of funds**[iv]	

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

Category	Original Project Value	Previous Approved Charges	Current Change Order Amount	Total
Internal Labor				
Materials				
Equipment				
Contractor/Subcontractor				
Burdens/Overheads				
AFUDC				
Total Project Cost	$350,00	**$100,000**	**$200,000**	**$650,000**

Updated Unlevered Internal Rate of Return:

Basis of Current Change Order Amount: *Project for random service replacement (non-leaks). Supports construction and maintenance capital project for service replacements. Includes truing gas service off and back on when capital work is being competed in the street or maintain service to a build on bottle gas for the duration of capital work. Additional volume on top the first change order. Added volume also requires additional restoration cost.*

Schedule Impacts
(As a result of the Change Order, where applicable, List the Impacts to schedule)

Baseline Schedule (BL)	New Forecast (NF)	Variance (BL – NF)

Liberty Utilities WATER | GAS | ELECTRIC

Change Order Form

2020

Approvals and Signatures[v]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			
Senior Manager: :	Up to $50,000			
Senior Director/Director:	Up to $250,000	Robert Mostone Director, Gas Operations	Robert Mostone Digitally signed by Robert Mostone Date: 2020.12.28 12:44:53 -05'00'	
State President / Senior VP / VP:	Up to $500,000	Richard MacDonald VP, Gas Operations	Richard MacDonald Digitally signed by Richard MacDonald Date: 2021.01.04 12:01:28 -05'00'	
Regional President:	Up to $3,000,000	James Sweeney President East Region		
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] The Financial Work Order Section captures the work order this change falls under when the job was initially set-up
[ii] The Revised project end date is dependent on changes in scope that may deviate the schedule from the original plan
[iii] The Change type for In scope or Out of scope changes fall within the following scenario:

- In Scope changes are deviations of scope from the original plan and approved budget that align to the original scope of the project but have revised pricing as a result of changes in pricing of labour, materials, and equipment
- Out of Scope changes are scope changes that were not originally planned for in the project baselines and approved budget. Examples of this type of change are related to changes in technology, missed deliverables, a change in the project design altering the scope of the project, etc.

iv In cases where the project no longer has contingency to cover project change orders, please specify any other sources of funds that would address the project variance (i.e. not executing another project, delaying scope of another project, etc)

[v] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report | 2020

Requesting Region or Group:	Liberty Utilities- NH-Gas Operations	**Date of Closeout (MM/DD/YY):**	03/09/2021
Project Name:	Replacement Services Random (Non Leaks) 8840-2004		
Requesting Region:		**Sponsor** (Name)**:**	Rich MacDonald
Project Champion:	Robert Mostone	**Project ID**	
Project Status	☐In Service ☐Complete ☐ Closed		
Project Start Date:	1/1/2020	**Project Completion Date:**	12/31/2020
Requested Capital ($)	$350,000	**Expenditure Included in Approved Budget?**	X Yes ☐No

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
Robert Mostone	Project Lead		3/09/2021
	Project Sponsor	Richard G. MacDonald	3/10/2021
	Operations Manager		
	Accounting Manager		

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 ☒ No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes ☒ No ☐
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 ☒ No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes ☒ No ☐

Item	Question	Response
2.5	Do you agree the project should be closed? If no, please explain:	Yes ☒ No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	5/5
2.7	Scope	5/5
2.8	Cost (Budget)	5/5
2.9	Schedule	5/5

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 ☒ No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?		Yes ☒ No ☐
3.4	Identify the storage location for the following project documents items:		
Item	**Document**	**Location (e.g., Google Docs, Webspace)**	**Format**
3.4a	Business Case	See W Drive	☒ Electronic ☐ Manual
3.4b	If available, the Final Project Schedule		☒ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices	W Drive and with Accounts Payable	☒ Electronic ☐ Manual
3.4d	Status Reports	See accounting monthly reports	☒ Electronic ☐ Manual
3.4e	Risks and Issues Log	N/A	☐ Electronic ☐ Manual
3.4f	Final deliverable	See Wennsoft for project details and associated costs	☒ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team [ii]

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

Name	Role	Type (e.g., Contractor, Employee)
Robert Mostone	Project Manager	Employee

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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the 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 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
See Change Order 8840-2004	

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			

External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$350,000	**$648,083**	($298,083)

Reasons for Variance	Impact
Change order #1	$100,000
Change order #2	$200,000
Cause 3	$

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)
See Wennsoft for job numbers based off project number

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project
[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Liberty Utilities

Capital Project Expenditure Form 2020

Project Name:	Replacement Services Random (Due to Leaks)		
Financial Work Order (FWO):		**Project ID #:**	8840-2005
Requesting Region or Group:	Energy North	**Date of Request (MM/DD/YY):**	3/23/2020
Project Sponsor:	Richard MacDonald	**Project Start Date:**	1/1/2020
Project Lead:	Robert Mostone	**Project End Date:**	12/31/2020
Prepared by:	Ryan Patnode	**Requested Capital ($)**	$550,000
Planned or Unplanned Projects:	☒ Planned ☐Unplanned		
Project Type: (Click appropriate boxes)	☐ Safety ☒ Mandated ☐ Growth ☐ Regulatory Supported ☐ Discretionary		

Details of Request

Project description

This project will provide for random replacement services random (due to leaks). This Blanket project will provide for replacement services outside of our established Blankets. Leak Prone Pipe enterprise is significant and we may need to replace services due to reported leaks. Leaks are associated with unprotected bare steel, cast iron pipe and/or small diameter cast iron pipe.

Includes:

- Replacement of unprotected/bare steel and/or cast iron pipe
- Replacement of small diameter cast iron pipe ≤ 8 inch diameter

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

No

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

Licensing and Environmental Permitting as required.

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?

GUIDANCE: If yes, please detail the specific assets that will be removed: Removal per individual job

1. *Original Cost of Plant to be removed (if known):*
2. *What is the replacement cost of the plant being removed (if original cost not known)?*
3. *Original Work Order of Plant to be removed (if known):*
4. *Is the Plant being removed reusable?*
5. *What is the year of original installation of the plant being removed*

Liberty Utilities Capital Project Expenditure Form 2020

What alternatives were evaluated and why were they rejected?
No viable alternatives. Risk of rejecting the project detailed below.

What are the risks and consequences of not approving this expenditure?
Safety risks resulting from leaks have the potential to compromise existing customer service safety.

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.
All standard safety procedures will be followed in project execution.

Are there other pertinent details that may affect the decision making process?
No

Liberty Utilities Capital Project Expenditure Form 2020

Complete the Financial Summary table only if:
- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year	**2021**	**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☒1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?			
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:[i]	☐Fixed or Firm Price ☐Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$550,000		

Approvals and Signatures[ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			Click here to enter a date.
Senior Manager:	Up to $50,000			Click here to enter a date.
Senior Director/Director:	Up to $250,000	Robert Mostone Gas operations	Robert Mostone Digitally signed by Robert Mostone Date: 2020.03.26 11:43:09 -04'00'	Click here to enter a date.
Senior VP/VP:	Up to $500,000	Richard MacDonald VP operations	Rich MacDonald Digitally signed by Rich MacDonald Date: 2020.04.09 10:51:27 -04'00'	

Liberty Utilities Capital Project Expenditure Form | 2020

State President:	Up to $500,000	Susan Fleck President, NH	Susan Fleck Digitally signed by Susan Fleck Date: 2020.04.10 09:07:22 -04'00'	Click here to enter a date.
Regional President:	Up to $3,000,000			Click here to enter a date. 4/28/20
Corporate – Sr. VP Operations:	Up to $5,000,000			Click here to enter a date.
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Liberty Utilities WATER | GAS | ELECTRIC

Change Order Form

2020

Project Overview			
Reason for Change: Initial budget reduced to achieve overall company target. Volume and spend relative to prior year.			
Project ID:	8840-2005	**Project Name:**	Replacement Services Random (Due to Leaks)
Change Order Name:	Replacement Services Random Change	**Date Prepared:**	12/28/2020
Change Order #:	8840-2005-1	**Financial Work Order (FWO):**[i]	
Project Sponsor:	Richard Macdonald	**Revised Start Date:**	1/1/2020
Project Lead:	Robert Mostone	**Revised End Date:**[ii]	12/31/2020
Prepared By:	Robert Mostone	**Change Type**[iii]	x In Scope ☐ Out of Scope
Project Contingency Available?	☒ Yes ☐ No	**If No is Selected, Please specify source of funds**[iv]	

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

Category	Original Project Value	Previous Approved Charges	Current Change Order Amount	Total
Internal Labor				
Materials				
Equipment				
Contractor/Subcontractor				
Burdens/Overheads				
AFUDC				
Total Project Cost	$550,00		**$100,000**	**$650,000**

Updated Unlevered Internal Rate of Return:

Basis of Current Change Order Amount: *Project for random service replacement (leaks).Leak prone pipe enterprise is significant and requires us to replace service due to reported leaks. Leaks associated with unprotected bare steel, cast iron and small diameter cast iron pipe. Initial budget reduced $50K from prior year. Due to consistent volume with prior years coupled with contractors agreed cost increase additional spend to budget required. Initial budget overrun being offset my multiply project underruns.*

Schedule Impacts
(As a result of the Change Order, where applicable, List the Impacts to schedule)

Baseline Schedule (BL)	New Forecast (NF)	Variance (BL – NF)

Liberty Utilities WATER | GAS | ELECTRIC

Change Order Form

2020

Approvals and Signatures[v]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			
Senior Manager: :	Up to $50,000			
Senior Director/Director:	Up to $250,000	Robert Mostone Director, Gas Operations	Robert Mostone Digitally signed by Robert Mostone Date: 2020.12.28 12:25:24 -05'00'	
State President / Senior VP / VP:	Up to $500,000	Richard MacDonald VP, Gas Operations	Richard MacDonald Digitally signed by Richard MacDonald Date: 2021.01.04 11:57:00 -05'00'	
Regional President:	Up to $3,000,000	James Sweeney President East Region		
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] The Financial Work Order Section captures the work order this change falls under when the job was initially set-up
[ii] The Revised project end date is dependent on changes in scope that may deviate the schedule from the original plan
[iii] The Change type for In scope or Out of scope changes fall within the following scenario:

- In Scope changes are deviations of scope from the original plan and approved budget that align to the original scope of the project but have revised pricing as a result of changes in pricing of labour, materials, and equipment
- Out of Scope changes are scope changes that were not originally planned for in the project baselines and approved budget. Examples of this type of change are related to changes in technology, missed deliverables, a change in the project design altering the scope of the project, etc.

iv In cases where the project no longer has contingency to cover project change orders, please specify any other sources of funds that would address the project variance (i.e. not executing another project, delaying scope of another project, etc)

[v] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report | 2020

Requesting Region or Group:	Liberty Utilities- NH-Gas Operations	**Date of Closeout (MM/DD/YY):**	03/31/21
Project Name:	Replacement Services Random (Due to Leaks) 8840-2005		
Requesting Region:		**Sponsor** (Name)**:**	Rich MacDonald
Project Champion:	Robert Mostone	**Project ID**	
Project Status	☐In Service ☐Complete ☐ Closed		
Project Start Date:		**Project Completion Date:**	
Requested Capital ($)	$550,000	**Expenditure Included in Approved Budget?**	X Yes ☐No

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
Robert Mostone	Project Lead		3/16/2021
Richard MacDonald	Project Sponsor	Richard G MacDonald	03/31/2021
	Operations Manager		
	Accounting Manager		

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 ☒ No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes ☒ No ☐
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 ☒ No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes ☒ No ☐

Item	Question	Response
2.5	Do you agree the project should be closed? If no, please explain:	Yes ☒ No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	5/5
2.7	Scope	5/5
2.8	Cost (Budget)	5/5
2.9	Schedule	5/5

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 ☒ No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?		Yes ☒ No ☐
3.4	Identify the storage location for the following project documents items:		
Item	**Document**	**Location (e.g., Google Docs, Webspace)**	**Format**
3.4a	Business Case	See W Drive	☒ Electronic ☐ Manual
3.4b	If available, the Final Project Schedule		☒ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices	W Drive and with Accounts Payable	☒ Electronic ☐ Manual
3.4d	Status Reports	See accounting monthly reports	☒ Electronic ☐ Manual
3.4e	Risks and Issues Log	N/A	☐ Electronic ☐ Manual
3.4f	Final deliverable	See Wennsoft for project details and associated costs	☒ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team [ii]

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

Name	Role	Type (e.g., Contractor, Employee)
Robert Mostone	Project Lead	Employee

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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the recommended improvements to correct a similar problem in the future.

Problem Statement	Problem Description	References	Recommendation

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
See Change Order 8840-2005	

Section 8. This Project is for random service replacement (Leaks) Leak prone pipe is significant and requires us to replace service due to reported leaks. Leaks associated with unprotected bare steel, cast iron and small diameter cast iron pipe. Initial budget reduced to $50K from prior year. Due to consistent volume with prior years coupled with contractors agreed cost increase additional spend to budget required. Initial overrun being offset my multiply project overruns.

Project Close Out Report 2020

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$550,000	**$606,382**	($56,382)

Reasons for Variance	Impact
Change order #1	$100,000
Cause 3	$

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)
See Wennsoft for job numbers based off project number

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project
[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Liberty Utilities

Capital Project Expenditure Form 2020

Project Name:	Corrosion & Miscellaneous Fitting		
Financial Work Order (FWO):		**Project ID #:**	8840-2008
Requesting Region or Group:	Energy North	**Date of Request (MM/DD/YY):**	3/23/2020
Project Sponsor:	Richard MacDonald	**Project Start Date:**	1/1/2020
Project Lead:	Robert Mostone	**Project End Date:**	12/31/2020
Prepared by:	Ryan Patnode	**Requested Capital ($)**	$150,000
Planned or Unplanned Projects:	☒ Planned ☐ Unplanned		
Project Type: (Click appropriate boxes)	☐ Safety ☒ Mandated ☐ Growth ☐ Regulatory Supported ☐ Discretionary		

Details of Request

Project description
This program projects will replace corroded fittings located at customer meter sets. The primary driver of this program is to replace corroded fittings located at customer meter sets. This program will allow Liberty Utilities to replace existing corroded fittings with new fittings.

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.
No

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?
Licensing and Environmental Permitting as required.

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?
GUIDANCE: If yes, please detail the specific assets that will be removed: Removal per individual job 1. *Original Cost of Plant to be removed (if known):* 2. *What is the replacement cost of the plant being removed (if original cost not known)?* 3. *Original Work Order of Plant to be removed (if known):* 4. *Is the Plant being removed reusable?* 5. *What is the year of original installation of the plant being removed*

Liberty Utilities Capital Project Expenditure Form 2020

What alternatives were evaluated and why were they rejected?
No viable alternatives. Risk of rejecting the overall project detailed below.

What are the risks and consequences of not approving this expenditure?
Not executing causes potential leaks resulting from corrosion at meter sets. Thus causing risk to safe and reliable service provided to customer services.

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.
All standard safety procedures will be followed in project execution.

Are there other pertinent details that may affect the decision making process?
No

Complete the Financial Summary table only if:

- Project is less than $100,000; or
- Project category is *Mandated* or *Safety* (Business Case Form not required)

Financial Summary

Next Anticipated Test Year	2021	Was this Capital Project included in the current year's Board Approved Budget?	☒ Yes ☐ No
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☒1 – 3 years ☐Greater than three years		

Liberty Utilities Capital Project Expenditure Form 2020

Which regulatory constructs will be used for recovering this capital spend?			
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:[i]	☐Fixed or Firm Price ☐Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		
Category	**Current Year**	**Future Years**	**Authorized Amount (to be filled in by Corporate)**
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$150,000		

Approvals and Signatures[ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			Click here to enter a date.
Senior Manager:	Up to $50,000			Click here to enter a date.
Senior Director/Director:	Up to $250,000	Robert Mostone Gas operations	Robert Mostone Digitally signed by Robert Mostone Date: 2020.03.26 11:42:56 -04'00'	Click here to enter a date.
Senior VP/VP:	Up to $500,000	Richard MacDonald VP operations	Rich MacDonald Digitally signed by Rich MacDonald Date: 2020.04.09 10:50:41 -04'00'	
State President:	Up to $500,000	Susan Fleck President, NH		Click here to enter a date.
Regional President:	Up to $3,000,000			Click here to enter a date.
Corporate – Sr. VP Operations:	Up to $5,000,000			Click here to enter a date.
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

Liberty Utilities Capital Project Expenditure Form 2020

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Liberty Utilities

Change Order Form

2020

Project Overview			
Reason for Change: Number of Corroded fittings that need to be replaced as significantly increased over prior year.			
Project ID:	8840-2008	**Project Name:**	Corrosion & Miscellaneous Fitting
Change Order Name:	Corrosion & Miscellaneous Fitting	**Date Prepared:**	08/11/2020
Change Order #:	8840-2008	**Financial Work Order (FWO):**[i]	
Project Sponsor:	Richard MacDonald	**Revised Start Date:**	1/01/2020
Project Lead:	Robert Mostone	**Revised End Date:**[ii]	12/31/2020
Prepared By:	Robert Mostone	**Change Type**[iii]	☒ In Scope ☐ Out of Scope
Project Contingency Available?	☒ Yes ☐ No	**If No is Selected, Please specify source of funds:**[iv]	

Financial Assessment/Cost Estimate:
(Double click embedded excel file to update; include contingency allowance in excel file)

Category	Original Project Value	Previous Approved Charges	Current Change Order Amount	Total
Internal Labor				
Materials				
Equipment				
Contractor/Subcontractor				
Burdens/Overheads				
AFUDC				
Total Project Cost	**$150,000**		**$150,000**	**$300,000**

Updated Unlevered Internal Rate of Return:

Basis of Current Change Order Amount: *Meter fitting related to Corrosion inspection resulting in replacement of customer meter sets. We are working with older infrastructure as meters sets get identified we are required to replace.*

Schedule Impact:
(As a result of the Change Order, where applicable, List the Impacts to schedule)

Baseline Schedule (BL)	New Forecast (NF)	Variance (BL – NF)
$150,000	$150,000	$300,000

Liberty Utilities

Change Order Form

2020

Approvals and Signatures[i]

Approved By:				
Role	Approval Authority Limit	Name	Signature	Date
Manager / Staff (requisitioner/buyer):	Up to: $25,000	Robert Mostone Director, Gas Operations		08/11/2020
Senior Manager: :	Up to: $50,000			
Senior Director/Director	Up to $250,000			
State President / Senior VP / VP:	Up to $500,000	Richard MacDonald VP, Gas Operations	Richard MacDonald Digitally signed by Richard MacDonald Date: 2020.08.17 14:46:22 -04'00'	
State President / Senior VP / VP:	Up to $500,000	Susan Fleck President - LUNH		
Regional President	Up to $3,000,000			
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] The Financial Work Order Section captures the work order this change falls under when the job was initially set-up
[ii] The Revised project end date is dependent on changes in scope that may deviate the schedule from the original plan
[iii] The Change type for In scope or Out of scope changes fall within the following scenario:

- In Scope changes are deviations of scope from the original plan and approved budget that align to the original scope of the project but have revised pricing as a result of changes in pricing of labour, materials, and equipment
- Out of Scope changes are scope changes that were not originally planned for in the project baselines and approved budget. Examples of this type of change are related to changes in technology, missed deliverables, a change in the project design altering the scope of the project, etc.

[iv] In cases where the project no longer has contingency to cover project change orders, please specify any other sources of funds that would address the project variance (i.e. not executing another project, delaying scope of another project, etc)

[v] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report | 2020

Requesting Region or Group:	Liberty Utilities- NH-Gas Operations	**Date of Closeout (MM/DD/YY):**	03/09/2021
Project Name:	Corrosion & Miscellaneous Fitting 8840-2008		
Requesting Region:		**Sponsor** (Name)**:**	Richard MacDonald
Project Champion:	Robert Mostone	**Project ID**	
Project Status	☐In Service ☐Complete ☐ Closed		
Project Start Date:	1/1/2020	**Project Completion Date:**	12/31/2020
Requested Capital ($)	$150,000	**Expenditure Included in Approved Budget?**	X Yes ☐No

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
Robert Mostone	Project Lead		3/09/2021
Richard MacDonald	Project Sponsor	Richard G. MacDonald	3/10/2021
	Operations Manager		
	Accounting Manager		

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 ☒ No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes ☒ No ☐
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 ☒ No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes ☒ No ☐

Item	Question	Response
2.5	Do you agree the project should be closed? If no, please explain:	Yes ☒ No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	5/5
2.7	Scope	5/5
2.8	Cost (Budget)	5/5
2.9	Schedule	5/5

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 ☒ No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?	Yes ☒ No ☐
3.4	Identify the storage location for the following project documents items:	

Item	Document	Location (e.g., Google Docs, Webspace)	Format
3.4a	Business Case	See W Drive	☒ Electronic ☐ Manual
3.4b	If available, the Final Project Schedule	N/A	☐ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices	W Drive and with Accounts Payable	☒ Electronic ☐ Manual
3.4d	Status Reports	See accounting monthly reports	☒ Electronic ☐ Manual
3.4e	Risks and Issues Log	N/A	☐ Electronic ☐ Manual
3.4f	Final deliverable	See Wennsoft for project details and associated costs	☒ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team [ii]

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

Name	Role	Type (e.g., Contractor, Employee)
Robert Mostone	Project Manager	Employee

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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the 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 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
See Change Order Form 8840-2008	

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			

Project Close Out Report 2020

External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$150,00	**$286,035**	($136,035)

Reasons for Variance	Impact
Change order #1	$150,000
Cause 3	$

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)
See Wennsoft for job numbers based off project number

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project
[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Capital Project Expenditure Form 2020

Project Name:	Valve Installation/Replacement		
Financial Work Order (FWO):		**Project ID #:**	8840-2009
Requesting Region or Group:	Energy North	**Date of Request (MM/DD/YY):**	2/18/2020
Project Sponsor:	Charles Rodrigues	**Project Start Date:**	1/1/2020
Project Lead:	Brian Frost	**Project End Date:**	12/31/2020
Prepared by:	AndrewBernier	**Requested Capital ($)**	$85,000
Planned or Unplanned Projects:	☒ Planned ☐Unplanned		
Project Type: (Click appropriate boxes)	☐ Safety ☒ Mandated ☐ Growth ☐ Regulatory Supported ☐ Discretionary		
Spending Rationale:	☐ Growth ☐ Improvement ☒ Replenishment		

Details of Request

Project description

EN is required by Federal and State regulations to install, inspect and maintain and operate critical pipeline values on all gas distribution systems. Valve installation and/or replacement is necessary to facilitate the rapid shutdown of distribution piping during gas emergencies such as 3rd party damage, water intrusion or for other operational reasons.

The key drivers for this critical valve Blanket are:

- **Regulatory compliance**
- **Public Safety**
- **Process Safety**

`

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

No

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

Licensing and Environmental Permitting as required.

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?

GUIDANCE: If yes, please detail the specific assets that will be removed:

1. *Original Cost of Plant to be removed (if known):*
2. *What is the replacement cost of the plant being removed (if original cost not known)?*
3. *Original Work Order of Plant to be removed (if known):*
4. *Is the Plant being removed reusable?*
5. *What is the year of original installation of the plant being removed*

Liberty Utilities WATER · GAS · ELECTRIC

Capital Project Expenditure Form 2020

Yes, Asset removal will be calculated on a job specific basis.

What alternatives were evaluated and why were they rejected?
N/A

What are the risks and consequences of not approving this expenditure?
Inability to meet regulatory requirement to maintain Critical Valves

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.

Are there other pertinent details that may affect the decision making process?

Complete the Financial Summary table only if:

- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year		**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☒1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?			
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete: [i]	☐Fixed or Firm Price ☐Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		

Liberty Utilities WATER · GAS · ELECTRIC

Capital Project Expenditure Form 2020

Category	Current Year	Future Years	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$85,000		$85,000

Approvals and Signatures [ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000	Brian Frost Planning Engineer - Gas		
Senior Manager:	Up to $50,000	Andrew Bernier Manager, Gas Engineering	Andrew Bernier Digitally signed by Andrew Bernier Date: 2020.03.23 13:37:43 -04'00'	
Senior Director/Director:	Up to $250,000	Charles Rodrigues Director, Engineering	Charles Rodrigues Digitally signed by Charles Rodrigues Date: 2020.03.23 17:26:57 -04'00'	
Senior VP/VP:	Up to $500,000		Rich MacDonald Digitally signed by Rich MacDonald Date: 2020.03.26 10:32:52 -04'00'	
State President:	Up to $500,000		Susan Fleck Digitally signed by Susan Fleck Date: 2020.04.09 09:09:48 -04'00'	
Regional President:	Up to $3,000,000			
Corporate – Sr. VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			
Finance (East) – Vice President, Finance & Administration:	All Requests	Peter Dawes VP, Finance & Administration		

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Liberty Utilities WATER · GAS · ELECTRIC

Change Order Form

2020

Project Overview			
Reason for Change:			
Project ID:	8840-2009	**Project Name:**	Valve Installation/Replacement
Change Order Name:	8840-2009 #1	**Date Prepared:**	3/22/2021
Change Order #:	8840-2009	**Financial Work Order (FWO):**[i]	
Project Sponsor:	Charles Rodrigues	**Revised Start Date:**	1/1/2020
Project Lead:	Brian Frost	**Revised End Date:**[ii]	12/31/2020
Prepared By:		**Change Type**[iii]	x In Scope ☐ Out of Scope
Project Contingency Available?	☒ Yes ☐ No	**If No is Selected, Please specify source of funds**[iv]	

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

Category	Original Project Value	Previous Approved Charges	Current Change Order Amount	Total
Internal Labor				
Materials				
Equipment				
Contractor/Subcontractor				
Burdens/Overheads				
AFUDC				
Total Project Cost	$85,000		$228,090	**$313,090**

Updated Unlevered Internal Rate of Return:

Basis of Current Change Order Amount:

Valve box full replacement job initial charged to new growth main project under job 402066-37601 $291K. Valve box full replacements should be charged to 8840-2009. Increase in field quantity due to increase in paving cities are completing.

Schedule Impacts
(As a result of the Change Order, where applicable, List the Impacts to schedule)

Baseline Schedule (BL)	New Forecast (NF)	Variance (BL – NF)

Liberty Utilities WATER · GAS · ELECTRIC

Change Order Form

2020

Approvals and Signatures[v]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000	Brian Frost Gas Engineering	Brian R. Frost Digitally signed by Brian R. Frost Date: 2021.03.22 11:38:02 -04'00'	3/22/2021
Senior Manager: :	Up to $50,000			
Senior Director/Director:	Up to $250,000	Charles Rodrigues Engineering Director	Charles Rodrigues Digitally signed by Charles Rodrigues Date: 2021.03.22 13:00:38 -04'00'	
State President / Senior VP / VP:	Up to $500,000	Richard MacDonald VP Operations	Richard MacDonald Digitally signed by Richard MacDonald Date: 2021.03.30 15:36:57 -04'00'	
Regional President:	Up to $3,000,000			
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] The Financial Work Order Section captures the work order this change falls under when the job was initially set-up
[ii] The Revised project end date is dependent on changes in scope that may deviate the schedule from the original plan
[iii] The Change type for In scope or Out of scope changes fall within the following scenario:

- In Scope changes are deviations of scope from the original plan and approved budget that align to the original scope of the project but have revised pricing as a result of changes in pricing of labour, materials, and equipment
- Out of Scope changes are scope changes that were not originally planned for in the project baselines and approved budget. Examples of this type of change are related to changes in technology, missed deliverables, a change in the project design altering the scope of the project, etc.

iv In cases where the project no longer has contingency to cover project change orders, please specify any other sources of funds that would address the project variance (i.e. not executing another project, delaying scope of another project, etc)

[v] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report | 2020

Requesting Region or Group:	Liberty Utilities- NH-Gas Operations	**Date of Closeout (MM/DD/YY):**	03/22/2021
Project Name:	Valve Installation/Replacement (ENG) 8840-2009		
Requesting Region:	East	**Sponsor** (Name)**:**	Andrew Bernier
Project Champion:	Brian Frost	**Project ID**	8840-2009
Project Status	X In Service ☐Complete ☐ Closed		
Project Start Date:	1/1/2020	**Project Completion Date:**	12/31/2020
Requested Capital ($)	$85,000	**Expenditure Included in Approved Budget?**	X Yes ☐No

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
Brian Frost	Project Lead	Brian R. Frost Digitally signed by Brian R. Frost Date: 2021.03.22 14:46:25 -04'00'	3/22/2021
Andrew Bernier	Project Sponsor	Andrew Bernier Digitally signed by Andrew Bernier Date: 2021.03.30 13:40:00 -04'00'	
	Operations Manager		
	Accounting Manager		

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 ☒ No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes ☒ No ☐
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 ☒ No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes ☒ No ☐

Item	Question	Response
2.5	Do you agree the project should be closed? If no, please explain:	Yes ☒ No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	5/5
2.7	Scope	5/5
2.8	Cost (Budget)	5/5
2.9	Schedule	5/5

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 ☒ No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?		Yes ☒ No ☐
3.4	Identify the storage location for the following project documents items:		
Item	**Document**	**Location (e.g., Google Docs, Webspace)**	**Format**
3.4a	Business Case	Operations Finance SharePoint.	☒ Electronic ☐ Manual
3.4b	If available, the Final Project Schedule	N/A	☐ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices	Monthly accounting reports.	☒ Electronic ☐ Manual
3.4d	Status Reports	Monthly budget meetings.	☒ Electronic ☐ Manual
3.4e	Risks and Issues Log	Monthly budget meetings.	☒ Electronic ☐ Manual
3.4f	Final deliverable	Wennsoft closed jobs.	☒ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team [ii]

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

Name	Role	Type (e.g., Contractor, Employee)
Gas Operations Yards	Maintain Team	Employee

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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the recommended improvements to correct a similar problem in the future.

Problem Statement	Problem Description	References	Recommendation
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	

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			

Project Close Out Report 2020

External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$85,000	**$313,090**	$228,090

Reasons for Variance	Impact
Valve Boxes Full Replacement Job number 402066-37601 charged under project 8840-2047	$291,179.64

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)
8840-2009
402066-37601

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project
[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Liberty Utilities

Capital Project Expenditure Form 2020

Project Name:	Leak Repairs		
Financial Work Order (FWO):		**Project ID #:**	8840-2010
Requesting Region or Group:	Energy North	**Date of Request (MM/DD/YY):**	3/23/2020
Project Sponsor:	Richard MacDonald	**Project Start Date:**	1/1/2020
Project Lead:	Robert Mostone	**Project End Date:**	12/31/2020
Prepared by:	Ryan Patnode	**Requested Capital ($)**	$1,000,000
Planned or Unplanned Projects:	☒ Planned ☐Unplanned		
Project Type: (Click appropriate boxes)	☐ Safety ☒ Mandated ☐ Growth ☐ Regulatory Supported ☐ Discretionary		

Details of Request

Project description

The projects will address main valve cluster leaks when they arise .The primary driver of this project is to extend asset life by repairing gas leaks allowed under capital Policy.

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

No

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

Licensing and Environmental Permitting as required.

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?

GUIDANCE: If yes, please detail the specific assets that will be removed: Removal per individual job

1. *Original Cost of Plant to be removed (if known):*
2. *What is the replacement cost of the plant being removed (if original cost not known)?*
3. *Original Work Order of Plant to be removed (if known):*
4. *Is the Plant being removed reusable?*
5. *What is the year of original installation of the plant being removed*

What alternatives were evaluated and why were they rejected?

Liberty Utilities Capital Project Expenditure Form 2020

No viable alternatives. Risk of rejecting the project detailed below.

What are the risks and consequences of not approving this expenditure?
Safety risks to fire and explosion if not able to repair critical gas leaks identified.

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.
All standard safety procedures will be followed in project execution.

Are there other pertinent details that may affect the decision making process?
No

Complete the Financial Summary table only if:

- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year	**2021**	**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☒1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for			

Liberty Utilities Capital Project Expenditure Form 2020

recovering this capital spend?			
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:[i]	☐Fixed or Firm Price ☐Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$1,000,000		

Approvals and Signatures[ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			Click here to enter a date.
Senior Manager:	Up to $50,000			Click here to enter a date.
Senior Director/Director:	Up to $250,000	Robert Mostone Gas operations	Robert Mostone Digitally signed by Robert Mostone Date: 2020.03.26 11:45:52 -04'00'	Click here to enter a date.
Senior VP/VP:	Up to $500,000	Richard MacDonald VP operations	Rich MacDonald Digitally signed by Rich MacDonald Date: 2020.04.09 11:24:29 -04'00'	
State President:	Up to $500,000	Susan Fleck President, NH	Susan Fleck Digitally signed by Susan Fleck Date: 2020.04.10 09:10:29 -04'00'	Click here to enter a date.
Regional President:	Up to $3,000,000	James Sweeney President, East	4/28/20	Click here to enter a date.
Corporate – Sr. VP Operations:	Up to $5,000,000			Click here to enter a date.
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000	Johnny Johnston, COO		Click here to enter a date.

Liberty Utilities Capital Project Expenditure Form 2020

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Liberty Utilities WATER | GAS | ELECTRIC

Change Order Form

2020

Project Overview			
Reason for Change: Number of Leaks found through our Winter Patrol Survey Program increased significantly			
Project ID:	8840-2010	**Project Name:**	Leak Repair
Change Order Name:		**Date Prepared:**	07/30/2020
Change Order #:		**Financial Work Order (FWO):**[i]	
Project Sponsor:	Richard MacDonald	**Revised Start Date:**	
Project Lead:	Robert Mostone	**Revised End Date:**[ii]	
Prepared By:	Robert Mostone	**Change Type**[iii]	☐ In Scope ☐ Out of Scope
Project Contingency Available?	☒ Yes ☐ No	**If No is Selected, Please specify source of funds**[iv]	

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

Category	Original Project Value	Previous Approved Charges	Current Change Order Amount	Total
Internal Labor				
Materials				
Equipment				
Contractor/Subcontractor				
Burdens/Overheads				
AFUDC				
Total Project Cost	**1,000,000**		**700,000**	**1,700,000**

Updated Unlevered Internal Rate of Return:

Basis of Current Change Order Amount: For 2020, Leak Repair budget 8840-2010 is $1,000,000. This project blanket is used for Leak Repair. We are mandated by our State Regulators to repair our leaks within specific time frames. We are working with an older distribution line particularly in Nashua & Manchester NH. Leaks Repaired YTD 297 Remaining YTD 80
Click here to enter text.

Schedule Impacts
(As a result of the Change Order, where applicable, List the Impacts to schedule)

Baseline Schedule (BL)	New Forecast (NF)	Variance (BL – NF)
$1,000,000	1,700,000	700,000

Liberty Utilities WATER | GAS | ELECTRIC

Change Order Form

2020

Approvals and Signatures[v]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to: $25,000	Robert Mostone Director, Gas Operations		07/30/2020
Senior Manager: :	Up to: $50,000			
Senior Director/Director:	Up to $250,000			
State President / Senior VP / VP:	Up to $500,000	Richard MacDonald VP, Gas Operations	Richard MacDonald Digitally signed by Richard MacDonald Date: 2020.08.12 14:48:35 -04'00'	
State President / Senior VP / VP:	Up to $500,000	Susan Fleck President - LUNH		
Regional President	Up to $3,000,000	James Sweeney East region VP		
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] The Financial Work Order Section captures the work order this change falls under when the job was initially set-up
[ii] The Revised project end date is dependent on changes in scope that may deviate the schedule from the original plan
[iii] The Change type for In scope or Out of scope changes fall within the following scenario:

- In Scope changes are deviations of scope from the original plan and approved budget that align to the original scope of the project but have revised pricing as a result of changes in pricing of labour, materials, and equipment
- Out of Scope changes are scope changes that were not originally planned for in the project baselines and approved budget. Examples of this type of change are related to changes in technology, missed deliverables, a change in the project design altering the scope of the project, etc.

iv In cases where the project no longer has contingency to cover project change orders, please specify any other sources of funds that would address the project variance (i.e. not executing another project, delaying scope of another project, etc)

[v] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Liberty Utilities WATER | GAS | ELECTRIC

Change Order Form

2020

Project Overview			
Reason for Change: Number of Leaks found through our Winter Patrol Survey Program increased significantly			
Project ID:	8840-2010	**Project Name:**	Leak Repair
Change Order Name:		**Date Prepared:**	11/23/2020
Change Order #:		**Financial Work Order (FWO):**[i]	
Project Sponsor:	Richard MacDonald	**Revised Start Date:**	
Project Lead:	Robert Mostone	**Revised End Date:**[ii]	
Prepared By:	Robert Mostone	**Change Type**[iii]	☐ In Scope ☐ Out of Scope
Project Contingency Available?	☒ Yes ☐ No	**If No is Selected, Please specify source of funds**[iv]	

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

Category	Original Project Value	Previous Approved Charges	Current Change Order Amount	Total
Internal Labor				
Materials				
Equipment				
Contractor/Subcontractor				
Burdens/Overheads				
AFUDC				
Total Project Cost	**1,000,000**	**$700,000**	**300,000**	**2,000,000**

Updated Unlevered Internal Rate of Return:

Basis of Current Change Order Amount: For 2020, Leak Repair budget 8840-2010 is $1,000,000. This project blanket is used for Leak Repair. We are mandated by our State Regulators to repair our leaks within specific time frames. We are working with an older distribution line particularly in Nashua & Manchester NH. Leaks Repaired YTD 297 Remaining YTD 80. Increase additional cost due to paving restorations
Click here to enter text.

Schedule Impacts
(As a result of the Change Order, where applicable, List the Impacts to schedule)

Baseline Schedule (BL)	New Forecast (NF)	Variance (BL – NF)
$1,000,000	2,000,000	1,000,000

Liberty Utilities WATER | GAS | ELECTRIC

Change Order Form

2020

Approvals and Signatures[v]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to: $25,000			
Senior Manager: :	Up to: $50,000			
Senior Director/Director:	Up to $250,000	Robert Mostone Director, Gas Operations		11/23/2020
State President / Senior VP / VP:	Up to $500,000	Richard MacDonald VP, Gas Operations	Richard MacDonald Digitally signed by Richard MacDonald Date: 2020.11.30 11:03:06 -05'00'	
State President / Senior VP / VP:	Up to $500,000	Susan Fleck President - LUNH		
Regional President	Up to $3,000,000			
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] The Financial Work Order Section captures the work order this change falls under when the job was initially set-up
[ii] The Revised project end date is dependent on changes in scope that may deviate the schedule from the original plan
[iii] The Change type for In scope or Out of scope changes fall within the following scenario:

- In Scope changes are deviations of scope from the original plan and approved budget that align to the original scope of the project but have revised pricing as a result of changes in pricing of labour, materials, and equipment
- Out of Scope changes are scope changes that were not originally planned for in the project baselines and approved budget. Examples of this type of change are related to changes in technology, missed deliverables, a change in the project design altering the scope of the project, etc.

iv In cases where the project no longer has contingency to cover project change orders, please specify any other sources of funds that would address the project variance (i.e. not executing another project, delaying scope of another project, etc)

[v] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Liberty Utilities WATER | GAS | ELECTRIC

Change Order Form

2020

Project Overview			
Reason for Change: Under in other EnergyNorth capital target allowed for additional spend.			
Project ID:	8840-2010	**Project Name:**	Leak Repairs
Change Order Name:	8840-2010	**Date Prepared:**	1/28/2021
Change Order #:	8840-2010 2020 Change order #3	**Financial Work Order (FWO):**[i]	
Project Sponsor:	Richard MacDonald	**Revised Start Date:**	1/1/2020
Project Lead:	Robert Mostone	**Revised End Date:**[ii]	12/31/2020
Prepared By:		**Change Type**[iii]	x In Scope ☐ Out of Scope
Project Contingency Available?	☒ Yes ☐ No	**If No is Selected, Please specify source of funds**[iv]	

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

Category	Original Project Value	Previous Approved Charges	Current Change Order Amount	Total
Internal Labor				
Materials				
Equipment				
Contractor/Subcontractor				
Burdens/Overheads				
AFUDC				
Total Project Cost	$1,000,000	$1,000,000	$59,770	**$2,059,770**

Updated Unlevered Internal Rate of Return:

The project blanket is used for required leak repairs. We are mandated by our state regulators to repair our leaks within specific time frames. We are working with an older distribution line particularly in Nashua and Manchester NH. Increase additional cost due to paving restorations. We repaired 430 leaks and 148 were charged to Capital.

Basis of Current Change Order Amount:

Click here to enter text.

Schedule Impacts
(As a result of the Change Order, where applicable, List the Impacts to schedule)

Baseline Schedule (BL)	New Forecast (NF)	Variance (BL – NF)

Liberty Utilities WATER | GAS | ELECTRIC

Change Order Form

2020

Approvals and Signatures[v]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			
Senior Manager: :	Up to $50,000			
Senior Director/Director:	Up to $250,000	Robert Mostone Director Gas	Robert Mostone Digitally signed by Robert Mostone Date: 2021.02.01 14:15:39 -05'00'	
State President / Senior VP / VP:	Up to $500,000	Richard MacDonald VP Operations	Richard MacDonald Digitally signed by Richard MacDonald Date: 2021.02.05 13:17:26 -05'00'	
Regional President:	Up to $3,000,000	James Sweeney East region VP		
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] The Financial Work Order Section captures the work order this change falls under when the job was initially set-up
[ii] The Revised project end date is dependent on changes in scope that may deviate the schedule from the original plan
[iii] The Change type for In scope or Out of scope changes fall within the following scenario:

- In Scope changes are deviations of scope from the original plan and approved budget that align to the original scope of the project but have revised pricing as a result of changes in pricing of labour, materials, and equipment
- Out of Scope changes are scope changes that were not originally planned for in the project baselines and approved budget. Examples of this type of change are related to changes in technology, missed deliverables, a change in the project design altering the scope of the project, etc.

iv In cases where the project no longer has contingency to cover project change orders, please specify any other sources of funds that would address the project variance (i.e. not executing another project, delaying scope of another project, etc)

[v] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report | 2020

Requesting Region or Group:	Liberty Utilities- NH-Gas Operations	**Date of Closeout (MM/DD/YY):**	03/09/2021
Project Name:	Leak Repairs 8840-2010		
Requesting Region:		**Sponsor** (Name)**:**	Richard MacDonald
Project Champion:	Robert Mostone	**Project ID**	
Project Status	☐In Service ☐Complete ☐ Closed		
Project Start Date:	1/1/2020	**Project Completion Date:**	12/31/2020
Requested Capital ($)	$1,000,000	**Expenditure Included in Approved Budget?**	X Yes ☐No

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
Robert Mostone	Project Lead		03/09/2021
Richard MacDonald	Project Sponsor	Richard G. MacDonald	3/10/2021
	Operations Manager		
	Accounting Manager		

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 ☒ No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes ☒ No ☐
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 ☒ No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes ☒ No ☐

Item	Question	Response
2.5	Do you agree the project should be closed? If no, please explain:	Yes ☒ No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	5/5
2.7	Scope	5/5
2.8	Cost (Budget)	5/5
2.9	Schedule	5/5

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 ☒ No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?		Yes ☒ No ☐
3.4	Identify the storage location for the following project documents items:		
Item	**Document**	**Location (e.g., Google Docs, Webspace)**	**Format**
3.4a	Business Case	See W Drive	☒ Electronic ☐ Manual
3.4b	If available, the Final Project Schedule		☒ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices	W Drive and with Accounts Payable	☒ Electronic ☐ Manual
3.4d	Status Reports	See accounting monthly reports	☒ Electronic ☐ Manual
3.4e	Risks and Issues Log	N/A	☐ Electronic ☐ Manual
3.4f	Final deliverable	See Wennsoft for project details and associated costs	☒ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team [ii]

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

Name	Role	Type (e.g., Contractor, Employee)
Robert Mostone	Project Manager	Employee

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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the 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 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
See Change Order 8840-2010	

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			

Project Close Out Report 2020

External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$1,000,000	**$2,059,770**	($1,059,770)

Reasons for Variance	Impact
Change order #1	$700,000
Change order #2	$300,000
Change order #3	$59,770

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)
See Wennsoft for job numbers based off project number

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project
[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Liberty Utilities

Capital Project Expenditure Form | 2020

Project Name:	Main Replacement LPP		
Financial Work Order (FWO):	8840-2011	**Project ID #:**	8840-2011
Requesting Region or Group:	New Hampshire	**Date of Request (MM/DD/YY):**	1/23/20
Project Sponsor:	Charles Rodrigues	**Project Start Date:**	1/1/20
Project Lead:	Brian Frost	**Project End Date:**	12/31/2020
Prepared by:	Peter Chivers	**Requested Capital ($)**	**$8,601,098.00**
Planned or Unplanned Projects:	☒ Planned ☐ Unplanned		
Project Type: (Click appropriate boxes)	☒ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported ☐ Discretionary		

Details of Request

Project description

The scope of work of this project is for prioritized replacement of cast iron and bare steel gas mains and services in the company's pipeline system. Approximately 17 construction jobs are planned for a proposed gas main replacement of 4.8 miles.

The gas main and service leak prone pipe (LPP) program replaces aging gas infrastructure before it becomes a pipeline safety related problem. To accomplish these safety improvements on an ongoing multi-year basis the company continually assesses asset condition and defects within its pipeline system. This year's program calls for prioritized replacement of cast iron and unprotected bare steel piping by executing approximately 17 construction jobs for a proposed gas main replacement of 4.8 miles.

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

No

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

This expenditure is for 17 jobs across the service territory. All jobs will need to be permitted. There might be some environmental impact on various jobs.

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?

This project will remove approximately 4.8 miles of cast iron and bare steel pipe from the ground. The cast iron and bare steel was installed anywhere between 1890s and 1950s.

Liberty Utilities Capital Project Expenditure Form 2020

What alternatives were evaluated and why were they rejected?
None were evaluated.

What are the risks and consequences of not approving this expenditure?
Not removing risky leak-prone assets from service

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.
All project will be executed in accordance with company procedures.

Are there other pertinent details that may affect the decision making process?

Complete the Financial Summary table only if:

- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year	2021	Was this Capital Project included in the current	☒ Yes ☐ No

Liberty Utilities Capital Project Expenditure Form 2020

		year's Board Approved Budget?	
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☒1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?	Standard Rate Case		
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:[i]	☐Fixed or Firm Price ☒Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	**$8,601,098.00**		

Approvals and Signatures[ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000	Andrew Bernier	Andrew Bernier Digitally signed by Andrew Bernier Date: 2020.01.24 13:36:46 -05'00'	Click here to enter a date.
Senior Manager:	Up to $50,000			Click here to enter a date.
Senior Director/Director:	Up to $250,000	Charles A. Rodrigues	Charles Rodrigues Digitally signed by Charles Rodrigues	Click here to enter a date.
Senior VP/VP:	Up to $500,000	RICHARD MACDONALD		2/31/2020
State President:	Up to $500,000	SUSAN FLECK		Click here to enter a date. 2/5/2020
Regional President:	Up to $3,000,000			Click here to enter a date.
Corporate – Sr. VP Operations:	Up to $5,000,000			Click here to enter a date.

Liberty Utilities Capital Project Expenditure Form | 2020

Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report 2020

Requesting Region or Group:	Liberty Utilities- NH-Gas Operations	**Date of Closeout (MM/DD/YY):**	3/22/2021
Project Name:	Main Replacement LPP-Restoration 8840-2011		
Requesting Region:		**Sponsor** (Name)**:**	Robert Mostone
Project Champion:	Brian Frost	**Project ID**	8840-2011
Project Status	X In Service ☐Complete ☐ Closed		
Project Start Date:		**Project Completion Date:**	
Requested Capital ($)	$8,601,098	**Expenditure Included in Approved Budget?**	X Yes ☐No

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
Brian Frost	Project Lead	Brian R. Frost Digitally signed by Brian R. Frost Date: 2021.03.22 14:45:54 -04'00'	3/22/2021
Robert Mostone	Project Sponsor	Andrew Bernier Digitally signed by Andrew Bernier Date: 2021.03.30 13:41:08 -04'00'	
	Operations Manager		
	Accounting Manager		

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 ☒ No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes ☒ No ☐
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 ☒ No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes ☒ No ☐

Item	Question	Response
2.5	Do you agree the project should be closed? If no, please explain:	Yes ☒ No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	5/5
2.7	Scope	5/5
2.8	Cost (Budget)	5/5
2.9	Schedule	5/5

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 ☒ No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?		Yes ☒ No ☐
3.4	Identify the storage location for the following project documents items:		
Item	**Document**	**Location (e.g., Google Docs, Webspace)**	**Format**
3.4a	Business Case	Operations Finance SharePoint.	☒ Electronic ☐ Manual
3.4b	If available, the Final Project Schedule	N/A	☐ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices	Monthly accounting reports.	☒ Electronic ☐ Manual
3.4d	Status Reports	Monthly budget meetings.	☒ Electronic ☐ Manual
3.4e	Risks and Issues Log	Monthly budget meetings.	☒ Electronic ☐ Manual
3.4f	Final deliverable	Wennsoft closed jobs.	☒ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team [ii]

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

Name	Role	Type (e.g., Contractor, Employee)
Gas Operations	Construct Team	Employee

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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the recommended improvements to correct a similar problem in the future.

Problem Statement	Problem Description	References	Recommendation
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	

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			

Project Close Out Report 2020

External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$7,193,378	**$8,601,098**	$1,407,720

Reasons for Variance	Impact
See project change order.	$
	$

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)
8840-2011

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project
[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Liberty Utilities

Capital Project Expenditure Form 2020

Project Name:	Main Replacement Fitting LPP		
Financial Work Order (FWO):		**Project ID #:**	8840-2013
Requesting Region or Group:	Energy North	**Date of Request (MM/DD/YY):**	3/23/2020
Project Sponsor:	Richard MacDonald	**Project Start Date:**	1/1/2020
Project Lead:	Robert Mostone	**Project End Date:**	12/31/2020
Prepared by:	Ryan Patnode	**Requested Capital ($)**	$740,501
Planned or Unplanned Projects:	☒ Planned ☐Unplanned		
Project Type: (Click appropriate boxes)	☐ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported ☒ Discretionary		

Details of Request

Project description

Main Replacement/Fitting Integrity Program will identify and replace meter installations associated with the LPP Main Replacement Program.

This program will provide for the replacement of metering equipment associated with the replacement of mains and services under the LPP Replacement Program.

Includes:

- Remediation of significant defects discovered as part of the LPP Program.
- Replacement of meters, services, and risers.

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

No

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

Licensing and Environmental Permitting as required.

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?

GUIDANCE: If yes, please detail the specific assets that will be removed: Removal per individual job

1. *Original Cost of Plant to be removed (if known):*
2. *What is the replacement cost of the plant being removed (if original cost not known)?*
3. *Original Work Order of Plant to be removed (if known):*
4. *Is the Plant being removed reusable?*

Liberty Utilities Capital Project Expenditure Form 2020

5. *What is the year of original installation of the plant being removed*

What alternatives were evaluated and why were they rejected?
Each main replacement job is assessed for viability and allowance in the financial budget. This assessment will determine if jobs need to be completed in the current year or can be delayed until outer years.

What are the risks and consequences of not approving this expenditure?
The project has direct connections to the main leak-prone pipe replacement. The main mitigate pipeline safety risk by replacing recognized aging infrastructure with leakage history before it becomes a safety risk. The fitting work on this project works in conjunction with this project.

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.
All standard safety procedures will be followed in project execution.

Are there other pertinent details that may affect the decision making process?
No

Liberty Utilities Capital Project Expenditure Form | 2020

Complete the Financial Summary table only if:
- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year	**2021**	**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☒1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?			
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:[i]	☐Fixed or Firm Price ☐Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$740,501		

Approvals and Signatures[ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			Click here to enter a date.
Senior Manager:	Up to $50,000			Click here to enter a date.
Senior Director/Director:	Up to $250,000	Robert Mostone Gas operations	Robert Mostone Digitally signed by Robert Mostone Date: 2020.03.26 11:51:08 -04'00'	Click here to enter a date.
Senior VP/VP:	Up to $500,000	Richard MacDonald VP operations	Rich MacDonald Digitally signed by Rich MacDonald Date: 2020.04.09 11:23:48 -04'00'	

Liberty Utilities Capital Project Expenditure Form 2020

State President:	Up to $500,000	Susan Fleck President, NH	Susan Fleck Digitally signed by Susan Fleck Date: 2020.04.10 09:11:17 -04'00'	Click here to enter a date.
Regional President:	Up to $3,000,000	James Sweeney President, East	4/28/20	Click here to enter a date.
Corporate – Sr. VP Operations:	Up to $5,000,000			Click here to enter a date.
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Liberty Utilities

Capital Project Business Case | 2020

NOTE: This form is required for planned Growth, Regulatory Supported, and Discretionary projects as well as combined blanket projects for Safety and Mandated with Growth, Regulatory Supported, and Discretionary Projects with a spend greater than $100,000 and all unplanned projects. All other Project types can utilize the Capital Expenditure Application Form.

Project Overview			
Project Name:	Main Replacement Fitting LPP	**Date Prepared:**	1/22/2020
Project ID#:	8840-2013	**Cost Estimate:**	740,501
Project Sponsor:	Richard MacDonald	**Project Start Date:**	1/1/2020
Project Lead:	Robert Mostone	**Project End Date:**	12/31/2020
Prepared By:	Ryan Patnode	**Planned or Unplanned Projects:**	☒ Planned ☐Unplanned
Project Type (click appropriate boxes):	☐ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported ☒ Discretionary		
Spending Rationale:	☐ Growth ☒ Improvement ☐ Replenishment		

Project Scope Statement
(Insert the scope of work, major deliverables, assumptions, and constraints)

Main Replacement/Fitting Integrity Program will identify and replace meter installations associated with the LPP Main Replacement Program.

Background
(Insert description of current operational arrangement, and brief history of project & asset)

This program will provide for the replacement of metering equipment associated with the replacement of mains and services under the LPP Replacement Program.

Includes:

- Remediation of significant defects discovered as part of the LPP Program.
- Replacement of meters, services, and risers.

Recommendation/Objective
(Insert the unique problem this project is looking to resolve)

This project mitigates pipeline safety risk by replacing recognized aging infrastructure with leakage history before it becomes a safety risk.

Alternatives/Options
(Describe all reasonably viable alternatives. Discuss the viability of each and provide reasons if rejected)

Each main replacement job is assessed for viability and allowance in the financial budget. This assessment will determine if jobs need to be completed in the current year or can be delayed until outer years

Liberty Utilities

Capital Project Business Case

2020

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

Next Anticipated Test Year	**2019**	**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No

Regulatory Lag (Click appropriate box) ☐Less than 6 Months ☐6-12 Months ☒1 to 3 years ☐Greater than 3 years

Category	Total Already Approved	2020	2021	Beyond 2021	Total
Internal Labor					
Materials					
Equipment					
Contractor/ Subcontractor					
AFUDC					
Total Project Cost		**740,501**			

Click here to enter text.

Unlevered Internal Rate of Return:

Basis of Estimate: *Estimated labor cost in correlation with .8840-2011 Main Replacement LPP*

For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:

Schedule
(List key milestone dates)

Key Milestone Description	Forecast Start Date	Forecast End Date
Construction Job Completion	4/1/2020	12/31/2020

Note: Approximately 21 construction jobs will be completed during the 2020 calendar year to accomplish this project. They will be completed both parallel and in series.

Risk Assessment
(Please describe the risk of not completing the project)

The risks and consequences of not completing this project would be that the company is giving up the opportunity to reduce high risk pipeline

Trade Finance
(Is there a possibility to apply trade finance products to this project? See Capital Planning for further clarification)

Liberty Utilities

Capital Project Business Case | 2020

Supporting Documentation (Reference drawings, condition assessment reports, vendor quotations, etc. Attach document or where possible include hyperlink to file located on shared server or SharePoint)
The detailed scoping spreadsheet for the 2020 LPP program is attached below. FY2020 Main Replacement Progra

Approvals and Signatures [i]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			
Senior Manager: :	Up to $50,000			
Senior Director/Director:	Up to $250,000	Robert Mostone Director, Operations	Robert Mostone Digitally signed by Robert Mostone Date: 2020.03.26 11:46:34 -04'00'	
Senior Vice President/ Vice President	Up to $500,000	Richard MacDonald Vice President, Operations	Rich MacDonald Digitally signed by Rich MacDonald Date: 2020.04.09 11:27:47 -04'00'	
State President:	Up to $500,000	Susan Fleck President, NH	Susan Fleck Digitally signed by Susan Fleck Date: 2020.04.10 09:08:08 -04'00'	
Regional President:	Up to $3,000,000	James Sweeney President, East Region		4/28/20
Corporate – Sr. VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			
Finance (East) – Vice President, Finance & Administration	All Requests	Peter Dawes VP, Finance & Administration		

[i] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report | 2020

Requesting Region or Group:	Liberty Utilities- NH-Gas Operations	**Date of Closeout (MM/DD/YY):**	03/31/21
Project Name:	Main Replacement Fitting LPP 8840-2013		
Requesting Region:		**Sponsor** (Name)**:**	Richard MacDonald
Project Champion:	Robert Mostone	**Project ID**	
Project Status	☐In Service ☐Complete ☐ Closed		
Project Start Date:		**Project Completion Date:**	
Requested Capital ($)	$740,501	**Expenditure Included in Approved Budget?**	X Yes ☐No

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
Robert Mostone	Project Lead		3/172021
Richard MacDonald	Project Sponsor	Richard G MacDonald	3/31/2021
	Operations Manager		
	Accounting Manager		

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 ☒ No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes ☒ No ☐
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 ☒ No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes ☒ No ☐

Item	Question	Response
2.5	Do you agree the project should be closed? If no, please explain:	Yes ☒ No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	5/5
2.7	Scope	5/5
2.8	Cost (Budget)	5/5
2.9	Schedule	5/5

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 ☒ No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?	Yes ☐ No ☒
3.4	Identify the storage location for the following project documents items:	

Item	Document	Location (e.g., Google Docs, Webspace)	Format
3.4a	Business Case	See W Drive	☒ Electronic ☐ Manual
3.4b	If available, the Final Project Schedule	N/A	☐ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices	W Drive and with Accounts Payable	☒ Electronic ☐ Manual
3.4d	Status Reports	See accounting monthly reports	☒ Electronic ☐ Manual
3.4e	Risks and Issues Log	N/A	☐ Electronic ☐ Manual
3.4f	Final deliverable	See Wennsoft for project details and associated costs	☒ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team [ii]

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

Name	Role	Type (e.g., Contractor, Employee)
Robert Mostone	Project Manager	Employee

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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the 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 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
No Issues to Report	

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			

Project Close Out Report 2020

External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$740,501	**$736,511**	$3,950

Reasons for Variance	Impact

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)
Blanket Project See Wennsoft

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project
[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Capital Project Expenditure Form 2020

Project Name:	K Meter Replacement Program		
Financial Work Order (FWO):	8840-2014	**Project ID #:**	8840-2014
Requesting Region or Group:	New Hampshire	**Date of Request (MM/DD/YY):**	1/23/20
Project Sponsor:	Charles Rodrigues	**Project Start Date:**	1/1/20
Project Lead:	Peter Chivers	**Project End Date:**	12/31/2020
Prepared by:	Peter Chivers	**Requested Capital ($)**	**$430,000**
Planned or Unplanned Projects:	☒ Planned ☐Unplanned		
Project Type: (Click appropriate boxes)	☒ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported ☐ Discretionary		

Details of Request

Project description
This project aims to remove K meters from the system. K Meters are 60 PSI meter sets installed indoors and have more risk than an outdoor meter set. At around $5000 per meter, this project should remove 86 of the 1500 K meters left in the system.

`

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.
No

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?
Each job needs to be permitted. The only environmental impact might be if asbestos is encountered. There are no new resulting performance obligations.

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?
This project will move approximately 86 meters indoors to outside.

What alternatives were evaluated and why were they rejected?
None were evaluated.

What are the risks and consequences of not approving this expenditure?
Not removing risky meter sets from the system.

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.
All project will be executed in accordance with company procedures.

Capital Project Expenditure Form 2020

Are there other pertinent details that may affect the decision making process?
No.

Complete the Financial Summary table only if:
- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year		**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☐1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?			
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:[i]	☐Fixed or Firm Price ☒Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)	$430,000		
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$430,000		

Approvals and Signatures[ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			Click here to enter a date.
Senior Manager:	Up to $50,000		Andrew Bernier Digitally signed by Andrew Bernier Date: 2020.03.23 13:39:05 -04'00'	Click here to enter a date.

Liberty Utilities WATER · GAS · ELECTRIC

Capital Project Expenditure Form 2020

Senior Director/Director:	Up to $250,000	Charles Rodrigues Digitally signed by Charles Rodrigues Date: 2020.03.23 16:23:10 -04'00'	Peter Chivers Digitally signed by Peter Chivers Date: 2020.03.18 14:12:36 -04'00'	Click here to enter a date.
Senior VP/VP:	Up to $500,000		Rich MacDonald Digitally signed by Rich MacDonald Date: 2020.03.26 10:36:31 -04'00'	
State President:	Up to $500,000		Susan Fleck Digitally signed by Susan Fleck Date: 2020.04.09 09:12:10 -04'00'	Click here to enter a date.
Regional President:	Up to $3,000,000			Click here to enter a date.
Corporate – Sr. VP Operations:	Up to $5,000,000			Click here to enter a date.
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Liberty Utilities WATER · GAS · ELECTRIC

Capital Project Business Case

2020

NOTE: This form is required for planned Growth, Regulatory Supported, and Discretionary projects as well as combined blanket projects for Safety and Mandated with Growth, Regulatory Supported, and Discretionary Projects with a spend greater than $100,000 and all unplanned projects. All other Project types can utilize the Capital Expenditure Application Form.

Project Overview			
Project Name:	K Meter Replacement Program	**Date Prepared:**	3-16-20
Project ID#:	8840-2014	**Cost Estimate:**	$430,000
Project Sponsor:	Charles Rodrigues	**Project Start Date:**	1/1/2020
Project Lead:	Peter Chivers	**Project End Date:**	12/31/2020
Prepared By:	Peter Chivers	**Planned or Unplanned Projects:**	X Planned ☐Unplanned
Project Type (click appropriate boxes)**:**	☒ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported Discretionary		
Spending Rationale:	☐ Growth ☐ Improvement ☐ Replenishment		

Project Scope Statement
(Insert the scope of work, major deliverables, assumptions, and constraints)

This project aims to remove K meters from the system. K Meters are 60# meter sets installed indoors and have more risk than an outdoor meter set. At $5000 per meter, this project should remove 86 of the 1500 K meters left in the system.

Background
(Insert description of current operational arrangement, and brief history of project & asset)

K meters are assets identified to have increased risk and should be eliminated from the system whenever possible by relocating the meters outside.

Recommendation/Objective
(Insert the unique problem this project is looking to resolve)

This project will reduce the inventory of K Meters.

Alternatives/Options
(Describe all reasonably viable alternatives. Discuss the viability of each and provide reasons if rejected)

None.

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

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Capital Project Business Case 2020

Next Anticipated Test Year	Click to select a date	**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No

Regulatory Lag
(Click appropriate box) ☐Less than 6 Months ☐6-12 Months ☐1 to 3 years ☐Greater than 3 years

Category	Total Already Approved	2020	2021	Beyond 2021	Total
Internal Labor					
Materials					
Equipment					
Contractor/ Subcontractor		$430,000			
AFUDC					
Total Project Cost		**$430,000**			

Unlevered Internal Rate of Return:

Basis of Estimate: Historical amounts.

For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:

Schedule
(List key milestone dates)

Key Milestone Description	Forecast Start Date	Forecast End Date

Risk Assessment
(Please describe the risk of not completing the project)

Compliance risk.

Trade Finance
(Is there a possibility to apply trade finance products to this project? See Capital Planning for further clarification)

No.

Supporting Documentation
(Reference drawings, condition assessment reports, vendor quotations, etc. Attach document or where possible include hyperlink to file located on shared server or SharePoint)

Liberty Utilities WATER · GAS · ELECTRIC

Capital Project Business Case

2020

None.

Approvals and Signatures[i]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000	Peter Chivers	Peter Chivers Digitally signed by Peter Chivers Date: 2020.03.18 14:13:51 -04'00'	
Senior Manager: :	Up to $50,000	Andrew Bernier	Andrew Bernier Digitally signed by Andrew Bernier Date: 2020.03.23 13:27:41 -04'00'	
Senior Director/Director:	Up to $250,000	Charles Rodrigues Director, Engineering	Charles Rodrigues Digitally signed by Charles Rodrigues Date: 2020.03.23 15:53:06 -04'00'	
Senior Vice President/ Vice President	Up to $500,000		Rich MacDonald Digitally signed by Rich MacDonald Date: 2020.03.26 10:33:29 -04'00'	
State President:	Up to $500,000		Susan Fleck Digitally signed by Susan Fleck Date: 2020.04.09 09:10:49 -04'00'	
Regional President:	Up to $3,000,000			
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report 2020

Requesting Region or Group:	Liberty Utilities-NH-Gas Operations	**Date of Closeout (MM/DD/YY):**	3/31/21
Project Name:	K Meter Replacement Program 8840-2014		
Requesting Region:	East	**Sponsor** (Name):	Andrew Bernier
Project Champion:	Peter Chivers	**Project ID**	8840-2014
Project Status	☐In Service ☐Complete X Closed		
Project Start Date:	1/1/20	**Project Completion Date:**	12/31/20
Requested Capital ($)	$430,000	**Expenditure Included in Approved Budget?**	X Yes ☐No

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
Peter Chivers	Project Lead	Peter Chivers Digitally signed by Peter Chivers Date: 2021.03.31 15:38:10 -04'00'	
Andrew Bernier	Project Sponsor	Andrew Bernier Digitally signed by Andrew Bernier Date: 2021.04.01 07:12:00 -04'00'	
	Operations Manager		
	Accounting Manager		

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 ☒ No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes ☒ No ☐
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 ☒ No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes ☒ No ☐

Item	Question	Response
2.5	Do you agree the project should be closed? If no, please explain:	Yes ☒ No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	5/5
2.7	Scope	5/5
2.8	Cost (Budget)	5/5
2.9	Schedule	5/5

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 ☒ No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?		Yes ☒ No ☐
3.4	Identify the storage location for the following project documents items:		
Item	**Document**	**Location (e.g., Google Docs, Webspace)**	**Format**
3.4a	Business Case	W drive	☒ Electronic ☐ Manual
3.4b	If available, the Final Project Schedule		☐ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices	W drive and AP	☒ Electronic ☐ Manual
3.4d	Status Reports		☐ Electronic ☐ Manual
3.4e	Risks and Issues Log		☐ Electronic ☐ Manual
3.4f	Final deliverable	W drive, work management system, new services	☒ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team[ii]

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

Name	Role	Type (e.g., Contractor, Employee)
Various operations dept personnel		

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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the recommended improvements to correct a similar problem in the future.

Problem Statement	Problem Description	References	Recommendation

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

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			

External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$430,000	**$275,342**	$154,658

Reasons for Variance	Impact

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)

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project

[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

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Change Order Form

2020

Project Overview			
Reason for Change: (Please Provide a brief explanation for the cause of the change order)			
Project ID:	8840-2015	**Project Name:**	Aldyl-A Replacement Program
Change Order Name:	Carryover	**Date Prepared:**	8/3/2020
Change Order #:	1	**Financial Work Order (FWO):**[i]	
Project Sponsor:		**Revised Start Date:**	
Project Lead:	Brian Frost	**Revised End Date:**[ii]	
Prepared By:	Brian Frost	**Change Type**[iii]	X In Scope ☐ Out of Scope
Project Contingency Available?	☐ Yes ☐ No	**If No is Selected, Please specify source of funds**[iv]	

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

Category	Original Project Value	Previous Approved Charges	Current Change Order Amount	Total
Internal Labor				
Materials				
Equipment				
Contractor/Subcontractor				
Burdens/Overheads				
AFUDC				
Total Project Cost	**0**	**$80,445**	**$80,445**	**$80,445**

Updated Unlevered Internal Rate of Return:

Basis of Current Change Order Amount: *Provide brief explanation on basis of the requested amount (i.e. revised contract amount, estimate based on revised engineering design, etc)*
Carryover billing related to city repaving and degradation fees.

Schedule Impacts
(As a result of the Change Order, where applicable, List the Impacts to schedule)

Baseline Schedule (BL)	New Forecast (NF)	Variance (BL – NF)

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Change Order Form

2020

Approvals and Signatures[v]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000	Brian Frost	Brian R. Frost	8/3/2020
Senior Manager: :	Up to $50,000	Andy Bernier	Andrew Bernier Digitally signed by Andrew Bernier Date: 2020.08.04 09:33:50 -04'00'	8/4/2020
Senior Director/Director:	Up to $250,000	Charles Rodrigues	Charles Rodrigues Digitally signed by Charles Rodrigues Date: 2020.08.12 20:59:21 -04'00'	
State President / Senior VP / VP:	Up to $500,000			
Regional President:	Up to $3,000,000			
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] The Financial Work Order Section captures the work order this change falls under when the job was initially set-up
[ii] The Revised project end date is dependent on changes in scope that may deviate the schedule from the original plan
[iii] The Change type for In scope or Out of scope changes fall within the following scenario:

- In Scope changes are deviations of scope from the original plan and approved budget that align to the original scope of the project but have revised pricing as a result of changes in pricing of labour, materials, and equipment
- Out of Scope changes are scope changes that were not originally planned for in the project baselines and approved budget. Examples of this type of change are related to changes in technology, missed deliverables, a change in the project design altering the scope of the project, etc.

iv In cases where the project no longer has contingency to cover project change orders, please specify any other sources of funds that would address the project variance (i.e. not executing another project, delaying scope of another project, etc)

[v] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report 2020

Requesting Region or Group:	Liberty Utilities- NH-Gas Operations	**Date of Closeout (MM/DD/YY):**	03/22/2021
Project Name:	Aldyl-A Replacement Program 8840-2015		
Requesting Region:	East	**Sponsor** (Name)**:**	Andrew Bernier
Project Champion:	Brian Frost	**Project ID**	8840-2015
Project Status	X In Service ☐Complete ☐ Closed		
Project Start Date:	1/1/2020	**Project Completion Date:**	12/31/2020
Requested Capital ($)	$500,000	**Expenditure Included in Approved Budget?**	X Yes ☐No

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
Brian Frost	Project Lead	Brian R. Frost Digitally signed by Brian R. Frost Date: 2021.03.22 14:46:57 -04'00'	3/22/2021
Andrew Bernier	Project Sponsor	Andrew Bernier Digitally signed by Andrew Bernier Date: 2021.03.30 13:42:20 -04'00'	
	Operations Manager		
	Accounting Manager		

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 ☒ No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes ☒ No ☐
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 ☒ No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes ☒ No ☐

Item	Question	Response
2.5	Do you agree the project should be closed? If no, please explain:	Yes ☒ No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	5/5
2.7	Scope	5/5
2.8	Cost (Budget)	5/5
2.9	Schedule	5/5

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 ☒ No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?		Yes ☒ No ☐
3.4	Identify the storage location for the following project documents items:		
Item	**Document**	**Location (e.g., Google Docs, Webspace)**	**Format**
3.4a	Business Case	Operations Finance SharePoint.	☒ Electronic ☐ Manual
3.4b	If available, the Final Project Schedule	N/A	☐ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices	Accounting reports.	☒ Electronic ☐ Manual
3.4d	Status Reports	Monthly budget meetings.	☒ Electronic ☐ Manual
3.4e	Risks and Issues Log	Monthly budget meetings.	☒ Electronic ☐ Manual
3.4f	Final deliverable	Wennsoft completed jobs.	☒ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team [ii]

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

Name	Role	Type (e.g., Contractor, Employee)
Gas Operations	Construct Team	Employee

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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the recommended improvements to correct a similar problem in the future.

Problem Statement	Problem Description	References	Recommendation
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	

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			

External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$0	**$80,424**	($80,424)

Reasons for Variance	Impact
Change order #1	

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)
8840-2015

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project
[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Capital Project Expenditure Form 2020

Project Name:	Main Replacement Reactive		
Financial Work Order (FWO):		**Project ID #:**	8840-2016
Requesting Region or Group:		**Date of Request (MM/DD/YY):**	4/30/2020
Project Sponsor:	Charles Rodrigues	**Project Start Date:**	1/1/2020
Project Lead:	Brian Frost	**Project End Date:**	12/31/2020
Prepared by:	Ryan Patnode	**Requested Capital ($)**	$500,000
Planned or Unplanned Projects:	☒ Planned ☐Unplanned		
Project Type: (Click appropriate boxes)	☐ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported ☒ Discretionary		

Details of Request

Project description

This Main Replacement Reactive Blanket provides for the replacement of gas mains and services during urgent or emergency situations which fall outside the normal scope of integrity, reinforcement, reliability and public works Blankets.

`

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

No

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

Per individual job

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?

GUIDANCE: If yes, please detail the specific assets that will be removed: TBD on individual jobs

1. *Original Cost of Plant to be removed (if known):*
2. *What is the replacement cost of the plant being removed (if original cost not known)?*
3. *Original Work Order of Plant to be removed (if known):*
4. *Is the Plant being removed reusable?*
5. *What is the year of original installation of the plant being removed*

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Capital Project Expenditure Form 2020

What alternatives were evaluated and why were they rejected?
NA

What are the risks and consequences of not approving this expenditure?
Potential safety issues from not replacement of gas mains and services during urgent or emergency situations which fall outside the normal scope of integrity, reinforcement, reliability and public works Blankets

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.
All standard process will be followed in execution of this project.

Are there other pertinent details that may affect the decision making process?
NA

Capital Project Expenditure Form 2020

Complete the Financial Summary table only if:
- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year		**Was this Capital Project included in the current year's Board Approved Budget?**	☐ Yes ☐ No
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☐1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?			
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:[i]	☐Fixed or Firm Price ☐Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$500,000		

Approvals and Signatures[ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000	Brian Frost Planning Engineer - Gas		Click here to enter a date.
Senior Manager:	Up to $50,000	Andrew Bernier Manager, Gas Engineering	Andrew Bernier Digitally signed by Andrew Bernier Date: 2020.04.30 09:53:42 -04'00'	Click here to enter a date.
Senior Director/Director:	Up to $250,000	Charles Rodrigues	Charles Rodrigues Digitally signed by Charles Rodrigues Date: 2020.04.30 11:10:53 -04'00'	Click here to enter a date.

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Capital Project Expenditure Form 2020

		Director, Engineering		
Senior VP/VP:	Up to $500,000	Richard MacDonald Vice President, Operations	Rich MacDonald Digitally signed by Rich MacDonald Date: 2020.04.30 12:26:22 -04'00'	
State President:	Up to $500,000	Susan Fleck New Hampshire President	Susan Fleck Digitally signed by Susan Fleck Date: 2020.04.30 13:05:30 -04'00'	Click here to enter a date.
Regional President:	Up to $3,000,000			Click here to enter a date.
Corporate – Sr. VP Operations:	Up to $5,000,000			Click here to enter a date.
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

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Capital Project Business Case 2018

NOTE: This form is required for planned Growth, Regulatory Supported, and Discretionary projects as well as combined blanket projects for Safety and Mandated with Growth, Regulatory Supported, and Discretionary Projects with a spend greater than $100,000 and all unplanned projects. All other Project types can utilize the Capital Expenditure Application Form.

Project Overview			
Project Name:	Main Replacement Reactive	**Date Prepared:**	1/9/2020
Project ID#:	8840-2016	**Cost Estimate:**	$500,000
Project Sponsor:	Charles Rodrigues	**Project Start Date:**	1/1/20120
Project Lead:	Brian Frost	**Project End Date:**	12/31/2020
Prepared By:	Andrew Bernier	**Planned or Unplanned Projects:**	☒ Planned ☐Unplanned
Project Type (click appropriate boxes)**:**	☐ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported ☒ Discretionary		
Spending Rationale:	☐ Growth ☐ Improvement ☒ Replenishment		

Project Scope Statement
(Insert the scope of work, major deliverables, assumptions, and constraints)

This Main Replacement Reactive Blanket provides for the replacement of gas mains and services during urgent or emergency situations which fall outside the normal scope of integrity, reinforcement, reliability and public works Blankets.

Background
(Insert description of current operational arrangement, and brief history of project & asset)

This Main Replacement Reactive Blanket provides for the replacement of gas mains and services during urgent or emergency situations which fall outside the normal scope of integrity, reinforcement, reliability and public works Blankets. Situations arise where a field decision may be required to replace a segment of pipe or service. It also includes replacing assets that normally would be repaired under maintenance, but upon evaluation and inspection are deemed more appropriate to replace in a manner which satisfies criteria for capitalization

Recommendation/Objective
(Insert the unique problem this project is looking to resolve)

Replace gas main and services as requested by Gas Operations that fall within the project scope.

Alternatives/Options
(Describe all reasonably viable alternatives. Discuss the viability of each and provide reasons if rejected)

None

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

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Capital Project Business Case 2018

Next Anticipated Test Year	**2021**	**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No

Regulatory Lag (Click appropriate box) ☐Less than 6 Months ☐6-12 Months ☒1 to 3 years ☐Greater than 3 years

Category	Total Already Approved	2020	2021	Beyond 2021	Total
Internal Labor					
Materials					
Equipment					
Contractor/ Subcontractor		$500,000			$500,000
AFUDC					
Total Project Cost		**$500,000**			**$500,000**

Unlevered Internal Rate of Return: Click here to enter text.

Basis of Estimate: **This Blanket project is based on historical spending trends and anticipated a year-ahead activity in this investment category.**

For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:

Schedule
(List key milestone dates)

Key Milestone Description	Forecast Start Date	Forecast End Date

Risk Assessment
(Please describe the risk of not completing the project)

None

Trade Finance
(Is there a possibility to apply trade finance products to this project? See Capital Planning for further clarification)

Supporting Documentation
(Reference drawings, condition assessment reports, vendor quotations, etc. Attach document or where possible include hyperlink to file located on shared server or SharePoint)

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Capital Project Business Case 2018

Approvals and Signatures [i]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000	Brian Frost Planning Engineer - Gas		
Senior Manager: :	Up to $50,000	Andrew Bernier Manager, Gas Engineering	Andrew Bernier Digitally signed by Andrew Bernier Date: 2020.03.23 13:28:31 -04'00'	
Senior Director/Director:	Up to $250,000	Charles Rodrigues Director, Engineering	Charles Rodrigues Digitally signed by Charles Rodrigues Date: 2020.03.23 15:51:33 -04'00'	
Senior Vice President/ Vice President	Up to $500,000	Richard MacDonald Vice President, Operations	Rich MacDonald Digitally signed by Rich MacDonald Date: 2020.03.26 10:34:49 -04'00'	
State President:	Up to $500,000		Susan Fleck Digitally signed by Susan Fleck Date: 2020.04.09 09:14:33 -04'00'	
Regional President:	Up to $3,000,000			
Corporate – Sr. VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			
Finance (East) – Vice President, Finance & Administration	All Requests	Peter Dawes VP, Finance & Administration		

[i] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

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Change Order Form

2020

Project Overview			
Reason for Change:			
Project ID:	8840-2016	**Project Name:**	Main Replacement Reactive
Change Order Name:	8840-2016	**Date Prepared:**	2/4/2021
Change Order #:	8840-2016	**Financial Work Order (FWO):**[i]	
Project Sponsor:	Charles Rodrigues	**Revised Start Date:**	1/1/2020
Project Lead:	Brian Frost	**Revised End Date:**[ii]	12/31/2020
Prepared By:		**Change Type**[iii]	x In Scope ☐ Out of Scope
Project Contingency Available?	☒ Yes ☐ No	**If No is Selected, Please specify source of funds**[iv]	

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

Category	Original Project Value	Previous Approved Charges	Current Change Order Amount	Total
Internal Labor				
Materials				
Equipment				
Contractor/Subcontractor				
Burdens/Overheads				
AFUDC				
Total Project Cost	$500,000		$45,410	**$545,410**

Updated Unlevered Internal Rate of Return:

Costs higher on Amherst St due to assigning work to outside contractor and burden rate approx. 50% higher than usual due to being constructed in December.
Liberty St Concord estimate did not include NDE weld inspection costs incurred.

Basis of Current Change Order Amount:

Click here to enter text.

Schedule Impacts
(As a result of the Change Order, where applicable, List the Impacts to schedule)

Baseline Schedule (BL)	New Forecast (NF)	Variance (BL – NF)

Liberty Utilities WATER · GAS · ELECTRIC

Change Order Form

2020

Approvals and Signatures[v]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000	Brian Frost Gas Engineering	Brian R. Frost Digitally signed by Brian R. Frost Date: 2021.03.08 12:51:09 -05'00'	3/8/2021
Senior Manager: :	Up to $50,000			
Senior Director/Director:	Up to $250,000	Charles Rodrigues Engineering Director		
State President / Senior VP / VP:	Up to $500,000	Richard MacDonald VP Operations	Richard MacDonald Digitally signed by Richard MacDonald Date: 2021.03.10 08:40:40 -05'00'	
Regional President:	Up to $3,000,000	James Sweeney East region VP		
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] The Financial Work Order Section captures the work order this change falls under when the job was initially set-up
[ii] The Revised project end date is dependent on changes in scope that may deviate the schedule from the original plan
[iii] The Change type for In scope or Out of scope changes fall within the following scenario:

- In Scope changes are deviations of scope from the original plan and approved budget that align to the original scope of the project but have revised pricing as a result of changes in pricing of labour, materials, and equipment
- Out of Scope changes are scope changes that were not originally planned for in the project baselines and approved budget. Examples of this type of change are related to changes in technology, missed deliverables, a change in the project design altering the scope of the project, etc.

iv In cases where the project no longer has contingency to cover project change orders, please specify any other sources of funds that would address the project variance (i.e. not executing another project, delaying scope of another project, etc)

[v] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report 2020

Requesting Region or Group:	Liberty Utilities- NH-Gas Operations	**Date of Closeout (MM/DD/YY):**	3/22/2021
Project Name:	Main Replacement Reactive 8840-2016		
Requesting Region:	East	**Sponsor** (Name)**:**	Charles Rodrigues
Project Champion:	Brian Frost	**Project ID**	8840-2016
Project Status	X In Service ☐Complete ☐ Closed		
Project Start Date:	1/1/2020	**Project Completion Date:**	12/31/2020
Requested Capital ($)	$500,000	**Expenditure Included in Approved Budget?**	X Yes ☐No

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
Brian Frost	Project Lead	Brian R. Frost Digitally signed by Brian R. Frost Date: 2021.03.22 14:45:17 -04'00'	3/22/2021
Charles Rodrigues	Project Sponsor	Andrew Bernier Digitally signed by Andrew Bernier Date: 2021.03.30 13:43:21 -04'00'	
	Operations Manager		
	Accounting Manager		

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 ☒ No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes ☒ No ☐
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 ☒ No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes ☒ No ☐

Item	Question	Response
2.5	Do you agree the project should be closed? If no, please explain:	Yes ☒ No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	5/5
2.7	Scope	5/5
2.8	Cost (Budget)	5/5
2.9	Schedule	5/5

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 ☒ No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?		Yes ☒ No ☐
3.4	Identify the storage location for the following project documents items:		
Item	**Document**	**Location (e.g., Google Docs, Webspace)**	**Format**
3.4a	Business Case	Operations Finance SharePoint.	☒ Electronic ☐ Manual
3.4b	If available, the Final Project Schedule	N/A	☐ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices	Accounting reports.	☒ Electronic ☐ Manual
3.4d	Status Reports	Monthly budget meetings.	☒ Electronic ☐ Manual
3.4e	Risks and Issues Log	Monthly budget meetings.	☒ Electronic ☐ Manual
3.4f	Final deliverable	Wennsoft completed jobs.	☒ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team [ii]

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

Name	Role	Type (e.g., Contractor, Employee)
Gas Operations	Construct Team	Employee

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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the recommended improvements to correct a similar problem in the future.

Problem Statement	Problem Description	References	Recommendation
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	

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			

Project Close Out Report 2020

External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$500,000	$545,410	($45,410)

Reasons for Variance	Impact
Change order #1	$45,410

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)
8840-2016

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project
[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Capital Project Expenditure Form 2020

Project Name:	Purchase Misc Capital Equipment & Tools		
Financial Work Order (FWO):		**Project ID #:**	8840-2018
Requesting Region or Group:	Energy North	**Date of Request (MM/DD/YY):**	3/23/2020
Project Sponsor:	Richard MacDonald	**Project Start Date:**	1/1/2020
Project Lead:	Robert Mostone	**Project End Date:**	12/31/2020
Prepared by:	Ryan Patnode	**Requested Capital ($)**	$280,000
Planned or Unplanned Projects:	☒ Planned ☐Unplanned		
Project Type: (Click appropriate boxes)	☐ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported ☒ Discretionary		

Details of Request

Project description

Equipment and tools will be purchased under this project for Miscellaneous Capital for non-infrastructure projects. The gas operations department identifies individual equipment and tools needs. From these needs, designated purchases are approved and capitalized following the company's policies.

`

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

No

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

NA

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?

GUIDANCE: If yes, please detail the specific assets that will be removed: Yes, dependent on individual purchase

1. *Original Cost of Plant to be removed (if known):*
2. *What is the replacement cost of the plant being removed (if original cost not known)?*
3. *Original Work Order of Plant to be removed (if known):*
4. *Is the Plant being removed reusable?*
5. *What is the year of original installation of the plant being removed*

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Capital Project Expenditure Form 2020

What alternatives were evaluated and why were they rejected?
Purchases are evaluated on need, financial impact and/or ability to continue extent existing equipment. A purchase will be rejected based on these factors.

What are the risks and consequences of not approving this expenditure?
Potential safety risk to employees operating aging tools/equipment. Or not having adequate equipment to work safely.

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.
All standard safety procedures will be followed in use or equipment and tools

Are there other pertinent details that may affect the decision making process?
No

Capital Project Expenditure Form 2020

Complete the Financial Summary table only if:
- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year	**2021**	**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☐1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?			
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:[i]	☐Fixed or Firm Price ☐Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$280,000		

Approvals and Signatures[ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			Click here to enter a date.
Senior Manager:	Up to $50,000			Click here to enter a date.
Senior Director/Director:	Up to $250,000	Robert Mostone Gas operations	Robert Mostone Digitally signed by Robert Mostone Date: 2020.03.27 09:42:24 -04'00'	Click here to enter a date.
Senior VP/VP:	Up to $500,000	Richard MacDonald VP operations	Rich MacDonald Digitally signed by Rich MacDonald Date: 2020.04.09 11:29:24 -04'00'	

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Capital Project Expenditure Form | 2020

State President:	Up to $500,000	Susan Fleck President, NH		Click here to enter a date.
Regional President:	Up to $3,000,000			Click here to enter a date.
Corporate – Sr. VP Operations:	Up to $5,000,000			Click here to enter a date.
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

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Capital Project Business Case | 2020

NOTE: This form is required for planned Growth, Regulatory Supported, and Discretionary projects as well as combined blanket projects for Safety and Mandated with Growth, Regulatory Supported, and Discretionary Projects with a spend greater than $100,000 and all unplanned projects. All other Project types can utilize the Capital Expenditure Application Form.

Project Overview			
Project Name:	Purchase Misc Capital Equipment & Tools	**Date Prepared:**	1/22/2020
Project ID#:	8840-2018	**Cost Estimate:**	280,000
Project Sponsor:	Richard MacDonald	**Project Start Date:**	1/1/2020
Project Lead:	Robert Mostone	**Project End Date:**	12/31/2020
Prepared By:	Ryan Patnode	**Planned or Unplanned Projects:**	☒ Planned ☐Unplanned
Project Type (click appropriate boxes)**:**	☐ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported ☒ Discretionary		
Spending Rationale:	☐ Growth ☐ Improvement ☒ Replenishment		

Project Scope Statement
(Insert the scope of work, major deliverables, assumptions, and constraints)

Equipment and tools will be purchased under blanket from Miscellaneous Capital for non-infrastructure projects.

Background
(Insert description of current operational arrangement, and brief history of project & asset)

Equipment and tools will be purchased under this project for Miscellaneous Capital for non-infrastructure projects.. The gas operations department identifies individual equipment and tools needs. From these needs, designated purchases are approved and capitalized following the company's policies.

Recommendation/Objective
(Insert the unique problem this project is looking to resolve)

The project funds standard replenishment and improvement of equipment, tools. These purchases ultimately support a safe and productive working environment.

Alternatives/Options
(Describe all reasonably viable alternatives. Discuss the viability of each and provide reasons if rejected)

Purchases are evaluated on need, financial impact and/or ability to continue extent existing equipment. A purchase will be rejected based on these factors.

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

Liberty Utilities WATER · GAS · ELECTRIC

Capital Project Business Case 2020

Next Anticipated Test Year	**2021**	**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No

Regulatory Lag (Click appropriate box) ☐Less than 6 Months ☐6-12 Months ☒1 to 3 years ☐Greater than 3 years

Category	Total Already Approved	2020	2021	Beyond 2021	Total
Internal Labor					
Materials					
Equipment					
Contractor/ Subcontractor					
AFUDC					
Total Project Cost		280,000			

Click here to enter text.

Unlevered Internal Rate of Return:

Basis of Estimate: *Estimated based on historical spend*

For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:

Schedule
(List key milestone dates)

Key Milestone Description	Forecast Start Date	Forecast End Date

Risk Assessment
(Please describe the risk of not completing the project)

Potential safety risk to employees operating aging tools/equipment. Or not having adequate equipment to work safely.

Trade Finance
(Is there a possibility to apply trade finance products to this project? See Capital Planning for further clarification)

No

Supporting Documentation
(Reference drawings, condition assessment reports, vendor quotations, etc. Attach document or where possible include hyperlink to file located on shared server or SharePoint)

Liberty Utilities WATER · GAS · ELECTRIC

Capital Project Business Case 2020

Approvals and Signatures [i]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			
Senior Manager: :	Up to $50,000			
Senior Director/Director:	Up to $250,000	Robert Mostone Director, Operations	Robert Mostone Digitally signed by Robert Mostone Date: 2020.03.27 09:43:47 -04'00'	
Senior Vice President/ Vice President	Up to $500,000	Richard MacDonald Vice President, Operations	Rich MacDonald Digitally signed by Rich MacDonald Date: 2020.04.09 11:28:33 -04'00'	
State President:	Up to $500,000	Susan Fleck President, NH		
Regional President:	Up to $3,000,000	James Sweeney President, East Region		
Corporate – Sr. VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			
Finance (East) – Vice President, Finance & Administration	All Requests	Peter Dawes VP, Finance & Administration		

[i] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Liberty Utilities WATER · GAS · ELECTRIC

Change Order Form

2020

Project Overview			
Reason for Change:			
Project ID:	8840-2018	**Project Name:**	Purchase Misc Capital Equipment & Tools
Change Order Name:	8840-2018	**Date Prepared:**	3/8/2021
Change Order #:	8840-2018 #1	**Financial Work Order (FWO):**[i]	
Project Sponsor:	Richard MacDonald	**Revised Start Date:**	1/1/2020
Project Lead:	Robert Mostone	**Revised End Date:**[ii]	12/31/2020
Prepared By:	Ryan Patnode	**Change Type**[iii]	x In Scope ☐ Out of Scope
Project Contingency Available?	☒ Yes ☐ No	**If No is Selected, Please specify source of funds**[iv]	8840-2014 K meters

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

Category	Original Project Value	Previous Approved Charges	Current Change Order Amount	Total
Internal Labor				
Materials				
Equipment				
Contractor/Subcontractor				
Burdens/Overheads				
AFUDC				
Total Project Cost	$280,000		$143,950	**$423,950**

Updated Unlevered Internal Rate of Return:

Basis of Current Change Order Amount: Changes due to purchasing new GPS Antenna Receiver Combo units 20-Waypoint Trimble R2 as older units are out dated and no longer supported. The GPS units are used for mapping out our distribution system. We also needed to purchase 15- Eastcom Radio detection RD7100DL Transmitters for purpose of marking out our system this is replacing older units that are not supported for repairs.
Click here to enter text.

Schedule Impacts
(As a result of the Change Order, where applicable, List the Impacts to schedule)

Baseline Schedule (BL)	New Forecast (NF)	Variance (BL – NF)

Liberty Utilities WATER · GAS · ELECTRIC

Change Order Form

2020

Approvals and Signatures[v]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			
Senior Manager: :	Up to $50,000			
Senior Director/Director:	Up to $250,000	Robert Mostone Director Gas		March 9, 2021
State President / Senior VP / VP:	Up to $500,000	Richard MacDonald VP Operations	Richard MacDonald Digitally signed by Richard MacDonald Date: 2021.03.10 08:38:43 -05'00'	
Regional President:	Up to $3,000,000	James Sweeney East region VP		
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] The Financial Work Order Section captures the work order this change falls under when the job was initially set-up
[ii] The Revised project end date is dependent on changes in scope that may deviate the schedule from the original plan
[iii] The Change type for In scope or Out of scope changes fall within the following scenario:

- In Scope changes are deviations of scope from the original plan and approved budget that align to the original scope of the project but have revised pricing as a result of changes in pricing of labour, materials, and equipment
- Out of Scope changes are scope changes that were not originally planned for in the project baselines and approved budget. Examples of this type of change are related to changes in technology, missed deliverables, a change in the project design altering the scope of the project, etc.

iv In cases where the project no longer has contingency to cover project change orders, please specify any other sources of funds that would address the project variance (i.e. not executing another project, delaying scope of another project, etc)

[v] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report | 2020

Requesting Region or Group:	Liberty Utilities- NH-Gas Operations	**Date of Closeout (MM/DD/YY):**	03/31/21
Project Name:	Purchase Misc Capital Equipment & Tools 8840-2018		
Requesting Region:		**Sponsor** (Name)**:**	Richard MacDonald
Project Champion:	Robert Mostone	**Project ID**	
Project Status	☐In Service ☐Complete ☐ Closed		
Project Start Date:		**Project Completion Date:**	
Requested Capital ($)	$280,000	**Expenditure Included in Approved Budget?**	X Yes ☐No

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
Robert Mostone	Project Lead		3/17/21
Richard MacDonald	Project Sponsor	Richard G MacDonald	3/31/2021
	Operations Manager		
	Accounting Manager		

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 ☒ No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes ☒ No ☐
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 ☒ No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes ☒ No ☐

Item	Question	Response
2.5	Do you agree the project should be closed? If no, please explain:	Yes ☒ No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	5/5
2.7	Scope	5/5
2.8	Cost (Budget)	5/5
2.9	Schedule	5/5

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 ☒ No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?		Yes ☒ No ☐
3.4	Identify the storage location for the following project documents items:		
Item	**Document**	**Location (e.g., Google Docs, Webspace)**	**Format**
3.4a	Business Case	See W Drive	☒ Electronic ☐ Manual
3.4b	If available, the Final Project Schedule	N/A	☐ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices	W Drive and with Accounts Payable	☒ Electronic ☐ Manual
3.4d	Status Reports		☐ Electronic ☐ Manual
3.4e	Risks and Issues Log	N/A	☐ Electronic ☐ Manual
3.4f	Final deliverable	Invoices	☒ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team [ii]

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

Name	Role	Type (e.g., Contractor, Employee)
Robert Mostone	Project Lead	Employee

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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the 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 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
See Change Order 8840-2018	

Section 8. Equipment and tools will be purchased under this project for Miscellaneous Capital for non-infrastructure projects. The gas operations department identifies individual equipment and tools needs. From these needs, designated purchases are approved and capitalized following the company's policies. Purchasing new GPS Antenna Receiver Combo units 20-Waypoint Trimble R2 as older units are out dated and no longer supported. The GPS units are used for mapping out our distribution system. We also needed to purchase 15- Eastcom Radio detection RD7100DL Transmitters for purpose of marking out our system this is replacing older units that are not supported for repairs.

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance

Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$280,000	**$423,950**	($143,950)

Reasons for Variance	Impact
Change order	

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)
W Drive and with Accounts Payable

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project
[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Liberty Utilities

Capital Project Expenditure Form | 2020

Project Name:	Main Replacement City/State Construction		
Financial Work Order (FWO):	TBD	**Project ID #:**	8840-2023
Requesting Region or Group:	Energy North	**Date of Request (MM/DD/YY):**	1/23/2020
Project Sponsor:	Charles Rodrigues	**Project Start Date:**	1/1/2020
Project Lead:	Bradford Marx	**Project End Date:**	12/31/2020
Prepared by:	Bradford Marx	**Requested Capital ($)**	$4,624,818
Planned or Unplanned Projects:	☒ Planned ☐ Unplanned		
Project Type: (Click appropriate boxes)	☐ Safety ☒ Mandated ☐ Growth ☐ Regulatory Supported ☐ Discretionary		

Details of Request

Project description

This Blanket project is for main & service replacement city/state construction. City/State construction related work responds to third party construction activity which threatens the integrity of the company's natural gas facilities. Typical third party construction that impacts those facilities includes new water, sewer, and drainage infrastructure, street reconstruction, road realignment, and/or bridge replacement.

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

No

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

Licensing and Environmental Permitting as required.

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?

GUIDANCE: If yes, please detail the specific assets that will be removed:

1. *Original Cost of Plant to be removed (if known):* **Not known**
2. *What is the replacement cost of the plant being removed (if original cost not known)?* **Not known**
3. *Original Work Order of Plant to be removed (if known):* **Not known**
4. *Is the Plant being removed reusable?* **No**
5. *What is the year of original installation of the plant being removed* **Will vary by job**

What alternatives were evaluated and why were they rejected?

Liberty Utilities Capital Project Expenditure Form 2020

The alternative would be to do nothing during these municipal activities. This action would create risk to an aging infrastructure. In addition, it would cost more money in the future. Working with the municipalities affords us the benefit of shared restoration cost which are our single largest expense on these types of projects.

What are the risks and consequences of not approving this expenditure?

If we do not replace or relocate our mains that are impacted by third party work, this would not only put the integrity of our gas facilities in jeopardy but may also damage relationships between Liberty Utilities and local municipalities.

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.

Gas construction work to complete this project will be executed using previously approved Liberty Utilities blanket health and safety plans and ISNetworld verified contractors.

Are there other pertinent details that may affect the decision making process?

No

Liberty Utilities Capital Project Expenditure Form | 2020

Complete the Financial Summary table only if:
- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year	**2021**	**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☒1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?	Standard Rate Case		
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:[i]	☐Fixed or Firm Price ☒Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$4,624,818		

Approvals and Signatures[ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000	Bradford Marx Engineer III	*Bradford Marx*	January 23, 2020
Senior Manager:	Up to $50,000	Andrew Bernier Manager, Gas Engineering	Andrew Bernier Digitally signed by Andrew Bernier Date: 2020.01.24 13:38:52 -05'00'	Click here to 01/24/2020
Senior Director/Director:	Up to $250,000	Charles Rodrigues Director, Engineering	Charles Rodrigues Digitally signed by Charles Rodrigues DN: cn=Charles Rodrigues, c=US, o=Liberty Utilities, ou, email=charles.rodrigues@libertyutilities.com, c=US Date: 2020.01.24 13:33:30 -05'00'	Click here to enter a date.

Liberty Utilities Capital Project Expenditure Form | 2020

Senior VP/VP:	Up to $500,000	Richard MacDonald Vice President, Operations	Richard MacDonald	1/31/2020
State President:	Up to $500,000	Susan Fleck President, NH		Click here to enter a date. 2/5/2020
Regional President:	Up to $3,000,000	James Sweeney President, East Region		Click here to enter a date. 2/26/2020
Corporate – Sr. VP Operations:	Up to $5,000,000			Click here to enter a date.
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Liberty Utilities WATER | GAS | ELECTRIC

Change Order Form

2020

Project Overview			
Reason for Change: Additional jobs required in coordination with service area towns and cities.			
Project ID:	8840-2023	**Project Name:**	Main Replacement City/State Construction
Change Order Name:	8840-2023	**Date Prepared:**	10/15/2020
Change Order #:	8840-2023- 1 Change order	**Financial Work Order (FWO):**[i]	
Project Sponsor:	Andrew Bernier	**Revised Start Date:**	1/1/2020
Project Lead:	Brad Marx	**Revised End Date:**[ii]	12/31/2020
Prepared By:	Brad Marx	**Change Type**[iii]	x In Scope ☐ Out of Scope
Project Contingency Available?	☒ Yes ☐ No	**If No is Selected, Please specify source of funds**[iv]	Partial funding from 8840-2011 Main Replacement LPP

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

Category	Original Project Value	Previous Approved Charges	Current Change Order Amount	Total
Internal Labor				
Materials				
Equipment				
Contractor/Subcontractor				
Burdens/Overheads				
AFUDC				
Total Project Cost	$4,654,819		$1,200,000	**$5,854,819**

Updated Unlevered Internal Rate of Return:

Basis of Current Change Order Amount:

Crescent St – The existing main was in conflict with the City of Nashua's sewer project
Allison St – The City of Concord was to pave this street in 2020
Church @ Main – there was a short piece of cast iron pipe at this intersection that the City of Laconia was to pave over in 2020
Emmett St – The existing main was in conflict with the City of Nashua's sewer project
Mammoth Rd – The City of Manchester wanted to pave this in 2020. Mammoth Rd has been on their radar for a few years and we have ask to defer previously.
Manchester Rd Derry – The Town of Derry installed a water pumping station on Manchester Rd, and the existing main was in conflict with their tie-in connection.

Click here to enter text.

Liberty Utilities WATER | GAS | ELECTRIC

Change Order Form

2020

Schedule Impacts (As a result of the Change Order, where applicable, List the Impacts to schedule)		
Baseline Schedule (BL)	**New Forecast (NF)**	**Variance (BL – NF)**
NA		

Approvals and Signatures[v]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000	Bradford Marx	Bradford Marx	10/15/2020
Senior Manager: :	Up to $50,000		Andrew Bernier Digitally signed by Andrew Bernier Date: 2020.10.16 11:24:20 -04'00'	
Senior Director/Director:	Up to $250,000		Richard MacDonald Digitally signed by Richard MacDonald Date: 2020.10.16 12:36:14 -04'00'	
State President / Senior VP / VP:	Up to $500,000			
Regional President:	Up to $3,000,000			
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000	Johnny Johnston		11/02/20

[i] The Financial Work Order Section captures the work order this change falls under when the job was initially set-up
[ii] The Revised project end date is dependent on changes in scope that may deviate the schedule from the original plan
[iii] The Change type for In scope or Out of scope changes fall within the following scenario:

- In Scope changes are deviations of scope from the original plan and approved budget that align to the original scope of the project but have revised pricing as a result of changes in pricing of labour, materials, and equipment
- Out of Scope changes are scope changes that were not originally planned for in the project baselines and approved budget. Examples of this type of change are related to changes in technology, missed deliverables, a change in the project design altering the scope of the project, etc.

iv In cases where the project no longer has contingency to cover project change orders, please specify any other sources of funds that would address the project variance (i.e. not executing another project, delaying scope of another project, etc)

[v] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Liberty Utilities WATER | GAS | ELECTRIC

Change Order Form

2020

Project Overview			
Reason for Change: Additional jobs and major scope changes required in Q4			
Project ID:	8840-2023	**Project Name:**	Main Replacement City/State Construction
Change Order Name:	8840-2023-2	**Date Prepared:**	3/4/2021
Change Order #:	8840-2023- 2 Change order	**Financial Work Order (FWO):**[i]	
Project Sponsor:	Andrew Bernier	**Revised Start Date:**	1/1/2020
Project Lead:	Brad Marx	**Revised End Date:**[ii]	12/31/2020
Prepared By:	Brad Marx	**Change Type**[iii]	x In Scope ☐ Out of Scope
Project Contingency Available?	☒ Yes ☐ No	**If No is Selected, Please specify source of funds**[iv]	Partial funding from 8840-2011 Main Replacement LPP

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

Category	Original Project Value	Previous Approved Charges	Current Change Order Amount	Total
Internal Labor				
Materials				
Equipment				
Contractor/Subcontractor				
Burdens/Overheads				
AFUDC				
Total Project Cost	$4,654,819	$1,200,000	$908,652	**$6,7,63,471**

Updated Unlevered Internal Rate of Return:

Basis of Current Change Order Amount:

- Main St Nashua required additional 215 feet of main due to mid-stream change requested by the city of Nashua sewer contractor. Original location of existing reg pit connection had to be changed once pipe was found to have mechanical fittings These fittings rarely hold under pressure test, so connection point and welding connections were re-engineered. Engineering added section of steel pipe to existing reg pit for future relief valve. Restoration via mill and inlay required prior to winter.
- Mechanic St Job in Laconia had to be added to the project due to a catch basin conflict the City informed us of and required us to complete in 2020.
- Liberty was encroached by Manchester Water Works on Gertrude St, Garmon St, & Salisbury St discovered in fourth quarter. Requiring us to relay sections on main on each street.

Click here to enter text.

Liberty Utilities WATER | GAS | ELECTRIC

Change Order Form

2020

Schedule Impacts (As a result of the Change Order, where applicable, List the Impacts to schedule)		
Baseline Schedule (BL)	**New Forecast (NF)**	**Variance (BL – NF)**
NA		

Approvals and Signatures[v]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000	Bradford Marx	Bradford Marx Digitally signed by Bradford Marx Date: 2021.03.10 10:41:34 -05'00'	3/10/2021
Senior Manager: :	Up to $50,000	Andrew Bernier	Andrew Bernier Digitally signed by Andrew Bernier Date: 2021.03.10 10:45:43 -05'00'	
Senior Director/Director:	Up to $250,000			
State President / Senior VP / VP:	Up to $500,000	Richard Macdonald	Richard MacDonald Digitally signed by Richard MacDonald Date: 2021.03.10 11:36:27 -05'00'	
Regional President:	Up to $3,000,000	James Sweeney		
Corporate - Sr VP Operations:	Up to $5,000,000	Gerald Tremblay		
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000	Jonny Jonnston		

[i] The Financial Work Order Section captures the work order this change falls under when the job was initially set-up
[ii] The Revised project end date is dependent on changes in scope that may deviate the schedule from the original plan
[iii] The Change type for In scope or Out of scope changes fall within the following scenario:

- In Scope changes are deviations of scope from the original plan and approved budget that align to the original scope of the project but have revised pricing as a result of changes in pricing of labour, materials, and equipment
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iv In cases where the project no longer has contingency to cover project change orders, please specify any other sources of funds that would address the project variance (i.e. not executing another project, delaying scope of another project, etc)

[v] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report 2020

Requesting Region or Group:	Liberty Utilities- NH-Gas Operations	**Date of Closeout (MM/DD/YY):**	
Project Name:	Main Replacement City/State Construction 8840-2023		
Requesting Region:		**Sponsor** (Name)**:**	Andrew Bernier
Project Champion:	Brad Marx	**Project ID**	
Project Status	☐In Service ☐Complete ☐ Closed		
Project Start Date:		**Project Completion Date:**	
Requested Capital ($)	$4,654,819	**Expenditure Included in Approved Budget?**	X Yes ☐No

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
Bradford Marx	Project Lead	Bradford Marx Digitally signed by Bradford Marx Date: 2021.03.11 10:47:42 -05'00'	03/11/2021
	Project Sponsor	Andrew Bernier Digitally signed by Andrew Bernier Date: 2021.03.11 11:10:14 -05'00'	
	Operations Manager		
	Accounting Manager		

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 ☒ No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes ☒ No ☐
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 ☒ No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes ☒ No ☐

Item	Question	Response
2.5	Do you agree the project should be closed? If no, please explain:	Yes ☒ No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	5/5
2.7	Scope	5/5
2.8	Cost (Budget)	3/5
2.9	Schedule	4/5

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 ☒ No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?		Yes ☒ No ☐
3.4	Identify the storage location for the following project documents items:		
Item	**Document**	**Location (e.g., Google Docs, Webspace)**	**Format**
3.4a	Business Case	SharePoint	☒ Electronic ☐ Manual
3.4b	If available, the Final Project Schedule	SharePoint	☒ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices	SharePoint	☒ Electronic ☐ Manual
3.4d	Status Reports	SharePoint	☒ Electronic ☐ Manual
3.4e	Risks and Issues Log	SharePoint	☒ Electronic ☐ Manual
3.4f	Final deliverable	SharePoint	☒ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team [ii]

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

Name	Role	Type (e.g., Contractor, Employee)
Bradford Marx	Gas Engineer III	Employee

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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the recommended improvements to correct a similar problem in the future.

Problem Statement	Problem Description	References	Recommendation
Communication with Manchester Water Works	Liberty only became aware our cast iron on 3 streets in Manchester in October	Job #'s 402023-37632 & 402023-37631	Obtain schedule from MWW in the spring and continually communicate so Liberty knows when and where cast iron encroachments are occurring

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

Section 8. Project Cost Summary

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

Project Close Out Report 2020

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$4,654,819	$ 6,763,471	($2,108,652)

Reasons for Variance	Impact
Change order #1	$1,200,000
Change order #2	$908,652

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)

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project
[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Capital Project Expenditure Form 2020

Project Name:	Service Replacement Fitting City/State Construction		
Financial Work Order (FWO):		**Project ID #:**	8840-2025
Requesting Region or Group:	Energy North	**Date of Request (MM/DD/YY):**	3/23/2020
Project Sponsor:	Richard MacDonald	**Project Start Date:**	1/1/2020
Project Lead:	Robert Mostone	**Project End Date:**	12/31/2020
Prepared by:	Ryan Patnode	**Requested Capital ($)**	$303,000
Planned or Unplanned Projects:	☒ Planned ☐Unplanned		
Project Type: (Click appropriate boxes)	☐ Safety ☒ Mandated ☐ Growth ☐ Regulatory Supported ☐ Discretionary		

Details of Request

Project description

City/State construction-related work responds to third party construction activity, which threatens the integrity of the company's natural gas facilities. Typical third party construction that impacts those facilities includes new water, sewer, and drainage infrastructure, street reconstruction, road realignment, and bridge replacement.

State codes and company procedures require the replacement of eight-inch and smaller cast iron gas mains if roadway or underground construction is being performed in such a way that would impact the integrity of our pipes. Non-cast iron gas mains (i.e. steel and plastic) are not subject to the same replacement codes and are typically supported and protected during third party construction whenever possible.

The current City/State construction capital plan funds replacement or relocation of existing gas facilities, as required.

It is the company's goal to more effectively manage the capital spend plan by minimizing spending through the following:

- Eliminate and avoid conflicts through design changes and negotiations
- Engineer most effective distribution system
- Optimize overall OPEX spend
- Obtain reimbursement for projects where conflicts are unavoidable
- Support and protect existing gas facilities during construction where practical
- Minimize relocations/replacements, paving and restoration costs
- Seek opportunities for synergy savings by coordinating with Growth & Proactive leak Prone Pipe replacement programs
- Replacement is the last resort

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Capital Project Expenditure Form 2020

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.
No

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?
Licensing and Environmental Permitting as required.

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?
GUIDANCE: If yes, please detail the specific assets that will be removed: Yes, dependent on individual purchase 1. *Original Cost of Plant to be removed (if known):* 2. *What is the replacement cost of the plant being removed (if original cost not known)?* 3. *Original Work Order of Plant to be removed (if known):* 4. *Is the Plant being removed reusable?* 5. *What is the year of original installation of the plant being removed*

What alternatives were evaluated and why were they rejected?
No viable alternatives. Work dictated by city and state projects.

What are the risks and consequences of not approving this expenditure?
Potential safety risk in not completing the project in conjunction with city/state projects.

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.
All standard safety procedures will be followed on each job executed.

Are there other pertinent details that may affect the decision making process?
No

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Capital Project Expenditure Form | 2020

Complete the Financial Summary table only if:

- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year	**2021**	**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☒1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?			
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:[i]	☐Fixed or Firm Price ☐Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$303,000		

Liberty Utilities WATER · GAS · ELECTRIC

Capital Project Expenditure Form | 2020

Approvals and Signatures[ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			Click here to enter a date.
Senior Manager:	Up to $50,000			Click here to enter a date.
Senior Director/Director:	Up to $250,000	Robert Mostone Gas operations	Robert Mostone Digitally signed by Robert Mostone Date: 2020.03.27 08:01:56 -04'00'	Click here to enter a date.
Senior VP/VP:	Up to $500,000	Richard MacDonald VP operations	Rich MacDonald Digitally signed by Rich MacDonald Date: 2020.04.09 11:21:23 -04'00'	
State President:	Up to $500,000	Susan Fleck President, NH	Susan Fleck Digitally signed by Susan Fleck Date: 2020.04.10 09:08:53 -04'00'	Click here to enter a date.
Regional President:	Up to $3,000,000			Click here to enter a date.
Corporate – Sr. VP Operations:	Up to $5,000,000			Click here to enter a date.
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report | 2020

Requesting Region or Group:	Liberty Utilities- NH-Gas Operations	**Date of Closeout (MM/DD/YY):**	
Project Name:	Service Replacement Fitting City/State Construction 8840-2025		
Requesting Region:		**Sponsor** (Name)**:**	Andrew Bernier
Project Champion:	Brad Marx	**Project ID**	
Project Status	☐In Service ☐Complete ☐ Closed		
Project Start Date:		**Project Completion Date:**	
Requested Capital ($)	$303.000	**Expenditure Included in Approved Budget?**	X Yes ☐No

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
Bradford Marx	Project Lead	Bradford Marx Digitally signed by Bradford Marx Date: 2021.03.16 09:39:03 -04'00'	3/16/2021
	Project Sponsor	Andrew Bernier Digitally signed by Andrew Bernier Date: 2021.03.31 15:04:14 -04'00'	
	Operations Manager		
	Accounting Manager		

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 ☒ No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes ☒ No ☐
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 ☒ No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes ☒ No ☐

Item	Question	Response
2.5	Do you agree the project should be closed? If no, please explain:	Yes ☒ No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	5/5
2.7	Scope	5/5
2.8	Cost (Budget)	5/5
2.9	Schedule	5/5

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 ☒ No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?		Yes ☒ No ☐
3.4	Identify the storage location for the following project documents items:		
Item	**Document**	**Location (e.g., Google Docs, Webspace)**	**Format**
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3.4b	If available, the Final Project Schedule	SharePoint	☒ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices	SharePoint	☒ Electronic ☐ Manual
3.4d	Status Reports	SharePoint	☒ Electronic ☐ Manual
3.4e	Risks and Issues Log	SharePoint	☒ Electronic ☐ Manual
3.4f	Final deliverable	SharePoint	☒ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team [ii]

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

Name	Role	Type (e.g., Contractor, Employee)
Bradford Marx	Gas Engineer III	Employee

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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the recommended improvements to correct a similar problem in the future.

Problem Statement	Problem Description	References	Recommendation

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

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			

Project Close Out Report 2020

External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$303,000	$ 293,531	$9,469

Reasons for Variance	Impact

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)

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project
[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Capital Project Expenditure Form 2020

Project Name:	LNG/LPG Capital Improvement		
Financial Work Order (FWO):		**Project ID #:**	8840-2026
Requesting Region or Group:		**Date of Request (MM/DD/YY):**	
Project Sponsor:	Norman Gallagher	**Project Start Date:**	
Project Lead:	David Sandrelli	**Project End Date:**	15 DEC, 2020
Prepared by:	D. Sandrelli	**Requested Capital ($)**	100,000.00
Planned or Unplanned Projects:	☒ Planned ☐Unplanned		
Project Type: (Click appropriate boxes)	☐ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported ☒ Discretionary		

Details of Request

Project description

1. Overhaul of Manchester 1200 Air Compressor for LPG operation
2. Replacement of LP Vaporizer #1 Control system Nashua LPG

`

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

No

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

None

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?

GUIDANCE: If yes, please detail the specific assets that will be removed:

1. *Original Cost of Plant to be removed (if known):*
2. *What is the replacement cost of the plant being removed (if original cost not known)?*
3. *Original Work Order of Plant to be removed (if known):*
4. *Is the Plant being removed reusable?*
5. *What is the year of original installation of the plant being removed*

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Capital Project Expenditure Form 2020

What alternatives were evaluated and why were they rejected?
None

What are the risks and consequences of not approving this expenditure?
1. Significant reduction in LPG/Air make capacity at Manchester LPG 2. Reduced reliability and output of Vaporizer operations at Nashua LPG

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.
None

Are there other pertinent details that may affect the decision making process?
No

Capital Project Expenditure Form 2020

Complete the Financial Summary table only if:
- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year		**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☐1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?			
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:[i]	☐Fixed or Firm Price ☐Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	100,000.00		

Approvals and Signatures[ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			Click here to enter a date.
Senior Manager:	Up to $50,000			Click here to enter a date.
Senior Director/Director:	Up to $250,000	Norman Gallagher	Norman Gallagher Digitally signed by Norman Gallagher Date: 2020.04.27 15:20:09 -04'00'	Click here to enter a date.
Senior VP/VP:	Up to $500,000			

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Capital Project Expenditure Form 2020

State President:	Up to $500,000			Click here to enter a date.
Regional President:	Up to $3,000,000			Click here to enter a date.
Corporate – Sr. VP Operations:	Up to $5,000,000			Click here to enter a date.
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

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Capital Project Business Case | 2020

NOTE: This form is required for planned Growth, Regulatory Supported, and Discretionary projects as well as combined blanket projects for Safety and Mandated with Growth, Regulatory Supported, and Discretionary Projects with a spend greater than $100,000 and all unplanned projects. All other Project types can utilize the Capital Expenditure Application Form.

Project Overview			
Project Name:	LNG/LPG Capital Improvements	**Date Prepared:**	
Project ID#:	8840-2026	**Cost Estimate:**	100,000.00
Project Sponsor:	Norman Gallagher	**Project Start Date:**	
Project Lead:	David Sandrelli	**Project End Date:**	
Prepared By:	Dave Sandrelli	**Planned or Unplanned Projects:**	X☐ Planned ☐Unplanned
Project Type (click appropriate boxes)**:**	☐ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported X☐ Discretionary		
Spending Rationale:	☐ Growth ☒ Improvement ☐ Replenishment		

Project Scope Statement (Insert the scope of work, major deliverables, assumptions, and constraints)
Blanket LNG/LPG project will allow us to serve core customer core load and to extend the life of critical production facilities
Background (Insert description of current operational arrangement, and brief history of project & asset)
We are responsible to insure that LNG/LPG are available to supplement the gas supply requirements whenever needed.
Recommendation/Objective (Insert the unique problem this project is looking to resolve)
Alternatives/Options (Describe all reasonably viable alternatives. Discuss the viability of each and provide reasons if rejected)
None
Financial Assessment/Cost Estimate (Double click embedded excel file to update; include contingency allowance in excel file)
This blanket Project is based on historical spending trends and anticipate a year ahead activity in this investment category

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Capital Project Business Case

2020

Next Anticipated Test Year	Click to select a date	**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No

Regulatory Lag
(Click appropriate box) ☐Less than 6 Months ☐6-12 Months ☐1 to 3 years ☐Greater than 3 years

Category	Total Already Approved	2020	2021	Beyond 2021	Total
Internal Labor					
Materials					
Equipment					
Contractor/ Subcontractor					
AFUDC					
Total Project Cost		**100,000**			

Unlevered Internal Rate of Return:

Basis of Estimate: *Provide brief explanation on basis of estimate, activities completed to determine costs*

For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:

Schedule
(List key milestone dates)

Key Milestone Description	Forecast Start Date	Forecast End Date

Risk Assessment
(Please describe the risk of not completing the project)

Reduced reliability

Trade Finance
(Is there a possibility to apply trade finance products to this project? See Capital Planning for further clarification)

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Capital Project Business Case | 2020

Supporting Documentation (Reference drawings, condition assessment reports, vendor quotations, etc. Attach document or where possible include hyperlink to file located on shared server or SharePoint)

Approvals and Signatures[i]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000	David Sandrelli		4/24/20
Senior Manager: :	Up to $50,000			
Senior Director/Director:	Up to $250,000	Norman Gallagher	Norman Gallagher Digitally signed by Norman Gallagher Date: 2020.04.29 13:12:12 -04'00'	
Senior Vice President/ Vice President	Up to $500,000			
State President:	Up to $500,000			
Regional President:	Up to $3,000,000			
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

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Change Order Form

2020

Project Overview			
Reason for Change: Yearend replacement of LP vaporizer #1 fuel & burner in Nashua.			
Project ID:	8840-2026	**Project Name:**	LNG/LPG Capital Improvements
Change Order Name:	8840-2026	**Date Prepared:**	1/28/2021
Change Order #:	8840-2026 2020	**Financial Work Order (FWO):**[i]	
Project Sponsor:	Robert Mostone	**Revised Start Date:**	1/1/2020
Project Lead:	David Sandrelli	**Revised End Date:**[ii]	12/31/2020
Prepared By:	Ryan Patnode	**Change Type**[iii]	x In Scope ☐ Out of Scope
Project Contingency Available?	☒ Yes ☐ No	**If No is Selected, Please specify source of funds**[iv]	8840-2090 Transportation Fleet and Equipment Purchases

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

Category	Original Project Value	Previous Approved Charges	Current Change Order Amount	Total
Internal Labor				
Materials				
Equipment				
Contractor/Subcontractor				
Burdens/Overheads				
AFUDC				
Total Project Cost	$100,000		$5,941	**$105,591.00**

Updated Unlevered Internal Rate of Return:

Slight overall project overrun 6% due to Yearend replacement of LP vaporizer #1 fuel & burner in Nashua. The Vaporizer #1 makes LP gas for send out and fuel gas for Vaporizer #3. The burner management system from 1975 failed, and parts are unavailable. We needed to replace it or have two vaporizers out of service and unable to meet peak shaving needs. We also had to make sure it meets current safety codes.

Basis of Current Change Order Amount:

Click here to enter text.

Schedule Impacts
(As a result of the Change Order, where applicable, List the Impacts to schedule)

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Change Order Form

2020

Baseline Schedule (BL)	New Forecast (NF)	Variance (BL – NF)

Approvals and Signatures[v]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			
Senior Manager: :	Up to $50,000			
Senior Director/Director:	Up to $250,000	Robert Mostone Operation Director	Robert Mostone Digitally signed by Robert Mostone Date: 2021.02.03 10:30:14 -05'00'	
State President / Senior VP / VP:	Up to $500,000	Richard MacDonald VP Operations	Richard MacDonald Digitally signed by Richard MacDonald Date: 2021.02.03 14:51:47 -05'00'	
Regional President:	Up to $3,000,000	James Sweeney East region VP		
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] The Financial Work Order Section captures the work order this change falls under when the job was initially set-up
[ii] The Revised project end date is dependent on changes in scope that may deviate the schedule from the original plan
[iii] The Change type for In scope or Out of scope changes fall within the following scenario:

- In Scope changes are deviations of scope from the original plan and approved budget that align to the original scope of the project but have revised pricing as a result of changes in pricing of labour, materials, and equipment
- Out of Scope changes are scope changes that were not originally planned for in the project baselines and approved budget. Examples of this type of change are related to changes in technology, missed deliverables, a change in the project design altering the scope of the project, etc.

iv In cases where the project no longer has contingency to cover project change orders, please specify any other sources of funds that would address the project variance (i.e. not executing another project, delaying scope of another project, etc)

[v] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report | 2020

Requesting Region or Group:	Liberty Utilities- NH-Gas Operations	Date of Closeout (MM/DD/YY):	15 December 2020
Project Name:	LNG/LPG Capital Improvements 8840-2026		
Requesting Region:		Sponsor (Name):	Norm Gallagher
Project Champion:	David Sandrelli	Project ID	
Project Status	X In Service X Complete X Closed		
Project Start Date:		Project Completion Date:	15DEC20
Requested Capital ($)	$100,000	Expenditure Included in Approved Budget?	X Yes ☐No

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
David Sandrelli	Project Lead	DAVID SANDRELLI	3/17/21
	Project Sponsor		
	Operations Manager		
	Accounting Manager		

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 X No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes X No ☐
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 X No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes X No ☐

Item	Question	Response
2.5	Do you agree the project should be closed? If no, please explain:	Yes X No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	5/5
2.7	Scope	5/5
2.8	Cost (Budget)	5/5
2.9	Schedule	4/5

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 x No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?		Yes ☐ No ☐
3.4	Identify the storage location for the following project documents items:		
Item	Document	Location (e.g., Google Docs, Webspace)	Format
3.4a	Business Case	W:\Control\Production\Projects\2020 Buisness Cases-CAPEX\8840-2026 LNG-LPG	X Electronic ☐ Manual
3.4b	If available, the Final Project Schedule		☐ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices	\\utilities.local\users\nh\dsandrelli\Documents\Purchasing\Cummins Concord \\utilities.local\users\nh\dsandrelli\Documents\Purchasing\Powell Controls\Powell, Bob Powell 2020\Nashua Vap upgrade 2020	X Electronic ☐ Manual
3.4d	Status Reports		☐ Electronic ☐ Manual
3.4e	Risks and Issues Log		☐ Electronic ☐ Manual
3.4f	Final deliverable		☐ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team [ii]

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

Name	Role	Type (e.g., Contractor, Employee)
Cummins Sales & Service, Concord NH	Engine rebuilder	Contractor
Powell Controls	Equipment supplier and installer	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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the recommended improvements to correct a similar problem in the future.

Problem Statement	Problem Description	References	Recommendation
None			

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
None	

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance

Project Close Out Report 2020

Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$100,000	$ 105,941	($5,941)

Reasons for Variance	Impact
Change order #1	$5,941

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)
402026-37800 LP Air Compressor overhaul 402026-37801 Nashua Vaporizer #1 burner control upgrade

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project
[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Capital Project Expenditure Form 2020

Project Name:	Gas System Control & Regulation (ENG)		
Financial Work Order (FWO):		**Project ID #:**	8840-2028
Requesting Region or Group:	Energy North	**Date of Request (MM/DD/YY):**	3/19/2020
Project Sponsor:	Charles Rodrigues	**Project Start Date:**	1/1/2020
Project Lead:	Brian Frost	**Project End Date:**	12/31/2020
Prepared by:	Andrew Bernier	**Requested Capital ($)**	$350,000
Planned or Unplanned Projects:	☒ Planned ☐Unplanned		
Project Type: (Click appropriate boxes)	☐ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported ☒ Discretionary		
Spending Rationale:	☐ Growth ☒ Improvement ☐ Replenishment		

Details of Request

Project description

This Blanket project is associated with regulating facilities that have been designed for specific flows to maintain continuity of supply during normal and critical periods of gas demand.

The Blanket project will replace obsolete equipment, vaults with structural issues, regulator stations consisting of (2) regulators inside one vault (susceptible to over pressurization of the system), vault problems, obsolete or inadequate valves.

Includes:

- Inadequate by-pass
- Inadequate accessibility
- Inadequate maintainability

`

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

NO

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

Possibility of Coal-Tar coated pipe in old regulator stations

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?

GUIDANCE: If yes, please detail the specific assets that will be removed:

1. *Original Cost of Plant to be removed (if known):*
2. *What is the replacement cost of the plant being removed (if original cost not known)?*

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Capital Project Expenditure Form 2020

3. *Original Work Order of Plant to be removed (if known):* 4. *Is the Plant being removed reusable?* 5. *What is the year of original installation of the plant being removed*
Yes, Asset removal will be calculated on a job specific basis

What alternatives were evaluated and why were they rejected?
None

What are the risks and consequences of not approving this expenditure?
Leave antiquated regulator stations in active service and risk possible failure of devices.

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.
New Regulator stations rebuilt to modern safety specification.

Are there other pertinent details that may affect the decision making process?
No

Complete the Financial Summary table only if:
- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year		**Was this Capital Project included in the current year's Board Approved Budget?**	☐ Yes ☐ No
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☒1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?			
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please	☐Fixed or Firm Price ☐Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		

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Capital Project Expenditure Form 2020

specify the percent complete: [i]			
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$350,000		$350,000

Approvals and Signatures [ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000	Brian Frost Planning Engineer - Gas		
Senior Manager:	Up to $50,000	Andrew Bernier Manager, Gas Engineering	Andrew Bernier Digitally signed by Andrew Bernier Date: 2020.03.23 13:41:21 -04'00'	
Senior Director/Director:	Up to $250,000	Charles Rodrigues Director, Engineering	Charles Rodrigues Digitally signed by Charles Rodrigues Date: 2020.03.23 16:20:31 -04'00'	
Senior VP/VP:	Up to $500,000	Richard MacDonald Vice President, Operations	Rich MacDonald Digitally signed by Rich MacDonald Date: 2020.03.26 10:40:32 -04'00'	
State President:	Up to $500,000		Susan Fleck Digitally signed by Susan Fleck Date: 2020.04.09 09:16:16 -04'00'	
Regional President:	Up to $3,000,000			
Corporate – Sr. VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			
Finance (East) – Vice President, Finance & Administration:	All Requests	Peter Dawes VP, Finance & Administration		

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

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Capital Project Business Case 2020

Project Overview			
Project Name:	Gas System Control & Regulation (ENG)	**Date Prepared:**	1/9/2020
Project ID#:	8840-2028	**Cost Estimate:**	$350,000
Project Sponsor:	Charles Rodrigues	**Project Start Date:**	1/1/2020
Project Lead:	Brad Marx	**Project End Date:**	12/31/2020
Prepared By:	Andrew Bernier	**Planned or Unplanned Projects:**	☒ Planned ☐Unplanned
Project Type (click appropriate boxes)**:**	☐ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported ☒ Discretionary		
Spending Rationale:	☐ Growth ☒ Improvement ☐ Replenishment		

Project Scope Statement
(Insert the scope of work, major deliverables, assumptions, and constraints)

This Blanket project will provide enhanced gas system control and regulation.

BACKGROUND

This Blanket project is associated with regulating facilities that have been designed for specific flows to maintain continuity of supply during normal and critical periods of gas demand.

The Blanket project will replace obsolete equipment, vaults with structural issues, regulator stations consisting of (2) regulators inside one vault (susceptible to over pressurization of the system), vault problems, obsolete or inadequate valves.

Includes:

- Inadequate by-pass
- Inadequate accessibility
- Inadequate maintainability

Recommendation/Objective
(Insert the unique problem this project is looking to resolve)

Replace antiquated regulation equipment and stations.

Alternatives/Options
(Describe all reasonably viable alternatives. Discuss the viability of each and provide reasons if rejected)

None

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

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Capital Project Business Case

2020

Next Anticipated Test Year	**2021**	**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No

Regulatory Lag (Click appropriate box) ☐Less than 6 Months ☐6-12 Months ☒1 to 3 years ☐Greater than 3 years

Category	Total Already Approved	2020	2021	Beyond 2021	Total	
Internal Labor						
Materials		$100,000			$100,000	
Equipment						
Contractor/ Subcontractor		$250,000			$250,000	
AFUDC						
Total Project Cost		**$350,000**			**$350,000**	

Unlevered Internal Rate of Return: Click here to enter text.

Basis of Estimate: This Blanket project is based on historical spending trends and anticipated a year-ahead activity in this investment category.

For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:

Schedule
(List key milestone dates)

Key Milestone Description	Forecast Start Date	Forecast End Date

Risk Assessment
(Please describe the risk of not completing the project)

None

Trade Finance
(Is there a possibility to apply trade finance products to this project? See Capital Planning for further clarification)

Supporting Documentation
(Reference drawings, condition assessment reports, vendor quotations, etc. Attach document or where possible include hyperlink to file located on shared server or SharePoint)

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Capital Project Business Case 2020

Approvals and Signatures [i]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000	Brad Marx Project Engineer - Gas		
Senior Manager: :	Up to $50,000	Andrew Bernier Manager, Gas Engineering	Andrew Bernier Digitally signed by Andrew Bernier Date: 2020.03.23 13:30:11 -04'00'	
Senior Director/Director:	Up to $250,000	Charles Rodrigues Director, Engineering	Charles Rodrigues Digitally signed by Charles Rodrigues Date: 2020.03.23 15:48:16 -04'00'	
Senior Vice President/ Vice President	Up to $500,000	Richard MacDonald Vice President, Operations	Rich MacDonald Digitally signed by Rich MacDonald Date: 2020.03.26 10:41:37 -04'00'	
State President:	Up to $500,000		Susan Fleck Digitally signed by Susan Fleck Date: 2020.04.09 09:17:16 -04'00'	
Regional President:	Up to $3,000,000			
Corporate – Sr. VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			
Finance (East) – Vice President, Finance & Administration	All Requests	Peter Dawes VP, Finance & Administration		

[i] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

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Change Order Form

2020

Project Overview			
Reason for Change: Ability to complete all three jobs in Q4 due to overall EN capital underrun.			
Project ID:	8840-2028	**Project Name:**	Gas System Control & Regulations
Change Order Name:	8840-2028	**Date Prepared:**	1/29/2021
Change Order #:	8840-2028-1	**Financial Work Order (FWO):**[i]	
Project Sponsor:	Charles Rodrigues	**Revised Start Date:**	1/1/2020
Project Lead:	Brad Marx	**Revised End Date:**[ii]	12/31/2020
Prepared By:	Ryan Patnode	**Change Type**[iii]	x In Scope ☐ Out of Scope
Project Contingency Available?	☐ Yes ☒ No	**If No is Selected, Please specify source of funds**[iv]	8840-2080 SAP-Ariba EN Portion Procure to Pay Software

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

Category	Original Project Value	Previous Approved Charges	Current Change Order Amount	Total
Internal Labor				
Materials				
Equipment				
Contractor/Subcontractor				
Burdens/Overheads				
AFUDC				
Total Project Cost	$350,000		$213,291	**$563,291**

Updated Unlevered Internal Rate of Return:

There were 3 jobs completed in the fourth quarter of 2020.
S. Groton Street relief value in Nashua, a material purchase for the Hanover at Lake Street Regulator Vault in Manchester, S. Beech at Tyler Street Manchester. All jobs became able to complete as a result of underrun in other capital projects. Jobs ensure specific flows to maintain continuity of supply during normal and critical periods of gas demand.

Basis of Current Change Order Amount:

Click here to enter text.

Schedule Impacts
(As a result of the Change Order, where applicable, List the Impacts to schedule)

Baseline Schedule (BL)	New Forecast (NF)	Variance (BL – NF)

Liberty Utilities WATER | GAS | ELECTRIC

Change Order Form

2020

Approvals and Signatures[v]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			
Senior Manager: :	Up to $50,000	Andrew Bernier, Sr. Manager, Engineering - Gas	Andrew Bernier Digitally signed by Andrew Bernier Date: 2021.02.04 08:44:00 -05'00'	
Senior Director/Director:	Up to $250,000	Charles Rodrigues Director, Engineering	Charles Rodrigues Digitally signed by Charles Rodrigues Date: 2021.02.04 08:59:08 -05'00'	
State President / Senior VP / VP:	Up to $500,000	Richard MacDonald VP Operations	Richard MacDonald Digitally signed by Richard MacDonald Date: 2021.02.04 16:41:44 -05'00'	
Regional President:	Up to $3,000,000	James Sweeney President, East Region		
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] The Financial Work Order Section captures the work order this change falls under when the job was initially set-up
[ii] The Revised project end date is dependent on changes in scope that may deviate the schedule from the original plan
[iii] The Change type for In scope or Out of scope changes fall within the following scenario:

- In Scope changes are deviations of scope from the original plan and approved budget that align to the original scope of the project but have revised pricing as a result of changes in pricing of labour, materials, and equipment
- Out of Scope changes are scope changes that were not originally planned for in the project baselines and approved budget. Examples of this type of change are related to changes in technology, missed deliverables, a change in the project design altering the scope of the project, etc.

iv In cases where the project no longer has contingency to cover project change orders, please specify any other sources of funds that would address the project variance (i.e. not executing another project, delaying scope of another project, etc)

[v] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report | 2020

Requesting Region or Group:	Liberty Utilities- NH-Gas Operations	**Date of Closeout (MM/DD/YY):**	3/8/2021
Project Name:	Gas System Control & Regulation (ENG) 8840-2028		
Requesting Region:	NH	**Sponsor** (Name)**:**	Andrew Bernier
Project Champion:	Brian Frost	**Project ID**	
Project Status	X In Service ☐Complete ☐ Closed		
Project Start Date:	1/1/2020	**Project Completion Date:**	12/31/2020
Requested Capital ($)	$350,000	**Expenditure Included in Approved Budget?**	X Yes ☐No

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
Brian Frost	Project Lead	Brian R. Frost Digitally signed by Brian R. Frost Date: 2021.03.08 10:34:11 -05'00'	3/8/2021
Andrew Bernier	Project Sponsor	Andrew Bernier Digitally signed by Andrew Bernier Date: 2021.03.08 10:46:30 -05'00'	
	Operations Manager		
	Accounting Manager		

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 ☒ No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes ☒ No ☐
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 ☒ No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes ☒ No ☐

Item	Question	Response
2.5	Do you agree the project should be closed? If no, please explain:	Yes ☒ No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	5/5
2.7	Scope	5/5
2.8	Cost (Budget)	5/5
2.9	Schedule	5/5

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 ☒ No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?		Yes ☒ No ☐
3.4	Identify the storage location for the following project documents items:		
Item	**Document**	**Location (e.g., Google Docs, Webspace)**	**Format**
3.4a	Business Case	Operations Finance Sharepoint	☒ Electronic ☐ Manual
3.4b	If available, the Final Project Schedule	N/A	☐ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices	W drive and accounts payable	☒ Electronic ☐ Manual
3.4d	Status Reports	Monthly accounting reports	☒ Electronic ☐ Manual
3.4e	Risks and Issues Log	N/A	☐ Electronic ☐ Manual
3.4f	Final deliverable	Wennsoft unitized work orders	☒ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team [ii]

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

Name	Role	Type (e.g., Contractor, Employee)
Brian Frost	Project Manager	Employee

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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the recommended improvements to correct a similar problem in the future.

Problem Statement	Problem Description	References	Recommendation

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

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			

Project Close Out Report 2020

External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$350,000	**$563,291**	($213,291)

Reasons for Variance	Impact
Change order #1	$213,291

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)

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project
[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Capital Project Expenditure Form 2020

Project Name:	Pre-Code Pipe Replacement Program		
Financial Work Order (FWO):	8840-2029	**Project ID #:**	8840-2029
Requesting Region or Group:	New Hampshire	**Date of Request (MM/DD/YY):**	1/23/20
Project Sponsor:	Charles Rodrigues	**Project Start Date:**	1/1/20
Project Lead:	Peter Chivers	**Project End Date:**	12/31/2020
Prepared by:	Peter Chivers	**Requested Capital ($)**	**$268,778**
Planned or Unplanned Projects:	☒ Planned ☐Unplanned		
Project Type: (Click appropriate boxes)	☐ Safety ☒ Mandated ☐ Growth ☐ Regulatory Supported ☐ Discretionary		

Details of Request

Project description

This project aims to replace coated steel pipe that was installed before corrosion requirements took effect in 1971. Much of the pre-code pipe has been placed under cathodic protection. Now, most of the unprotected pre-code pipe left is un-protectable due to poor coatings. This pipe is at risk for corrosion leaks. Under this program for 2020 there is one project identified on Cilley Rd in Manchester to replace 850 feet of pre-code main.

`

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

No

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

This expenditure is for 1 job in Manchester. All jobs need to be permitted. There might be some environmental impact if we run into asbestos.

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?

This project will remove approximately 850 feet of 4" pre-code coated steel pipe.

What alternatives were evaluated and why were they rejected?

None were evaluated.

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Capital Project Expenditure Form 2020

What are the risks and consequences of not approving this expenditure?
Not removing risky leak-prone assets from service

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.
All project will be executed in accordance with company procedures.

Are there other pertinent details that may affect the decision making process?
No.

Complete the Financial Summary table only if:

- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year		**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☐1 – 3 years ☐Greater than three years		

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Capital Project Expenditure Form 2020

Which regulatory constructs will be used for recovering this capital spend?			
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:[i]	☐Fixed or Firm Price ☒Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)	$268,778		
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$268,778		

Approvals and Signatures[ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000	Andrew Bernier	Andrew Bernier Digitally signed by Andrew Bernier Date: 2020.01.29 12:20:11 -05'00'	Click here to enter a date.
Senior Manager:	Up to $50,000			Click here to enter a date.
Senior Director/Director:	Up to $250,000	Charles Rodrigues Director, Engineering	Charles Rodrigues Digitally signed by Charles Rodrigues Date: 2020.03.23 17:37:15 -04'00'	Click here to enter a date.
Senior VP/VP:	Up to $500,000		Rich MacDonald Digitally signed by Rich MacDonald Date: 2020.03.26 10:42:23 -04'00'	
State President:	Up to $500,000		Susan Fleck Digitally signed by Susan Fleck Date: 2020.04.09 09:18:41 -04'00'	Click here to enter a date.
Regional President:	Up to $3,000,000			Click here to enter a date.
Corporate – Sr. VP Operations:	Up to $5,000,000			Click here to enter a date.
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

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Capital Project Expenditure Form | 2020

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report 2020

Requesting Region or Group:	Liberty Utilities-NH-Gas Operations	**Date of Closeout (MM/DD/YY):**	3/31/21
Project Name:	Pre-Code Steel Pipe protection program		
Requesting Region:	East	**Sponsor** (Name):	Andrew Bernier
Project Champion:	Peter Chivers	**Project ID**	8840-2029
Project Status	☐In Service ☐Complete X Closed		
Project Start Date:	1/1/20	**Project Completion Date:**	12/31/20
Requested Capital ($)	$268,778	**Expenditure Included in Approved Budget?**	X Yes ☐No

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
Peter Chivers	Project Lead	Peter Chivers Digitally signed by Peter Chivers Date: 2021.03.31 15:43:29 -04'00'	
Andrew Bernier	Project Sponsor	Andrew Bernier Digitally signed by Andrew Bernier Date: 2021.04.01 07:13:07 -04'00'	
	Operations Manager		
	Accounting Manager		

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 ☒ No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes ☒ No ☐
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 ☒ No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes ☒ No ☐

Item	Question	Response
2.5	Do you agree the project should be closed? If no, please explain:	Yes ☒ No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	5/5
2.7	Scope	5/5
2.8	Cost (Budget)	5/5
2.9	Schedule	5/5

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 ☒ No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?		Yes ☒ No ☐
3.4	Identify the storage location for the following project documents items:		
Item	**Document**	**Location (e.g., Google Docs, Webspace)**	**Format**
3.4a	Business Case	W drive	☒ Electronic ☐ Manual
3.4b	If available, the Final Project Schedule		☐ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices	W drive, AP dept	☒ Electronic ☐ Manual
3.4d	Status Reports		☐ Electronic ☐ Manual
3.4e	Risks and Issues Log		☐ Electronic ☐ Manual
3.4f	Final deliverable	Work management system	☒ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team[ii]

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

Name	Role	Type (e.g., Contractor, Employee)
Various operations dept personnel		

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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the recommended improvements to correct a similar problem in the future.

Problem Statement	Problem Description	References	Recommendation

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

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			

External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$268,778	**$63,836**	$204,942

Reasons for Variance	Impact

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)

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project

[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Capital Project Expenditure Form 2020

Project Name:	IT Systems & Equipment Blanket		
Financial Work Order (FWO):		**Project ID #:**	8840-2030
Requesting Region or Group:	Energy North	**Date of Request (MM/DD/YY):**	4/7/2020
Project Sponsor:	Shaival Hora	**Project Start Date:**	3/1/2020
Project Lead:	Don Romano	**Project End Date:**	12/31/2020
Prepared by:	Ryan Patnode	**Requested Capital ($)**	$50,000
Planned or Unplanned Projects:	☒ Planned ☐Unplanned		
Project Type: (Click appropriate boxes)	☐ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported ☒ Discretionary		

Details of Request

Project description

IT Purchases—Software, Equipment & Infrastructure. During the year the need to purchase computers, software, equipment & infrastructure to meet new service demands and implement will occur. This blanket project will fund Granite State Electric Utilities business strategy.

`

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

No

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

NA

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?

GUIDANCE: If yes, please detail the specific assets that will be removed: Yes, dependent on individual purchase

1. *Original Cost of Plant to be removed (if known):*
2. *What is the replacement cost of the plant being removed (if original cost not known)?*
3. *Original Work Order of Plant to be removed (if known):*
4. *Is the Plant being removed reusable?*
5. *What is the year of original installation of the plant being removed*

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Capital Project Expenditure Form 2020

What alternatives were evaluated and why were they rejected?
Purchases are evaluated on need, financial impact and/or ability to continue extent existing equipment. A purchase will be rejected or approved based on these factors.

What are the risks and consequences of not approving this expenditure?
Potential unproductive risks if proper IT equipment not operating at optimal capability.

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.
All standard safety procedures will be followed in use or equipment and tools

Are there other pertinent details that may affect the decision making process?
No

Complete the Financial Summary table only if:

- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year	**2021**	**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☒1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?			
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:[i]	☐Fixed or Firm Price ☐Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			

Liberty Utilities WATER · GAS · ELECTRIC

Capital Project Expenditure Form 2020

Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$50,000		

Approvals and Signatures[ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000	Don Romano Manager, Information Systems, Corporate IT		April 13, 2020
Senior Manager:	Up to $50,000			Click here to enter a date.
Senior Director/Director:	Up to $250,000	Shaival Hora Director, IT Operations	3/22/2021	Click here to enter a date.
Senior VP/VP:	Up to $500,000	Richard MacDonald VP operations		
State President:	Up to $500,000	Susan Fleck President, NH		Click here to enter a date.
Regional President:	Up to $3,000,000			Click here to enter a date.
Corporate – Sr. VP Operations:	Up to $5,000,000			Click here to enter a date.
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report | 2020

Requesting Region or Group:	East	**Date of Closeout (MM/DD/YY):**	12/31/2020
Project Name:	IT - Software, Equipment & Infrastructure 8840-2030		
Requesting Region:	East	**Sponsor** (Name)**:**	Shaival Hora
Project Champion:	Don Romano	**Project Champion**	
Project Status	☐In Service ☐Complete ☐ Closed		
Project Start Date:	01/01/2020	**Project Completion Date:**	12/31/2020
Requested Capital ($)	$50,000	**Expenditure Included in Approved Budget?**	X Yes ☐No

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
Don Romano	Project Lead		3/12/2021
Shaival Hora	Project Sponsor		3/22/2021
	Operations Manager		
	Accounting Manager		

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 ☒ No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes ☒ No ☐
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 ☒ No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes ☐ No ☐

Item	Question	Response
2.5	Do you agree the project should be closed? If no, please explain:	Yes ☒ No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	/5
2.6	Product and/or Service Performance	/5
2.7	Scope	/5
2.8	Cost (Budget)	/5
2.9	Schedule	/5

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 ☐ No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?		Yes ☐ No ☐
3.4	Identify the storage location for the following project documents items:		
Item	**Document**	**Location (e.g., Google Docs, Webspace)**	**Format**
3.4a	Business Case		☐ Electronic ☐ Manual
3.4b	If available, the Final Project Schedule		☐ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices		☐ Electronic ☐ Manual
3.4d	Status Reports		☐ Electronic ☐ Manual
3.4e	Risks and Issues Log		☐ Electronic ☐ Manual
3.4f	Final deliverable		☐ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team [ii]

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

Name	Role	Type (e.g., Contractor, Employee)
David Chung	Local IT support	Employee
Tedd Cluff	Local IT support	Employee
Esad Palic	Local IT support	Employee

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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the recommended improvements to correct a similar problem in the future.

Problem Statement	Problem Description	References	Recommendation

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

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			

External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$50,000	$ 63,413	($13,413)

Reasons for Variance	Impact
2200-SMENH-NHGAS- software Corporate allocation belong to 8840-2038	$8,735.95
2200-TORDATA-REPL-software Corporate allocation belong to 8840-2038	$31,647.43
2200-9800-LEGVPN-5yrs software Corporate allocation belong to 8840-2038	$2,254.50

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)

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project
[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Liberty Utilities

Capital Project Expenditure Form 2020

Project Name:	Gas System Reliability Program		
Financial Work Order (FWO):	8840-2031	**Project ID #:**	8840-2031
Requesting Region or Group:	New Hampshire	**Date of Request (MM/DD/YY):**	1/28/20
Project Sponsor:	Charles Rodrigues	**Project Start Date:**	1/1/20
Project Lead:	Peter Chivers	**Project End Date:**	12/31/2020
Prepared by:	Peter Chivers	**Requested Capital ($)**	$2,900,000
Planned or Unplanned Projects:	☒ Planned ☐Unplanned		
Project Type: (Click appropriate boxes)	☐ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported ☒ Discretionary		

Details of Request

Project description

The system reliability Blanket includes projects that provide operational benefits to customers beyond those of traditional system reinforcement projects and focus on gas planning & improving overall system reliability.

For 2020, the System Reliability Program will complete 2 projects. Manchester St in Concord will complete a 12" steel 100# feeder to supply downtown Concord and Laconia Rd Phase 2 in Tilton will install another 5000" of 8" plastic to reinforce supply to downtown Laconia.

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

Yes, the projects will enable more growth and sales in Laconia and Concord.

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

Both jobs will need to be permitted. Laconia Rd Phase 2 has extensive environmental impact since it goes along the edge of Lake Winnisquam.

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?

No.

Liberty Utilities Capital Project Expenditure Form 2020

What alternatives were evaluated and why were they rejected?
None were evaluated.

What are the risks and consequences of not approving this expenditure?
Lack of supply and growth opportunity for Laconia Rd and downtown Concord

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.
All project will be executed in accordance with company procedures.

Are there other pertinent details that may affect the decision making process?
No.

Complete the Financial Summary table only if:

- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year		Was this Capital Project included in the current	☒ Yes ☐ No

Liberty Utilities

Capital Project Expenditure Form | 2020

		year's Board Approved Budget?	
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☐1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?			
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:[i]	☐Fixed or Firm Price ☒Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$2,900,000		$2,900,000

Approvals and Signatures[ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000	Andrew Bernier	Andrew Bernier Digitally signed by Andrew Bernier Date: 2020.01.30 07:22:33 -05'00'	Click here to enter a date.
Senior Manager:	Up to $50,000			Click here to enter a date.
Senior Director/Director:	Up to $250,000	Charles Rodrigues	Charles Rodrigues Digitally signed by Charles Rodrigues	Click here to enter a date.
Senior VP/VP:	Up to $500,000	Richard MacDonald	Richard MacDonald	1/31/2020
State President:	Up to $500,000	Susan Fleck		~~Click here to enter a date.~~ 3/12/2020
Regional President:	Up to $3,000,000	James Sweeney		Click here to enter a date.
Corporate – Sr. VP Operations:	Up to $5,000,000			Click here to enter a date.

Liberty Utilities Capital Project Expenditure Form 2020

Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Liberty Utilities

Capital Project Business Case | 2020

NOTE: This form is required for planned Growth, Regulatory Supported, and Discretionary projects as well as combined blanket projects for Safety and Mandated with Growth, Regulatory Supported, and Discretionary Projects with a spend greater than $100,000 and all unplanned projects. All other Project types can utilize the Capital Expenditure Application Form.

Project Overview			
Project Name:	Gas System Planning & Reliability	**Date Prepared:**	1/29/20
Project ID#:	8840-2031	**Cost Estimate:**	$2,900,000
Project Sponsor:	Charles Rodrigues	**Project Start Date:**	1/1/2020
Project Lead:	Peter Chivers	**Project End Date:**	12/31/2020
Prepared By:	Peter Chivers	**Planned or Unplanned Projects:**	X Planned ☐Unplanned
Project Type (click appropriate boxes):	☐ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported X Discretionary		
Spending Rationale:	☐ Growth ☒ Improvement ☐ Replenishment		

Project Scope Statement
(Insert the scope of work, major deliverables, assumptions, and constraints)

The system reliability Blanket includes projects that provide operational benefits to customers by improving and providing better system pressure to areas identified based on SCADA system data and hydraulic analysis that have poor pressure during cold weather conditions. It also includes strategic main connection designed to allow for large low to high pressure to occur under the CIBS program. This reflects planned work to correct known deficiencies in the distribution system

Background
(Insert description of current operational arrangement, and brief history of project & asset)

The system reliability Blanket includes projects that provide operational benefits to customers beyond those of traditional system reinforcement projects and focus on gas planning & improving overall system reliability.

Includes:

- Eliminating single-feed distribution systems which often include the elimination of a district regulator through up ratings/down ratings and the elimination of non-standard pressure systems
- Eliminating "farm tap" regulators for regulatory non-compliance
- Integrating distribution reliance on LNG facilities and/or equipment for pressure-balancing the distribution system during peak conditions
- Relocating pressure-regulating equipment out of severe flood zones
- Improving the ability/flexibility to take pipeline gas from the transmission companies

Recommendation/Objective (Insert the unique problem this project is looking to resolve)

Install system reinforcement projects to allow for continuing expansion of Energy North customer base.
2020 has 2 projects planned under this blanket, Manchester St in CCD and Laconia Rd in TIL.

Liberty Utilities

Capital Project Business Case | 2020

Alternatives/Options
(Describe all reasonably viable alternatives. Discuss the viability of each and provide reasons if rejected)

None.

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

Next Anticipated Test Year	Click to select a date	**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No

Regulatory Lag
(Click appropriate box) ☐Less than 6 Months ☐6-12 Months ☐1 to 3 years ☐Greater than 3 years

Category	Total Already Approved	2020	2021	Beyond 2021	Total
Internal Labor					
Materials					
Equipment					
Contractor/ Subcontractor		$2,900,000			$2,900,000
AFUDC					
Total Project Cost					

Unlevered Internal Rate of Return:

Basis of Estimate: High Level project estimates based on prior year cost averages applied to specific planned projects.

For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:

Schedule
(List key milestone dates)

Key Milestone Description	Forecast Start Date	Forecast End Date

Risk Assessment
(Please describe the risk of not completing the project)

Liberty Utilities

Capital Project Business Case

2020

None.
Trade Finance (Is there a possibility to apply trade finance products to this project? See Capital Planning for further clarification)
No.
Supporting Documentation (Reference drawings, condition assessment reports, vendor quotations, etc. Attach document or where possible include hyperlink to file located on shared server or SharePoint)
None.

Approvals and Signatures[1]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000	Andrew Bernier	Andrew Bernier Digitally signed by Andrew Bernier Date: 2020.01.29 12:21:37 -05'00'	
Senior Manager: :	Up to $50,000			
Senior Director/Director:	Up to $250,000	Charles Rodrigues	Charles Rodrigues	
Senior Vice President/ Vice President	Up to $500,000	Rick MacDonald	Richard MacDonald	1/31/2020
State President:	Up to $500,000	SUSAN FLECK		2/5/2020
Regional President:	Up to $3,000,000	James Sweeney		2/26/2020
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[1] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report | 2020

Requesting Region or Group:	Liberty Utilities- NH-Gas Operations	**Date of Closeout (MM/DD/YY):**	3/22/2021
Project Name:	Gas System Planning & Reliability 8840-2031		
Requesting Region:	East	**Sponsor** (Name)**:**	Andrew Bernier
Project Champion:	Brian Frost	**Project ID**	8840-2031
Project Status	X In Service ☐Complete ☐ Closed		
Project Start Date:	1/1/2020	**Project Completion Date:**	12/31/2020
Requested Capital ($)	$2,900,000	**Expenditure Included in Approved Budget?**	X Yes ☐No

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
Brian Frost	Project Lead	Brian R. Frost Digitally signed by Brian R. Frost Date: 2021.03.22 14:44:47 -04'00'	3/22/2021
Andrew Bernier	Project Sponsor	Andrew Bernier Digitally signed by Andrew Bernier Date: 2021.03.30 13:45:22 -04'00'	
	Operations Manager		
	Accounting Manager		

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 ☒ No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes ☒ No ☐
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 ☒ No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes ☒ No ☐

Item	Question	Response
2.5	Do you agree the project should be closed? If no, please explain:	Yes ☒ No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	5/5
2.7	Scope	5/5
2.8	Cost (Budget)	5/5
2.9	Schedule	5/5

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 ☒ No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?		Yes ☒ No ☐
3.4	Identify the storage location for the following project documents items:		
Item	**Document**	**Location (e.g., Google Docs, Webspace)**	**Format**
3.4a	Business Case	Operations Finance SharePoint.	☒ Electronic ☐ Manual
3.4b	If available, the Final Project Schedule	N/A	☐ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices	Accounting reports.	☒ Electronic ☐ Manual
3.4d	Status Reports	Monthly budget meetings.	☒ Electronic ☐ Manual
3.4e	Risks and Issues Log	Monthly budget meetings.	☒ Electronic ☐ Manual
3.4f	Final deliverable	Wennsoft completed jobs.	☒ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team [ii]

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

Name	Role	Type (e.g., Contractor, Employee)
Gas Operations	Construct Team	Employee

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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the recommended improvements to correct a similar problem in the future.

Problem Statement	Problem Description	References	Recommendation
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	

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			

Project Close Out Report 2020

External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$2,900,000	**$1,409,927**	$1,490,073

Reasons for Variance	Impact

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)
8840-2031

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project
[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Liberty Algonquin
Business Services

Business Case – IT Projects ($25,000 - $100,000)

Barracuda Archiver Redundancy - NJ

Prepared By: Farhan Ansari

Date: August 14, 2019

Reviewed By: Brian Mottershead
IT Manager

Approved By: APPROVED
ED MOHACSY
Director, IT Infrastructure
Date: Aug 20/19
Signature:
Director IT (< $100,000)

Approved By:
V.P. (< $251,000)

1. Background and Business Purpose

We are using one Barracuda Archiver in Toronto datacenter for email journaling for all company emails. This presents the risk of losing archived emails in case the appliance gets corrupted or any of its hard drives fails. Since we depend heavily on Barracuda archiver for legal discoveries, it is very important to have a redundant Barracuda Archiver in place to minimize risk of losing historical email data in case of hardware failure or any other disaster.

2. Project Description

2.1. Objective

Add new Barracuda 850 archiver in New Jersey datacenter for redundancy.

2.2. Scope

Physical Barracuda 850 archiver installation, clustering and data synchronization.

2.3. Out of Scope

Reconfigure policy and retention policy.

2.4. Schedule

July- Order Barracuda 850
August – Mount To Rack and complete configuration
August – Synchronize data between existing and new Barracuda archivers
September – Verify both appliances are archiving emails and old data is accessible using new applicance

3. Financial Analysis

3.1. Financial Impacts

Cost Analysis:

Identify all relevant costs by all stakeholders resulting from this project in the table below.

Summary of Costs (000's)	2019				2020	2021
	Qtr 1	Qtr 2	Qtr 3	Qtr 4		
Capital Costs (CAD)						
Total Hardware Costs			76,388.00			
Total Software Costs						
Total Labour Costs			5,000.00	10,000.00		
Total Other Costs						
Total Capital Costs	$ -	$ -	$ **81,388.00** -	$ 10,000.00 -	$ -	$ -

Operating, Maintenance & Admin Costs						
Additional Operating Costs						
Total Labour Costs						
Maintenance						
Other Admin Costs						
Total OM&A Costs	$ -	$ -	$ -	$ -	$ -	$ -
Total Project Costs	$ -	$ -	$ -	$ -	$ -	$ -

2018-2019 LABS CAM Allocation		Expense
Liberty Power	**7.70%**	**$7,037**
Liberty Utilities	**92.30%**	**$84,351**
Liberty Water	7.00%	$5,905
Calpeco	6.10%	$5,145
Granite State	4.90%	$4,133
Energy North	9.90%	$8,351
Midstates Gas	6.70%	$5,652
Midstates Water	0.30%	$253
Arkansas	1.60%	$1,350
Woodson-Hensley	0.04%	$34
Georgia	5.30%	$4,471
New England Gas	6.10%	$5,145
Whitehall - Water	0.20%	$169
Whitehall - Sewer	0.20%	$169
Parkwater	5.30%	$4,471
Empire	38.70%	$32,644

Budget Analysis:

Identify whether the project: 1) has been included or 2) can be absorbed in the current corporate budget or 3) whether this is an additional request for funds. If (option 3 is selected) this project is not in the current budget, identify the impact (ie. revenue, costs, net income) the approval of this project would have on the budget.

Resource Allocation & Timeframe:

Identify all internal FTE requirements resulting from this project in the table below.

Summary of Internal FTE	**2019**				**2020**	**2021**
	Qtr 1	**Qtr 2**	**Qtr 3**	**Qtr 4**		
IT Resources						
Project & Other Mgmt						

Business Analyst						
Developer						
Operations/Infrast. Support				0.15	0.10	
DBA						
QA						
Change Management						
Total				0.15	0.10	

Identify all external FTE requirements resulting from this project in the table below.

Summary of External FTE	2019				2020	2021
	Qtr 1	Qtr 2	Qtr 3	Qtr 4		
IT Resources						
Project & Other Mgmt						
Business Analyst						
Developer						
Operations/Infrast. Support						
DBA						
QA						
Change Management						
Total						

Benefits Analysis:

Summary of Benefits (000's)	2009				2010	2011
	Qtr 1	Qtr 2	Qtr 3	Qtr 4		
Total Project Benefits	$ -	$ -	$ -	$ -	$ -	$ -

3.2. Non-Financial Impacts

Non-Quantifiable Benefits

- Improved Reliability
- Operational Efficiency
- Process Improvement
- Increase Customer Satisfaction
- Increased Staff Morale
- Improved Working Conditions
- Improved Safety Standards
- Health Benefits
- Regulatory / Governance
- Compliance / Risk
- Improved Corporate Image
- Brand Awareness

Non-Financial Summary	Description	Stakeholder(s) Impacted
Benefits:		
Compliance / Risk	Hardware may fail and result in historical email data loss	System Owners, IT Admin and Legal Team
Improved Reliability	Will have two copies of archived emails and appliances will be running in clustered mode	System Owners, IT Admin and Legal Team

4. Risk assessment

In case of hardware failure of the appliance, historical email data will be lost and we will not be able to perform legal discoveries for any legal requirements.

5. Assumptions

All assumptions used to determine, both financial and non-financial costs and benefits should be clearly documented.

- Installation will be performed by the internal staff whereas Barracuda support will help with configuration and data synchronization process between two appliance

Liberty Algonquin
Business Services

Business Case – IT Projects (>$100,000)

SCCM – Ivanti 3rd Party Patching Tool

Prepared By: Imran Noorani

Date: 07/03/19

Reviewed By: _____ MANAGER, END USER SERVICES 9/9/2019
IT Manager

Approved By: _____ 9/10/2019
Director IT (< $250,000)

Approved By: _____
V.P. (< $500,000)

1. Background and Business Purpose

Currently APUC's System Center Configuration Manager (SCCM) environment is responsible for patching all endpoints. This SCCM environment is used for deploying patches related to Microsoft products, as well as 3rd party software such as Google Chrome, Java, Adobe, and Mozilla Firefox Etc. Currently 3rd party patches are downloaded separately, tested, imported into SCCM, tested within SCCM, and then deployed to all production user endpoints. This is repeated for each 3rd party patch, making the whole process very time consuming and resource intensive.

2. Project Description

2.1. Objective

Implement Ivanti's 3rd Party Patch Plugin Tool and Reporting to easily patch Third-Party applications from the SCCM Console with no additional infrastructure investment.

2.2. Scope

- Acquisition of appropriate licensing and support from Ivanti for all Endpoints
- Receive training and documentation from Ivanti for Patch Plugin and Reporting tool.
- Allow Ivanti's Xtraction Reporting tool access to our SCCM SQL Database to generate live reports.

2.3. Out of Scope

Patching 3rd Party Patches on Servers

2.4. Schedule

To be determined

3. Financial Analysis

3.1. Financial Impacts

(Continued on the next page)

Cost Analysis:

Identify all relevant costs by all stakeholders resulting from this project in the table below.

Application Specific Licensing/ Implementation (Minimum licensing in brackets)	**Cost (USD)**	**Number of licenses required**	
Ivanti Patch for Microsoft	$ 6.45	3200	**$ 20,640.00**
Ivanti Patch for Microsoft Maintenance + Content Subscription-3 Year	$ 3.71	3200	**$ 11,872.00**
Patch Basic-Implementation	$ 6,129.00	1	**$ 6,129.00**
Ivanti Xtraction Connector -Reporting Tool	$ 22,286.77	1	**$ 22,286.77**
Ivanti Xtraction Connector -Reporting Tool- Maintenance 3 Year	$ 11,951.00	1	**$ 11,951.00**
		Sub Total USD	**$ 72,878.77**
		Sub Total CAD(rate 1.31)	**$ 95,471.19**
		Total CAD	**$ 95,471.19**

Internal Labour			
Description	**Rate (CAD)**	**Hours**	**Total**
Security	$ 75.00	20	**$ 1,500.00**
Infrastructure	$ 75.00	20	**$ 1,500.00**
Endpoint Services Group	$ 75.00	30	**$ 2,250.00**
Project Manager	$ 90.00	20	**$ 1,800.00**
Internal Consultant	$ 90.00	30	**$ 2,700.00**
		Sub Total	**$ 9,750.00**
		Contigency %	**$ 0.25**
		Contigency $	**$ 2,437.50**
		Total	**$ 12,187.50**
		Hardware, Software, Labour Total (CAD)	**$ 107,658.69**
Assumptions			
Internal Labour costs are estimates and are subject to change			
Quotes are based off the most recent quote provided by SoftChoice			
Training and Documentation will be provided by Ivanti			
Licensing costs are listed in USD then converted to CAD			
Patch Plugin and Reporting Tool will be Tested after implementation			

Allocations

Liberty Power	**7.7%**	**$8,290**
Liberty Utilities	**92.3%**	**$99,369**
Liberty Water	7.0%	$7,487
Calpeco	6.1%	$6,596
Granite State	4.9%	$5,252
Energy North	9.9%	$10,646
Midstates Gas	6.7%	$7,233
Midstates Water	0.3%	$303
Arkansas	1.6%	$1,686
Woodson-Hensley	0.04%	$47
Georgia	5.3%	$5,758
New England Gas	6.1%	$6,515
Whitehall - Water	0.2%	$206
Whitehall - Sewer	0.2%	$214
Parkwater	5.3%	$5,709
Empire	38.7%	$41,718
Total	**100.0%**	**$107,659**

3.2. Non-Financial Impacts

Non-Financial Summary	Description	Stakeholder(s) Impacted
Benefits:		
Operational Efficiency	Deploy all patches, Microsoft and 3rd party as one Package	IT, Business
Operational Efficiency	Improved reporting and dash-boarding functionality	IT, Business
Updated Patch Availability	New Patch automatically becomes available shortly after release by Vendor	IT, Business

4. Risk assessment

- Risks of not pursuing this effort will allow the following issues to continue:

- 3rd party patching no up to date, causing possible security and functional vulnerabilities
- Business downtime required to import, test and deploy each patch separately
- Inefficient creation/maintenance of software update groups
- Testing inefficiencies
- Inefficient deployments across system types
- Delayed application updates

5. Assumptions

- SCCM environment is expected to remain the same, with the addition of the Ivanti Patch Plugin to support patch management of all Endpoint systems.
- SCCM Environment will require a blackout period to facilitate implementation, training and testing.
- Resources from Security, Infrastructure and Endpoint teams will be required to support the project.

Liberty Algonquin
Business Services

Business Case – IT Projects (>$100,000)

Enterprise Data Center Foundation & Rationalization

Prepared By: Mario Cangemi, Brian Mottershead

Date: June 12, 2018

Approved By: _____ JUNE 14th 2018
Director, Procurement – Luiza de Camaret — Date

APPROVED
ED MOHASCY
Director, IT Infrastructure
Date:
SIGNATURE

Approved By: _____ 6/14/2018
Director IT (<$100,000) – Ed Mohacsy — Date

Approved By: _____ 6/14/2018
V.P (<750,000) – John Lowson — Date

Approved By: _____ 6/18/2018
Executive Officer (<2,000,000) – David Pasieka — Date

TABLE OF CONTENTS

1.0 BACKGROUND AND BUSINESS PURPOSE

The purpose of this document is to provide the business case for the rationalization of Liberty Utilities enterprise data center environments located in the Cyxtera colocation data centers in New Jersey and Toronto.

This document presents the business justification for the project, based on the estimated costs of development, implementation, ongoing operations and maintenance costs against the anticipated benefits.

This business case is a formal request for allocation of resources and funding to begin the project and contains key information necessary to evaluate the strategic fit, benefits and costs.

1.1 Problem/Opportunity

This is the first project in the implementation of ***Liberty Utilities Enterprise Data Center Strategy***. The strategy focuses on building a modern enterprise data center foundation to support Liberty Utilities for the period 2018-2022.

Project 1-Enterprise Data Center Foundation focuses on creation of Liberty Utilities enterprise data center foundation through rationalization and consolidation of existing data center services at the Cyxtera NJ colocation data center and the Cyxtera Toronto colocation data center. This project will deliver an annual OPEX saving of approximately USD **$400,000**.

Once completed, the project will deliver Liberty Utilities cost-effective enterprise data center services that provides the required performance, security, resiliency, scalability, and efficient data center operations environment to support the enterprise IT infrastructure and application systems.

This project consists of the following six distinct phases:

- Phase 1 – Build NJ Data Center Cage Environment
- Phase 2 – Migrate NJ Managed Services to NJ Cage
- Phase 3 – NJ SCADA Environment to NJ Cage
- Phase 4 – Migrate NJ Co-Location to NJ Cage
- Phase 5 – Build Toronto Cage Environment
- Phase 6 – Migrate Toronto Co-Location to Toronto Cage

1.2 Business Drivers

The following are the business drivers for this project:

- **Expiry of Existing Cyxtera Data Center Hosting Contract** – The current data center hosting contract needs to be renegotiated as it expires in November 2018.
- **Cost-efficiencies** – Rationalization and consolidation of the Liberty Utilities enterprise data centers currently located in Cyxtera Data Centers to deliver annual OPEX savings.
- **Data Center Capacity** – The existing Cyxtera NJ and Toronto data centers is near capacity in terms of rack space and power consumption and needs to be expanded. There is no space in the existing data center location to expand capacity.
- **SCADA Environment Expansion** – The existing SCADA data center environment needs to be expanded from one rack to two racks to support business requirements. There is not sufficient capacity in the existing colocation data center to support this expansion.

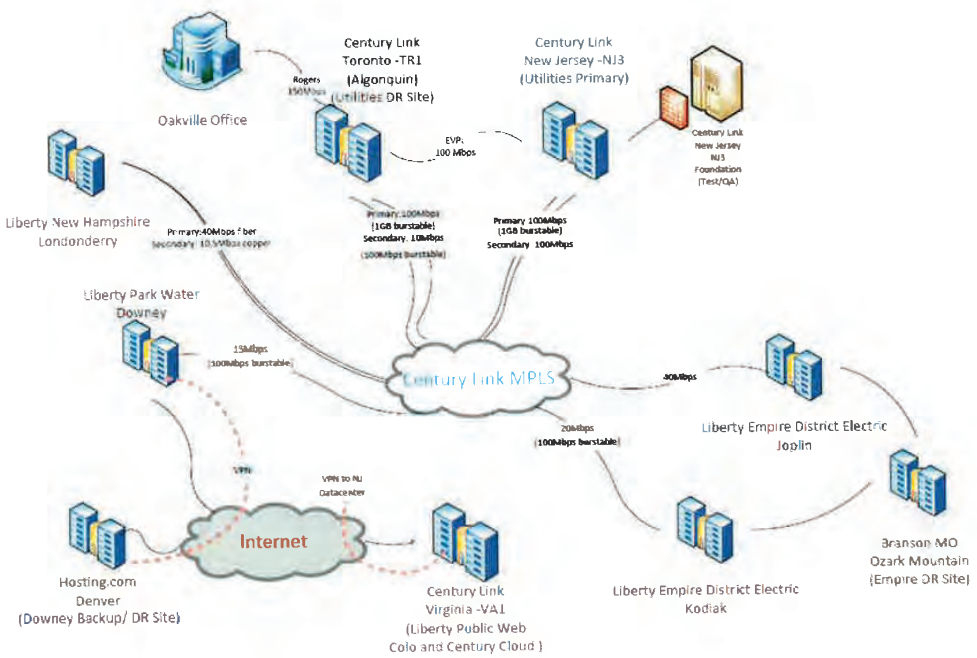
- **Secure Data Center Environment** – A requirement of the SCADA environment expansion and for improving IT General Controls over data center access at Cyxtera data centers is the implementation of a secure caged environment for Liberty Utilities IT infrastructure components in the data centers.
- **Tier III Data Center Certification –** Liberty Utilities requires that its colocation data centers are in partner data centers that are Tier III certified with Uptime Institute Management & Operations Stamp of Approval. The M&O Stamp of Approval is validated by an assessment process to have met criteria for 24 X 7 uptime ensuring the data center provider's rigor and effectiveness in relation to facility management and operations and gives Liberty Utilities the assurance that effective risk mitigation is in place.
- **End-of-Life IT Infrastructure Refresh** – Portions of the existing Liberty Utilities colocation data center assets are at end-of-live and need to be refreshed in order to maintain vendor support.
- **Enterprise Data Center Foundation –** Liberty Utilities needs a data center environment foundation that provides a cost-effective, standardized, enterprise-wide, secure, redundant, scalable, and manageable platform that supports business goals and objectives, streamlines IT services, and meets all regulatory compliance requirements for a company the size of Liberty Utilities.
- **Flexibility to Support Transition to Cloud Computing Services –** Liberty Utilities enterprise data center environment colocation strategy must provide the flexibility over the 3-year planning period to support the enterprise transition towards cloud computing services such as, SAP Software-as-a-Service, Microsoft Office 365, Security-as-a-Service, and others, where appropriate.

1.3 Current State

The following describes the current state of Liberty Utilities data center environment.

Multiple Data Centers

Liberty Utilities utilizes several data centers to provide IT service and solutions to meet business requirements. Some of these data centers are regional data centers acquired during merger and acquisition activity. The illustration below depicts the Liberty Utilities current data center environment. This environment is a mix of company owned-data centers, colocation data centers, managed services, and cloud services.



Current State - Liberty Utilities Data Center Footprint June 2018

Corporate-Owned Data Centers

Liberty Utilities owns two internal data centers, one in Joplin, Missouri and one in Downey, California. These data centers were acquired as a result of the merger/acquisition of Empire District Energy in Joplin and Park Water in Downey.

Colocation Data Centers

Liberty Utilities currently utilizes the following three colocation data centers provided by Cyxtera:

- New Jersey (primary production data center)
- Toronto (Disaster recovery, backup, and secondary data center)
- Virginia (public web security environment)

The colocation data centers at Cyxtera NJ and Cyxtera Toronto are in common data center floor space utilizing rack space shared with other companies. There is a business requirements to move these colocations into Liberty Utilities-specific secured cage environments to address business requirements for SCADA and simplification of ITGCs related to data center access control. Annual OPEX for the current NJ colocation data center is USD $249,361. Annual OPEX for the current Toronto colocation data center is USD $183,150.

Rack space in these colocation data centers is near capacity and will not support current requirements for SCADA environment expansion.

End-of-Life Data Center Infrastructure

Some of the IT infrastructure in the Cyxtera colocation data centers is at or beyond end-of-life and needs to be upgraded to minimize business risks related to supportability and ongoing vendor support.

Managed Services Data Center

Liberty Utilities currently utilizes a managed services data center located in the same Cyxtera New Jersey colocation data center as Liberty Utilities primary colocation data center. This data center is utilized to house the development and test environments for enterprise applications such as, the Great Plains and Cogsdale. These services currently cost USD **$423,417** per year.

Cloud Services

Liberty Utilities currently utilizes managed cloud services in a Cyxtera Virginia data center to provide public web services at an annual OPEX cost of USD $89,133. This cloud service is in the same Cyxtera Virginia colocation data center used to provide public web security services for Liberty Utilities web environment.

Disaster Recovery/Backup Data Centers

Liberty Utilities currently utilizes the following three data centers as disaster recovery/backup data centers:

- ***Cyxtera Toronto (Colocation)*** is Liberty Utilities primary enterprise disaster recovery and backup data center. It is the backup site for the Liberty Utilities production data center in Cyxtera New Jersey (Colocation).
- ***Ozark Mountain Complex (Branson)*** is the primary disaster recovery/backup data center for Liberty Utilities' Joplin (internal data center).
- ***Hosting.com (public cloud)*** is the primary disaster the backup data center for Liberty Utilities Downey Park Water (internal data center).

As designed, these data centers support varying degrees of disaster recovery capability and resilience.

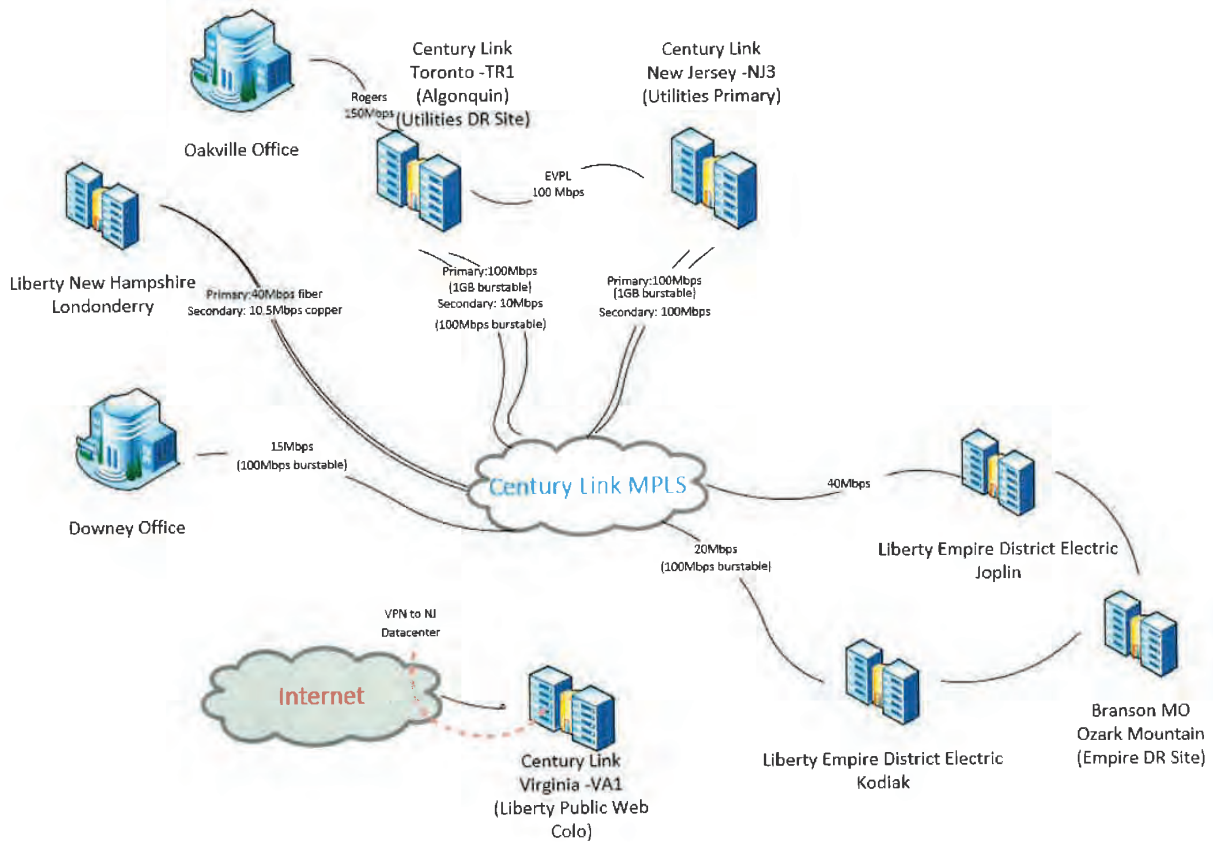
1.4 Future State

As a result of this project, the future state of Liberty Utilities enterprise data centers will be a modern data center foundation that is a more cost–effective, with consolidated enterprise data center services in both the Cyxtera NJ and Cyxtera Toronto colocation data center environments.

This enterprise data center environment will provide a 33% increase in Liberty Utilities data center capacity providing the data center power and rack space required to support known business requirements from 2018 to 2021, including the 2018 approved business case and budget for expansion of the NJ SCADA environment and the refresh of the Cisco telephony environment. This capacity expansion will be delivered at a reduced annual OPEX cost as compared to the existing Cyxtera data center colocation environments.

The project will also consolidate the existing NJ Managed Services into the new Cyxtera NJ secure cage enterprise data center environment.

The project will create an enterprise data center foundation that will support the capability to consolidate existing Park Water data center services in Downey and the related backup data center at Hosting.com in Denver.



Future State - Liberty Utilities Data Center Footprint March 2019

2.0 PROJECT DESCRIPTION

2.1 Project Objectives

The objectives of the ***Enterprise Data Center Foundation & Rationalization*** project are to build an enterprise-grade data center foundation for Liberty Utilities that delivers the following:

- Negotiation of a new, more cost-effective 3-year Cyxtera colocation data center services contract prior to the end of the existing in November 2018
- Secure cage environments to support consolidation of services within both NJ and Toronto colocation data centers
- Data center power and rack space capacity to support business requirements for 2018 to 2021 including the 2018 approved and budgeted expansion of the NJ SCADA to a secure caged colocation data center environment
- A reduction current OPEX costs
- Meets security requirements of SCADA and ITCGs
- Elimination of costly Managed Services by migrating NJ Managed Services to a new NJ Cage environment
- 2018 migration of the existing Cyxtera NJ colocation data center to the new Cyxtera NJ colocation cage data center
- 2019 migration of all current Cyxtera Toronto data center services to a new Cyxtera secure cage data center environment
- Compatibility with potential future cloud initiatives (i.e. SAP, Office 365, etc.)

2.2 Scope

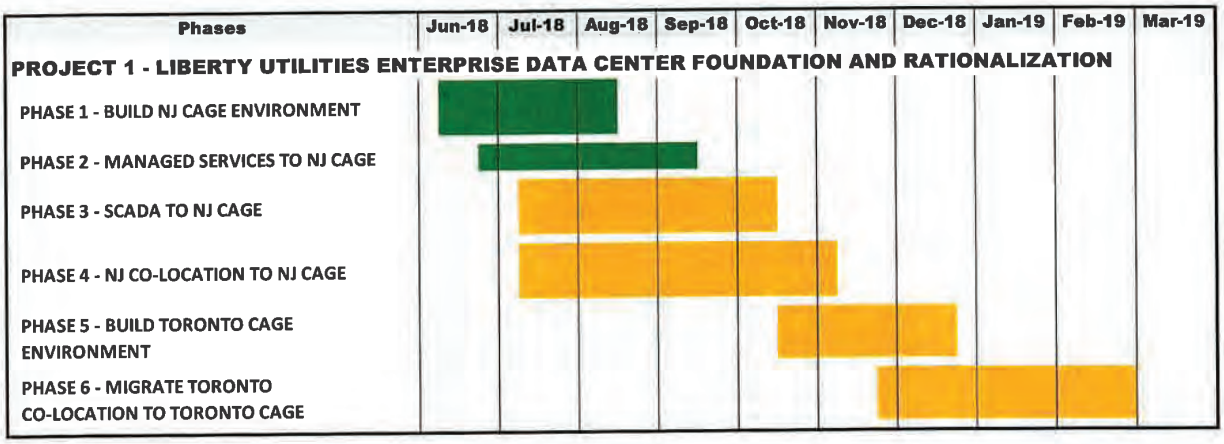
The scope of the ***Enterprise Data Center Foundation & Rationalization*** project focuses on rationalization of the following Liberty Utilities enterprise data center services:

- Cyxtera NJ colocation data center
- Cyxtera NJ managed services
- Cyxtera NJ SCADA colocation environment
- Cyxtera Toronto colocation data center
- Cyxtera Toronto SCADA colocation environment
- Cyxtera Toronto web services

2.3 Project Schedule

The project plan for the ***Enterprise Data Center Foundation & Rationalization*** project consists of the following six phases starting in June 2018 and completing in February 2019:

- Phase 1 – Build NJ Data Center Cage Environment
- Phase 2 – Migrate NJ Managed Services to NJ Cage
- Phase 3 – Migrate NJ Co-Location to NJ Cage
- Phase 4 – Rebuild SCADA Environment in NJ Cage
- Phase 5 – Build Toronto Cage Environment
- Phase 6 – Migrate Toronto Co-Location to Toronto Cage



This project plan is dependent on:

- Approval of the business case by mid-June 2018.
- Negotiation of a new data center hosting agreement with Cyxtera by mid-June 2018.
- Building of the new NJ cage environment by August 15, 2018.

2.4 Stakeholders

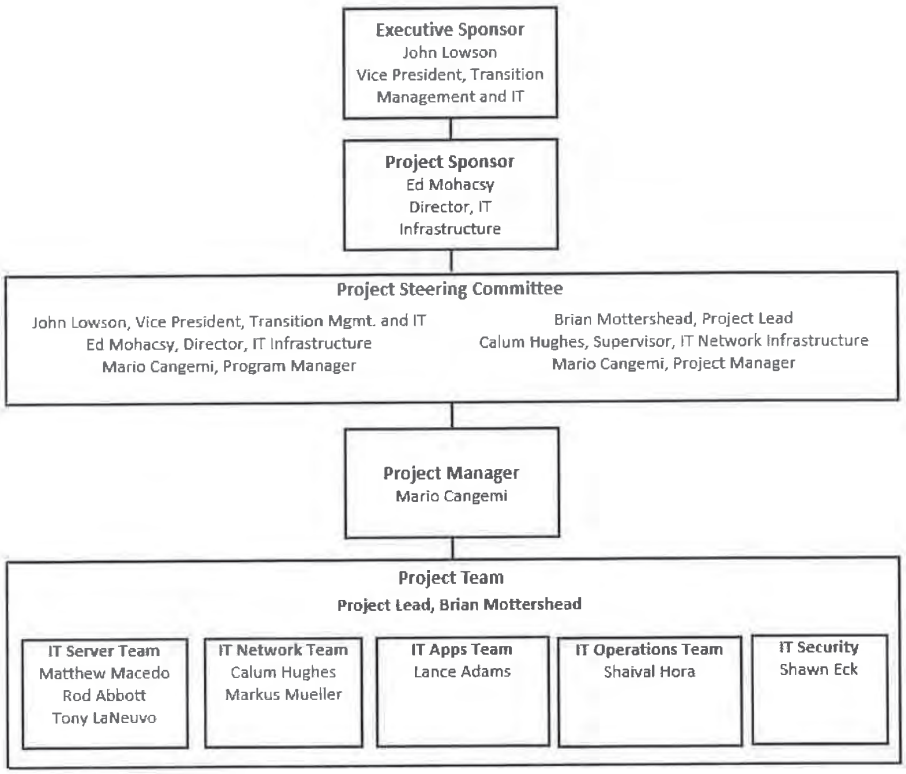
The following functional areas have been identified as key stakeholders in this project:

Functional Area	Role
IT Infrastructure-Server	Architecture, Design, Change Management, Implementation
IT Infrastructure-Network	Architecture, Design, Change Management, Implementation
IT Service Operations	Change Communications, Post-Implementation Service Support
IT Security, Risk, and Compliance	Architecture and design review
IT Applications	Application Impact Assessment, Post-Implementation Testing/Validation
Business / Operations	Informed of changes and impacts

2.5 Project Organization & Governance Model

The project will follow the Liberty Project Management and Governance Model. The Liberty IT Project Management Office will assign and Project Manager. The Project Manager will work with the Project Team to develop a detailed project and resource plan.

The following is the organization structure for the project:



Enterprise Data Center Foundation & Rationalization Project Organization

2.6 Alternatives

The Liberty Utilities IT Infrastructure team evaluated alternatives for the following data center services:

- Managed Services Data Center
- Secure Cage Colocation Data Center

Assessment of Managed Services Data Center Alternatives

An assessment was performed to determine the best option for replacement of the NJ Managed Services environment currently utilizing the Cyxtera NJ Data Center. Two options were explored:

1. Migrate NJ Managed Services to Joplin Data Center
2. Migrate NJ Managed Services to NJ Colocation Data Center

Option 2 was selected as the best approach for the following reasons:

- Minimal business impact
  - No impact on nightly dev/test refresh and support
  - No impact on on-demand dev/test refresh capability
- Minimal IT infrastructure and network changes
- Shorter project timelines (weeks vs. months)
- Less impact on IT staff resources
  - Shorter timelines
  - Minimal network changes
  - Minimal application team involvement
- Most cost effective option as there would not be a requirement to expand network bandwidth
- Lower annual OPEX
  - Managed services costs eliminated
- 24/7 on-site data center support in event of issues
- Modern scalable enterprise-grade data center facility
  - 24/7 data center management of fully redundant power, backup generators, air conditioning, etc.
- Most flexibility for future (mergers and acquisitions)
  - Can be expanded faster to accommodate growth

Option 1 Migrate NJ Managed Services to Joplin Data Center was rejected for the following reasons:

- More business impact
  - On-demand dev/test environment refreshes would not be possible
  - Nightly dev/test environment refresh time window might not accommodate refresh process over the network
- More impact on IT staff resources
  - Migration is more complex
  - Network upgrade required
  - Longer project timeline (months vs. weeks)
  - Data migration from NJ to Joplin would take in excess of a month and require a network bandwidth upgrade
- Increased monthly OPEX
  - Significant network upgrade to support nightly dev/test environment refresh and other production systems services

- No 24x7 support
- Rack space is limited. Existing Joplin Data center cannot accommodate space requirements.
- Less flexibility for future (mergers and acquisitions)
  - Finite space in existing data center
  - More time and cost required to expand data center once limit reached
    - Space, power, A/C
    - Need to leave space for organic growth of existing systems

Assessment of Secure Cage Colocation Data Center Alternatives

From the onset this project has been to rebuild the new secure cage enterprise data center environments in the same Cyxtera data centers currently utilized for the Liberty Utilities in New Jersey and Toronto, as the CAPEX cost, timelines, and internal resource effort to move to a new data center provider would be cost and timeline prohibitive.

To determine if the Cyxtera quotes were reasonable and comparable to other providers, an assessment was performed with three vendors asked to provide a quotes for the following configuration:

- 8 racks
- 36 kw of power
- Cage around the racks with a divider to split that cage into 2 'rooms', one with 6 racks, one with 2 racks
- Each room to have a separate door and hand scanner/card reader for entrance

Quotes from the following three vendors are included in Appendix B:

1. Cyxtera (incumbent)
2. Rogers Communications Inc.
3. Fujitsu America Inc. Managed Infrastructure Services

The chart below provides a summary of the costing from each vendor:

Provider	One-Time CAPEX	OPEX		Comments
		Monthly	Annual	
Colocation Data Center				
Cyxtera	$ 37,311	$ 10,728	$ 128,736	**Spec: 36KW Power, 8 Racks, Cage Environment, No Cross Connects**
Rogers	$ 32,806	$ 15,040	$ 180,480	
Fujitsu	$ 49,800	$ 15,000	$ 180,000	

Note: The Cyxtera quote reflects only the portion of the quote related to the technical specifications requested. Data center cross connects were removed as other vendors were not asked to quote them.

Cyxtera was selected for the following reasons:

- Most cost effective from a CAPEX perspective as migration to a new data center provider would require significant transition costs and would take significantly more internal resources
- Most cost effective from a monthly recurring OPEX perspective
  - Recurring monthly costs for requested quote were the lowest by >20% per month.
- Minimal business impact
  - Cage colocation data centers are is in the same existing Cyxtera data centers minimizing time for migration

  - Cage environments will to support approved SCADA migration/expansion budgeted and planned for 2018
- Less impact on IT staff resources
  - Significantly shorter timelines
  - Minimal network changes
  - Minimal application team involvement
- Shorter project timelines (weeks vs. months)

2.7 Initiative Priority

This ***Enterprise Data Center Foundation and Rationalization*** project is a high priority project for the following reasons:

- Existing Cyxtera data center contract is expiring in November 2018.
- Existing Cyxtera NJ Managed Services contract is expiring in November 2018 and is not cost-effective for the services delivered.
- Annual data center services OPEX reductions from consolidation of services.
- Incremental data center capacity is required to support business requirements from 2018-2021.
- A secure, caged, enterprise-grade data center environment is required to support IT infrastructure standardization, improve redundancy, scalability, capacity, and IT infrastructure supportability.
- Incremental data center capacity and a secure, caged, enterprise-grade data center environment is required to support implementation of the approved SCADA migration/expansion which has been approved, planned and budgeted for 2018.

3.0 PROJECT RISK ASSESSMENT

3.1 Business Risks

The following business risks have been identified should this project not proceed as planned:

- **Data Center Capacity** – Existing data center capacity (power and rack space) will not support business requirements for period 2018-2021
- **SCADA Expansion Plan and Budget** – A new secure caged enterprise-grade data center environment required to support implementation of the approved SCADA migration/expansion project planned and budgeted for 2018 will not be possible.
- **Managed Services Contract** – Existing expensive NJ Managed Services contract will have to be renewed.
- **Colocation Data Center Contract** - Existing colocation data center contracts will have to be renewed.

3.2 Project-Specific Risks

The following table outlines the risks that have could potentially affect the scope, timelines, or costs of the ***Enterprise Data Center Foundation & Rationalization*** project:

Risk	Probability	Impact	Impact To	Risk Response
Availability of key project resources and/or staff	Low	High	Schedule Cost Quality	Project Sponsor will communicate schedule, expectations and responsibilities to all project resources.
Scope Changes	Low	High	Schedule Cost Quality	Project Steering Committee to approval all scope changes which will follow the Project Change Request (PCR) process.
Delays in business case approval	Medium	High	Schedule Cost	Project Sponsor to tightly managed business case approval process.
Delays in Data Center Services contract negotiation	Low	High	Schedule Cost	Project Sponsor to tightly managed data center services contract negotiation process.
Delay in Managed Service Transition once Notice Given	Low	High	Schedule Cost	Negotiate flexibility in notice of termination in case transition of managed services to new cage colocation does not occur before termination date requested.
Delays in Hardware procurement Process	Low	High	Schedule Cost	Project Sponsor to closely manage the procurement process.
Project Schedule Change	Low	High	Resource Availability Schedule Cost	Follow the PCR process. Follow communications and escalation process to ensure project deadlines are met. Communicate changes as soon as possible.
Non-project related timing delays (Operational Requirements, Vacation, Training, Medical)	Low	High	Schedule Cost Resource Availability Quality	Clearly define the availability of Liberty Utilities resources and communicate / define their roles in the project. Assign secondary resources to assist should primary resource become unavailable.
Post-implementation support	Low	High	Schedule Cost Quality	Stagger migration to new environment to ensure resource availability for post-migration support. Clearly define the Liberty Utilities resources and communicate to business.

4.0 FINANCIAL ANALYSIS

4.1 Financial Impacts

Summary

Upon completion of the six phases of ***Enterprise Data Center Foundation & Rationalization*** project Liberty Utilities will realize an annual OPEX savings of approximately USD **$400,000**. To achieve these savings Liberty Utilities must make a one-time capital investment of USD **$849,199** which includes USD $40,000 in contingency.

Cost Analysis:

The chart below provides a high-level cost analysis of the CAPEX and vendor OPEX related to this project.

Phase	One-Time CAPEX	Annual OPEX		Forecast Annual OPEX Savings	
		Current	Forecast	USD	%
Project 1 - Enterprise Data Center Rationalization					
Phase 1.1 - Build NJ Cage Environment	$ 163,227	$ 203,584	$ 211,279	$ (7,695)	-4%
Phase 1.2 - Managed Services to NJ Cage	$ 432,640	$ 423,417		$ 423,417	100%
Phase 1.3 - Migrate SCADA to NJ Cage		$ 45,777		$ 45,777	100%
Phase 1.4 - Migrate NJ Colocation to NJ Cage	$ 107,200				
Phase 1.5 - Build Toronto Cage Environment	$ 55,732	$ 183,150	$ 169,517	$ 13,633	7%
Phase 1.6 - Migrate Toronto Colocation to Toronto Cage	$ 50,400				
Contingency	$ 40,000				
Totals	**$ 849,199**	**$ 855,928**	**$ 380,795**	**$ 475,132**	**56%**

The CAPEX budget for Phase 1.3 Migrate/Upgrade SCADA Environment is approved in a separate business case and is included in 2018 regional business unit budgets.

4.2 OPEX Analysis

Completion of this project as planned will reduce annual OPEX related to third party data centers from USD $855,928 to USD $380,795, a vendor annual cost saving of USD **$475,132.** These savings are driven primarily from migration and elimination of the NJ Managed Services into a Liberty Utilities enterprise colocation data center and from a negotiated reduction in cost for the colocation data center space. Vendor cost savings will be partially offset by a small labour cost increase associated with managing the environments.

Included in the new data center costs are:

- A 33% increase in the physical data center capacity (power and rack space)
- An increase in network bandwidth between the primary production data center in NJ and the secondary backup data center in Toronto to facilitate improved backup and recovery performance
- Enhanced physical data center security capabilities from a secure cage environment
- Improved physical access and access management utilizing scan in/scan out technology for improved management and ITGC reporting.

The following table is a summary of the forecasted annual vendor OPEX per the Cyxtera quote.

Services	Quote #	OPEX	
		Monthly	Annual
New Jersey Colocation			
36KW Power, 8 Racks, Cage Environment	829557	$ 10,778	$ 129,336
Data Center Cross Connects	829557	$ 3,050	$ 36,600
NJ Internet	829570	$ 779	$ 9,343
EVPL	833046	$ 3,000	$ 36,000
Total New Jersey Colocation		**$ 17,607**	**$ 211,279**
Toronto Colocation			
36KW Power, 8 Racks, Cage Environment	832763	$ 10,728	$ 128,736
Data Center Cross Connects		$ 2,904	$ 34,851
Toronto Internet	832789	$ 494	$ 5,930
Total Toronto Colocation		$ 14,126	$ 169,517
Totals		**$ 31,733**	**$ 380,795**

4.3 Cost Allocation – OPEX

The following chart presents the current distribution of enterprise data center OPEX allocated to Liberty entities. The forecasted enterprise data center OPEX is allocated using the same allocation percentage as the current allocation.

Entity	Current Data Center OPEX		Forecasted Data Center OPEX		Allocation %	Projected Annual Savings	
	Monthly Allocation (USD)	Annual Allocation (USD)	Monthly Allocation (USD)	Annual Allocation (USD)		(USD)	%
Liberty Power (APCO)	$ 1,317	$ 15,804	$ 504	$ 7,031	1.8%	$ 8,773	56%
Arkansas	$ 2,725	$ 32,701	$ 1,139	$ 14,548	3.8%	$ 18,153	56%
Calpeco	$ 8,365	$ 100,384	$ 3,606	$ 44,660	11.7%	$ 55,724	56%
Empire	$ 6,628	$ 79,532	$ 2,535	$ 35,383	9.3%	$ 44,149	56%
Energy North	$ 15,357	$ 184,284	$ 6,672	$ 81,986	21.5%	$ 102,298	56%
Georgia	$ 7,846	$ 94,155	$ 3,405	$ 41,889	11.0%	$ 52,266	56%
Granite State	$ 7,745	$ 92,938	$ 3,359	$ 41,348	10.9%	$ 51,591	56%
Liberty Water (South)	$ 7,978	$ 95,736	$ 4,692	$ 42,592	11.2%	$ 53,144	56%
Midstates Gas	$ 10,167	$ 122,003	$ 4,559	$ 54,278	14.3%	$ 67,725	56%
Midstates Water	$ 666	$ 7,993	$ 275	$ 3,556	0.9%	$ 4,437	56%
New England Gas	$ 1,112	$ 13,339	$ 403	$ 5,935	1.6%	$ 7,405	56%
Park Water	$ 907	$ 10,883	$ 347	$ 4,842	1.3%	$ 6,041	56%
Whitehall Sewer	$ 250	$ 2,999	$ 115	$ 1,334	0.4%	$ 1,665	56%
Whitehall Water	$ 257	$ 3,086	$ 120	$ 1,373	0.4%	$ 1,713	56%
Woodson-Hensley	$ 8	$ 91	$ 3	$ 40	0.0%	$ 50	56%
Totals	**$ 71,327**	**$ 855,928**	**$ 31,733**	**$ 380,795**	**100%**	**$ 475,133**	**56%**

4.4 Cost Allocation – CAPEX

The following chart presents the allocation of enterprise data center one-time CAPEX to Liberty entities. The allocation is based on the same allocation percentage as the current annual OPEX allocation.

Entity	One-Time CAPEX Allocation	
	(USD)	%
Liberty Power (APCO)	$ 15,680	1.8%
Arkansas	$ 32,444	3.8%
Calpeco	$ 99,595	11.7%
Empire	$ 78,907	9.3%
Energy North	$ 182,835	21.5%
Georgia	$ 93,415	11.0%
Granite State	$ 92,208	10.9%
Liberty Water (South)	$ 94,983	11.2%
Midstates Gas	$ 121,044	14.3%
Midstates Water	$ 7,930	0.9%
New England Gas	$ 13,235	1.6%
Park Water	$ 10,797	1.3%
Whitehall Sewer	$ 2,975	0.4%
Whitehall Water	$ 3,062	0.4%
Woodson-Hensley	$ 90	0.0%
Totals	**$ 849,199**	**100.0%**

4.5 Non-Financial Impacts

Non-Quantifiable Benefits

The following table provides a list of the non-quantifiable benefits that will be realized from completion of the ***Enterprise Data Center Foundation & Rationalization*** project:

Benefit	Description	Stakeholders Impacted
Data center capacity to support known business requirements	New enterprise data center environment will provide sufficient capacity in terms of the power and rack space to meet known business requirements for 2018-2021 including approved, planned and budgeted SCADA expansion in 2018	Business Operations teams
Improved IT Service Levels	New hardware for Dev/Test Environment will improve performance of these environments. Expanded bandwidth between NJ and Toronto datacenters.	Business Unit testing teams IT Apps Team
Improved enterprise data center manageability	With data center services consolidated into new enterprise colocation data centers the ongoing support and management will be less complex simplifying ongoing support and management	IT Infrastructure Server Team IT Infrastructure Network Team

Benefit	Description	Stakeholders Impacted
Improved in IT Risk Management and Data Center Security	New environment will be in a secure caged colocation space dedicated to Liberty Utilities with scan in/scan out access management	IT Infrastructure Server Team IT Infrastructure Network Team IT Security, Risk, and Compliance Management Team
Simplification of ITGC reporting on data center access	New environment will be equipped with scan in/scan out technology to manage access to the enterprise data center environment simplifying ITCG reporting	IT Infrastructure Server Team IT Infrastructure Network Team IT Security, Risk, and Compliance Management Team

5.0 DEPENDENCIES

5.1 Project Dependencies

Key dependencies for successful as planned completion of the ***Enterprise Data Center Foundation & Rationalization*** project are:

1. Business case approved by mid-June 2018 to ensure timelines are not impacted.
2. New Cyxtera data center services contract negotiated by mid-June 2018.
3. Hardware ordered by June 30, 2018 to ensure timelines are not impacted.
4. ***Phase 1-Build NJ Cage Environment*** must be completed as per timelines in order to support implementation timelines for the following phases:
   - Phase 2-Migrate NJ Managed Services to NJ Cage
   - Phase 3-Migrate NJ SCADA to NJ Cage
   - Phase 4-Migrate NJ Colocation to NJ Cage
5. ***Phase 5-Build Toronto Cage Environment*** must be completed as planned in order to support ***Phase 6-Migrate Toronto Colocation to Toronto Cage*** as planned.

5.2 Business Dependencies

Expansion of NJ SCADA Environment

Completion of the ***Enterprise Data Center Foundation & Rationalization*** project is a requirement for a business project to expand and update the SCADA environment in NJ. The SCADA project has both an approved business case and an approved 2018 CAPEX budget. Any delay in building the new NJ secure cage environment could impact the ability to complete the SCADA project in 2018.

Upgrade of Cisco Telephony Environment

Expansion of the environment will also provide the capacity to support the approved 2018 business case and budget for upgrade of Liberty Utilities telephony environment.

6.0 ASSUMPTIONS

6.1 Major Assumptions

The following assumptions have been made in order to facilitate completion of this project:

1. Business case approved mid-June 2018.
2. Cyxtera data center contracts negotiated mid-June 2018.
3. New NJ secure cage enterprise data center colocation environment built by August 15, 2018.
4. IT Infrastructure staff are available to execute required work as per the project plan.
5. Project will be completed prior to expiry of existing Cyxtera data center and managed services contracts.

APPENDIX A - PROJECT PHASE DETAILS

This project consists of the following six distinct phases:

- Phase 1 – Build NJ Data Center Cage Environment
- Phase 2 – Migrate NJ Managed Services to NJ Cage
- Phase 3 – Migrate NJ Co-Location to NJ Cage
- Phase 4 – Rebuild SCADA Environment in NJ Cage
- Phase 5 – Build Toronto Cage Environment
- Phase 6 – Migrate Toronto Co-Location to Toronto Cage

Details for each phase are outlined the following sections.

Phase 1.1 Build NJ Cage Environment

Phase 1.1 Objectives

The objectives of this phase of the enterprise data center rationalization project are:

- To build a standardized, secure, enterprise-grade data center environment in the Cyxtera NJ colocation data center to support consolidation of all existing data center services into a single co-location environment.
- To deliver the new secure cage environment with expanded capacity for a recurring monthly OPEX cost to the similar to the current cost for colocation data center services.
- To create the data center foundation that will deliver annual vendor OPEX savings of USD **$423,417** in Phase 1.2 Migration of NJ Managed Services to NJ Cage.
- To provide required capacity to support Liberty Utilities business requirements for 2018-2021.

Phase 1.1 Timeframe

This phase of the project is planned for completion by August 15, 2018.

Phase 1.1 Financial Analysis – CAPEX

A CAPEX investment of approximately USD **$165,000** is required in order to complete this phase of the project. All future phases of the enterprise data center rationalization project are dependent on completion of this phase.

These CAPEX costs include capitalization of four months of Cyxtera data center charges while Liberty Utilities transitions the current NJ managed services and NJ colocations into the new environment. Once completed these charges will become an OPEX charge.

The chart below provides CAPEX costs estimates related to this phase of the project.

Estimated costs	One-Time Capital Costs (USD)			
	2018	2019	2020	Total
Data Centre Costs				
Annual Cage Co-location Pre-migration	95,363			95,363
One time build costs	58,503			58,503
Internal Labour (Network)				
Design & Documentation	960			960
Internal Labour (Server)				
Design & Documentation	3,200			3,200
Testing	240			240
Project Management	2,400			2,400
Other Costs				
Travel	1,600			1,600
Total Costs	**163,227**	-	-	**163,227**

Phase 1.1 Financial Analysis – OPEX

There are no OPEX costs related to this phase of the project.

Phase 1.1 Benefits

The major benefits of this phase of the project are:

- Creation of the enterprise data center foundation to support consolidation of all existing Cyxtera NJ data center services into a single, secure colocation data center
- An enterprise dta center environment to support known business requirements for the period 2018-2023.
- Creation of the enterprise data center foundation to support realization of approximately USD **$423,417** in annual vendor OPEX savings in the Phase 1.2 of this project which is the migration NJ Managed Services to the new cage environment created in this phase.
- Creation of the enterprise data center required to support expansion of the secured SCADA data center environment approved, planned, and budgeted for implementation in 2018.

Phase 1.2 Migrate NJ Managed Services to NJ Cage

Objectives

The objectives of this phase of the enterprise data center project are:

- To migrate the existing Cyxtera NJ managed services environment which houses the Liberty Utilities development and test environments from the managed service to the Cyxtera NJ secure cage colocation built in Phase 1.
- Upon completion deliver for annual vendor OPEX savings of approximately USD **423,417**.
- To perform the migration with minimal impact on the business.

Timeframe

This phase of the project is planned for completion by September 15, 2018.

Financial Analysis – CAPEX

A CAPEX investment of USD **$432,640** is required in order to complete this phase of the project.

These CAPEX costs include:

- Purchase of hardware (servers and network)
- Internal labour to install the hardware and migrate the servers
- Other costs for staff training on the new hardware and travel to perform the migration

Estimated Costs	One-Time Capital Costs (USD)			
	2018	2019	2020	Total
Hardware				
Hyper-converged Infrstructure (Server & Storage)	400,000			400,000
Cisco SFP's	4,320			4,320
Network Cables	1,200			1,200
Internal Labour (Network)				
Network Setup	1,920			1,920
Firewall Setup	2,880			2,880
Documentation	960			960
Internal Labour (Server)				
Server Setup	2,400			2,400
Storage Setup	1,440			1,440
Virtual Move from Managed to Unmanaged	3,200			3,200
Documentation	960			960
Testing	400			400
Project Management	3,200			3,200
Incidentals	960			960
Other Costs				
Technical Training	4,800			4,800
Travel	4,000			4,000
Total Costs	**432,640**	-	-	**432,640**

Financial Analysis – OPEX

With completion of this phase of the project Liberty Utilities will realize annual vendor OPEX savings of USD **$423,417** driven by elimination of the managed services.

There are incremental OPEX cost starting in 2021 related to hardware maintenance on the servers and network components purchased to support the development and test environments that were part of the managed

services being replaced. As is customary with hardware purchases, the first three years of maintenance are bundled in the manufacturer's warranty as part of the initial hardware purchase.

The chart below provides details of the OPEX impact of this phase.

Estimated Costs	Incremental Ongoing Costs (USD)					
	2018	2019	2020	2021	2022	Total
Hardware						
Hyper-converged Infrstructure (Server & Storage)				40,000	80,000	120,000
Cisco SFP's				432	864	1,296
Network Cables				120	240	360
Internal Labour (Network)						
Yearly support	240	480	480	480	480	2,160
Internal Labour (Server)						
Yearly support	720	1,440	1,440	1,440	1,440	6,480
Total Costs	**960**	**1,920**	**1,920**	**42,472**	**83,024**	**130,296**

Benefits

The major benefits of this phase of the project are:

- Realization of approximately USD **$423,417** in annual vendor OPEX savings from elimination of the managed services
- Improvements in IT services related improved performance from newer technologies that in the installed server and storage hardware.

Phase 1.3 NJ SCADA to NJ Cage Environment

Objectives

The objectives of this phase of the enterprise data center rationalization project are:

- To build the required secure, caged data center infrastructure for expansion of the NJ SCADA environment to support business requirements.
- To migrate the existing NJ SCADA environment to the NJ cage environment built in Phase 1.

This phase that has been approved, budgeted and planned for implementation in 2018. This project will double the size of the SCADA environment.

Timeframe

This phase of the project is planned for completion by October 15, 2018.

Financial Analysis – CAPEX

CAPEX funding for this project has been approved for 2018 as part of the business case and budget for the SCADA expansion project.

Financial Analysis – OPEX

Incremental recurring OPEX funding for this project has been approved for as part of the business case and budget for the SCADA expansion project.

Benefits

The major benefits of this phase of the project are:

- Capacity for expansion and upgrade of end of life hardware in the SCADA environment as per 2018 business plans.
- Mitigation or risk related to vendor support for end of life hardware.
- Secured, cage environment for the SCADA environment as per business requirements.

Phase 1.4 Migration of NJ Colocation to NJ Cage

Objectives

The objectives of this phase of the enterprise data center rationalization project are:

- To migrate the existing Cyxtera NJ colocation data center into the new Cyxtera NJ secure, caged colocation data.
- Replace end of life hardware (server and storage).
- To migrate environment with minimal impact on the business.

Timeframe

This phase of the project is planned for completion by November 9, 2018. This date coincides with the end of the existing Cyxtera colocation data center contract.

Financial Analysis – CAPEX

A CAPEX investment of USD **$107,200** is required in order to complete this phase of the project.

These CAPEX costs consist internal labour and travel to support the migration of the existing colocation into the new secure caged colocation.

Estimated Costs	One-Time Capital Costs (USD)			
	2018	2019	2020	Total
Internal Labour (Network)				
Network Setup	34,400			34,400
Internal Labour (Server)				
Server Setup	34,400			34,400
Other Costs				
Travel	38,400			38,400
Total Costs	**107,200**	-	-	**107,200**

Financial Analysis – OPEX

There are no OPEX costs related to this phase of the project.

Benefits

The major benefits of this phase of the project are:

- All existing Cyxtera NJ data center services will be located in a single, secure colocation data center.
- IT network and server administration efficiencies related to ongoing management of the environment realized from consolidation of the environment.
- Data center capacity to support known business requirements from 2018-2021.
- IT service improvements with increased bandwidth between NJ and Toronto data centers.

Phase 1.5 Build Toronto Cage Environment

Objectives

The objective of this phase is to build a standardized, secure, enterprise-grade data center environment in the Cyxtera Toronto colocation data center to support consolidation of all existing Toronto data center services into a single co-location environment and to provide required capacity to support business requirements.

Timeframe

This phase of the project is planned for completion by December 15, 2018.

Financial Analysis – CAPEX

A CAPEX investment of USD **$55,732** is required in order to complete this phase of the project. Completion of this phase is required to support implementation of Phase 1.6-Migration of Toronto colocation to Toronto Cage.

These CAPEX costs include capitalization of two months of Cyxtera data center charges while Liberty Utilities transitions the current Cyxtera data center services into the new cage environment. Once completed the charges will become an OPEX charge.

The chart below provides details of the required CAPEX expenditure in 2018 and 2019.

Estimated Costs	One-Time Capital Costs (USD)			
	2018	2019	2020	Total
Data Centre Costs				
Annual Cage Co-location Pre-migration		31,611		31,611
One time build costs	47,572			47,572
Internal Labour (Network)				
Design & Documentation	960			960
Internal Labour (Server)				
Design & Documentation	3,200			3,200
Testing	240			240
Incidentals	960			960
Project Management	2,400			2,400
Other Costs				
Travel - Mileage	400			400
Total Costs	**55,732**	**31,611**	**-**	**87,343**

Financial Analysis – OPEX

There are no OPEX costs related to this phase of the project.

Benefits

The major benefits of this phase of the project are:

- Creation of the enterprise data center foundation to support consolidation of all existing Cyxtera Toronto data center services into a single, secure colocation data center
- Lay the foundation for a reduction in annual data center vendor OPEX costs of USD **$13,636** (7%) in Phase 1.6
- To provide data center environment to support known business requirements for the period 2018-2021.
- Data center capacity to support known business requirements from 2018-2021.

Phase 1.6 Migrate Toronto Colocation to Toronto Cage

Objectives

The objectives of this phase of the enterprise data center rationalization project are:

- To migrate the existing Cyxtera Toronto colocation data center into the new Cyxtera Toronto secure, caged colocation data.
- Replace end of life hardware (server and storage).
- To migrate environment with minimal impact on the business.

Timeframe

This phase of the project is planned for completion by February 28, 2019.

Financial Analysis – CAPEX

A CAPEX investment of USD **$50,400** is required in order to complete this phase of the project.

These CAPEX costs consist primarily of hardware and internal labour to support the migration of the existing colocation into the new secure caged colocation.

Estimated Costs	One-Time Capital Costs (USD)			
	2018	2019	2020	Total
Internal Labour (Network)				
Network Setup	21,200			21,200
Internal Labour (Server)				
Server Setup	21,200			21,200
Other Costs				
Travel	8,000			8,000
Total Costs	**50,400**	-	-	**50,400**

Financial Analysis – OPEX

There are no related OPEX costs related to this phase of the project.

Completion of this phase will deliver a reduction in annual vendor OPEX for data center services of USD **$13,636** (7%).

Benefits

The major benefits of this phase of the project are:

- All existing Cyxtera Toronto data center services will be located in a single, secure colocation data center.
- Reduction in data center services OPEX.
- Creation of the enterprise data center foundation to support known business requirements for the period 2018-2011

APPENDIX B - DATA CENTER SERVICES QUOTES

To determine if incumbent data center services provider (Cyxtera) quotes were reasonable and comparable to other providers, an assessment was performed with three vendors asked to provide a quotes for the following configuration:

- 8 racks
- 36 kw of power
- Cage around the racks with a divider to split that cage into 2 'rooms', one with 6 racks, one with 2 racks
- Each room to have a separate door and hand scanner/card reader for entrance

Quotes for the following three vendors are included in the following sections:

1. Cyxtera (incumbent)
2. Rogers Communication
3. Fujitsu America Inc. Managed Infrastructure Services

The following table is a summary of the quotes from the three vendors above.

Provider	One-Time CAPEX	OPEX	
		Monthly	Annual
Colocation Data Center			
Cyxtera	$ 37,311	$ 10,728	$ 128,736
Rogers	$ 32,806	$ 15,040	$ 180,480
Fujitsu	$ 49,800	$ 15,000	$ 180,000

Cyxtera Quote

Cyxtera

Company Name: Liberty Energy Inc
Quote #: 829557
Quote Expiration Date: 8/22/2018

Service Details - 36 Months							
Request Type	Qty	Product Family	Product Configuration	Monthly Recurring Charges			Non-Recurring Charges
				New	Existing	Delta	Non-Recurring
Allocation Line Item Includes Overhead Cable Tray -							
Add	1	Colocation	**Colocation Power Allocation 2.0** Data Center: ZZNJ3 kW: 36.0	9,128.00	0.00	9,128.00	3,420.00
Add		Colocation	**Colocation Enclosure 2.0** Data Center: ZZNJ3 Quantity: 8 Enclosure Type: Cabinet Enclosure Dimensions: 24 Inches x 42 Inches Pricing Plan: Option B - Pay Upfront	0.00	0.00	0.00	10,904.00
Add		Colocation	**Colocation Physical Security 2.0** Contacts: 1 Data Center: ZZNJ3 Door Type: Not Required Reader Type: Read In / Read Out Reporting: Yes	0.00	0.00	0.00	5,475.20
Add		Colocation	**Colocation Physical Security 2.0** Contacts: 1 Data Center: ZZNJ3 Door Type: Not Required Reader Type: Read In / Read Out Reporting: Yes	0.00	0.00	0.00	5,475.20
Add		Colocation	**Colocation Power Distribution 2.0** Data Center: ZZNJ3 Quantity: 8 Power Configuration: Primary/Redundant Pair Power Circuit: 30A/208V-Single Phase-L6	1,600.00	0.00	1,600.00	7,200.00
Add		Colocation	**Colocation Power Strip 2.0** Data Center: ZZNJ3 Quantity: 2 Power Strip Type: L6-30 Horizontal Mount Power Strip with Display	0.00	0.00	0.00	616.00
Add		Colocation	**Colocation Power Strip 2.0** Data Center: ZZNJ3 Quantity: 14 Power Strip Type: L6-30 Vertical Mount Power Strip with Display	0.00	0.00	0.00	4,221.00
			Group Totals	**10,728.00**	**0.00**	**10,728.00**	**37,311.40**

Rogers Quote

Quote is in CAD.

ROGERS

Colocation Services (Toronto DC3): New 8-Rack Suite in Pod-4

Description	Qty	Unit Price	Discount	Extended	Term	Notes
Server Co-location - Suite Setup - per Cabinet	8	750.00	50%	$3,000.00	One-time	
Server Co-location - Suite Build Costs	1	15,000.00		$15,000.00	One-time	Design suite segregation between (a) two control system racks, and (b) six general production system racks (with separate access controls for each sub-suite section, per compliancy requirement)
Server Co-location - Access Card (Setup)	1	75.00	50%	$37.50	One-time	
Server Co-location - Access Card Reader (Monthly)	2	50.00		$100.00	Monthly	
Server Co-location - Access Card Reader (Setup)	2	2,500.00	25%	$3,750.00	One-time	
Server Co-location - Full Cabinet Allocation	8	200.00		$1,600.00	Monthly	30" wide x 48" deep racks, 45RU
Server Co-location - Power Whip installation (Setup)	16	750.00	50%	$6,000.00	One-time	
Server Co-location - Power bar PDU 30A L21-30 (one-time)	16	770.00		$12,320.00	One time	8.6 kVA of usable power per rack
Server Co-location - PDU (Tripp-lite) 20A ATS (one-time)	1	900.00		$900.00	One-time	Horizontal (1U) ATS for single corded devices
Server Co-location A&B Power - 208V30A 3-Phase	8	0.00		$0.00	Monthly	
Server Co-location - Structured Cabling (one-time)	0			$0.00	One-time	To be assessed and priced after initial power and space vendor/pricing comparison
Server Co-location Toronto DC3 - 1kVA	36	475.00		$17,100.00	Monthly	3-kVA/rack minimum at a Tier-III location
Server Co-location - High Availability (monthly)	1	150.00	100%	$0.00	Monthly	No additional cost for high availability co-location port service at Rogers Tier-III Uptime certified facility
High Availability Set-up Fee	1	250.00	100%	$0.00	One-time	No additional cost for high availability co-location port service at Rogers Tier-III Uptime certified facility
Server Co-location (1Mbps) - Monthly	0	8.00		$0.00	Monthly	1000 Mbps port throttling permitted, and is not rate limited/shaped by bandwidth commit level (purely a billing/metering component only).
Server Co-location - Rogers Circuit X-Connect	0	50.00		$0.00	Monthly	For pricing reference only - not be added for this prelimary quote
Server Co-location - 3rd Party X-Connect (monthly)	0	250.00		$0.00	Monthly	For pricing reference only - not be added for this prelimary quote
Server Co-location X-Connect (Setup)	0	250.00	50%	$0.00	One-time	For pricing reference only - not be added for this prelimary quote.
One-Time Fees				$41,007.50		
Monthly Fees				$18,800.00		

Fujitsu Quote

From: Scott.Woods@us.fujitsu.com [mailto:Scott.Woods@us.fujitsu.com]
Sent: Saturday, June 09, 2018 10:21 AM
To: Brian Mottershead <brian.mottershead@libertyutilities.com>
Cc: Calum Hughes <Calum.Hughes@libertyutilities.com>; Trae.Schaefer@us.fujitsu.com; Mario Cangemi <Mario.Cangemi@libertyutilities.com>
Subject: Re: Liberty / Fujitsu Colo Pricing Request Follow Up

Hi Brian,

First, thanks for your interest in partnering with Fujitsu for your colo solutions. I understand this is a quote for budgetary purposes, however we are grateful for the chance to have a broader discussion with you regarding your IT roadmap.

We have put together a quote below, for budgetary purposes. Before I include the quote, I would like to share some important elements of the solution and suggest we review both these and the actual quote, early next week; perhaps Tuesday or Wednesday. I will include some possible open times for review.

Solution Elements:

- Quote - This is provided as a budgetary number and is non-binding. As discussed, Liberty is putting together numbers for budgetary purposes. Assuming these are in line, we would look to further refine, define and solution this out in the form of a formal, legally binding proposal or SOW.
- Separate Cages - One area where this differs from Fujitsu's Vertex solution is Liberty requires separate cages. I only mention Vertex as I was not sure if you were looking to leverage some synergies there. Since Fujitsu does not provide separate cages, we would need to partner with someone like CyrusOne to provide these. This is something we do often with our Japanese owned US clients. In short, the value is that the client receives all the colo benefits, like cages and thorough security, audit and logging, while Fujitsu provides a single point of coordination and oversight.
- Coordination and Oversight - As I mentioned, we would provide the oversight and management, affording Liberty a single point of contact for coordination, issue resolution, etc. This would be at an additional fee to the below and would be largely dependent on your desired level of service.
- Next Steps - I would suggest we review the below and validate against any additional needs you have, such as management of the solution. We could also explore options and advantages to utilizing the Fujitsu delivery model we have with Vertex today as there would like be some synergies. For this discussion, I have open times either Wednesday afternoon 2-5PM Central or Thursday afternoon, 1-3PM Central, as well as Friday any time before 11AM Central.
- Lastly, please find your CyrusOne quote below, with some additional parameters around the solution:
- MRC **$15k/month** This is for 36 kW power for 8 cabinets. Does not include reoccurring cost for cross connects
- NRC **$23K** This is for cage build out.

Other onetime charges:

Supply and Install 48U Cabinet	$2,815	per Rack
Supply and Install of L6-30 Power Whip	$535	per Whip
Supply and Install Fiber Cross Connect	$282	per Cable
Supply and Install Copper Cross Connect	$113	per Cable

Thanks again for considering Fujitsu and we look forward to discussing with you, next week.

Thanks!
Scott Woods
Client Executive, Fujitsu Americas
scott.woods@us.fujitsu.com
817 239.1513

Liberty Algonquin
Business Services

Business Case – IT Projects (>$100,000)

Toronto EOL Datacenter Infrastructure Replacement

Prepared By: Mario Cangemi, Brian Mottershead, Calum Hughes

Date: December 10th, 2018

Approved By: _____ DEC 11/18
Director IT (<$100,000) – Ed Monacsy — Date

Approved By: _____ Dec 11/2018
V.P (<750,000) – John Lowson — Date

Approved By: _____ Dec 13/2018.
Executive Officer (<2,000,000) – David Pasieka — Date

1.0 BACKGROUND AND BUSINESS PURPOSE

The purpose of this document is to provide the business case for the End-of-Life (EOL) replacement of datacenter infrastructure at Liberty Utilities corporate data center in Toronto.

This document presents the business justification for the project, based on the business drivers and risk mitigation factors, as well as, the costs of development, implementation, ongoing operations, and maintenance of the proposed implementation.

This business case is a formal request for allocation of resources and funding to begin the project and contains key information necessary to evaluate the strategic fit, business benefits, and project costs.

1.1 Problem/Opportunity

This ***Toronto EOL Datacenter Infrastructure Replacement*** project is part of ***Liberty Utilities Enterprise Data Center Strategy***. The strategy focuses on building a modern enterprise data center foundation to support Liberty Utilities for the period 2018-2022.

This project focuses on risk mitigation related to End-of-Life (EOL) and End-of-Vendor Support of Dell Server and EqualLogic SAN infrastructure at Liberty Utilities enterprise production data center in Toronto.

The project is to implement Liberty Utilities Hyper-Converged Infrastructure (HCI) standard DellEMC VxRail HCI appliances and required Cisco Software-Defined Network (SDN) architecture in the Toronto datacenter. This project requires a one-time CAPEX investment of approximately CAD **$861,144**.

Once completed the project will provide Liberty Utilities with the necessary IT infrastructure foundation (compute and storage, software-defined network) to support not only this project but also provides the foundation for future EOL hardware replacement and more cost-effective enterprise data center services that include improvements in IT infrastructure performance, security, resiliency, scalability, manageability, and efficiency of data center operations.

This project consists of the following two phases:

- Phase 1 – VxRail Implementation in Toronto (2019)
- Phase 2 – Migration of Servers and Storage to VxRail in Toronto (2019)

1.3 Current and Future State Data Center Environment

To facilitate the EOL replacement of datacenter infrastructure in Liberty Utilities Toronto datacenter requires replacement of the compute and storage (servers, EqualLogic SANs) environment, and core datacenter network infrastructure components.

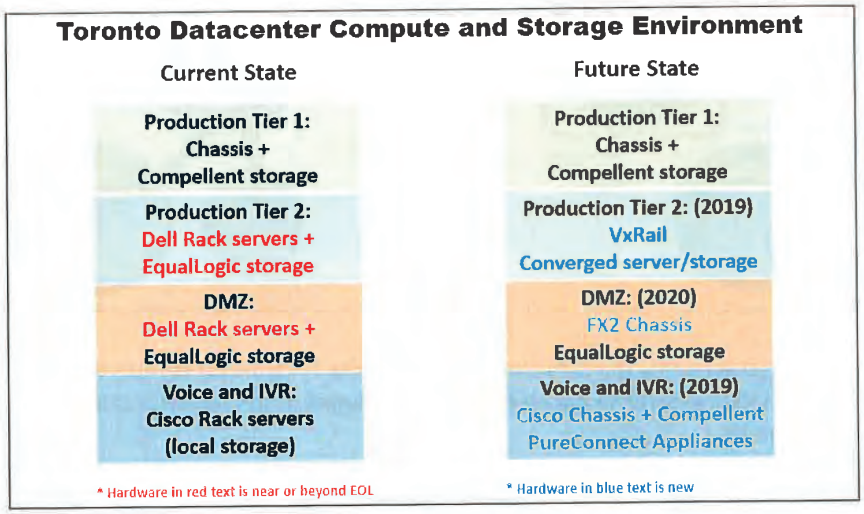
The following sections identify the required changes to ***Compute and Storage Environment*** and the ***Network Infrastructure.***

Compute and Storage Environment

The diagram below shows the current and future state of compute and storage infrastructure in Liberty Utilities enterprise data center in Toronto. In the current state, **red text** identifies components that are near or beyond end-of-life. In the future state, **blue text** identifies new components in 2019.

As a result of this project new components are limited to the Production Tier 2 environment only. The other changes are presented to provide an overall view of the requirements to address data center modernization and replacement of EOL components. The new components in the DMZ and Voice environments will be implmented as as part of other capital projects.

The DellEMC VxRail HCI Appliance architecture consists of a scalable, modular node architecture, based on Dell PowerEdge servers, and VMware Virtual SAN.



Network Environment

The DellEMC VxRail HCI appliances in the compute and storage environment require 40GB connectivity to the datacenter network. The existing datacenter core network switch does not support 40GB connectivity. To facilitate the required 40GB connectivity the datacenter network core switch will be upgraded.

The current state of the Toronto datacenter network architecture is based on traditional network design which provides limited network segmentation which is not consistent across all Liberty Utilities datacenters. The enterprise datacenters are connected however workload cannot be easily moved between datacenters.

2.0 PROJECT DESCRIPTION

2.1 Project Objectives

The objectives of the ***Toronto EOL Datacenter Infrastructure Replacement*** project are to build a future-proof, scalable enterprise-grade data center compute and storage infrastructure, and network infrastructure that delivers the following:

- Replacement of end-of-life and end-of-vendor support mission-critical server and SAN infrastructure in Liberty Utilities Toronto data center
- Mitigate risks related to end-of-vendor support for mission-critical server and SAN infrastructure
- Improved IT infrastructure manageability through consolidation of the compute, storage, virtualization, and management infrastructure
- Implementation of a Liberty Utilities standard for Software-Defined Networking to create a foundation that not only provides the 40GB connectivity required for DellEMC VxRail HCI appliance implementation but also lays the foundation for future network configuration that will improve network security, segmentation, provisioning, and manageability
- Infrastructure performance improvements for mission-critical applications derived from new generation all-flash storage technology
- Future proof scalability of critical server, storage, and network infrastructure
- Ease of support with a single point support for DellEMC VxRail HCI appliances and VMware management software

2.2 Scope

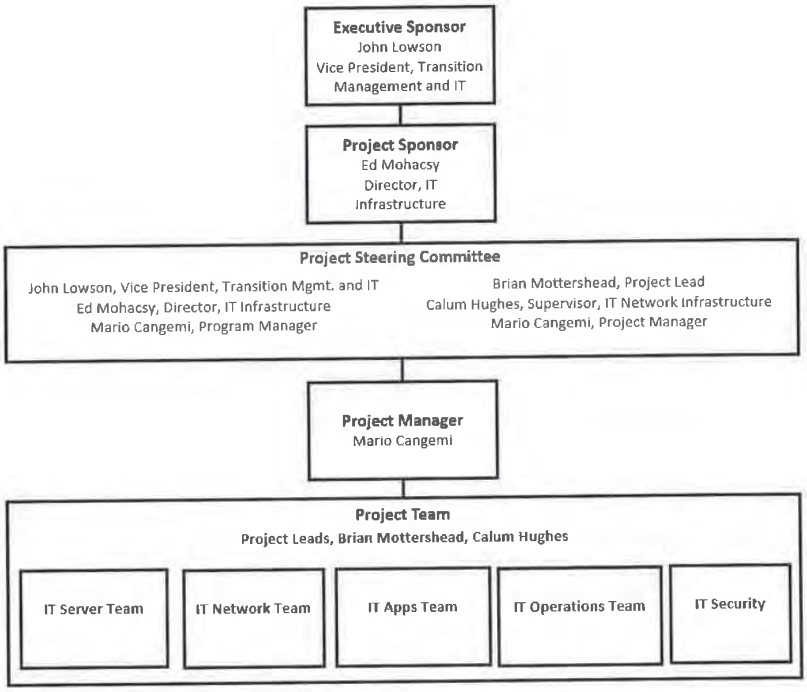
The scope of the ***Toronto EOL Datacenter Infrastructure Replacement*** project is focused on addressing risk factors related to EOL Dell Servers and EqualLogic SANs in the production environment at Liberty Utilities enterprise data center in Toronto.

Hostname	Cluster	Type	Storage (TB)	Purchase Date	Years since Purchase	Replacement Plan
LUT1ESXi01	Toronto Production Tier 2	Server	N/A	Jun 23, 2013	5.42	VXRAIL 2019
LUT1ESXi02	Toronto Production Tier 2	Server	N/A	Jun 23, 2013	5.42	VXRAIL 2019
LUT1ESXi03	Toronto Production Tier 2	Server	N/A	Feb 24, 2014	4.74	Move to DMZ, replace 2021
LUT1ESXi04	Toronto Production Tier 2	Server	N/A	Jul 24, 2014	4.33	Move to DMZ, replace 2021
LUT1SAN05	Toronto Production Tier 2	Storage	5.1	Oct 19, 2010	8.10	Moved to Production Tier 1
APT1SAN01	Toronto Production Tier 2	Storage	14.13	Jun 28, 2013	5.40	VXRAIL 2019
LUT1SAN02	Toronto Production Tier 2	Storage	9.94	Sep 18, 2013	5.18	VXRAIL 2019
LUT1SAN03	Toronto Production Tier 2	Storage	9.42	Sep 18, 2013	5.18	VXRAIL 2019
LUT1SAN06	Toronto Production Tier 2	Storage	9.94	Feb 11, 2014	4.78	Move to DMZ, replace 2021
LUT1SAN04	Toronto Production Tier 2	Storage	9.91	Jul 19, 2014	4.35	Move to DMZ, replace 2021

2.5 Project Organization & Governance Model

The project will follow the Liberty Project Management and Governance Model. The Liberty IT Project Management Office will assign and Project Manager. The Project Manager will work with the Project Team to develop a detailed project and resource plan.

The following is the organization structure for the project:



Toronto EOL Datacenter Infrastructure Replacement Project - Organization Structure

4.0 FINANCIAL ANALYSIS

4.1 Financial Impacts

Summary

The ***Toronto EOL Datacenter Infrastructure Replacement*** project is a business continuity project not a Return on Investment project. The project is required to replace End-of-Life and End-of-Vendor Support for datacenter infrastructure to ensure continued operation of critical business systems.

The project will deliver approximately **CAD $278,142** in OPEX savings over the five years post implementation related to savings on hardware maintenance and internal support as there is no vendor hardware maintenance costs during the three-year warranty period for the hardware.

The project requires a one-time capital investment of **CAD $864,144** which includes CAD $13,550 in contingency. The contingency is based on 10% of projected total costs for less costs for hardware and software as the hardware and software are firm costs based on quotes.

The CAPEX investment is allocated as follows: CAD $861,144 over Q1 and Q2 2019.

Cost Analysis - CAPEX

The chart below provides a high-level cost analysis of the CAPEX requirements for this project.

Estimated Costs	2019	2020	2021	Total
Hardware	712,094			712,094
Third-Party Services	70,000			70,000
Internal Labour	59,500			59,500
Travel	6,000			6,000
Contingency	13,550			13,550
Total Costs	**861,144**			**861,144**

4.3 Cost Allocation – CAPEX

The following chart presents the allocation of enterprise data center one-time CAPEX to Liberty entities. The allocation is based on the same allocation percentage as the current annual OPEX allocation for the Toronto datacenter. CAPEX allocation currency is CAD.

Entity	Total CAPEX Allocation	Allocation %
Liberty Power (APCO)	12,149	1.4%
Arkansas	30,972	3.6%
Calpeco	98,362	11.4%
Empire	61,141	7.1%
Energy North	182,518	21.2%
Georgia	97,800	11.4%
Granite State	91,889	10.7%
Liberty Water (South)	128,955	15.0%
Midstates Gas	125,329	14.6%
Midstates Water	7,500	0.9%
New England Gas	9,619	1.1%
Park Water	8,366	1.0%
Whitehall Sewer	3,166	0.4%
Whitehall Water	3,309	0.4%
Woodson-Hensley	69	0.0%
Totals	**861,144**	**100.0%**

5.0 DEPENDENCIES

5.1 Project Dependencies

Key dependencies for successful as planned completion of the ***Toronto EOL Datacenter Infrastructure Replacement*** project are:

1. Business case approved by Dec. 1, 2018 to ensure timelines are not impacted.
2. Deliver of hardware by Feb 15, 2019.
3. Configuration of network by April 1, 2019.
4. Configuration of required hardware by April 30, 2019.
5. Availability of Liberty Utilities resources to work with Cisco to facilitate design and configuration of the network.
6. Availability of Liberty Utilities resources to work with Dell to facilitate hardware racking and configuration.

5.2 Business Dependencies

Quarter-End Business Processing

Completion of the ***Toronto EOL Datacenter Infrastructure Replacement*** project must accommodate blackout period for quarter-end business processing for Q1 2019.

APPENDIX A – QUOTES FOR HARWARE AND SERVICES

DellEMC VxRail Hyper-Converged Infrastructure

softchoice

Softchoice LP
173 Dufferin Street, Suite 200
Toronto, ON, M6K 3H7

Sales/Order desk
Phone: (800) 268-7638 Fax: (800) 268-7639

Quote	8565703
Date	01-Nov-2018

QUOTE

Ship To: 926055

LIBERTY UTILITIES
C/O CENTURY LINK
6800 MILLCREEK DRIVE
MISSISSAUGA, ON L5N 4J9

Attn: BRIAN MOTTERSHEAD

Bill To: 887999

LIBERTY UTILITIES (CANADA) CORP
354 DAVIS ROAD
OAKVILLE, ON L6J 2X2

Attn: ROBERT FERRARI

All currency in this quote is in Canadian dollars.

Quote Prepared For	Brian Mottershead Liberty Utilities, C/O Century Link Phone: (905) 829-6333 Fax:
Quote Sent By	Ashley Arruda Ashley.Arruda@softchoice.com Phone: (416) 583-2872 x222039 Fax: (800) 268-7639

Item #	Mfg Sku #	Description	Qty	Unit Price	Extended Price
SBQHWA		VXRAIL-SDD 2U1N 24X2.5 NVME CAPABLE AF NORMAL (PROMOTIONAL)	1	$520,000.00	$520,000.00
MEMO		ProSupport Plus Maintenace 5 Node - $101,660.40 - 3 years			
MEMO		Liberty Additional Discouting $40,000 CAD			
				SUB TOTAL	$520,000.00

Please note that the shipping cost for hardware items using item SBQHWA have not been estimated.
The appropriate shipping costs will be included on the associated sales order.

DELIVERY:Economy	NO CHARGE
HST	$67,600.00
TOTAL - CAD	$587,600.00

All currency in this quote is in Canadian dollars.

Lease and Financing payment options are available, please call for special pricing*

*Please note that the estimated monthly payment shown above is an option based on a 36 month term with a CAD $10.00 buyout at the end of the term. Fair market value buyout and monthly payments may vary depending on your creditworthiness as determined by Softchoice. 1 and 2 year Service Agreements, Subscriptions, License and Support contracts are not eligible for 36 month payment plans; 12 or 24 month payment options may be available upon request. Shipping and applicable taxes are not included in the above estimate. Payment options in the Canada are in Canadian Dollars and not billable in other currencies. All monthly lease payment options are subject to credit approval and execution of a lease contract.

Pricing, availability and special offers are subject to change at any time.

This purchase is subject to Softchoice's online terms of sale, unless you have a separate purchase agreement signed by both your company and Softchoice, in which case, that separate agreement will govern. Softchoice's terms of sale can be found at:
http://m.softchoice.com/files/pdf/terms/TermsAndConditionsForProductPurchases.pdf

Page 1 of 1 v3.6

Liberty Utilities

Nexus 9K - ACI

softchoice

Presented to: LU

Presented by: Bradley Woods / Thor Evans

Date: 27-Nov-18

Case # 00062632

MfgSku	Description	Lead Time	Quantity	ListPrice	Ext List Price	SellPrice	Ext Sell Price
CAB-9K12A-NA	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America	50 days	4	$ -	$ -	-	-
QSFP-40/100-SRBD	100G and 40GBASE SR-BiDi QSFP Transceiver, LC, 100m OM4 MMF	50 days	8	$ -	$ -	-	-
NXA-PICK-BIDI	PID to select QSFP-100G-SR-BD Optic in the bundle	50 days	2	$ -	$ -	-	-
NXA-PAC-500W-PI	Nexus N9Ks AC 500W PSU - Port Side Intake	50 days	4	$ -	$ -	-	-
NXA-PAC-500W-PI	Nexus N9Ks AC 500W PSU - Port Side Intake	50 days	4	$ -	$ -	-	-
		Hardware Sub-Total:			$353,494.94		$ 148,467.88
	3 Year SmartNet						
	Start Date: 12/24/2018 - End Date: 10/27/2021						
CON-SSSNP-APIUCDXS	SOLN SUPP 24X7X4 APIC Cluster with virtual APIC		1	$ 10,943.53	$ 10,943.53	$ 10,943.53	$ 10,943.53
CON-SSSNP-N9KC9332	SOLN SUPP 24X7X4 Nexus 9K ACI NX-OS Spine, 32p 40/100G		2	$ 6,351.38	$ 12,702.76	$ 6,351.38	$ 12,702.76
CON-SSSNP-N93PCFXC	SOLN SUPP 24X7X4 2xNexus 93180YC-FX w/8x QSFP-100G-PSM4-		2	$ -	$ -	-	-
CON-SSSNP-N93YCFXB	SOLN SUPP 24X7X4 Nexus 93180YC-FX bun		2	$ 4,995.00	$ 9,990.00	$ 4,995.00	$ 9,990.00
CON-SSSNP-N93YCFXB	SOLN SUPP 24X7X4 Nexus 93180YC-FX bun		2	$ 4,995.00	$ 9,990.00	$ 4,995.00	$ 9,990.00
		Support Sub-Total:			$ 43,626.29		$ 43,626.29
		Grand Total:			$397,121.23		$ 192,094.17
		** Estimated Monthly Lease Payment from Cisco Capital					$ 5,945.31

** Please note that the estimated monthly payment shown above is based on a 36 month term with a CAD$15.00 Buyout at the end of the term. Fair market value buyout and monthly payment may be higher or lower depending on your creditworthiness as determined by Lender, Softchoice Financial Services Canada (or affiliate), in its sole discretion. Shipping and applicable taxes not included in above estimate. Payment options in Canada are in Canadian currency and not billable in other currencies.

All pricing is in Canadian Dollars | Taxes, EHF and freight are not included | Pricing, availability and special offers are subject to change at any time

Liberty Algonquin
Business Services

Datacenter EOL Infrastructure Replacement
Toronto vs. NJ Cost Comparison

Estimated Costs	Toronto Datacenter			Toronto Datacenter			NJ Datacenter		
	One-Time Capital Costs (CAD)			One-Time Capital Costs (USD)			One-Time Capital Costs (USD)		
	2018	2019	Total	2018	2019	Total	2018	2019	Total
Hardware	-	712,094	712,094	-	569,675	569,675	630,289	-	630,289
3rd-Party Services	-	70,000	70,000	-	56,000	56,000	-	55,000	55,000
Internal Labour	-	59,500	59,500	-	47,600	47,600	19,000	30,000	49,000
Travel	-	6,000	6,000	-	4,800	4,800	6,000	-	6,000
Contingency	-	13,550	13,550	-	10,840	10,840	2,500	3,000	5,500
Total Costs	-	861,144	861,144	-	688,915		657,789	88,000	745,789

Capital Project Expenditure Form 2020

Project Name:	Dresser Coupling Replacement Program		
Financial Work Order (FWO):		**Project ID #:**	8840-2039
Requesting Region or Group:	Energy North	**Date of Request (MM/DD/YY):**	3/23/2020
Project Sponsor:	Richard MacDonald	**Project Start Date:**	1/1/2020
Project Lead:	Robert Mostone	**Project End Date:**	12/31/2020
Prepared by:	Ryan Patnode	**Requested Capital ($)**	$500,000
Planned or Unplanned Projects:	☒ Planned ☐Unplanned		
Project Type: (Click appropriate boxes)	☐ Safety ☒ Mandated ☐ Growth ☐ Regulatory Supported ☐ Discretionary		

Details of Request

Project description

This program projects will replace leaking dresser couplings with a welded section of the pipe. The primary driver for this project number is to replace leaking dresser couplings with a welded part. Dresser couplings are joints that tend to leak during the winter months when contraction of the gaskets tend to occur. The problem is that most are under 60 psig, and rather than tightening, it makes sense to replace the fitting and eliminate the potential for a future leak from occurring at that location.

`

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

No

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

NA

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?

GUIDANCE: If yes, please detail the specific assets that will be removed: Yes, dependent on individual purchase

1. *Original Cost of Plant to be removed (if known):*
2. *What is the replacement cost of the plant being removed (if original cost not known)?*
3. *Original Work Order of Plant to be removed (if known):*
4. *Is the Plant being removed reusable?*
5. *What is the year of original installation of the plant being removed*

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Capital Project Expenditure Form 2020

What alternatives were evaluated and why were they rejected?
No viable alternatives, as issues are identified replacement is needed.

What are the risks and consequences of not approving this expenditure?
Potential risk by not addressing dresser coupling leaks identified. Gas leak increase the risk of fire and explosions.

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.
All standard safety procedures will be followed in project execution.

Are there other pertinent details that may affect the decision making process?
No

Complete the Financial Summary table only if:

- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year	**2021**	**Was this Capital Project included in the current**	☒ Yes ☐ No

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Capital Project Expenditure Form 2020

		year's Board Approved Budget?	
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☐1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?			
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:[i]	☐Fixed or Firm Price ☐Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$500,000		

Approvals and Signatures[ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			Click here to enter a date.
Senior Manager:	Up to $50,000			Click here to enter a date.
Senior Director/Director:	Up to $250,000	Robert Mostone Gas operations	Robert Mostone Digitally signed by Robert Mostone Date: 2020.03.27 08:38:22 -04'00'	Click here to enter a date.
Senior VP/VP:	Up to $500,000	Richard MacDonald VP operations	Rich MacDonald Digitally signed by Rich MacDonald Date: 2020.04.09 11:20:49 -04'00'	
State President:	Up to $500,000	Susan Fleck President, NH	Susan Fleck Digitally signed by Susan Fleck Date: 2020.04.10 09:12:04 -04'00'	Click here to enter a date.
Regional President:	Up to $3,000,000			Click here to enter a date.
Corporate – Sr. VP Operations:	Up to			Click here to enter a date.

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Capital Project Expenditure Form | 2020

	$5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report | 2020

Requesting Region or Group:	Liberty Utilities- NH-Gas Operations	**Date of Closeout (MM/DD/YY):**	03/31/21
Project Name:	Dresser Coupling Replacement Program 8840-2039		
Requesting Region:		**Sponsor** (Name)**:**	Richard Macdonald
Project Champion:	Robert Mostone	**Project ID**	
Project Status	☐In Service ☐Complete ☐ Closed		
Project Start Date:		**Project Completion Date:**	12/31/20
Requested Capital ($)	$500,000	**Expenditure Included in Approved Budget?**	X Yes ☐No

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
Robert Mostone	Project Lead		3/19/21
Richard MacDonald	Project Sponsor	Richard G MacDonald	3/31/2021
	Operations Manager		
	Accounting Manager		

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 ☒ No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes ☒ No ☐
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 ☒ No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes ☒ No ☐

Item	Question	Response
2.5	Do you agree the project should be closed? If no, please explain:	Yes ☒ No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	5/5
2.7	Scope	5/5
2.8	Cost (Budget)	5/5
2.9	Schedule	5/5

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 ☒ No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?	Yes ☒ No ☐
3.4	Identify the storage location for the following project documents items:	

Item	Document	Location (e.g., Google Docs, Webspace)	Format
3.4a	Business Case	See W Drive	☒ Electronic ☐ Manual
3.4b	If available, the Final Project Schedule	N/A	☐ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices	W Drive and with Accounts Payable	☒ Electronic ☐ Manual
3.4d	Status Reports	See accounting monthly reports	☒ Electronic ☐ Manual
3.4e	Risks and Issues Log	N/A	☐ Electronic ☐ Manual
3.4f	Final deliverable	See Wennsoft for project details and associated costs	☒ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team [ii]

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

Name	Role	Type (e.g., Contractor, Employee)
Robert Mostone	Project Manager	Employee

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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the 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 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
No Issues to Report	

Section 8. This program projects will replace leaking dresser couplings with a welded section of the pipe. The primary driver for this project number is to replace leaking dresser couplings with a welded part. Dresser couplings are joints that tend to leak during the winter months when contraction of the gaskets tend to occur. The problem is that most are under 60 psig, and rather than tightening, it makes sense to replace the fitting and eliminate the potential for a future leak from occurring at that location

.

Project Close Out Report | 2020

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$500,000	$ 466,494	$33,506

Reasons for Variance	Impact

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)
Blanket Project See Wennsoft

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project
[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Capital Project Expenditure Form 2020

Project Name:	iRestore 2020 System Enhancements		
Financial Work Order (FWO):	402043-3031	**Project ID #:**	8840-2043
Requesting Region or Group:	NH	**Date of Request (MM/DD/YY):**	3/23/20
Project Sponsor:	Rich MacDonald	**Project Start Date:**	1/1/20
Project Lead:	Peter Chivers	**Project End Date:**	12/31/20
Prepared by:	Peter Chivers	**Requested Capital ($)**	$200,000
Planned or Unplanned Projects:	☒ Planned ☐Unplanned		
Project Type: (Click appropriate boxes)	☐ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported ☒ Discretionary		

Details of Request

Project description

This project is to provide enhancements to 3 existing iRestore smartphone apps. Refer to Projects 8840-1791, 8840-1792, and 8830-1876 for initial projects. These software enhancements are capital expenses. Two apps are being used in production (QA Manager and RA Manager). CP Manager is in BETA and will be released to production in NH in 2020. QA = Quality Assurance, RA = Repair Activity, CP = Cathodic Protection.

`

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

No

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

There are none.

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?

GUIDANCE: If yes, please detail the specific assets that will be removed:

1. *Original Cost of Plant to be removed (if known):*
2. *What is the replacement cost of the plant being removed (if original cost not known)?*
3. *Original Work Order of Plant to be removed (if known):*
4. *Is the Plant being removed reusable?*
5. *What is the year of original installation of the plant being removed*

None

What alternatives were evaluated and why were they rejected?

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Capital Project Expenditure Form 2020

What are the risks and consequences of not approving this expenditure?
Not implementing needed and wanted improvements to the suite of iRestore apps

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.
They are not affected

Are there other pertinent details that may affect the decision making process?
No. See business case for a more detailed background.

Complete the Financial Summary table only if:

- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year		**Was this Capital Project included in the current**	☒ Yes ☐ No

Liberty Utilities WATER · GAS · ELECTRIC

Capital Project Expenditure Form 2020

		year's Board Approved Budget?	
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☐1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?			
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:[i]	☐Fixed or Firm Price ☐Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)	$200,000		
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$200,000		

Approvals and Signatures[ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000		Peter Chivers Digitally signed by Peter Chivers Date: 2020.03.23 10:58:35 -04'00'	Click here to enter a date.
Senior Manager:	Up to $50,000			Click here to enter a date.
Senior Director/Director:	Up to $250,000			Click here to enter a date.
Senior VP/VP:	Up to $500,000		Rich MacDonald Digitally signed by Rich MacDonald Date: 2020.03.25 08:52:27 -04'00'	
State President:	Up to $500,000			Click here to enter a date.
Regional President:	Up to $3,000,000			Click here to enter a date.
Corporate – Sr. VP Operations:	Up to $5,000,000			Click here to enter a date.

Liberty Utilities WATER · GAS · ELECTRIC

Capital Project Expenditure Form | 2020

Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Capital Project Expenditure Form 2020

Project Name:	iRestore 2020 System Enhancements		
Financial Work Order (FWO):	402043-3031	**Project ID #:**	8840-2043
Requesting Region or Group:	NH	**Date of Request (MM/DD/YY):**	3/23/20
Project Sponsor:	Rich MacDonald	**Project Start Date:**	1/1/20
Project Lead:	Peter Chivers	**Project End Date:**	12/31/20
Prepared by:	Peter Chivers	**Requested Capital ($)**	$212,470
Planned or Unplanned Projects:	☒ Planned ☐Unplanned		
Project Type: (Click appropriate boxes)	☐ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported ☒ Discretionary		

Details of Request

Project description

This project is to provide enhancements to 3 existing iRestore smartphone apps. Refer to Projects 8840-1791, 8840-1792, and 8830-1876 for initial projects. These software enhancements are capital expenses. Two apps are being used in production (QA Manager and RA Manager). CP Manager is in BETA and will be released to production in NH in 2020. QA = Quality Assurance, RA = Repair Activity, CP = Cathodic Protection.

`

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

No

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

There are none.

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?

GUIDANCE: If yes, please detail the specific assets that will be removed:

1. *Original Cost of Plant to be removed (if known):*
2. *What is the replacement cost of the plant being removed (if original cost not known)?*
3. *Original Work Order of Plant to be removed (if known):*
4. *Is the Plant being removed reusable?*
5. *What is the year of original installation of the plant being removed*

None

What alternatives were evaluated and why were they rejected?

Liberty Utilities WATER · GAS · ELECTRIC

Capital Project Expenditure Form 2020

What are the risks and consequences of not approving this expenditure?
Not implementing needed and wanted improvements to the suite of iRestore apps

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.
They are not affected

Are there other pertinent details that may affect the decision making process?
No. See business case for a more detailed background.

Complete the Financial Summary table only if:

- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year		**Was this Capital Project included in the current**	☐ Yes ☒ No

Liberty Utilities WATER · GAS · ELECTRIC

Capital Project Expenditure Form 2020

		year's Board Approved Budget?	
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☐1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?			
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:[i]	☐Fixed or Firm Price ☐Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)	$212,470		
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$212,470		

Approvals and Signatures[ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000		Peter Chivers Digitally signed by Peter Chivers Date: 2020.03.23 11:01:42 -04'00'	Click here to enter a date.
Senior Manager:	Up to $50,000			Click here to enter a date.
Senior Director/Director:	Up to $250,000			Click here to enter a date.
Senior VP/VP:	Up to $500,000		Rich MacDonald Digitally signed by Rich MacDonald Date: 2020.03.25 08:51:19 -04'00'	
State President:	Up to $500,000			Click here to enter a date.
Regional President:	Up to $3,000,000			Click here to enter a date.
Corporate – Sr. VP Operations:	Up to $5,000,000			Click here to enter a date.

Liberty Utilities WATER · GAS · ELECTRIC

Capital Project Expenditure Form | 2020

Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Capital Project Business Case 2019

NOTE: This form is required for planned Growth, Regulatory Supported, and Discretionary projects as well as combined blanket projects for Safety and Mandated with Growth, Regulatory Supported, and Discretionary Projects with a spend greater than $100,000 and all unplanned projects. All other Project types can utilize the Capital Expenditure Application Form.

Project Overview			
Project Name:	iRestore 2020 System Enhancements	**Date Prepared:**	January 28, 2020
Project ID#:	Click here to enter text.	**Cost Estimate:**	$412,470
Project Sponsor:	Rich MacDonald	**Project Start Date:**	February 19, 2019
Project Lead:	Peter Chivers	**Project End Date:**	July 1, 2020
Prepared By:	Peter Chivers	**Planned or Unplanned Projects:**	☒ Planned ☒Unplanned
Project Type (click appropriate boxes)**:**	☐ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported x Discretionary		
Spending Rationale:	☐ Growth ☒ Improvement ☐ Replenishment		

Project Scope Statement

(Insert the scope of work, major deliverables, assumptions, and constraints)

This project is to provide enhancements to 3 existing iRestore smartphone apps. Refer to Projects 8840-1791, 8840-1792, and 8830-1876 for initial projects. See attached for a summary of all proposed enhancements. These software enhancements are capital expenses. Two apps are being used in production (QA Manager and RA Manager). CP Manager is in BETA and will be released to production in NH in 2020. QA = Quality Assurance, RA = Repair Activity, CP = Cathodic Protection. The quoted amount for iRestore to deliver the enhancements requested by Liberty in 2020 is $343,725. This business case includes a 20% adder for anticipated scope creep in 2020. NH and MA will receive benefits from this spend (81% NH / 19% MA).

Background

(Insert description of current operational arrangement, and brief history of project & asset)

The initial projects were started in 2017. As of January 2020, two apps are in production (QA Manager and RA Manager).

Through the current utilization of **QA Manager**, quality assurance evidence is documented electronically in a web- and mobile-based platform. QA Manager increases quality and safety by the following means:

- High quality photographic/geo-tagged evidence and history of construction jobs available in real-time
- Increased quality and thoroughness of contractor oversight
- The system provides for a high degree of accountability

QA Manager has already provided multiple benefits which verify the quality of the installation. This has led to the successful and timely recovery from an unplanned outage. A contractor inadvertently caused an outage for approximately 15 customers. QA Manager's photographic and geo-tagged provided evidence needed to determine the cause of the outage such that the customers were able to be recovered within a couple hours significantly reducing the outage duration.

QA Manager has reduced the cost of the Quality Assurance Program by utilizing mobile/electronic web-based forms that automatically compile, store, display, and makes data available for visualization and analytics. QA Manager is estimated to reduce the administrative burden of managing a QA Program by at least 50% compared to the paper based system that was previously used. QA Manager has also been utilized to verify the accuracy of contractor invoicing and has provided savings on several occasions.

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Capital Project Business Case | 2019

Manager enables more accurate verification of invoicing. There was one instance in 2019 where evidence from QA Manager was used to support a contractor invoice for paving restoration to be reduced by $18,000. The dimensions of the pavement patch

were documented in QA Manager with pictures and dimensions and the contractor agreed to adjust the invoice based on that evidence.

The current utilization of **RA Manager** documents the discovery and remediation of problems via a mobile- and web-based platform with a timeline of geo-tagged photos and comments. RA Manager app provides the ability for an inspector to take photos of issues which are geo tagged. The issue can then be quickly reviewed and assigned to the proper individuals which are quickly routed to the location to complete the repairs.

RA Manager increases safety and quality by:

- Problems found are fixed in less time
- More problems are found and reported
- Nothing can "slip through the cracks" i.e. no paper records can be lost
- The system provides for a high degree of accountability

RA Manager reduces the O&M cost by:

- Utilizing electronic forms and photographic/geo-tagged evidence of problems enabling faster and more effective assessment by the supervisors.
- Geo-tagged photos ensure that the technician finds the exact problem location as efficiently as possible.
- Map based visualization of problems enables supervisors to efficiently assign workloads based on geography

The proposed utilization of **CP Manager** in 2020 will allow the Corrosion Department to manage routine aspects of the corrosion program with a mobile- and web-based platform. The app will document every corrosion asset (test stations, rectifiers, etc) with geo-tagged photos. The app will also manage the recurring annual inspection program for all assets, detect out-of-specs, and provide basic system performance analytics. The CP Manager app has the potential to increase safety by responding to and fixing corrosion problems faster. Quickly repairing corrosion problems reduces pipeline corrosion which reduces future failures.

The CP Manager app reduces the O&M cost required to operate the corrosion program by:

- The current system utilizes a legacy Windows-based program that is very time intensive to use with little value added. CP Manager will automate much of the administrative process that is currently done manually in the current system (Wennsoft).
- CP Manager is estimated to reduce the time spent by the Corrosion Supervisor doing administrative tasks by at least 50%.

The requested enhancements to all 3 of these apps is a direct results of user feedback. These enhancements will improve usability, accountability, and efficiency in all 3 systems. These improvements will make it easier to capture the benefits listed above.

Recommendation/Objective

(Insert the unique problem this project is looking to resolve)

Performing these enhancements will address user feedback and make the apps more user friendly and for inspectors and supervisors. The system will become more usable, more accurate, and enable better data-driven decision making.

Alternatives/Options

(Describe all reasonably viable alternatives. Discuss the viability of each and provide reasons if rejected)

There are none.

Financial Assessment/Cost Estimates

(Double click embedded excel file to update; include contingency allowance in excel file)

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Capital Project Business Case 2019

Next Anticipated Test Year		**Was this Capital Project included in the current year's Board Approved Budget?**	☐ Yes ☒ No

Regulatory Lag (Click appropriate box) ☐Less than 6 Months ☐6-12 Months ☐1 to 3 years ☐Greater than 3 years

Equipment (rental equipment)	$ -	$ -	$ -	$ -	$ -
Contactor/Subcontractor (including consultants)	$ -	$ -	$ -	$ -	$ 412,470
AFUDC ($)					
Total Project Costs ($)	$ -	$ -	$ -	$ -	$ 412,470

Unlevered Internal Rate of Return: Click here to enter text.

Basis of Estimate: *See attached quote from iRestore. 20% adder applied for anticipated scope creep.*

For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:

Schedule
(List key milestone dates)

Key Milestone Description	Forecast Start Date	Forecast End Date
Issuance of PO	3/1/20	7/1/20
Go-live with all new features	3/1/20	6/1/20

Risk Assessment
(Please describe the risk of not completing the project)

If this project is not completed, the current iRestore projects will be at risk.

Trade Finance
(Is there a possibility to apply trade finance products to this project? See Capital Planning for further clarification)

Supporting Documentation
(Reference drawings, condition assessment reports, vendor quotations, etc. Attach document or where possible include hyperlink to file located on shared server or SharePoint)

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Capital Project Business Case 2019

Approvals and Signatures[i]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000		Peter Chivers Digitally signed by Peter Chivers Date: 2020.03.23 10:50:41 -04'00'	
Senior Manager: :	Up to $50,000			
Senior Director/Director:	Up to $250,000			
Senior Vice President/ Vice President	Up to $500,000		Rich MacDonald Digitally signed by Rich MacDonald Date: 2020.03.16 14:34:03 -04'00'	
State President:	Up to $500,000			
Regional President:	Up to $3,000,000			
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

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Change Order Form

2020

Project Overview			
Reason for Change: 4% overrun on vendor cost for to project estimate.			
Project ID:	8840-2043	**Project Name:**	iRestore System Enhancements
Change Order Name:	8840-2043	**Date Prepared:**	1/29/2021
Change Order #:	8840-2043 2020	**Financial Work Order (FWO):**[i]	
Project Sponsor:	Rich MacDonald	**Revised Start Date:**	1/1/2020
Project Lead:	Peter Chivers	**Revised End Date:**[ii]	12/31/2020
Prepared By:	Ryan Patnode	**Change Type**[iii]	x In Scope ☐ Out of Scope
Project Contingency Available?	☒ Yes ☐ No	**If No is Selected, Please specify source of funds**[iv]	

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

Category	Original Project Value	Previous Approved Charges	Current Change Order Amount	Total
Internal Labor				
Materials				
Equipment				
Contractor/Subcontractor				
Burdens/Overheads				
AFUDC				
Total Project Cost	$200,000	**$212,270**	$16,295	**$428,565**

Updated Unlevered Internal Rate of Return:

Basis of Current Change Order Amount:

Project enhancement to 3 existing iRestore smartphone apps.QA= Quality Assurance, RA= Repair Activity and CP= Cathodic Protection. Two apps are being used in production (QA Manager and RA Manager). CP manager released in projection in 2020. 4% overrun on vendor cost for to project estimate.

Click here to enter text.

Schedule Impacts
(As a result of the Change Order, where applicable, List the Impacts to schedule)

Baseline Schedule (BL)	New Forecast (NF)	Variance (BL – NF)

Liberty Utilities WATER · GAS · ELECTRIC

Change Order Form

2020

Approvals and Signatures[v]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			
Senior Manager: :	Up to $50,000	Andrew Bernier Sr. Manager, Engineering - Gas	Andrew Bernier Digitally signed by Andrew Bernier Date: 2021.02.04 08:45:01 -05'00'	
Senior Director/Director:	Up to $250,000	Charles Rodrigues Director, Engineering	Charles Rodrigues Digitally signed by Charles Rodrigues Date: 2021.02.04 08:56:39 -05'00'	
State President / Senior VP / VP:	Up to $500,000	Richard MacDonald VP Operations	Richard MacDonald Digitally signed by Richard MacDonald Date: 2021.02.04 16:43:23 -05'00'	
Regional President:	Up to $3,000,000	James Sweeney President, East Region		
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] The Financial Work Order Section captures the work order this change falls under when the job was initially set-up
[ii] The Revised project end date is dependent on changes in scope that may deviate the schedule from the original plan
[iii] The Change type for In scope or Out of scope changes fall within the following scenario:

- In Scope changes are deviations of scope from the original plan and approved budget that align to the original scope of the project but have revised pricing as a result of changes in pricing of labour, materials, and equipment
- Out of Scope changes are scope changes that were not originally planned for in the project baselines and approved budget. Examples of this type of change are related to changes in technology, missed deliverables, a change in the project design altering the scope of the project, etc.

iv In cases where the project no longer has contingency to cover project change orders, please specify any other sources of funds that would address the project variance (i.e. not executing another project, delaying scope of another project, etc)

[v] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report 2020

Requesting Region or Group:	Liberty Utilities-NH-Gas Operations	**Date of Closeout (MM/DD/YY):**	
Project Name:	iRestore System Enhancements 8840-2043		
Requesting Region:	East	**Sponsor** (Name):	Andrew Bernier
Project Champion:	Peter Chivers	**Project ID**	8840-2043
Project Status	☐In Service x Complete ☐ Closed		
Project Start Date:	1/1/20	**Project Completion Date:**	12/31/21
Requested Capital ($)	$200,000	**Expenditure Included in Approved Budget?**	X Yes ☐No

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
Peter Chivers	Project Lead	Peter Chivers Digitally signed by Peter Chivers Date: 2021.03.08 09:40:01 -05'00'	
Andrew Bernier	Project Sponsor	Andrew Bernier Digitally signed by Andrew Bernier Date: 2021.03.08 10:45:15 -05'00'	
	Operations Manager		
	Accounting Manager		

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 ☒ No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes ☒ No ☐
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 ☒ No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes ☒ No ☐

Item	Question	Response
2.5	Do you agree the project should be closed? If no, please explain:	Yes ☒ No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	5/5
2.7	Scope	5/5
2.8	Cost (Budget)	5/5
2.9	Schedule	5/5

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 ☒ No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?		Yes ☒ No ☐
3.4	Identify the storage location for the following project documents items:		
Item	**Document**	**Location (e.g., Google Docs, Webspace)**	**Format**
3.4a	Business Case		☒ Electronic ☐ Manual
3.4b	If available, the Final Project Schedule		☐ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices		☒ Electronic ☐ Manual
3.4d	Status Reports		☐ Electronic ☐ Manual
3.4e	Risks and Issues Log		☐ Electronic ☐ Manual
3.4f	Final deliverable		☐ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team[ii]

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

Name	Role	Type (e.g., Contractor, Employee)
Peter Chivers	Engineer	Employee
Team iRestore	Software vendor	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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the recommended improvements to correct a similar problem in the future.

Problem Statement	Problem Description	References	Recommendation

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

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			

External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$200,000	**$428,565**	($228,565)

Reasons for Variance	Impact
Change order #1	$212,270
Change order #2	$16,295

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)

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project
[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Liberty Utilities

Capital Project Expenditure Form 2020

Project Name:	FLIR Camera Project- EnergyNorth		
Financial Work Order (FWO):		**Project ID #:**	8840-2044
Requesting Region or Group:	New Hampshire-Energy North	**Date of Request (MM/DD/YY):**	2/7/2020
Project Sponsor:	Rich Foley	**Project Start Date:**	3/1/2020
Project Lead:	Doug Dorn	**Project End Date:**	12/31/2020
Prepared by:	Doug Dorn	**Requested Capital ($)**	$986,000
Planned or Unplanned Projects:	☒ Planned ☐Unplanned		
Project Type: (Click appropriate boxes)	☒ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported ☐ Discretionary		

Details of Request

Project description

Install FLIR Thermal imaging cameras to replace the shaker fence system used for the gas production yards to protect against break ins.

Currently the gas plant uses antiquated security systems for the fence that is very expensive to repair and is unreliable. Therefore we propose to install FLIR thermal cameras that are proven out in one of our electric yards. More reliable, easier to service, get parts for and overall ease of use make going in this direction the recommended approach.

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

NO

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

NA

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?

GUIDANCE: If yes, please detail the specific assets that will be removed:NA

1. *Original Cost of Plant to be removed (if known):*
2. *What is the replacement cost of the plant being removed (if original cost not known)?*
3. *Original Work Order of Plant to be removed (if known):*
4. *Is the Plant being removed reusable?*

Liberty Utilities Capital Project Expenditure Form 2020

5. *What is the year of original installation of the plant being removed*

What alternatives were evaluated and why were they rejected?
Continue to operate with current security system. This opens us up to penalties for DHS.

What are the risks and consequences of not approving this expenditure?	
Large penalties from DHS for not securing our plants. Current systems in Manchester and Tilton are obsolete and not able to get parts or service for.	

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.
All standard operating procedures regarding safety will be followed during project construction.

Are there other pertinent details that may affect the decision making process?
No

Complete the Financial Summary table only if:
- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year	**2021**	**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☒1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?	Rate Case		
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:[1]	☐Fixed or Firm Price ☒Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		

Liberty Utilities

Capital Project Expenditure Form | 2020

Category	Current Year	Future Years	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$986,000		

Approvals and Signatures[ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			Click here to enter a date.
Senior Manager:	Up to $50,000	Douglas Dorn		February 7, 2020
Senior Director/Director:	Up to $250,000	Richard Foley		February 7, 2020
Senior VP/VP:	Up to $500,000	Richard MacDonald		2/21/2020
State President:	Up to $500,000	Susan Fleck	2/26/2020	Click here to enter a date.
Regional President:	Up to $3,000,000	James Sweeney		Click here to enter a date. 2/21/2020
Corporate – Sr. VP Operations:	Up to $5,000,000			Click here to enter a date.
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

Project Close Out Report 2020

Requesting Region or Group:	Liberty Utilities- NH-Gas Operations	**Date of Closeout (MM/DD/YY):**	3/30/2021
Project Name:	Flir Cameras - Security-Manchester 8840-2044		
Requesting Region:		**Sponsor** (Name)**:**	Richard Foley
Project Champion:	Doug Dorn	**Project ID**	
Project Status	x☐In Service ☐Complete ☐ Closed		
Project Start Date:	9/2020	**Project Completion Date:**	12/2020
Requested Capital ($)	$986,000	**Expenditure Included in Approved Budget?**	X Yes ☐No

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
Doug Dorn	Project Lead	ddorn Digitally signed by ddorn DN: cn=ddorn, o, ou, email=douglas.dorn@libertyutilities.com, c=US Date: 2021.03.11 12:53:24 -05'00'	
Rich Foley	Project Sponsor	Richard Foley Digitally signed by Richard Foley DN: cn=Richard Foley, o=Liberty Utilities, ou, email=richard.foley@libertyutilities.com, c=US Date: 2021.03.16 17:49:10 -04'00'	
Rich MacDonald	Operations Manager		
	Accounting Manager		

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 X☐ No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes X☐ No ☐
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 X☐ No ☐

Item	Question	Response
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes X☐ No ☐
2.5	Do you agree the project should be closed? If no, please explain:	Yes X☐ No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	4/5
2.7	Scope	5/5
2.8	Cost (Budget)	4/5
2.9	Schedule	5/5

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 X☐ No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?		Yes X☐ No ☐
3.4	Identify the storage location for the following project documents items:		
Item	**Document**	**Location (e.g., Google Docs, Webspace)**	**Format**
3.4a	Business Case		X☐ Electronic ☐ Manual
3.4b	If available, the Final Project Schedule		X☐ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices		X☐ Electronic ☐ Manual
3.4d	Status Reports		X☐ Electronic ☐ Manual
3.4e	Risks and Issues Log		X☐ Electronic ☐ Manual
3.4f	Final deliverable		X☐ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team [ii]

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

Name	Role	Type (e.g., Contractor, Employee)
Doug Dorn	Lead	Employee
Shaun Fresia	PM	Employee
Allied Security		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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the recommended improvements to correct a similar problem in the future.

Problem Statement	Problem Description	References	Recommendation
None			

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
None	

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance

Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$986,000	**$717,164**	$268,836

Reasons for Variance	Impact
Burden cost carried into 2021	$217,016

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)

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project
[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Capital Project Expenditure Form 2018

Project Name:	GIS Gas Service Line Mapping		
Financial Work Order (FWO):		**Project ID #:**	8840-1972
Requesting Region or Group:	Energy North	**Date of Request (MM/DD/YY):**	1/9/2019
Project Sponsor:	Charles Rodrigues	**Project Start Date:**	1/1/2020
Project Lead:	Joel Rivera	**Project End Date:**	12/31/2020
Prepared by:	Charles Rodrigues	**Requested Capital ($)**	$100,000
Planned or Unplanned Projects:	☒ Planned ☐Unplanned		
Project Type: (Click appropriate boxes)	☒ Safety ☐ Mandated ☐ Growth ☒ Regulatory Supported ☐ Discretionary		
Spending Rationale:	☐ Growth ☒ Improvement ☐ Replenishment		

Details of Request

Project description

Mapping Gas Service Lines, from the original source documents, is the final step in having accurate Gas Service Line graphics and data in GIS. The scope of work for this project is to:

- Accurately map the Gas Service Lines converted from the SPIPE Database, from the original source documents.
- Add Buildings, as required, for the Gas Service Lines being mapped.
  Total Number of Gas Service Lines to be Mapped: 65,000 Services

`

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

No.

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

N/A.

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?

GUIDANCE: If yes, please detail the specific assets that will be removed:

1. *Original Cost of Plant to be removed (if known):*
2. *What is the replacement cost of the plant being removed (if original cost not known)?*
3. *Original Work Order of Plant to be removed (if known):*
4. *Is the Plant being removed reusable?*
5. *What is the year of original installation of the plant being removed*

No.

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Capital Project Expenditure Form 2018

What alternatives were evaluated and why were they rejected?
An alternative is not having Gas Service Lines mapped in GIS, risking possibility of hitting Gas Service Lines. Not having Gas Service Lines mapped in GIS makes more work for employees and contractor crews having to take additional time to research exact location of Gas Service Lines.

What are the risks and consequences of not approving this expenditure?
Risk associated with not having Gas Service Lines mapped in GIS, is the possibility of hitting Gas Service Lines. Not having Gas Service Lines mapped in GIS makes more work for employees and contractor crews having to take additional time to research exact location of Gas Service Lines.

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.
N/A.

Are there other pertinent details that may affect the decision making process?
No.

Complete the Financial Summary table only if:

- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year		**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☐1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?			
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please	☐Fixed or Firm Price ☒Estimate – Internal ☐Estimate – External ☐Other (specify details) N/A		

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Capital Project Expenditure Form 2018

specify the percent complete: [i]			
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)	$50,000		
Internal Costs ($)	$50,000		
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$100,000		

Approvals and Signatures [ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000	Joel Rivera Manager, Electric System Planning and GIS Maps and Records	Joel Rivera (159) Digitally signed by Joel Rivera (159) DN: c=US, st=MA, l=Holyoke, o=ISO New England Inc, ou=USER ID - 600066941, ou=ISNE, cn=Joel Rivera (159), email=joel.rivera@libertyutilities.com Date: 2020.04.06 10:49:47 -04'00'	
Senior Manager:	Up to $50,000			
Senior Director/Director:	Up to $250,000	Charles Rodrigues Director, Engineering	Charles Rodrigues Digitally signed by Charles Rodrigues Date: 2020.04.06 10:56:13 -04'00'	
Senior VP/VP:	Up to $500,000	Richard MacDonald Vice President, Operations		
State President:	Up to $500,000			
Regional President:	Up to $3,000,000			
Corporate – Sr. VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			
Finance (East) – Vice President, Finance & Administration:	All Requests	Peter Dawes VP, Finance & Administration		

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

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Capital Project Business Case | 2020

NOTE: This form is required for planned Growth, Regulatory Supported, and Discretionary projects as well as combined blanket projects for Safety and Mandated with Growth, Regulatory Supported, and Discretionary Projects with a spend greater than $100,000 and all unplanned projects. All other Project types can utilize the Capital Expenditure Application Form.

Project Overview			
Project Name:	GIS Gas Service Line Mapping	**Date Prepared:**	4/3/2020
Project ID#:	8840-1972	**Cost Estimate:**	$100,000
Project Sponsor:	Charles Rodrigues	**Project Start Date:**	1/1/2020
Project Lead:	Joel Rivera	**Project End Date:**	12/31/2020
Prepared By:	Charles Rodrigues	**Planned or Unplanned Projects:**	☒ Planned ☐ Unplanned
Project Type (click appropriate boxes)**:**	☒ Safety ☐ Mandated ☐ Growth ☒ Regulatory Supported ☐ Discretionary		
Spending Rationale:	☐ Growth ☒ Improvement ☐ Replenishment		

Project Scope Statement
(Insert the scope of work, major deliverables, assumptions, and constraints)

Mapping 65,000 Gas Service Lines in GIS, from the original source documents

Background
(Insert description of current operational arrangement, and brief history of project & asset)

Prior to 2015 Gas Service Lines were not mapped in the NH GIS as a rule. We have taken on a Project to Map the existing Services into GIS from the non-graphical data in the Service Pipe Database (SPIPE). A program was written to create Service Lines in the GIS from relationships between Services and Mains, and Services and Street Centerlines. The Service Lines created from this Service Mapping Program need to be accurately drawn in GIS from the original Service source documents.

Recommendation/Objective
(Insert the unique problem this project is looking to resolve)

Mapping Gas Service Lines, from the original source documents, is the final step in having accurate Gas Service Line graphics and data in GIS. The scope of work for this project is to:

- Accurately map the Gas Service Lines converted from the SPIPE Database, from the original source documents.
- Add Buildings, as required, for the Gas Service Lines being mapped.

Total Number of Gas Service Lines to be Mapped: 65,000 Services

Alternatives/Options
(Describe all reasonably viable alternatives. Discuss the viability of each and provide reasons if rejected)

Alternative is not having Gas Service Lines mapped in GIS, risking possibility of hitting Gas Service Lines.
Not having Gas Service Lines mapped in GIS makes more work for employees and contractor crews having to take additional time to research exact location of Gas Service Lines.

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

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Capital Project Business Case 2020

Next Anticipated Test Year	**2021**	**Was this Capital Project included in the current year's Board Approved Budget?**	☐ Yes ☒ No

Regulatory Lag (Click appropriate box) ☐Less than 6 Months ☐6-12 Months ☒1 to 3 years ☐Greater than 3 years

Category	Total Already Approved	2019	2020	Beyond 2020	Total
Internal Labor	$ -	$ -	$ 50,000	$ -	$ 50,000
External/Contractor Labor	$ -	$ -	$ 50,000	$ -	$ 50,000
other	$ -	$ -		$ -	$ -
Total Project Costs ($)	**$ -**	**$ -**	**$ 100,000**	**$ -**	**$ 100,000**

Unlevered Internal Rate of Return:

Basis of Estimate: *The cost estimate is based on historical spending trends.*

For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:

Schedule
(List key milestone dates)

Key Milestone Description	Forecast Start Date	Forecast End Date
Collection of original source documents by Field Operations personnel	Continuous	Continuous
Input of Gas Service Line data into GIS by Mapping personnel.	Continuous	Continuous

Risk Assessment
(Please describe the risk of not completing the project)

Risk associated with not having Gas Service Lines mapped in GIS, is the possibility of hitting Gas Service Lines.
Not having Gas Service Lines mapped in GIS makes more work for employees and contractor crews having to take additional time to research exact location of Gas Service Lines.

Trade Finance
(Is there a possibility to apply trade finance products to this project? See Capital Planning for further clarification)

Unknown

Supporting Documentation
(Reference drawings, condition assessment reports, vendor quotations, etc. Attach document or where possible include hyperlink to file located on shared server or SharePoint)

Supporting Documentation can be found on https://community.libertyutilities.com/east/Pages/Engineering.aspx

Liberty Utilities WATER · GAS · ELECTRIC

Capital Project Business Case 2020

Approvals and Signatures [i]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000	Joel Rivera Manager, Electric System Planning and GIS Maps and Records	Joel Rivera (159) Digitally signed by Joel Rivera (159) DN: c=US, st=MA, l=Holyoke, o=ISO New England Inc, ou=USER ID - 600066941, ou=ISNE, cn=Joel Rivera (159), email=joel.rivera@libertyutilities.com Date: 2020.04.06 10:49:14 -04'00'	
Senior Manager: :	Up to $50,000			
Senior Director/Director:	Up to $250,000	Charles Rodrigues Director, Engineering	Charles Rodrigues Digitally signed by Charles Rodrigues Date: 2020.04.06 10:58:13 -04'00'	
Senior Vice President/ Vice President	Up to $500,000	Richard MacDonald Vice President, Operations		
State President:	Up to $500,000			
Regional President:	Up to $3,000,000			
Corporate – Sr. VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			
Finance (East) – Vice President, Finance & Administration	All Requests	Peter Dawes VP, Finance & Administration		

[i] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report | 2020

Requesting Region or Group:	Liberty Utilities- NH-Gas Operations	**Date of Closeout (MM/DD/YY):**	3/31/2021
Project Name:	GIS Mapping 8840-1972		
Requesting Region:	East Region	**Sponsor** (Name)**:**	Charles Rodrigues
Project Champion:	Joel Rivera	**Project ID**	8840-1972
Project Status	☐In Service ☐Complete X Closed		
Project Start Date:	01/01/2020	**Project Completion Date:**	12/31/2020
Requested Capital ($)	$100,000	**Expenditure Included in Approved Budget?**	X Yes ☐No

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
Joel Rivera	Project Lead	Joel Rivera Digitally signed by Joel Rivera Date: 2021.03.31 18:17:03 -04'00'	3-31-2021
Charles Rodrigues	Project Sponsor	Charles Rodrigues Digitally signed by Charles Rodrigues Date: 2021.03.31 18:27:51 -04'00'	
	Operations Manager		
	Accounting Manager		

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 ☒ No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes ☒ No ☐
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 ☒ No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes ☒ No ☐

Item	Question	Response
2.5	Do you agree the project should be closed? If no, please explain:	Yes ☒ No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	3/5
2.6	Product and/or Service Performance	3/5
2.7	Scope	3/5
2.8	Cost (Budget)	3/5
2.9	Schedule	3/5

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 ☒ No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?		Yes ☒ No ☐
3.4	Identify the storage location for the following project documents items:		
Item	**Document**	**Location (e.g., Google Docs, Webspace)**	**Format**
3.4a	Business Case	East (W:)\Engineering\Business Cases\Gas\2020\	☒ Electronic ☐ Manual
3.4b	If available, the Final Project Schedule		☐ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices	East (W:)\Engineering\Mapping GIS\Purchasing\Invoices	☒ Electronic ☐ Manual
3.4d	Status Reports		☐ Electronic ☐ Manual
3.4e	Risks and Issues Log		☐ Electronic ☐ Manual
3.4f	Final deliverable	NH Gas GIS	☒ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team[ii]

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

Name	Role	Type (e.g., Contractor, Employee)

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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the recommended improvements to correct a similar problem in the future.

Problem Statement	Problem Description	References	Recommendation

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

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			

Project Close Out Report 2020

External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$100,000	$ 273,898	($173,898)

Reasons for Variance	Impact
Change order #1	$200,000

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)

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project
[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Capital Project Expenditure Form 2020

Project Name:	RTU Replacement Program		
Financial Work Order (FWO):	8840-2066	**Project ID #:**	
Requesting Region or Group:		**Date of Request (MM/DD/YY):**	
Project Sponsor:	Norman Gallagher	**Project Start Date:**	
Project Lead:	Greg Clement	**Project End Date:**	15 DEC, 2020
Prepared by:	D. Sandrelli	**Requested Capital ($)**	60,000.00
Planned or Unplanned Projects:	☒ Planned ☐Unplanned		
Project Type: (Click appropriate boxes)	☒ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported ☐ Discretionary		

Details of Request

Project description
Replace Remote Terminal Units (RTU) at Gate and regulator pits

`

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.
no

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?
None

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?
GUIDANCE: If yes, please detail the specific assets that will be removed: 1. *Original Cost of Plant to be removed (if known):* 2. *What is the replacement cost of the plant being removed (if original cost not known)?* 3. *Original Work Order of Plant to be removed (if known):* 4. *Is the Plant being removed reusable?* 5. *What is the year of original installation of the plant being removed*

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Capital Project Expenditure Form 2020

What alternatives were evaluated and why were they rejected?
No Alternatives

What are the risks and consequences of not approving this expenditure?
Reduce communications reliabilities at regulating stations

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.
None

Are there other pertinent details that may affect the decision making process?
No

Capital Project Expenditure Form 2020

Complete the Financial Summary table only if:
- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year		**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☐1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?			
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:[i]	☐Fixed or Firm Price ☒Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	60,000.00		

Approvals and Signatures[ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000	David Sandrelli		April 27, 2020
Senior Manager:	Up to $50,000			Click here to enter a date.
Senior Director/Director:	Up to $250,000	Norman Gallagher	Norman Gallagher Digitally signed by Norman Gallagher Date: 2020.04.27 12:10:32 -04'00'	April 27, 2020
Senior VP/VP:	Up to $500,000			

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Capital Project Expenditure Form | 2020

State President:	Up to $500,000			Click here to enter a date.
Regional President:	Up to $3,000,000			Click here to enter a date.
Corporate – Sr. VP Operations:	Up to $5,000,000			Click here to enter a date.
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report | 2020

Requesting Region or Group:	Liberty Utilities- NH-Gas Operations	**Date of Closeout (MM/DD/YY):**	20 October 2020
Project Name:	RTU Replacement Program 8840-2066		
Requesting Region:		**Sponsor** (Name)**:**	Norman Gallagher
Project Champion:	Greg Clement	**Project ID**	
Project Status	XIn Service XComplete X Closed		
Project Start Date:		**Project Completion Date:**	20OCT20
Requested Capital ($)	$60,000	**Expenditure Included in Approved Budget?**	X Yes ☐No

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
Greg Clement	Project Lead	Gregory Clement Digitally signed by Gregory Clement Date: 2021.03.17 14:02:55 -04'00'	3.17.2021
	Project Sponsor		
	Operations Manager		
	Accounting Manager		

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 X No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes X No ☐
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 X No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes X No ☐

Item	Question	Response
2.5	Do you agree the project should be closed? If no, please explain:	Yes X No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	5/5
2.7	Scope	5/5
2.8	Cost (Budget)	5/5
2.9	Schedule	4/5

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 X No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?		Yes ☐ No ☐
3.4	Identify the storage location for the following project documents items:		
Item	**Document**	**Location (e.g., Google Docs, Webspace)**	**Format**
3.4a	Business Case	W:\Control\Production\Projects\2020 Buisness Cases-CAPEX\2020CAPEX forms signed	X Electronic ☐ Manual
3.4b	If available, the Final Project Schedule		☐ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices	W:\Control\Production\Projects\2020 Business Cases-CAPEX\2020 RTU replacment	X Electronic ☐ Manual
3.4d	Status Reports		☐ Electronic ☐ Manual
3.4e	Risks and Issues Log		☐ Electronic ☐ Manual
3.4f	Final deliverable		☐ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team [ii]

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

Name	Role	Type (e.g., Contractor, Employee)

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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the recommended improvements to correct a similar problem in the future.

Problem Statement	Problem Description	References	Recommendation
NONE			

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
NONE	

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance

Project Close Out Report 2020

Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$60,000	$ 34,289	$25,711

Reasons for Variance	Impact

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)	
402066-39701	Hooksett, RTU Replace
402066-39702	Daniel Webster @ BAE Merrimack –COMPLETED 8/6/20
402066-39703	Opechee @ Messer, Laconia RTU Replace
402066-37801	Fairmont @ Elm , Laconia
402066-37802	Pennichuck 60# Nashua-COMPLETED 7/29/20
402066-37803	Hudson Gate station-COMPLETED 10/20/20

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project
[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Liberty Utilities

Capital Project Expenditure Form | 2020

Project Name:	Electric Meter Worker Meter Training/Testing Wall		
Financial Work Order (FWO):	8840 - 2084	**Project ID #:**	
Requesting Region or Group:		**Date of Request (MM/DD/YY):**	03/02/2020
Project Sponsor:	Mark Eagan	**Project Start Date:**	
Project Lead:	Mark Eagan	**Project End Date:**	
Prepared by:	Mark Eagan	**Requested Capital ($)**	25,000
Planned or Unplanned Projects:	☒ Planned ☒ Unplanned GM - 3/11/2020 - Unplanned in 2020 budget		
Project Type: (Click appropriate boxes)	☒ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported ☐ Discretionary		

Details of Request

Project description

Construct new electric meter training and testing wall at the Concord NH Training Center. This will be multiple electric meters and associated equipment, wiring, conduit, circuit breakers and switches. This equipment will be installed on the second floor of the Training Center and will be used as part of the new Electric Meter Worker training/testing program.

The installation of these electric meters/equipment at the Training Center is to allow for the simulation/training/testing of the Company's Electric Meter Workers in a controlled environment.

Once the contract is awarded, the Electrical Contractor selected will install the meters/equipment on a turn-key basis.

Estimated time of installation once the contract is awarded and all materials are procured and on-site is one week.

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

No

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

Electric permit

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?

Liberty Utilities **Capital Project Expenditure Form** | **2020**

GUIDANCE: If yes, please detail the specific assets that will be removed:

1. *Original Cost of Plant to be removed (if known):*
2. ~~*What is the replacement cost of the plant being removed (if original cost not known)?*~~
3. *Original Work Order of Plant to be removed (if known):*
4. *Is the Plant being removed reusable?*
5. *What is the year of original installation of the plant being removed*

NO

What alternatives were evaluated and why were they rejected?

Do nothing. Continue with an inadequate hands-on electric meter set up at the Training Center. This perpetuates the Company's inability to offer adequate hands-on training/testing of its Electric Meter Workers.

What are the risks and consequences of not approving this expenditure?

The risk in continuing with the current set up in Concord is not providing adequate hands-on Electric Meter Worker training in a controlled environment. The current set up has Electric Meter Workers learning to perform this work in the Field in an On The Job Training type of mode and not in a controlled environment.

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.

Work is inside the Concord Training Center. Work is to be performed by NH Licensed electricians. No external construction is taking place.

Are there other pertinent details that may affect the decision making process?

No

Liberty Utilities Capital Project Expenditure Form | 2020

Complete the Financial Summary table only if:

- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year		**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☐1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?			
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:[i]	☐Fixed or Firm Price ☐Estimate – Internal ☒Estimate – External ☐Other (specify details) See Attachments		
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$25,000		

Approvals and Signatures[ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**

Liberty Utilities Capital Project Expenditure Form 2020

Manager / Staff (requisitioner/buyer):	Up to $25,000	MARK J. EAGAN		3/11/20
Senior Manager:	Up to $50,000			Click here to enter a date.
Senior Director/Director:	Up to $250,000			Click here to enter a date.
Senior VP/VP:	Up to $500,000			
State President:	Up to $500,000			Click here to enter a date.
Regional President:	Up to $3,000,000			Click here to enter a date.
Corporate – Sr. VP Operations:	Up to $5,000,000			Click here to enter a date.
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Liberty Utilities

Capital Project Business Case

2020

NOTE: This form is required for planned Growth, Regulatory Supported, and Discretionary projects as well as combined blanket projects for Safety and Mandated with Growth, Regulatory Supported, and Discretionary Projects with a spend greater than $100,000 and all unplanned projects. All other Project types can utilize the Capital Expenditure Application Form.

Project Overview			
Project Name:	Electric Meter Worker Meter Training/Testing Wall	**Date Prepared:**	March 2, 2020
Project ID#:	8840 - 2084	**Cost Estimate:**	
Project Sponsor:	Mark Eagan	**Project Start Date:**	
Project Lead:	Mark Eagan	**Project End Date:**	
Prepared By:	Mark Eagan	**Planned or Unplanned Projects:**	☐ Planned ☒ Unplanned
Project Type (click appropriate boxes):	☒ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported ☐ Discretionary		
Spending Rationale:	☐ Growth ☒ Improvement ☐ Replenishment		

Project Scope Statement
(Insert the scope of work, major deliverables, assumptions, and constraints)

Construct new electric meter training and testing wall at the Concord NH Training Center. This will be multiple electric meters and associated equipment, wiring, conduit, circuit breakers and switches. This equipment will be installed on the second floor of the Training Center and will be used as part of the new Electric Meter Worker training/testing program.

The installation of these electric meters/equipment at the Training Center is to allow for the simulation/training/testing of the Company's Electric Meter Workers in a controlled environment.

Once the contract is awarded, the Electrical Contractor selected will install the meters/equipment on a turn-key basis.

Estimated time of installation once the contract is awarded and all materials are procured and on-site is one week.

Background
(Insert description of current operational arrangement, and brief history of project & asset)

Currently, the Company does not have the proper electric metering equipment at the Concord Training Center to perform adequate training and testing of its Electric Meter Workers.

The installation of this metering equipment will allow the Company to properly train and test its Electric Meter Workers, mimicking what it currently does for its Gas Meter Workers at the Concord Training Center.

Recommendation/Objective (Insert the unique problem this project is looking to resolve)

The objective is to have the proper Electric Meter/s in a controlled environment at the Concord Training Center so as to train/test its Electric Meter Workers.

Alternatives/Options
(Describe all reasonably viable alternatives. Discuss the viability of each and provide reasons if rejected)

Do nothing. Continue with an inadequate hands-on electric meter set up at the Training Center. This perpetuates the Company's inability to offer adequate hands-on training/testing of its Electric Meter Workers.

Liberty Utilities

Capital Project Business Case

2020

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

Next Anticipated Test Year	Click to select a date	**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No

Regulatory Lag
(Click appropriate box) ☐Less than 6 Months ☐6-12 Months ☐1 to 3 years ☐Greater than 3 years

Category	Total Already Approved	2020	2021	Beyond 2021	Total
Internal Labor					
Materials					
Equipment					
Contractor/ Subcontractor					
AFUDC					
Total Project Cost		**$25,000**			

Unlevered Internal Rate of Return:

Basis of Estimate: See Attachments – Two estimates for the proposed work from two local Electrician Companies that are in IsNetWorld with adequate scores.

For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:

Schedule
(List key milestone dates)

Key Milestone Description	Forecast Start Date	Forecast End Date
Contract Execution		
Start Installation		
Commission the Installation		

Risk Assessment
(Please describe the risk of not completing the project)

The risk in continuing with the current set up in Concord is not providing adequate hands-on Electric Meter Worker training in a controlled environment. The current set up has Electric Meter Workers learning to perform this work in the Field in an On The Job Training type of mode and not in a controlled environment.

Liberty Utilities

Capital Project Business Case

2020

Trade Finance (Is there a possibility to apply trade finance products to this project? See Capital Planning for further clarification)
No.
Supporting Documentation (Reference drawings, condition assessment reports, vendor quotations, etc. Attach document or where possible include hyperlink to file located on shared server or SharePoint)
See Attachments.

Approvals and Signatures[1]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000	MARK J. EAGAN		3/11/20
Senior Manager: :	Up to $50,000			
Senior Director/Director:	Up to $250,000			
Senior Vice President/ Vice President	Up to $500,000			
State President:	Up to $500,000			
Regional President:	Up to $3,000,000			
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[1] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report | 2020

Requesting Region or Group:	Liberty Utilities- NH-Gas Operations	**Date of Closeout (MM/DD/YY):**	
Project Name:	Electric Meter Worker Meter Training/Testing Wall 8840-2084		
Requesting Region:		**Sponsor** (Name):	
Project Champion:	Mark Eagan	**Project ID**	
Project Status	☒In Service ☐Complete ☐ Closed		
Project Start Date:		**Project Completion Date:**	
Requested Capital ($)	$25,000	**Expenditure Included in Approved Budget?**	X Yes ☐No

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
	Project Lead		
MARK J. EAGAN	Project Sponsor		4/5/21
	Operations Manager		
	Accounting Manager		

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 ☒ No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes ☒ No ☐
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 ☒ No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes ☒ No ☐

Project Close Out Report | 2020

Item	Question	Response
2.5	Do you agree the project should be closed? If no, please explain:	Yes ☒ No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	4 /5
2.6	Product and/or Service Performance	4 /5
2.7	Scope	4 /5
2.8	Cost (Budget)	4 /5
2.9	Schedule	4 /5

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 ☒ No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?		Yes ☒ No ☐
3.4	Identify the storage location for the following project documents items:		
Item	**Document**	**Location (e.g., Google Docs, Webspace)**	**Format**
3.4a	Business Case	COMPANY DRIVE	☒ Electronic ☐ Manual
3.4b	If available, the Final Project Schedule		☐ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices	COMPANY DRIVE	☒ Electronic ☐ Manual
3.4d	Status Reports		☐ Electronic ☐ Manual
3.4e	Risks and Issues Log		☐ Electronic ☐ Manual
3.4f	Final deliverable	COMPANY DRIVE	☒ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team[ii]

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

Project Close Out Report | 2020

Name	Role	Type (e.g., Contractor, Employee)
JOSH PARADISE	LEAD ELECTRICIAN	CONTRACTOR
KEN SALTER	LIBERTY ELECTRIC TRAINER	EMPLOYEE
MARK EAGAN	LIBERTY TRAINING DEPT MGR	EMPLOYEE

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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the recommended improvements to correct a similar problem in the future.

Problem Statement	Problem Description	References	Recommendation
NO ISSUES			

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	

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			

Project Close Out Report | 2020

External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$25,000	$24,926	$73

Reasons for Variance	Impact

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)

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project

[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Liberty Utilities

Capital Project Expenditure Form | 2020

Project Name:	Transportation/Fleet		
Financial Work Order (FWO):	TBD	**Project ID #:**	8840-2090
Requesting Region or Group:	New Hampshire-Energy North	**Date of Request (MM/DD/YY):**	1/17/2020
Project Sponsor:	Robert Mostone	**Project Start Date:**	1/17/2020
Project Lead:	Richard Foley	**Project End Date:**	12/31/2020
Prepared by:	Richard Foley	**Requested Capital ($)**	
Planned or Unplanned Projects:	☒ Planned ☐ Unplanned		
Project Type: (Click appropriate boxes)	☐ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported ☒ Discretionary		

Details of Request

Project description

This Project represents the annual purchases of vehicles required for Liberty Utilities (Energy North) Corp. A review and assessment of the fleet is performed in conjunction with operations to determine any fleet additions required and replacement needs based on the current condition (mileage and age) of the fleet as determined in the corporate fleet policy

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

No

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

NA

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?

GUIDANCE: If yes, please detail the specific assets that will be removed:

1. *Original Cost of Plant to be removed (if known):*
2. *What is the replacement cost of the plant being removed (if original cost not known)?*
3. *Original Work Order of Plant to be removed (if known):*
4. *Is the Plant being removed reusable?*
5. *What is the year of original installation of the plant being removed*

Yes there will be some plant removed. The exact plant removed will be contingent upon the arrival of the equipment. Vehicles are ordered based on what is proposed for replacement and there are instances where the exact unit being replaced changes based on updated vehicle condition when the new unit is completed. All vehicles retired are communicated to Plant accounting. New units will not have plant removed.

Liberty Utilities Capital Project Expenditure Form 2020

What alternatives were evaluated and why were they rejected?
Continue using existing vehicles: This was rejected due to the failing condition of the assets and the safety risk this in continuing to operate older assets and the risk of failure / breakdown can impede our ability to respond to customer needs.

What are the risks and consequences of not approving this expenditure?
Increased risk of equipment failure posing potential safety risks to employees customers and possibly the general public if equipment failure results in delayed responses to emergencies.

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.
Vehicle replacements are a result of standards set forth in the fleet policy which address safety related impacts.

Are there other pertinent details that may affect the decision making process?
No

Liberty Utilities

Capital Project Expenditure Form | 2020

Complete the Financial Summary table only if:
- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year	**2021**	**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☒6 – 12 months ☐1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?	Rate Case		
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:[i]	☐Fixed or Firm Price ☒Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)	2,663,000		
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)			

Approvals and Signatures[ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			Click here to enter a date.
Senior Manager:	Up to $50,000			Click here to enter a date.
Senior Director/Director:	Up to $250,000	Richard Foley		January 23, 2019
Senior VP/VP:	Up to $500,000	Richard MacDonald		1/31/2020

Liberty Utilities Capital Project Expenditure Form | 2020

State President:	Up to $500,000	Susan Fleck		Click here to enter a date. 2/5/2020
Regional President:	Up to $3,000,000	James Sweeney		Click here to enter a date. 2/20/2020
Corporate – Sr. VP Operations:	Up to $5,000,000			Click here to enter a date.
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Liberty Utilities

Capital Project Business Case

2020

NOTE: This form is required for planned Growth, Regulatory Supported, and Discretionary projects as well as combined blanket projects for Safety and Mandated with Growth, Regulatory Supported, and Discretionary Projects with a spend greater than $100,000 and all unplanned projects. All other Project types can utilize the Capital Expenditure Application Form.

Project Overview			
Project Name:	Transportation/Fleet	**Date Prepared:**	17-Jan-2020
Project ID#:	8840-2090	**Cost Estimate:**	2,663,000
Project Sponsor:	Robert Mostone	**Project Start Date:**	17-Jan-2020
Project Lead:	Richard Foley	**Project End Date:**	31-Dec-2020
Prepared By:	Richard Foley	**Planned or Unplanned Projects:**	☒ Planned ☐Unplanned
Project Type (click appropriate boxes):	☐ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported ☒ Discretionary		
Spending Rationale:	☐ Growth ☐ Improvement ☒ Replenishment		

Project Scope Statement
(Insert the scope of work, major deliverables, assumptions, and constraints)

This Project represents the annual purchases of vehicles required for Liberty Utilities (EnergyNorth Natural Gas) Corp. A review and assessment of the fleet is performed in conjunction with operations to determine any fleet additions required and replacement needs based on the current condition (mileage and age) of the fleet as determined in the corporate fleet policy

Background
(Insert description of current operational arrangement, and brief history of project & asset)

To support the requirement to construct and maintain the gas distribution assets in the territory, there is a requirement for crews and employees to use trucks and cars to perform the work. This project is designed to fund the new and replacement vehicles required to support these operations

Recommendation/Objective (Insert the unique problem this project is looking to resolve)

Purchase vehicles to assist in the performance and completion of tasks required to provide an adequate and safe supply of energy to our customers. We review needs annually to determine new and replacement needs to support these operations.

Alternatives/Options
(Describe all reasonably viable alternatives. Discuss the viability of each and provide reasons if rejected)

Regional Fleet committee meets regularly to discuss all needs and alternatives related to fleet inventory. This committee makes the recommendations for unit replacement based on the vehicle required to support the work being performed, and the safe operation of the fleet units being replaced.

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

Liberty Utilities

Capital Project Business Case

2020

Next Anticipated Test Year	2021	Was this Capital Project included in the current year's Board Approved Budget?	☒ Yes ☐ No

Regulatory Lag (Click appropriate box) ☐Less than 6 Months ☐6-12 Months ☐1 to 3 years ☐Greater than 3 years

Category	Total Already Approved	2020	2021	Beyond 2021	Total
Internal Labor					
Materials					
Equipment		2,663,000			
Contractor/ Subcontractor					
AFUDC					
Total Project Cost		**2,663,000**			

Unlevered Internal Rate of Return:

Basis of Estimate: *Provide brief explanation on basis of estimate, activities completed to determine costs*

For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:

Schedule
(List key milestone dates)

Key Milestone Description	Forecast Start Date	Forecast End Date
Purchase Trucks	01-01-2020	06-30-2020
Receive Trucks	01-01-2020	09-30-2020

Risk Assessment
(Please describe the risk of not completing the project)

Regular review and replacement of fleet assets is important as it keeps our vehicles in good working order. Failure to have an adequate program leads to more frequent breakdowns and the potential for not having the correct vehicle to perfrom the required tasks.

Trade Finance
(Is there a possibility to apply trade finance products to this project? See Capital Planning for further clarification)

Liberty Utilities

Capital Project Business Case

2020

Supporting Documentation (Reference drawings, condition assessment reports, vendor quotations, etc. Attach document or where possible include hyperlink to file located on shared server or SharePoint)

Approvals and Signatures[1]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			
Senior Manager: :	Up to $50,000			
Senior Director/Director:	Up to $250,000	Richard Foley		1.30.2020
Senior Vice President/ Vice President	Up to $500,000	Richard MacDonald		3/9/2020
State President:	Up to $500,000	Susan Fleck		2/5/2020
Regional President:	Up to $3,000,000	James Sweeney		2/20/2020
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[1] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report 2020

Requesting Region or Group:	Liberty Utilities- NH-Gas Operations	**Date of Closeout (MM/DD/YY):**	12-31-2021
Project Name:	Transportation Fleet and Equipment Purchases 8840-2090		
Requesting Region:	East	**Sponsor** (Name)**:**	Robert Mostone
Project Champion:	Richard Foley	**Project ID**	8840-2090
Project Status	☐In Service XComplete ☐ Closed		
Project Start Date:		**Project Completion Date:**	
Requested Capital ($)	$2,663,000	**Expenditure Included in Approved Budget?**	X Yes ☐No

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
Richard Foley	Project Lead	Richard Foley Digitally signed by Richard Foley DN: cn=Richard Foley, o=Liberty Utilities, ou, email=richard.foley@libertyutilities.com, c=US Date: 2021.03.16 18:59:54 -04'00'	
Robert Mostone	Project Sponsor		
Richard MacDonald	Operations Manager		
	Accounting Manager		

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 ☒ No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes ☒ No ☐
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 ☒ No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes ☒ No ☐

Item	Question	Response
2.5	Do you agree the project should be closed? If no, please explain:	Yes ☒ No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	4/5
2.7	Scope	5/5
2.8	Cost (Budget)	4/5
2.9	Schedule	5/5

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 ☒ No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?		Yes ☒ No ☐
3.4	Identify the storage location for the following project documents items:		
Item	**Document**	**Location (e.g., Google Docs, Webspace)**	**Format**
3.4a	Business Case	Finance Sharepoint Site	☒ Electronic ☐ Manual
3.4b	If available, the Final Project Schedule		☐ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices	Accounts Payable Invoices in GP	☒ Electronic ☐ Manual
3.4d	Status Reports	Finance Sharepoint Site	☒ Electronic ☐ Manual
3.4e	Risks and Issues Log		☐ Electronic ☐ Manual
3.4f	Final deliverable		☐ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team[ii]

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

Name	Role	Type (e.g., Contractor, Employee)
Robert Mostone	Director , Gas Operations	Employee
Richard Foley	Director, Supply Chain (East)	Employee
Leonard Leclair	Supervisor SOP & Fleet	Employee

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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the recommended improvements to correct a similar problem in the future.

Problem Statement	Problem Description	References	Recommendation

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

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			

Project Close Out Report 2020

External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$2,663,000	$ 1,739,571	$923,429

Reasons for Variance	Impact
Burdens not applied as expected	Burdens reflected in 2021 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)
402090-39201
402090-39202
402090-39203
402090-39204
402090-39205
402090-39206
402090-392101
402090-392102
402090-392103
402090-392104
402090-392105
402090-39207
402090-39208

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project
[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Liberty Utilities

Capital Project Expenditure Form | 2020

Project Name:	Meter Purchases - Gas		
Financial Work Order (FWO):	TBD	**Project ID #:**	8840-2091
Requesting Region or Group:	New Hampshire-Energy North	**Date of Request (MM/DD/YY):**	1/17/2020
Project Sponsor:	Robert Mostone	**Project Start Date:**	1/17/2020
Project Lead:	Richard Foley	**Project End Date:**	12/31/2020
Prepared by:	Richard Foley	**Requested Capital ($)**	
Planned or Unplanned Projects:	☒ Planned ☐Unplanned		
Project Type: (Click appropriate boxes)	☐ Safety ☐ Mandated ☒ Growth ☒ Regulatory Supported ☐ Discretionary		

Details of Request

Project description

This Project represents the annual purchases of natural gas meters for Liberty Utilities (Energy North) Corp. We are required to provide new meters as part of our annual meter replacement program as well as meters required for new business.

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

Yes – Replacement meters that are on our system are identified by gas operations based on annual testing requirements. All meters greater than 30 years are removed from service. Some population of the new meters will also be used to support customer growth. The specific locations develop as the year progresses.

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

NA

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?

GUIDANCE: If yes, please detail the specific assets that will be removed:

1. *Original Cost of Plant to be removed (if known):*
2. *What is the replacement cost of the plant being removed (if original cost not known)?*
3. *Original Work Order of Plant to be removed (if known):*
4. *Is the Plant being removed reusable?*
5. *What is the year of original installation of the plant being removed*

Yes there will be some plant removed. The exact plant removed will be contingent upon the arrival of the new equipment and the locations selected as part of the meter testing program. New meter installations to support growth will not have plant removed.

Liberty Utilities

Capital Project Expenditure Form | 2020

What alternatives were evaluated and why were they rejected?

We have an obligation to perform meter testing to confirm the accuracy of the metering devices. As part of random sampling, new meters are purchased to remove the vintage meters that are in the field. Leaving older meters which have the potential for failure or create reading/billing issues can impact the customer. For new customers, a mechanism is required to ensure we can measure customer usage.

What are the risks and consequences of not approving this expenditure?

We fall out of compliance with our meter testing and change program. Additionally we will be unable to install any new meters on new customers and unable to provide service.

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.

Meter installation follow company safety standard operating procedures.

Are there other pertinent details that may affect the decision making process?

No

Liberty Utilities Capital Project Expenditure Form | 2020

Complete the Financial Summary table only if:
- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year	**2021**	**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☒6 – 12 months ☐1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?	Rate Case		
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:[i]	☐Fixed or Firm Price ☒Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)	1,000,000		
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)			

Approvals and Signatures[ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			Click here to enter a date.
Senior Manager:	Up to $50,000			Click here to enter a date.
Senior Director/Director:	Up to $250,000	Richard Foley	Richard Foley 1-30 2020	January 23, 2019
Senior VP/VP:	Up to $500,000	Richard MacDonald	Richard MacDonald 1/31/2020	

Liberty Utilities Capital Project Expenditure Form | 2020

State President:	Up to $500,000	Susan Fleck		Click here to enter a date. 2/5/2020
Regional President:	Up to $3,000,000	James Sweeney		Click here to enter a date. 2/26/2020
Corporate – Sr. VP Operations:	Up to $5,000,000			Click here to enter a date.
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Liberty Utilities

Capital Project Business Case | 2020

NOTE: This form is required for planned Growth, Regulatory Supported, and Discretionary projects as well as combined blanket projects for Safety and Mandated with Growth, Regulatory Supported, and Discretionary Projects with a spend greater than $100,000 and all unplanned projects. All other Project types can utilize the Capital Expenditure Application Form.

Project Overview			
Project Name:	Meter Purchases - Gas	**Date Prepared:**	17-Jan-2020
Project ID#:	8840-2091	**Cost Estimate:**	1,000,000
Project Sponsor:	Robert Mostone	**Project Start Date:**	17-Jan-2020
Project Lead:	Richard Foley	**Project End Date:**	31-Dec-2020
Prepared By:	Richard Foley	**Planned or Unplanned Projects:**	☒ Planned ☐Unplanned
Project Type (click appropriate boxes):	☐ Safety ☐ Mandated ☒ Growth ☒ Regulatory Supported ☐ Discretionary		
Spending Rationale:	☒ Growth ☐ Improvement ☒ Replenishment		

Project Scope Statement
(Insert the scope of work, major deliverables, assumptions, and constraints)

This Project represents the annual purchases of natural gas meters required for Liberty Utilities (EnergyNorth Natural Gas) Corp. The scope is for the purchase and receipt of meters and AMR (Automated Meter Reading) devices.

Background
(Insert description of current operational arrangement, and brief history of project & asset)

Liberty Utilities has an obligation to select randomly generated meter accounts and perform testing on the accuracy of the meters. In addition to this process, we are targeting gas meters older than 30 years for retirement and replacement in an effort to remain to the tolerances in the pick for test program. Additionally, this project funds any new meters required as a result of sales growth which occurs during the year.

The key drivers for this project are:

- Identification of older (30+ years) gas meters subject to replacement
- Results of "pick for test" program and the need to perform additional meter replacement
- New customer growth and upgrades requiring new or larger sized meters based on customer demand.

Recommendation/Objective (Insert the unique problem this project is looking to resolve)

Purchase gas meters to meet the obligation of replacement of older equipment and support the requirement to provide natural gas service to new customers.

Alternatives/Options
(Describe all reasonably viable alternatives. Discuss the viability of each and provide reasons if rejected)

None – Regulatory requirement

Liberty Utilities

Capital Project Business Case | 2020

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

Next Anticipated Test Year	2021	**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No

Regulatory Lag (Click appropriate box) ☐Less than 6 Months ☒6-12 Months ☐1 to 3 years ☐Greater than 3 years

Category	Total Already Approved	2020	2021	Beyond 2021	Total
Internal Labor					
Materials					
Equipment		1,000,000			
Contractor/ Subcontractor					
AFUDC					
Total Project Cost		**1,000,000**			

Unlevered Internal Rate of Return:

Basis of Estimate: *Provide brief explanation on basis of estimate, activities completed to determine costs*

For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:

Schedule
(List key milestone dates)

Key Milestone Description	Forecast Start Date	Forecast End Date
Purchase Meters & ERTs	01-01-2020	06-30-2020
Receive Meters & ERTs	01-01-2020	09-30-2020

Risk Assessment
(Please describe the risk of not completing the project)

Inability to replace older meters will result in being non-compliant with our obligations to replace older meters.

Trade Finance
(Is there a possibility to apply trade finance products to this project? See Capital Planning for further clarification)

Liberty Utilities

Capital Project Business Case | 2020

Supporting Documentation (Reference drawings, condition assessment reports, vendor quotations, etc. Attach document or where possible include hyperlink to file located on shared server or SharePoint)

Approvals and Signatures[1]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			
Senior Manager: :	Up to $50,000			
Senior Director/Director:	Up to $250,000	Richard Foley	Richard P. Foley	1-30-2020
Senior Vice President/ Vice President	Up to $500,000	Richard MacDonald	Richard MacDonald	1/30/2020
State President:	Up to $500,000	Susan Fleck		2/5/2020
Regional President:	Up to $3,000,000	James Sweeney		2/26/2020
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[1] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Liberty Utilities WATER | GAS | ELECTRIC

Change Order Form

2020

Project Overview			
Reason for Change: Meter Purchases due to long purchase times and higher volumes of meters needed			
Project ID:	8840-2091	**Project Name:**	Meter Work Project (Meter Purchases)
Change Order Name:	Meter Work Project (Meter Purchases)	**Date Prepared:**	11/23/2020
Change Order #:	8840-2091	**Financial Work Order (FWO):**[i]	
Project Sponsor:	Richard MacDonald	**Revised Start Date:**	1/01/2020
Project Lead:	Robert Mostone	**Revised End Date:**[ii]	12/31/2020
Prepared By:	Robert Mostone	**Change Type**[iii]	☐ In Scope ☐ Out of Scope
Project Contingency Available?	☒ Yes ☐ No	**If No is Selected, Please specify source of funds**[iv]	

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

Category	Original Project Value	Previous Approved Charges	Current Change Order Amount	Total
Internal Labor				
Materials				
Equipment				
Contractor/Subcontractor				
Burdens/Overheads				
AFUDC				
Total Project Cost	**$1,000,000**	**$300,000**	**$150,000**	**$1,450,000**

Updated Unlevered Internal Rate of Return:

Basis of Current Change Order Amount: *Meter volumes have increased due to 2019 Meter change status report in group A. Meters required to change 2,000 this was an increase of 1,500 meters. We are also experiencing long delays in orders from manufactures and need to keep our inventory up. Due to the current inventory plus increase backlog on meter purchases for 2021 we were able to purchase additional meters. This inventory will help support New Hampshire for into-out projects and mandated work. .*

Schedule Impacts
(As a result of the Change Order, where applicable, List the Impacts to schedule)

Baseline Schedule (BL)	New Forecast (NF)	Variance (BL – NF)
$1,000,000	$400,000	$1,400,000

Liberty Utilities WATER | GAS | ELECTRIC

Change Order Form

2020

Approvals and Signatures[v]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to: $25,000			
Senior Manager: :	Up to: $50,000			
Senior Director/Director:	Up to $250,000	Robert Mostone Director, Gas Operations		11/23/2020
State President / Senior VP / VP:	Up to $500,000	Richard MacDonald VP, Gas Operations	Richard MacDonald Digitally signed by Richard MacDonald Date: 2020.11.30 11:05:47 -05'00'	
State President / Senior VP / VP:	Up to $500,000	Susan Fleck President - LUNH		
Regional President	Up to $3,000,000			
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] The Financial Work Order Section captures the work order this change falls under when the job was initially set-up
[ii] The Revised project end date is dependent on changes in scope that may deviate the schedule from the original plan
[iii] The Change type for In scope or Out of scope changes fall within the following scenario:

- In Scope changes are deviations of scope from the original plan and approved budget that align to the original scope of the project but have revised pricing as a result of changes in pricing of labour, materials, and equipment
- Out of Scope changes are scope changes that were not originally planned for in the project baselines and approved budget. Examples of this type of change are related to changes in technology, missed deliverables, a change in the project design altering the scope of the project, etc.

iv In cases where the project no longer has contingency to cover project change orders, please specify any other sources of funds that would address the project variance (i.e. not executing another project, delaying scope of another project, etc)

[v] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

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Change Order Form

2020

Project Overview			
Reason for Change: Additional meter purchases benefits adequate stock available in 2021			
Project ID:	8840-2091	**Project Name:**	Meter Purchase
Change Order Name:	8840-2091	**Date Prepared:**	1/28/2021
Change Order #:	8840-2091 2020	**Financial Work Order (FWO):**[i]	
Project Sponsor:	Richard MacDonald	**Revised Start Date:**	1/1/2020
Project Lead:	Robert Mostone	**Revised End Date:**[ii]	12/31/2020
Prepared By:	Ryan Patnode	**Change Type**[iii]	x In Scope ☐ Out of Scope
Project Contingency Available?	☒ Yes ☐ No	**If No is Selected, Please specify source of funds**[iv]	8840-2090 Transportation Fleet and Equipment Purchases

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

Category	Original Project Value	Previous Approved Charges	Current Change Order Amount	Total
Internal Labor				
Materials				
Equipment				
Contractor/Subcontractor				
Burdens/Overheads				
AFUDC				
Total Project Cost	$1,000,000		$347,759	**$1,347,759**

Updated Unlevered Internal Rate of Return:

Additional meter purchase opportunities came available went other project under and total EnergyNorth capital portfolio. Additional meter purchases benefits ability to have adequate stock available in 2021.

Basis of Current Change Order Amount:

Click here to enter text.

Schedule Impacts
(As a result of the Change Order, where applicable, List the Impacts to schedule)

Baseline Schedule (BL)	New Forecast (NF)	Variance (BL – NF)

Liberty Utilities WATER | GAS | ELECTRIC

Change Order Form

2020

Approvals and Signatures[v]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			
Senior Manager: :	Up to $50,000			
Senior Director/Director:	Up to $250,000	Robert Mostone Director Gas	Robert Mostone Digitally signed by Robert Mostone Date: 2021.02.01 14:18:36 -05'00'	
State President / Senior VP / VP:	Up to $500,000	Richard MacDonald VP Operations	Richard MacDonald Digitally signed by Richard MacDonald Date: 2021.02.03 14:48:56 -05'00'	
Regional President:	Up to $3,000,000	James Sweeney East region VP		
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] The Financial Work Order Section captures the work order this change falls under when the job was initially set-up
[ii] The Revised project end date is dependent on changes in scope that may deviate the schedule from the original plan
[iii] The Change type for In scope or Out of scope changes fall within the following scenario:

- In Scope changes are deviations of scope from the original plan and approved budget that align to the original scope of the project but have revised pricing as a result of changes in pricing of labour, materials, and equipment
- Out of Scope changes are scope changes that were not originally planned for in the project baselines and approved budget. Examples of this type of change are related to changes in technology, missed deliverables, a change in the project design altering the scope of the project, etc.

iv In cases where the project no longer has contingency to cover project change orders, please specify any other sources of funds that would address the project variance (i.e. not executing another project, delaying scope of another project, etc)

[v] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report 2020

Requesting Region or Group:	Liberty Utilities- NH-Gas Operations	**Date of Closeout (MM/DD/YY):**	12-31-2020
Project Name:	Meter Work Project (Meter Purchases) 8840-2091		
Requesting Region:	New Hampshire	**Sponsor** (Name)**:**	Robert Mostone
Project Champion:	Richard Foley	**Project ID**	8840-2091
Project Status	X In Service ☐Complete ☐ Closed		
Project Start Date:	01/01/2020	**Project Completion Date:**	12/31/2020
Requested Capital ($)	$1,000,000	**Expenditure Included in Approved Budget?**	X Yes ☐No

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
Richard Foley	Project Lead	Richard Foley Digitally signed by Richard Foley DN: cn=Richard Foley, o=Liberty Utilities, ou, email=richard.foley@libertyutilities.com, c=US Date: 2021.03.08 14:22:29 -05'00'	
Richard MacDonald	Project Sponsor		
Robert Mostone	Operations Manager		
	Accounting Manager		

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 ☒ No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes ☒ No ☐
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 ☒ No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes ☒ No ☐

Item	Question	Response
2.5	Do you agree the project should be closed? If no, please explain:	Yes ☒ No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	5/5
2.7	Scope	5/5
2.8	Cost (Budget)	4/5
2.9	Schedule	4/5

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 ☒ No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?		Yes ☒ No ☐
3.4	Identify the storage location for the following project documents items:		
Item	**Document**	**Location (e.g., Google Docs, Webspace)**	**Format**
3.4a	Business Case	See Sharepoint Site	☒ Electronic ☐ Manual
3.4b	If available, the Final Project Schedule		☒ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices	Accounts Payable	☒ Electronic ☐ Manual
3.4d	Status Reports	See Accounting Monthly Reports	☒ Electronic ☐ Manual
3.4e	Risks and Issues Log	NA	☐ Electronic ☐ Manual
3.4f	Final deliverable	Wennsoft for project details and associated costs	☐ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team[ii]

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

Name	Role	Type (e.g., Contractor, Employee)
Richard Foley	Purchasing	Employee
Gary Poon	Meter Shop Manager	Employee
Robert Mostone	Operations	Employee

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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the recommended improvements to correct a similar problem in the future.

Problem Statement	Problem Description	References	Recommendation

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

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			

Project Close Out Report 2020

External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$1,000,000	**$1,347,759**	($347,759)

Reasons for Variance	Impact
Change order #1	$347,759

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)
402091-38101 – Commercial Meters
402091-38102 – Residential Meters
402091-38120 – ERT's

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project
[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Liberty Utilities

Capital Project Expenditure Form | 2020

Project Name:	EN Facilities Capital Improvements		
Financial Work Order (FWO):		**Project ID #:**	8840-2093
Requesting Region or Group:	New Hampshire- Energy North	**Date of Request (MM/DD/YY):**	2/19/2020
Project Sponsor:	Rich Foley	**Project Start Date:**	March 1, 2020
Project Lead:	Doug Dorn	**Project End Date:**	December 31, 2020
Prepared by:	Doug Dorn	**Requested Capital ($)**	600,000
Planned or Unplanned Projects:	☒ Planned ☐Unplanned		
Project Type: (Click appropriate boxes)	☐ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported ☒ Discretionary		

Details of Request

Project description

This project is a Blanket project to provide funding associated with various capital facility improvements required to support the buildings and grounds for the 8840 EN locations..

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

No

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

This will depend on individual jobs improvement. All permits and environmental impacts will be address at time of improvement.

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?

GUIDANCE: If yes, please detail the specific assets that will be removed: TBD

1. *Original Cost of Plant to be removed (if known): No*
2. *What is the replacement cost of the plant being removed (if original cost not known)?*
3. *Original Work Order of Plant to be removed (if known):NA*
4. *Is the Plant being removed reusable?:TBD*
5. *What is the year of original installation of the plant being removed NA*

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Capital Project Expenditure Form | 2020

What alternatives were evaluated and why were they rejected?

Individual alternatives will be sought for each situation. Overall elimination of total project rejected due to historical need of facility improvements each year.

What are the risks and consequences of not approving this expenditure?

Potential safety risk to employees.

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.

Each job identified under this project will follow company's standard operating procedures.

No

Liberty Utilities Capital Project Expenditure Form | 2020

Complete the Financial Summary table only if:
- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year	**2021**	**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☒1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?			
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:[i]	☐Fixed or Firm Price ☒Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)			

Approvals and Signatures[ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			Click here to enter a date.
Senior Manager:	Up to $50,000	Douglas Dorn		Click here to enter a date. 2/20/2020
Senior Director/Director:	Up to $250,000	Richard Foley		Click here to enter a date.
Senior VP/VP:	Up to $500,000	Richard MacDonald	Richard MacDonald	2/21/2020

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Capital Project Expenditure Form | 2020

State President:	Up to $500,000	Susan Fleck	2/26/2020	Click here to enter a date.
Regional President:	Up to $3,000,000	James Sweeney		Click here to enter a date. 2/26/2020
Corporate – Sr. VP Operations:	Up to $5,000,000			Click here to enter a date.
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Liberty Utilities

Capital Project Business Case | 2020

NOTE: This form is required for planned Growth, Regulatory Supported, and Discretionary projects as well as combined blanket projects for Safety and Mandated with Growth, Regulatory Supported, and Discretionary Projects with a spend greater than $100,000 and all unplanned projects. All other Project types can utilize the Capital Expenditure Application Form.

Project Overview			
Project Name:	EN Facilities Capital Improvements	**Date Prepared:**	2/7/2020
Project ID#:	8840-2093	**Cost Estimate:**	$600,000
Project Sponsor:	Rich Foley	**Project Start Date:**	1-Mar-2020
Project Lead:	Doug Dorn	**Project End Date:**	31-Dec-2020
Prepared By:	Douglas Dorn	**Planned or Unplanned Projects:**	☒ Planned ☐Unplanned
Project Type (click appropriate boxes):	☐ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported ☒ Discretionary		
Spending Rationale:	☐ Growth ☒ Improvement ☐ Replenishment		

Project Scope Statement
(Insert the scope of work, major deliverables, assumptions, and constraints)

This project is a Blanket project to provide funding associated with various capital facility improvements required to support the buildings and grounds for the 8840 EN locations.

Background
(Insert description of current operational arrangement, and brief history of project & asset)

This project is an annual request to provide funding for any capital needs which may be required to support the facility infrastructure located at Liberty Utilities (Energy North). This can include the purchase of office furnishings, required repairs to the HVAC or roofing systems to ensure the integrity of the building. Additionally, this budget will be used to support capital requests for improvements based on safety audits performed at this location in efforts to properly maintain the buildings and grounds.
The key drivers for this project include :
- Risk mitigation
- Employee and Customer Safety
- Improvements and upkeep to the Assets

Recommendation/Objective
(Insert the unique problem this project is looking to resolve)

Approval of funds to allow and maintain the upkeep and improvements to the NH EN Assets.

Liberty Utilities

Capital Project Business Case | 2020

Alternatives/Options
(Describe all reasonably viable alternatives. Discuss the viability of each and provide reasons if rejected)

Alternatives would be to decline all facility improvement that are identified in 2020. This creates potential harmful risk for employee depending on individual improvements.

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

Next Anticipated Test Year	**2021**	**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No

Regulatory Lag
(Click appropriate box) ☐Less than 6 Months ☐6-12 Months ☒1 to 3 years ☐Greater than 3 years

Category	Total Already Approved	2020	2021	Beyond 2021	Total
Internal Labor					
Materials					
Equipment					
Contractor/ Subcontractor		600,000			
AFUDC					
Total Project Cost		**600,000**			

Unlevered Internal Rate of Return:

Basis of Estimate: *Provide brief explanation on basis of estimate, activities completed to determine costs*

For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:

Schedule
(List key milestone dates)

Key Milestone Description	Forecast Start Date	Forecast End Date
Begin various projects/improvements	3/1/2020	12/15/2020

Liberty Utilities

Capital Project Business Case | 2020

Risk Assessment (Please describe the risk of not completing the project)
Reduced value to the company assets, potential for loss of efficiencies, increased operational costs.
Trade Finance (Is there a possibility to apply trade finance products to this project? See Capital Planning for further clarification)
No
Supporting Documentation (Reference drawings, condition assessment reports, vendor quotations, etc. Attach document or where possible include hyperlink to file located on shared server or SharePoint)
Historical project Spend

Approvals and Signatures[i]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			
Senior Manager: :	Up to $50,000	Douglas Dorn		2/20/2020
Senior Director/Director:	Up to $250,000	Richard Foley		2/20/2020
Senior Vice President/ Vice President	Up to $500,000	Richard MacDonald		2/20/2020
State President:	Up to $500,000	Susan Fleck		2/26/2020
Regional President:	Up to $3,000,000	James Sweeney		2/26/2020
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report 2020

Requesting Region or Group:	Liberty Utilities- NH-Gas Operations	**Date of Closeout (MM/DD/YY):**	3/30/2021
Project Name:	EN Facilities Capital Improvements 8840-2093		
Requesting Region:	East	**Sponsor** (Name)**:**	Richard Foley
Project Champion:	Doug Dorn	**Project ID**	
Project Status	X☐In Service ☐Complete ☐ Closed		
Project Start Date:	1/2020	**Project Completion Date:**	12/2020
Requested Capital ($)	$600,000	**Expenditure Included in Approved Budget?**	X Yes ☐No

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
Doug Dorn	Project Lead	ddorn Digitally signed by ddorn DN: cn=ddorn, o, ou, email=douglas.dorn@libertyutilities.com, c=US Date: 2021.03.11 12:54:16 -05'00'	
Rich Foley	Project Sponsor	Richard Foley Digitally signed by Richard Foley DN: cn=Richard Foley, o=Liberty Utilities, ou, email=richard.foley@libertyutilities.com, c=US Date: 2021.03.16 17:48:21 -04'00'	
Rich MacDonald	Operations Manager		
	Accounting Manager		

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 X☐ No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes X☐ No ☐
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 X☐ No ☐

Item	Question	Response
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes X☐ No ☐
2.5	Do you agree the project should be closed? If no, please explain:	Yes X☐ No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	5/5
2.7	Scope	5/5
2.8	Cost (Budget)	4/5
2.9	Schedule	5/5

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 X☐ No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?		Yes X☐ No ☐
3.4	Identify the storage location for the following project documents items:		
Item	**Document**	**Location (e.g., Google Docs, Webspace)**	**Format**
3.4a	Business Case		X☐ Electronic ☐ Manual
3.4b	If available, the Final Project Schedule		X☐ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices		X☐ Electronic ☐ Manual
3.4d	Status Reports		X☐ Electronic ☐ Manual
3.4e	Risks and Issues Log		X☐ Electronic ☐ Manual
3.4f	Final deliverable		X☐ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team [ii]

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

Name	Role	Type (e.g., Contractor, Employee)
Doug Dorn	Project Lead	employee
Shawn Raleigh	Project manager	employee
Shaun Fresia	Project manager	employee
Fulcrum associates		contractor
Gate City Electric		contractor
Allied Security		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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the recommended improvements to correct a similar problem in the future.

Problem Statement	Problem Description	References	Recommendation
None			

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
None	

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance

Project Close Out Report 2020

Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$600,000	$ 520,763	$79,237

Reasons for Variance	Impact
Not enough time to perform additional work	None

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)

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project
[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Liberty Utilities

Capital Project Expenditure Form | 2020

Project Name:	**Install Security Equipment - EN Facilities**		
Financial Work Order (FWO):		**Project ID #:**	8840-2094
Requesting Region or Group:	New Hampshire-Energy North	**Date of Request (MM/DD/YY):**	1/17/2020
Project Sponsor:	Rich Foley	**Project Start Date:**	3/1/2020
Project Lead:	Doug Dorn	**Project End Date:**	12/31/2020
Prepared by:	Doug Dorn	**Requested Capital ($)**	$50,000
Planned or Unplanned Projects:	☒ Planned ☐Unplanned		
Project Type: (Click appropriate boxes)	☐ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported ☒ Discretionary		

Details of Request

Project description

This project is to provide the coverage of security improvements on the gas side of the business. This covers all aspects of security at all the EN locations.
EN is required by Corporate Policy to complete the security conversion and maintain the security system to meet all L.U. standards.
Key drivers for this security conversion is:
☐ Risk Mitigation
☐ Security Compliance

Employee and Customer Safety

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

NO

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

None

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?

GUIDANCE: If yes, please detail the specific assets that will be removed:

1. *Original Cost of Plant to be removed (if known):*
2. *What is the replacement cost of the plant being removed (if original cost not known)?*

Liberty Utilities Capital Project Expenditure Form 2020

3. *Original Work Order of Plant to be removed (if known):* 4. *Is the Plant being removed reusable?* 5. *What is the year of original installation of the plant being removed*
DNA

What alternatives were evaluated and why were they rejected?
Do Nothing – not viable since it is a corporate initiative to strengthen our security measures

What are the risks and consequences of not approving this expenditure?	
The risks are high for not replacing antiquated equipment, leaving LU vulnerable to theft and security issues and possible safety concerns for LU Employees	

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.
This expenditure improves our physical security at our facilities.

Are there other pertinent details that may affect the decision making process?
No

Complete the Financial Summary table only if:
- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year	**2021**	**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☐1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?	Rate Case		
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please	☐Fixed or Firm Price ☒Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		

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Capital Project Expenditure Form | 2020

specify the percent complete:[i]			
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	**$50,000**		

Approvals and Signatures[ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			Click here to enter a date.
Senior Manager:	Up to $50,000	Douglas Dorn		February 7, 2020
Senior Director/Director:	Up to $250,000	Richard Foley		February 7, 2020
Senior VP/VP:	Up to $500,000	Richard MacDonald		2/21/2020
State President:	Up to $500,000	Susan Fleck		Click here to enter a date.
Regional President:	Up to $3,000,000	James Sweeney		Click here to enter a date.
Corporate – Sr. VP Operations:	Up to $5,000,000			Click here to enter a date.
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Liberty Utilities

Capital Project Business Case | 2020

NOTE: This form is required for planned Growth, Regulatory Supported, and Discretionary projects as well as combined blanket projects for Safety and Mandated with Growth, Regulatory Supported, and Discretionary Projects with a spend greater than $100,000 and all unplanned projects. All other Project types can utilize the Capital Expenditure Application Form.

Project Overview			
Project Name:	Install Security Equipment - EN Facilities	**Date Prepared:**	2/7/2020
Project ID#:	8840-2094	**Cost Estimate:**	$50,000
Project Sponsor:	Rich Foley	**Project Start Date:**	1-Mar-2020
Project Lead:	Doug Dorn	**Project End Date:**	31-Dec-2020
Prepared By:	Douglas Dorn	**Planned or Unplanned Projects:**	☒ Planned ☐Unplanned
Project Type (click appropriate boxes):	☐ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported ☒ Discretionary		
Spending Rationale:	☐ Growth ☒ Improvement ☐ Replenishment		

Project Scope Statement
(Insert the scope of work, major deliverables, assumptions, and constraints)

This project is to provide the coverage of security improvements on the gas side of the business. This covers all aspects of security at all the EN locations.

Background
(Insert description of current operational arrangement, and brief history of project & asset)

EN is required by Corporate Policy to complete the security conversion and maintain the security system to meet all L.U. standards.
Key drivers for this security conversion is:
☐ Risk Mitigation
☐ Security Compliance

Employee and Customer Safety

Recommendation/Objective (Insert the unique problem this project is looking to resolve)

Liberty Utilities

Capital Project Business Case | 2020

Strengthen the systems required to improve Physical Security at the EN locations

Alternatives/Options
(Describe all reasonably viable alternatives. Discuss the viability of each and provide reasons if rejected)

No Alternatives.

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

Next Anticipated Test Year	**2021**	**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No

Regulatory Lag (Click appropriate box) ☐Less than 6 Months ☐6-12 Months ☐1 to 3 years ☐Greater than 3 years

Category	Total Already Approved	2020	2021	Beyond 2021	Total
Internal Labor					
Materials					
Equipment					
Contractor/ Subcontractor		50,000			
AFUDC					
Total Project Cost		**50,000**			

Unlevered Internal Rate of Return:

Basis of Estimate: *Provide brief explanation on basis of estimate, activities completed to determine costs*

For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:

Schedule
(List key milestone dates)

Key Milestone Description	Forecast Start Date	Forecast End Date
Begin various projects/improvements	3/1/2020	12/15/2020

Liberty Utilities

Capital Project Business Case | 2020

Risk Assessment
(Please describe the risk of not completing the project)

The risks are high for not replacing antiquated equipment, leaving LU vulnerable to theft and security issues and possible safety concerns for LU Employees.

Trade Finance
(Is there a possibility to apply trade finance products to this project? See Capital Planning for further clarification)

NO

Supporting Documentation
(Reference drawings, condition assessment reports, vendor quotations, etc. Attach document or where possible include hyperlink to file located on shared server or SharePoint)

Historical project spend.

Approvals and Signatures[i]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			
Senior Manager: :	Up to $50,000	Douglas Dorn		2/20/20
Senior Director/Director:	Up to $250,000	Richard Foley		2/20/2020
Senior Vice President/ Vice President	Up to $500,000	Richard MacDonald	Richard MacDonald	2/20/2020
State President:	Up to $500,000	Susan Fleck		
Regional President:	Up to $3,000,000	James Sweeney		
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report | 2020

Requesting Region or Group:	Liberty Utilities- NH-Gas Operations	**Date of Closeout (MM/DD/YY):**	3/30/2021
Project Name:	Install Security Equipment - EN Facilities 8840-2094		
Requesting Region:		**Sponsor** (Name)**:**	Richard Foley
Project Champion:	Doug Dorn	**Project ID**	
Project Status	x☐In Service ☐Complete ☐ Closed		
Project Start Date:	1/2020	**Project Completion Date:**	12/2020
Requested Capital ($)	$50,000	**Expenditure Included in Approved Budget?**	X Yes ☐No

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
Doug Dorn	Project Lead	ddorn Digitally signed by ddorn DN: cn=ddorn, o, ou, email=douglas.dorn@libertyutilities.com, c=US Date: 2021.03.11 12:53:42 -05'00'	
Rich Foley	Project Sponsor	Richard Foley Digitally signed by Richard Foley DN: cn=Richard Foley, o=Liberty Utilities, ou, email=richard.foley@libertyutilities.com, c=US Date: 2021.03.12 10:20:16 -05'00'	
Rich MacDonald	Operations Manager		
	Accounting Manager		

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 X☐ No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes X☐ No ☐
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 X☐ No ☐

Item	Question	Response
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes X☐ No ☐
2.5	Do you agree the project should be closed? If no, please explain:	Yes X☐ No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	5/5
2.7	Scope	5/5
2.8	Cost (Budget)	4/5
2.9	Schedule	5/5

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 X☐ No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?		Yes X☐ No ☐
3.4	Identify the storage location for the following project documents items:		
Item	**Document**	**Location (e.g., Google Docs, Webspace)**	**Format**
3.4a	Business Case		X☐ Electronic ☐ Manual
3.4b	If available, the Final Project Schedule		X☐ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices		X☐ Electronic ☐ Manual
3.4d	Status Reports		X☐ Electronic ☐ Manual
3.4e	Risks and Issues Log		X☐ Electronic ☐ Manual
3.4f	Final deliverable		X☐ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team [ii]

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

Name	Role	Type (e.g., Contractor, Employee)
Doug Dorn	Lead	Employee
Allied Security		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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the recommended improvements to correct a similar problem in the future.

Problem Statement	Problem Description	References	Recommendation
None			

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
None	

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance

Project Close Out Report 2020

Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$50,000	$ 37,561	$12,439

Reasons for Variance	Impact
Did not require full amount of capital due to covid prevented additional work to be done.	

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)

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project
[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Liberty Utilities

Capital Project Expenditure Form | 2020

Project Name:	Liberty @ Centre Vault Door Extension		
Financial Work Order (FWO):		**Project ID #:**	8840-2096
Requesting Region or Group:		**Date of Request (MM/DD/YY):**	7/30/20
Project Sponsor:	Norman Gallagher	**Project Start Date:**	8/1/20
Project Lead:	David Sandrelli	**Project End Date:**	9/1/20
Prepared by:		**Requested Capital ($)**	$10,000.00
Planned or Unplanned Projects:	☐ Planned ☒ Unplanned		
Project Type: (Click appropriate boxes)	☐ Safety ☒ Mandated ☐ Growth ☐ Regulatory Supported ☐ Discretionary		

Details of Request

Project description

The 2 regulator pits at Liberty @ Centre Concord NH need to be raised to accommodate the City of Concord re-grading and elevating the sidewalks.

Transfer $10,000.00 from 8840-2026 to fund this capital

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

None

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?

GUIDANCE: If yes, please detail the specific assets that will be removed:

1. *Original Cost of Plant to be removed (if known):*
2. *What is the replacement cost of the plant being removed (if original cost not known)?*
3. *Original Work Order of Plant to be removed (if known):*
4. *Is the Plant being removed reusable?*
5. *What is the year of original installation of the plant being removed*

Liberty Utilities Capital Project Expenditure Form 2020

No, vault doors to be removed, riser cast and installed and doors put back in place

What alternatives were evaluated and why were they rejected?

No alternatives

What are the risks and consequences of not approving this expenditure?

City Mandated work requires this be complete.

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.

Operate within Liberty Utilities guidelines

Are there other pertinent details that may affect the decision making process?

None known

Liberty Utilities Capital Project Expenditure Form 2020

Complete the Financial Summary table only if:
- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year		**Was this Capital Project included in the current year's Board Approved Budget?**	☐ Yes ☒ No
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☐1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?			
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:[1]	☐Fixed or Firm Price ☒Estimate – Internal ☐Estimate – External ☒Other (specify details) Quote from local vendor		
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)	6000.00		
Internal Costs ($)	4000.00		
Other ($)			
AFUDC ($)			
Total Project Costs ($)	10,000.00		

Approvals and Signatures[6]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000	David Sandrelli	DAVID SANDRELLA	8/4/20
Senior Manager:	Up to $50,000			
Senior Director/Director:	Up to $250,000	Norman Gallagher	Norman M Gallagher	8/12/20
Senior VP/VP:	Up to $500,000			

Liberty Utilities Capital Project Expenditure Form 2020

State President:	Up to $500,000			
Regional President:	Up to $3,000,000			
Corporate – Sr. VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Liberty Utilities

Change Order Form

2020

Project Overview

Project ID:	8840-2096	**Project Name:**	Liberty @ Centre Vault door extension
Change Order Name:		**Date Prepared:**	7/30/20
Change Order #:	1	**Financial Work Order (FWO):**[i]	
Project Sponsor:	Norman Gallagher	**Revised Start Date:**	
Project Lead:	David Sandrelli	**Revised End Date:**[ii]	
Prepared By:	David Sandrelli	**Change Type**[iii]	☐ In Scope ☐ Out of Scope
Project Contingency Available?	☐ Yes ☒ No	**If No is Selected, Please specify source of funds**[iv]	Transfer 10,000 from 8840-2026 to fund this project

Financial Assessment/Cost Estimates

(Double click embedded excel file to update; include contingency allowance in excel file)

Category	Original Project Value	Previous Approved Charges	Current Change Order Amount	Total
Internal Labor	4000.00			
Materials				
Equipment				
Contractor/Subcontractor	6000.00			
Burdens/Overheads				
AFUDC				
Total Project Cost				

Updated Unlevered Internal Rate of Return:

Basis of Current Change Order Amount: *Provide brief explanation on basis of the requested amount (i.e. revised contract amount, estimate based on revised engineering design, etc)*

Click here to enter text.

Schedule Impacts

(As a result of the Change Order, where applicable, List the Impacts to schedule)

Baseline Schedule (BL)	New Forecast (NF)	Variance (BL – NF)

Liberty Utilities

Change Order Form

2020

Approvals and Signatures[v]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000	David D Sandrelli	DAVID SANDRELLA	7/30/20
Senior Manager: :	Up to $50,000			
Senior Director/Director:	Up to $250,000	Norm Gallagher	Norm Gallagher	8/12/20
State President / Senior VP / VP:	Up to $500,000			
Regional President:	Up to $3,000,000			
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] The Financial Work Order Section captures the work order this change falls under when the job was initially set-up
[ii] The Revised project end date is dependent on changes in scope that may deviate the schedule from the original plan
[iii] The Change type for In scope or Out of scope changes fall within the following scenario

- In Scope changes are deviations of scope from the original plan and approved budget that align to the original scope of the project but have revised pricing as a result of changes in pricing of labour, materials, and equipment
- Out of Scope changes are scope changes that were not originally planned for in the project baselines and approved budget. Examples of this type of change are related to changes in technology, missed deliverables, a change in the project design altering the scope of the project, etc.

[iv] In cases where the project no longer has contingencies to cover project change orders, please specify any other sources of funds that would address the project variance (i.e. not executing another project, delaying scope of another project, etc)

[v] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report 2020

Requesting Region or Group:	Liberty Utilities- NH-Gas Operations	Date of Closeout (MM/DD/YY):	01 September 2020
Project Name:	Liberty @ Centre Vault Door 8840-2096		
Requesting Region:		Sponsor (Name):	
Project Champion:	David Sandrelli	Project ID	
Project Status	X In Service X Complete X Closed		
Project Start Date:		Project Completion Date:	01SEP20
Requested Capital ($)	$10,000	Expenditure Included in Approved Budget?	☐ Yes X No

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
David Sandrelli	Project Lead	Production Supervisor DAVID SANDRELLI	3/17/21
	Project Sponsor		
	Operations Manager		
	Accounting Manager		

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 X No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes X No ☐
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 X No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes X No ☐

Item	Question	Response
2.5	Do you agree the project should be closed? If no, please explain:	Yes X No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	5/5
2.7	Scope	5/5
2.8	Cost (Budget)	5/5
2.9	Schedule	5/5

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 X No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?		Yes X No ☐
3.4	Identify the storage location for the following project documents items:		
Item	Document	Location (e.g., Google Docs, Webspace)	Format
3.4a	Business Case	W:\Control\Production\Projects\2020 Buisness Cases-CAPEX\Liberty Centre	X Electronic ☐ Manual
3.4b	If available, the Final Project Schedule		☐ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices	\\utilities.local\users\nh\dsandrelli\Documents\Purchasing\Phoenix Precast\2020	X Electronic ☐ Manual
3.4d	Status Reports		☐ Electronic ☐ Manual
3.4e	Risks and Issues Log		☐ Electronic ☐ Manual
3.4f	Final deliverable		☐ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team [ii]

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

Name	Role	Type (e.g., Contractor, Employee)
Phoenix Precast	Build riser and install with doors on pits	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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the recommended improvements to correct a similar problem in the future.

Problem Statement	Problem Description	References	Recommendation
None			

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

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			

Project Close Out Report 2020

External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$10,000	$7,740	$2.260

Reasons for Variance	Impact
Change order 31	$10,000

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)
402096-37801

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project
[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Capital Project Expenditure Form 2020

Project Name:	Replacement Services Random		
Financial Work Order (FWO):		**Project ID #:**	8843-2002
Requesting Region or Group:	Energy North	**Date of Request (MM/DD/YY):**	3/23/2020
Project Sponsor:	Robert Mostone	**Project Start Date:**	1/1/2020
Project Lead:	Steve Rokes	**Project End Date:**	12/31/2020
Prepared by:	Ryan Patnode	**Requested Capital ($)**	$10,000
Planned or Unplanned Projects:	☒ Planned ☐Unplanned		
Project Type: (Click appropriate boxes)	☐ Safety ☒ Mandated ☐ Growth ☐ Regulatory Supported ☐ Discretionary		

Details of Request

Project description

This project is for random services replacement (non-leaks). Random Services Replacement (Non-Leaks), supports Construction-Maintenance capital project replacements due to observed condition of service in the field that require replacement.

`

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

No

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

NA

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?

GUIDANCE: If yes, please detail the specific assets that will be removed: Yes, dependent on individual purchase

1. *Original Cost of Plant to be removed (if known):*
2. *What is the replacement cost of the plant being removed (if original cost not known)?*
3. *Original Work Order of Plant to be removed (if known):*
4. *Is the Plant being removed reusable?*
5. *What is the year of original installation of the plant being removed*

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Capital Project Expenditure Form 2020

What alternatives were evaluated and why were they rejected?
No viable alternatives. Risk of rejecting the project detailed below.

What are the risks and consequences of not approving this expenditure?
Safety risks resulting from leaks have the potential to compromise existing customer service safety.

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.
All standard safety procedures will be followed in project execution.

Are there other pertinent details that may affect the decision making process?
No

Complete the Financial Summary table only if:

- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year	**2021**	**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No

Liberty Utilities WATER · GAS · ELECTRIC

Capital Project Expenditure Form 2020

Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☒1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?			
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:[i]	☐Fixed or Firm Price ☐Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$10,000		

Approvals and Signatures[ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000	Steve Rokes Gas operations		Click here to enter a date.
Senior Manager:	Up to $50,000			Click here to enter a date.
Senior Director/Director:	Up to $250,000	Robert Mostone Gas operations	Robert Mostone Digitally signed by Robert Mostone Date: 2020.03.27 08:44:37 -04'00'	Click here to enter a date.
Senior VP/VP:	Up to $500,000	Richard MacDonald VP operations	Rich MacDonald Digitally signed by Rich MacDonald Date: 2020.04.09 11:18:09 -04'00'	
State President:	Up to $500,000	Susan Fleck President, NH		Click here to enter a date.
Regional President:	Up to $3,000,000			Click here to enter a date.
Corporate – Sr. VP Operations:	Up to $5,000,000			Click here to enter a date.

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Capital Project Expenditure Form | 2020

Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report | 2020

Requesting Region or Group:	Liberty Utilities- NH-Gas Operations	**Date of Closeout (MM/DD/YY):**	03/31/21
Project Name:	Replacement Services Random 8843-2002		
Requesting Region:		**Sponsor** (Name)**:**	Robert Mostone
Project Champion:	Steve Rokes	**Project ID**	
Project Status	☐In Service ☐Complete ☐ Closed		
Project Start Date:		**Project Completion Date:**	12/31/20
Requested Capital ($)	$10,000	**Expenditure Included in Approved Budget?**	X Yes ☐No

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
Steve Rokes	Project Lead		
Robert Mostone	Project Sponsor		3/19/21
Richard MacDonald	Operations Manager	Richard G MacDonald	3/31/2021
	Accounting Manager		

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 ☒ No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes ☒ No ☐
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 ☒ No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes ☒ No ☐

Item	Question	Response
2.5	Do you agree the project should be closed? If no, please explain:	Yes ☒ No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	5/5
2.7	Scope	5/5
2.8	Cost (Budget)	5/5
2.9	Schedule	5/5

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 ☒ No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?	Yes ☒ No ☐
3.4	Identify the storage location for the following project documents items:	

Item	Document	Location (e.g., Google Docs, Webspace)	Format
3.4a	Business Case	See W Drive	☒ Electronic ☐ Manual
3.4b	If available, the Final Project Schedule	N/A	☐ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices	W Drive and with Accounts Payable	☒ Electronic ☐ Manual
3.4d	Status Reports	See accounting monthly reports	☒ Electronic ☐ Manual
3.4e	Risks and Issues Log	N/A	☐ Electronic ☐ Manual
3.4f	Final deliverable	See Wennsoft for project details and associated costs	☒ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team [ii]

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

Name	Role	Type (e.g., Contractor, Employee)
Steve Rokes	Project Manager	Employee
Robert Mostone	Project Sponsor	Employee

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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the 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 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
None	

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			

Project Close Out Report 2020

External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$10,000	$ 286	$9,714

Reasons for Variance	Impact

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)
See Wennsoft for job numbers based off project number

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project
[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Capital Project Expenditure Form 2020

Project Name:	Service Replacement Fitting City/State Construction		
Financial Work Order (FWO):		**Project ID #:**	8843-2009
Requesting Region or Group:	Keene	**Date of Request (MM/DD/YY):**	4/20/2020
Project Sponsor:	Andrew Bernier	**Project Start Date:**	4/1/2020
Project Lead:	Bradford Marx	**Project End Date:**	12/31/2020
Prepared by:	Ryan Patnode	**Requested Capital ($)**	$25,000
Planned or Unplanned Projects:	☒ Planned ☐ Unplanned		
Project Type: (Click appropriate boxes)	☐ Safety ☒ Mandated ☐ Growth ☐ Regulatory Supported ☐ Discretionary		

Details of Request

Project description

City/State construction-related work responds to third party construction activity, which threatens the integrity of the company's natural gas facilities. Typical third party construction that impacts those facilities includes new water, sewer, and drainage infrastructure, street reconstruction, road realignment, and bridge replacement.

State codes and company procedures require the replacement of eight-inch and smaller cast iron gas mains if roadway or underground construction is being performed in such a way that would impact the integrity of our pipes. Non-cast iron gas mains (i.e. steel and plastic) are not subject to the same replacement codes and are typically supported and protected during third party construction whenever possible.

The current City/State construction capital plan funds replacement or relocation of existing gas facilities, as required.

It is the company's goal to more effectively manage the capital spend plan by minimizing spending through the following:

- Eliminate and avoid conflicts through design changes and negotiations
- Engineer most effective distribution system
- Optimize overall OPEX spend
- Obtain reimbursement for projects where conflicts are unavoidable
- Support and protect existing gas facilities during construction where practical
- Minimize relocations/replacements, paving and restoration costs
- Seek opportunities for synergy savings by coordinating with Growth & Proactive leak Prone Pipe replacement programs
- Replacement is the last resort

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Capital Project Expenditure Form | 2020

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.
No

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?
Licensing and Environmental Permitting as required.

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?
GUIDANCE: If yes, please detail the specific assets that will be removed: Yes, dependent on individual purchase *1. Original Cost of Plant to be removed (if known):* *2. What is the replacement cost of the plant being removed (if original cost not known)?* *3. Original Work Order of Plant to be removed (if known):* *4. Is the Plant being removed reusable?* *5. What is the year of original installation of the plant being removed*

What alternatives were evaluated and why were they rejected?
No viable alternatives. Work dictated by city and state projects.

What are the risks and consequences of not approving this expenditure?
Potential safety risk in not completing the project in conjunction with city/state projects.

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.
All standard safety procedures will be followed on each job executed.

Are there other pertinent details that may affect the decision making process?
No

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Capital Project Expenditure Form | 2020

Complete the Financial Summary table only if:

- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year	**2021**	**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☒ 1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?			
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:[i]	☐Fixed or Firm Price ☐Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$25,000		

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Capital Project Expenditure Form | 2020

Approvals and Signatures [ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000	Bradford Marx Operations Engineer	Bradford Marx Digitally signed by Bradford Marx Date: 2020.04.22 09:49:02 -04'00'	April 22, 2020
Senior Manager:	Up to $50,000	Andrew Bernier Engineer Manager	Andrew Bernier Digitally signed by Andrew Bernier Date: 2020.04.23 07:49:23 -04'00'	Click here to enter a date.
Senior Director/Director:	Up to $250,000	Robert Mostone Gas operations		Click here to enter a date.
Senior VP/VP:	Up to $500,000	Richard MacDonald VP operations		
State President:	Up to $500,000	Susan Fleck President, NH		Click here to enter a date.
Regional President:	Up to $3,000,000			Click here to enter a date.
Corporate – Sr. VP Operations:	Up to $5,000,000			Click here to enter a date.
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report | 2020

Requesting Region or Group:	Liberty Utilities- NH-Gas Operations	**Date of Closeout (MM/DD/YY):**	
Project Name:	Service Replacement City/State Construction 8843-2009		
Requesting Region:		**Sponsor** (Name)**:**	Andrew Bernier
Project Champion:	Brad Marx	**Project ID**	
Project Status	☐In Service ☐Complete ☐ Closed		
Project Start Date:		**Project Completion Date:**	
Requested Capital ($)	$25,000	**Expenditure Included in Approved Budget?**	X Yes ☐No

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
Bradford Marx	Project Lead	Bradford Marx Digitally signed by Bradford Marx Date: 2021.03.16 09:48:06 -04'00'	3/16/2021
	Project Sponsor	Andrew Bernier Digitally signed by Andrew Bernier Date: 2021.03.31 15:07:20 -04'00'	
	Operations Manager		
	Accounting Manager		

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 ☒ No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes ☒ No ☐
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 ☒ No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes ☒ No ☐

Item	Question	Response
2.5	Do you agree the project should be closed? If no, please explain:	Yes ☒ No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	5/5
2.7	Scope	5/5
2.8	Cost (Budget)	5/5
2.9	Schedule	5/5

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 ☒ No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?		Yes ☒ No ☐
3.4	Identify the storage location for the following project documents items:		
Item	**Document**	**Location (e.g., Google Docs, Webspace)**	**Format**
3.4a	Business Case	SharePoint	☒ Electronic ☐ Manual
3.4b	If available, the Final Project Schedule	SharePoint	☒ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices	SharePoint	☒ Electronic ☐ Manual
3.4d	Status Reports	SharePoint	☒ Electronic ☐ Manual
3.4e	Risks and Issues Log	SharePoint	☒ Electronic ☐ Manual
3.4f	Final deliverable	SharePoint	☒ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team [ii]

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

Name	Role	Type (e.g., Contractor, Employee)
Bradford Marx	Gas Engineer III	Employee

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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the recommended improvements to correct a similar problem in the future.

Problem Statement	Problem Description	References	Recommendation

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

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			

Project Close Out Report 2020

External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$25,000	$313	$24,687

Reasons for Variance	Impact

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)

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project
[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Capital Project Expenditure Form 2020

Project Name:	Main Replacement LPP		
Financial Work Order (FWO):	8843-2011	**Project ID #:**	8843-2011
Requesting Region or Group:	New Hampshire	**Date of Request (MM/DD/YY):**	4/30/20
Project Sponsor:	Charles Rodrigues	**Project Start Date:**	1/1/20
Project Lead:	Brian Frost	**Project End Date:**	12/31/2020
Prepared by:	Ryan Patnode	**Requested Capital ($)**	$ 441,706
Planned or Unplanned Projects:	☒ Planned ☐Unplanned		
Project Type: (Click appropriate boxes)	☒ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported ☐ Discretionary		

Details of Request

Project description

The scope of work of this project is for prioritized replacement of cast iron and bare steel gas mains and services in the company's pipeline system. Approximately 4 construction jobs are planned for a proposed gas main replacement of 2,605 feet.

.

The gas main and service leak prone pipe (LPP) program replaces aging gas infrastructure before it becomes a pipeline safety related problem. To accomplish these safety improvements on an ongoing multi-year basis the company continually assesses asset condition and defects within its pipeline system. This year's program calls for prioritized replacement of cast iron and unprotected bare steel piping by executing approximately 4 construction jobs for a proposed gas main replacement of 2,605 feet.

`

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

No

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

This expenditure is for 4 jobs across the service territory. All jobs will need to be permitted. There might be some environmental impact on various jobs.

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?

This project will remove approximately 2,605 feet of cast iron and bare steel pipe from the ground. The cast iron and bare steel was installed anywhere between 1890s and 1950s.

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Capital Project Expenditure Form 2020

What alternatives were evaluated and why were they rejected?
None were evaluated.

What are the risks and consequences of not approving this expenditure?
Not removing risky leak-prone assets from service

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.
All project will be executed in accordance with company procedures.

Are there other pertinent details that may affect the decision making process?

Capital Project Expenditure Form | 2020

Complete the Financial Summary table only if:
- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year	**2021**	**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☒1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?	Standard Rate Case		
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:[i]	☐Fixed or Firm Price ☒Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	**$500,000**		

Approvals and Signatures[ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000	Brain Frost Senior Engineer		Click here to enter a date.
Senior Manager:	Up to $50,000	Andrew Bernier Manager, Gas Engineering	Andrew Bernier Digitally signed by Andrew Bernier Date: 2020.04.30 09:55:08 -04'00'	Click here to enter a date.
Senior Director/Director:	Up to $250,000	Charles Rodrigues Director, Engineering	Charles Rodrigues Digitally signed by Charles Rodrigues Date: 2020.04.30 11:14:06 -04'00'	Click here to enter a date.

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Capital Project Expenditure Form | 2020

Senior VP/VP:	Up to $500,000	Richard MacDonald VP Operations	Rich MacDonald Digitally signed by Rich MacDonald Date: 2020.04.30 12:26:53 -04'00'	
State President:	Up to $500,000	Susan Fleck NH President	Susan Fleck Digitally signed by Susan Fleck Date: 2020.04.30 13:04:24 -04'00'	Click here to enter a date.
Regional President:	Up to $3,000,000			Click here to enter a date.
Corporate – Sr. VP Operations:	Up to $5,000,000			Click here to enter a date.
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report 2020

Requesting Region or Group:	Liberty Utilities- NH-Gas Operations	**Date of Closeout (MM/DD/YY):**	3/22/2021
Project Name:	Main Replacement LPP 8843-2011		
Requesting Region:	East	**Sponsor** (Name)**:**	Andrew Bernier
Project Champion:	Brian Frost	**Project ID**	8843-2011
Project Status	X In Service ☐Complete ☐ Closed		
Project Start Date:		**Project Completion Date:**	
Requested Capital ($)	$441,706	**Expenditure Included in Approved Budget?**	X Yes ☐No

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
Brian Frost	Project Lead	Brian R. Frost Digitally signed by Brian R. Frost Date: 2021.03.22 14:47:29 -04'00'	3/22/2021
Andrew Bernier	Project Sponsor	Andrew Bernier Digitally signed by Andrew Bernier Date: 2021.03.30 13:38:45 -04'00'	
	Operations Manager		
	Accounting Manager		

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 ☒ No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes ☒ No ☐
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 ☒ No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes ☒ No ☐

Item	Question	Response
2.5	Do you agree the project should be closed? If no, please explain:	Yes ☒ No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	5/5
2.7	Scope	5/5
2.8	Cost (Budget)	5/5
2.9	Schedule	5/5

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 ☒ No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?		Yes ☒ No ☐
3.4	Identify the storage location for the following project documents items:		
Item	**Document**	**Location (e.g., Google Docs, Webspace)**	**Format**
3.4a	Business Case	Operations Finance SharePoint.	☒ Electronic ☐ Manual
3.4b	If available, the Final Project Schedule	N/A	☐ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices	Accounting reports.	☒ Electronic ☐ Manual
3.4d	Status Reports	Monthly budget meetings.	☒ Electronic ☐ Manual
3.4e	Risks and Issues Log	Monthly budget meetings.	☒ Electronic ☐ Manual
3.4f	Final deliverable	Wennsoft completed jobs.	☒ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team [ii]

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

Name	Role	Type (e.g., Contractor, Employee)
Gas Operations	Construct Team	Employee

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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the recommended improvements to correct a similar problem in the future.

Problem Statement	Problem Description	References	Recommendation
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	

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			

Project Close Out Report 2020

External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$441,706	$368,119	$73,587

Reasons for Variance	Impact

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)
8843-2011

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project
[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Capital Project Expenditure Form 2020

Project Name:	Purchase Misc Capital Equipment & Tools		
Financial Work Order (FWO):		**Project ID #:**	8843-2012
Requesting Region or Group:	Keene	**Date of Request (MM/DD/YY):**	4/21/2020
Project Sponsor:	Richard MacDonald	**Project Start Date:**	4/30/2020
Project Lead:	Robert Mostone	**Project End Date:**	12/31/2020
Prepared by:	Ryan Patnode	**Requested Capital ($)**	$35,000
Planned or Unplanned Projects:	☒ Planned ☐Unplanned		
Project Type: (Click appropriate boxes)	☐ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported ☒ Discretionary		

Details of Request

Project description

Equipment and tools will be purchased under this project for Miscellaneous Capital for non-infrastructure projects. The gas operations department identifies individual equipment and tools needs. From these needs, designated purchases are approved and capitalized following the company's policies.

`

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

No

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

NA

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?

GUIDANCE: If yes, please detail the specific assets that will be removed: Yes, dependent on individual purchase

1. *Original Cost of Plant to be removed (if known):*
2. *What is the replacement cost of the plant being removed (if original cost not known)?*
3. *Original Work Order of Plant to be removed (if known):*
4. *Is the Plant being removed reusable?*
5. *What is the year of original installation of the plant being removed*

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Capital Project Expenditure Form 2020

What alternatives were evaluated and why were they rejected?
Purchases are evaluated on need, financial impact and/or ability to continue extent existing equipment. A purchase will be rejected based on these factors.

What are the risks and consequences of not approving this expenditure?
Potential safety risk to employees operating aging tools/equipment. Or not having adequate equipment to work safely.

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.
All standard safety procedures will be followed in use or equipment and tools

Are there other pertinent details that may affect the decision making process?
No

Capital Project Expenditure Form 2020

Complete the Financial Summary table only if:
- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year	**2021**	**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☐1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?			
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:[i]	☐Fixed or Firm Price ☐Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$35,000		

Approvals and Signatures[ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			Click here to enter a date.
Senior Manager:	Up to $50,000			Click here to enter a date.
Senior Director/Director:	Up to $250,000	Robert Mostone Gas operations	Robert Mostone Digitally signed by Robert Mostone Date: 2020.04.21 15:33:03 -04'00'	Click here to enter a date.
Senior VP/VP:	Up to $500,000	Richard MacDonald VP operations		

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Capital Project Expenditure Form | 2020

State President:	Up to $500,000	Susan Fleck President, NH		Click here to enter a date.
Regional President:	Up to $3,000,000			Click here to enter a date.
Corporate – Sr. VP Operations:	Up to $5,000,000			Click here to enter a date.
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report | 2020

Requesting Region or Group:	Liberty Utilities- NH-Gas Operations	**Date of Closeout (MM/DD/YY):**	03/31/2021
Project Name:	Capital Tools/Equipment 8843-2012		
Requesting Region:		**Sponsor** (Name)**:**	Richard Macdonald
Project Champion:	Robert Mostone	**Project ID**	
Project Status	☐In Service ☐Complete ☐ Closed		
Project Start Date:		**Project Completion Date:**	12/31/2020
Requested Capital ($)	$35,000	**Expenditure Included in Approved Budget?**	X Yes ☐No

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
Robert Mostone	Project Lead		3/31/2021
Richard MacDonald	Project Sponsor	Richard G MacDonald	3/31/2021
	Operations Manager		
	Accounting Manager		

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 ☒ No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes ☒ No ☐
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 ☒ No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes ☒ No ☐

Item	Question	Response
2.5	Do you agree the project should be closed? If no, please explain:	Yes ☒ No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	5/5
2.7	Scope	5/5
2.8	Cost (Budget)	5/5
2.9	Schedule	5/5

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 ☒ No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?	Yes ☒ No ☐
3.4	Identify the storage location for the following project documents items:	

Item	Document	Location (e.g., Google Docs, Webspace)	Format
3.4a	Business Case	See W Drive	☒ Electronic ☐ Manual
3.4b	If available, the Final Project Schedule	N/A	☐ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices	W Drive and with Accounts Payable	☒ Electronic ☐ Manual
3.4d	Status Reports	See accounting monthly reports	☒ Electronic ☐ Manual
3.4e	Risks and Issues Log	N/A	☐ Electronic ☐ Manual
3.4f	Final deliverable	See Wennsoft for project details and associated costs	☒ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team [ii]

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

Name	Role	Type (e.g., Contractor, Employee)
Robert Mostone	Project Manager	Employee

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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the 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 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
None	

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			

Project Close Out Report 2020

External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$35,000	$2,426	$32,574

Reasons for Variance	Impact

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)
See accounting

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project
[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Capital Project Expenditure Form 2020

Project Name:	Keene Propane Air Plant- Boiler Replacement		
Financial Work Order (FWO):		**Project ID #:**	8843-2022
Requesting Region or Group:		**Date of Request (MM/DD/YY):**	08/11/2020
Project Sponsor:	Norman Gallagher	**Project Start Date:**	09/14/2020
Project Lead:	Steve Rokes	**Project End Date:**	10/16/2020
Prepared by:	Steve Rokes	**Requested Capital ($)**	28,000
Planned or Unplanned Projects:	☐ Planned ☒Unplanned		
Project Type: (Click appropriate boxes)	☐ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported ☒ Discretionary		

Details of Request

Project description

1. Replacement of failed Weil McLain steam boiler at the Propane Air Plant. Boiler will need to be replaced before cold weather. The boiler is one of 3 boilers required for the critical operation of vaporizing of the liquid propane. The boiler is 30+ years old and is no longer repairable.

`

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

No

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

None

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?

GUIDANCE: If yes, please detail the specific assets that will be removed:

1. *Original Cost of Plant to be removed (if known):*
2. *What is the replacement cost of the plant being removed (if original cost not known)?*
3. *Original Work Order of Plant to be removed (if known):*
4. *Is the Plant being removed reusable?*
5. *What is the year of original installation of the plant being removed*

No, the current boilers are not assets of Liberty Utilities. These boilers are part of the leased facility of the Keene Propane Air Plant. Liberty is responsible for the service, maintenance and/or replacement of any piece of equipment required to maintain operations.

What alternatives were evaluated and why were they rejected?

None

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Capital Project Expenditure Form 2020

What are the risks and consequences of not approving this expenditure?
1. Not having sufficient back-up or boiler capacity to vaporize the liquid propane. If this were to occur during cold weather gas supply to the city would have to be curtailed or even shut down completely.

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.
Safety is a major concern as without the back-up boiler there could be risk of having to curtail production or a system shutdown.

Are there other pertinent details that may affect the decision making process?
No

Complete the Financial Summary table only if:

- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year		**Was this Capital Project included in the current year's Board Approved Budget?**	☐ Yes ☒ No
Regulatory Lag	☐ Less than 6 months ☐6 – 12 months ☐1 – 3 years ☐Greater than three years		

Capital Project Expenditure Form 2020

(Click appropriate box)			
Which regulatory constructs will be used for recovering this capital spend?			
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:[i]	☐Fixed or Firm Price ☐Estimate – Internal ☒Estimate – External ☐Other (specify details) Click here to enter text.		
Category	**Current Year**	**Future Years**	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)	1,400.00		
Cost of Construction ($)			
External Costs ($)	15,412.84		
Internal Costs ($)			
Other ($) subcontractor	8,640		
AFUDC ($)			
Total Project Costs ($)	25,452.84		

Approvals and Signatures[ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000	Steve Rokes	Steve Rokes	August 11, 2020
Senior Manager:	Up to $50,000			Click here to enter a date.
Senior Director/Director:	Up to $250,000	Norman Gallagher	Norman Gallagher Digitally signed by Norman Gallagher Date: 2020.08.15 09:02:49 -04'00'	Click here to enter a date.
Senior VP/VP:	Up to $500,000			
State President:	Up to $500,000			Click here to enter a date.
Regional President:	Up to $3,000,000			Click here to enter a date.
Corporate – Sr. VP Operations:	Up to $5,000,000			Click here to enter a date.

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Capital Project Expenditure Form | 2020

Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

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Capital Project Business Case | 2020

NOTE: This form is required for planned Growth, Regulatory Supported, and Discretionary projects as well as combined blanket projects for Safety and Mandated with Growth, Regulatory Supported, and Discretionary Projects with a spend greater than $100,000 and all unplanned projects. All other Project types can utilize the Capital Expenditure Application Form.

Project Overview			
Project Name:	Keene Propane Air Plant – Boiler Replacement	**Date Prepared:**	8/11/2020
Project ID#:	8843-2022	**Cost Estimate:**	28,000
Project Sponsor:	Norm Gallagher	**Project Start Date:**	9/14/2020
Project Lead:	Steve Rokes	**Project End Date:**	10/16/2020
Prepared By:	Steve Rokes	**Planned or Unplanned Projects:**	☐ Planned x ☐Unplanned
Project Type (click appropriate boxes)**:**	☐ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported X☐ Discretionary		
Spending Rationale:	☐ Growth ☐ Improvement ☒ Replenishment		

Project Scope Statement
(Insert the scope of work, major deliverables, assumptions, and constraints)

Replacement of a failed Weil McLain steam boiler at the Propane Air Plant. Boiler will need to be replaced before cold weather.

Background
(Insert description of current operational arrangement, and brief history of project & asset)

The boiler is critical to the operation of vaporizing the liquid propane. There are 3 boilers used for this purpose and the boiler in need of replacement has failed, is no longer repairable and is approximately 30+ years old. One other boiler is approximately the same age and the other boiler was replaced in 12/2015.

Recommendation/Objective
(Insert the unique problem this project is looking to resolve)

Alternatives/Options
(Describe all reasonably viable alternatives. Discuss the viability of each and provide reasons if rejected)

None

Financial Assessment/Cost Estimate

(Double click embedded excel file to update; include contingency allowance in excel file)

A full replacement estimate has been obtained and is approx. $25,500.

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Capital Project Business Case

2020

Next Anticipated Test Year	Click to select a date	**Was this Capital Project included in the current year's Board Approved Budget?**	☐ Yes ☒ No

Regulatory Lag
(Click appropriate box) ☐Less than 6 Months ☐6-12 Months ☐1 to 3 years ☐Greater than 3 years

Category	Total Already Approved	2020	2021	Beyond 2021	Total
Internal Labor		n/a			
Materials		1,400.00			
Equipment		15,412.84			
Contractor/ Subcontractor		8,640.00			
AFUDC					
Total Project Cost		**25,452.84**			

Unlevered Internal Rate of Return:

Basis of Estimate: *Provide brief explanation on basis of estimate, activities completed to determine costs*

For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:

Schedule
(List key milestone dates)

Key Milestone Description	Forecast Start Date	Forecast End Date

Risk Assessment
(Please describe the risk of not completing the project)

The replacement must be completed for continued "winter" operations. Once started the project should take 3 to 5 days.

Trade Finance
(Is there a possibility to apply trade finance products to this project? See Capital Planning for further clarification)

Supporting Documentation
(Reference drawings, condition assessment reports, vendor quotations, etc. Attach document or where possible include hyperlink

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Capital Project Business Case | 2020

to file located on shared server or SharePoint)

Approvals and Signatures[i]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000	Steve Rokes	Steve Rokes	8/11/2020
Senior Manager: :	Up to $50,000			
Senior Director/Director:	Up to $250,000	Norman Gallagher	Norman Gallagher Digitally signed by Norman Gallagher Date: 2020.08.15 09:01:25 -04'00'	
Senior Vice President/ Vice President	Up to $500,000			
State President:	Up to $500,000			
Regional President:	Up to $3,000,000			
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report | 2020

Requesting Region or Group:	Liberty Utilities- NH-Gas Operations	**Date of Closeout (MM/DD/YY):**	03/31/2021
Project Name:	Propane Boiler Replacement - Keene 8843-2022		
Requesting Region:		**Sponsor** (Name)**:**	Robert Mostone
Project Champion:	Steve Rokes	**Project ID**	
Project Status	X In Service ☐Complete ☐ Closed		
Project Start Date:		**Project Completion Date:**	12/31/2021
Requested Capital ($)	$25,453	**Expenditure Included in Approved Budget?**	X Yes ☐No

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
Steve Rokes	Project Lead	Steve Rokes	4/2/2021
Robert Mostone	Project Sponsor		4/2/2021
	Operations Manager		
	Accounting Manager		

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 X No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes X No ☐
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 X No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes X No ☐

Item	Question	Response
2.5	Do you agree the project should be closed? If no, please explain:	Yes X No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	5/5
2.7	Scope	5/5
2.8	Cost (Budget)	5/5
2.9	Schedule	4/5

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 ☒ No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?		Yes ☒ No ☐
3.4	Identify the storage location for the following project documents items:		
Item	**Document**	**Location (e.g., Google Docs, Webspace)**	**Format**
3.4a	Business Case	See W Drive	☒ Electronic ☐ Manual
3.4b	If available, the Final Project Schedule	N/A	☐ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices	W Drive and with Accounts Payable	☒ Electronic ☐ Manual
3.4d	Status Reports	See accounting monthly reports	☒ Electronic ☐ Manual
3.4e	Risks and Issues Log	N/A	☐ Electronic ☐ Manual
3.4f	Final deliverable	See Wennsoft for project details and associated costs	☒ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team [ii]

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

Name	Role	Type (e.g., Contractor, Employee)
Steve Rokes	Project Champion	Employee

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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the recommended improvements to correct a similar problem in the future.

Problem Statement	Problem Description	References	Recommendation
Timing/Scheduling	Delay in getting process started and sending down payment to Contractor, delayed ordering and shipment of unit.		Should have started process and project a bit earlier in the year. Completion was just close to winter!
N/A	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

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance

Project Close Out Report 2020

Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$25,453	$16,842	$8,611

Reasons for Variance	Impact
Change order #1	$36,650

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)
See Wennsoft for job numbers based off project number

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project
[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Liberty Utilities

Capital Project Expenditure Form | 2020

Project Name:	FLIR Camera Project- Keene		
Financial Work Order (FWO):		**Project ID #:**	8843-2044
Requesting Region or Group:	New Hampshire-Keene	**Date of Request (MM/DD/YY):**	2/7/2020
Project Sponsor:	Rich Foley	**Project Start Date:**	3/1/2020
Project Lead:	Doug Dorn	**Project End Date:**	12/31/2020
Prepared by:	Doug Dorn	**Requested Capital ($)**	$364,000
Planned or Unplanned Projects:	☐ Planned ☒Unplanned		
Project Type: (Click appropriate boxes)	☒ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported ☐ Discretionary		

Details of Request

Project description

Install FLIR Thermal imaging cameras to replace the shaker fence system used for the gas production yards to protect against break ins.

Currently the gas plant uses antiquated security systems for the fence that is very expensive to repair and is unreliable. Therefore we propose to install FLIR thermal cameras that are proven out in one of our gas yards. More reliable, easier to service, get parts for and overall ease of use make going in this direction the recommended approach. We are also being mandated by DHS to install these systems at eh Keene plant due to there being no security systems in place

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

NO

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

NA

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?

GUIDANCE: If yes, please detail the specific assets that will be removed:NA

1. *Original Cost of Plant to be removed (if known):*
2. *What is the replacement cost of the plant being removed (if original cost not known)?*
3. *Original Work Order of Plant to be removed (if known):*

Liberty Utilities Capital Project Expenditure Form 2020

4. *Is the Plant being removed reusable?* 5. *What is the year of original installation of the plant being removed*

What alternatives were evaluated and why were they rejected?
Continue to operate with current security system. This opens us up to penalties for DHS.

What are the risks and consequences of not approving this expenditure?	
Large penalties from DHS for not securing our plants. No current systems in Keene.	

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.
All standard operating procedures regarding safety will be followed during project construction.

Are there other pertinent details that may affect the decision making process?
No

Complete the Financial Summary table only if:
- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year	**2021**	**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☒1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?	Rate Case		
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:[1]	☐Fixed or Firm Price ☒Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		

Liberty Utilities

Capital Project Expenditure Form | 2020

Category	Current Year	Future Years	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	**$365,000**		

Approvals and Signatures[ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			Click here to enter a date.
Senior Manager:	Up to $50,000	Douglas Dorn		February 7, 2020
Senior Director/Director:	Up to $250,000	Richard Foley		February 7, 2020
Senior VP/VP:	Up to $500,000	Richard MacDonald	Richard MacDonald	2/21/2020
State President:	Up to $500,000	Susan Fleck	2/26/2020	Click here to enter a date.
Regional President:	Up to $3,000,000	James Sweeney		Click here to enter a date.
Corporate – Sr. VP Operations:	Up to $5,000,000			Click here to enter a date.
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

Liberty Utilities WATER · GAS · ELECTRIC

Change Order Form

2020

Project Overview			
Reason for Change: Incremental cost due to homeland security deadline.			
Project ID:	8843-2044	**Project Name:**	FLIR Camera project-Keene
Change Order Name:	**Change order #1**	**Date Prepared:**	11/17/2020
Change Order #:	**8843-2044**	**Financial Work Order (FWO):**[i]	
Project Sponsor:	Rich Foley	**Revised Start Date:**	1-1-2020
Project Lead:	Doug Dorn	**Revised End Date:**[ii]	11/15/2020
Prepared By:	Ryan Patnode	**Change Type**[iii]	☐ In Scope x Out of Scope
Project Contingency Available?	☒ Yes ☐ No	**If No is Selected, Please specify source of funds**[iv]	

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

Category	Original Project Value	Previous Approved Charges	Current Change Order Amount	Total
Internal Labor				
Materials				
Equipment				
Contractor/Subcontractor	365,000		30,000	395,000
Burdens/Overheads				
AFUDC				
Total Project Cost	**365,000**		**30,000**	**395,000**

Updated Unlevered Internal Rate of Return:

Basis of Current Change Order Amount: Incremental Cost needed for internal and external overtime needed to install cameras prior to homeland security deadline. Job has been delayed due to covid-19, however homeland security kept strict deadline for company to comply.
.

Schedule Impacts
(As a result of the Change Order, where applicable, List the Impacts to schedule)

Baseline Schedule (BL)	New Forecast (NF)	Variance (BL – NF)

Liberty Utilities WATER · GAS · ELECTRIC

Change Order Form

2020

Approvals and Signatures[v]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			
Senior Manager: :	Up to $50,000	Douglas Dorn	DDorn Digitally signed by DDorn DN: cn=DDorn, o, ou, email=douglas.dorn@libertyutilities.com, c=US Date: 2020.11.17 13:59:13 -05'00'	
Senior Director/Director:	Up to $250,000	Rich Foley	Richard Foley Digitally signed by Richard Foley DN: cn=Richard Foley, o=Liberty Utilities, ou, email=richard.foley@libertyutilities.com, c=US Date: 2020.11.17 16:19:39 -05'00'	
State President / Senior VP / VP:	Up to $500,000	Richard MacDonald	Richard MacDonald Digitally signed by Richard MacDonald Date: 2020.11.30 17:12:16 -05'00'	
Regional President:	Up to $3,000,000	James Sweeney		
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] The Financial Work Order Section captures the work order this change falls under when the job was initially set-up
[ii] The Revised project end date is dependent on changes in scope that may deviate the schedule from the original plan
[iii] The Change type for In scope or Out of scope changes fall within the following scenario:

- In Scope changes are deviations of scope from the original plan and approved budget that align to the original scope of the project but have revised pricing as a result of changes in pricing of labour, materials, and equipment
- Out of Scope changes are scope changes that were not originally planned for in the project baselines and approved budget. Examples of this type of change are related to changes in technology, missed deliverables, a change in the project design altering the scope of the project, etc.

iv In cases where the project no longer has contingency to cover project change orders, please specify any other sources of funds that would address the project variance (i.e. not executing another project, delaying scope of another project, etc)

[v] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Liberty Utilities

Change Order Form

2020

Project Overview			
Reason for Change: Incremental overtime cost due to homeland security pending deadline.			
Project ID:	8843-2044	Project Name:	FLIR Camera project-Keene
Change Order Name:	Change order #2	Date Prepared:	1/6/2020
Change Order #:	8843-2044	Financial Work Order (FWO):[i]	
Project Sponsor:	Rich Foley	Revised Start Date:	1-1-2020
Project Lead:	Doug Dorn	Revised End Date:[ii]	11/30/2020
Prepared By:	Ryan Patnode	Change Type[iii]	☐ In Scope x Out of Scope
Project Contingency Available?	☒ Yes ☐ No	If No is Selected, Please specify source of funds:[iv]	

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

Category	Original Project Value	Previous Approved Charges	Current Change Order Amount	Total
Internal Labor				
Materials				
Equipment				
Contractor/Subcontractor	365,000	30,000	34,000	429,000
Burdens/Overheads				
AFUDC				
Total Project Cost	**365,000**	**30,000**	34,000	429,000

Updated Unlevered Internal Rate of Return:

Basis of Current Change Order Amount: Additional Incremental Cost realized from the first change order estimate. The added cost resulted from extra overtime hours needed to install cameras before the homeland security deadline. The job has was delayed due to covid-19; however, homeland security kept a strict deadline for the company to comply. This condensed project schedule accelerated cost to the initial budget.

Schedule Impacts
(As a result of the Change Order, where applicable, List the Impacts to schedule)

Baseline Schedule (BL)	New Forecast (NF)	Variance (BL – NF)

Liberty Utilities

Change Order Form

2020

Approvals and Signatures[v]

Approved By:				
Role	Approval Authority Limit	Name	Signature	Date
Manager / Staff (requisitioner/buyer):	Up to $25,000			
Senior Manager:	Up to $50,000	Douglas Dorn Senior Manager, Facilities and Security, Procurement	DDorn Digitally signed by DDorn DN: cn=DDorn, o, ou, email=douglas.dorn@libertyutilities.com, c=US Date: 2021.01.06 10:15:34 -05'00'	
Senior Director/Director:	Up to $250,000	Rich Foley Director, Supply Chain, Supply Chain Procurement	Richard Foley Digitally signed by Richard Foley DN: cn=Richard Foley, o=Liberty Utilities, ou, email=richard.foley@libertyutilities.com, c=US Date: 2021.01.07 09:38:03 -05'00'	
State President / Senior VP / VP:	Up to $500,000	Richard MacDonald, VP Operations	Richard MacDonald Digitally signed by Richard MacDonald Date: 2021.01.07 12:22:03 -05'00'	
Regional President:	Up to $3,000,000			
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] The Financial Work Order Section captures the work order this change falls under when the job was initially set-up
[ii] The Revised project end date is dependent on changes in scope that may deviate the schedule from the original plan
[iii] The Change type for In scope or Out of scope changes fall within the following scenario:

- In Scope changes are deviations of scope from the original plan and approved budget that align to the original scope of the project but have revised pricing as a result of changes in pricing of labour, materials, and equipment
- Out of Scope changes are scope changes that were not originally planned for in the project baselines and approved budget. Examples of this type of change are related to changes in technology, missed deliverables, a change in the project design altering the scope of the project, etc.

[iv] In cases where the project no longer has contingency to cover project change orders, please specify any other sources of funds that would address the project variance (i.e. not executing another project, delaying scope of another project, etc)

[v] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report 2020

Requesting Region or Group:	Liberty Utilities- NH-Gas Operations	**Date of Closeout (MM/DD/YY):**	
Project Name:	Flir Cameras - Security-Keene 8843-2044		
Requesting Region:		**Sponsor** (Name)**:**	Richard Foley
Project Champion:	Doug Dorn	**Project ID**	
Project Status	x☐In Service ☐Complete ☐ Closed		
Project Start Date:		**Project Completion Date:**	
Requested Capital ($)	$364,000	**Expenditure Included in Approved Budget?**	X Yes ☐No

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
Doug Dorn	Project Lead	ddorn Digitally signed by ddorn DN: cn=ddorn, o, ou, email=douglas.dorn@libertyutilities.com, c=US Date: 2021.03.08 11:03:26 -05'00'	
Richard Foley	Project Sponsor	Richard Foley Digitally signed by Richard Foley DN: cn=Richard Foley, o=Liberty Utilities, ou, email=richard.foley@libertyutilities.com, c=US Date: 2021.03.08 14:34:59 -05'00'	
	Operations Manager		
	Accounting Manager		

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 x☐ No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes x☐ No ☐
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 x☐ No ☐
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes x☐ No ☐

Item	Question	Response
2.5	Do you agree the project should be closed? If no, please explain:	Yes x☐ No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	5/5
2.7	Scope	4/5
2.8	Cost (Budget)	2/5
2.9	Schedule	2/5

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 x☐ No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?		Yes x☐ No ☐
3.4	Identify the storage location for the following project documents items: Online		
Item	**Document**	**Location (e.g., Google Docs, Webspace)**	**Format**
3.4a	Business Case		x☐ Electronic ☐ Manual
3.4b	If available, the Final Project Schedule		x☐ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices		x☐ Electronic ☐ Manual
3.4d	Status Reports		x☐ Electronic ☐ Manual
3.4e	Risks and Issues Log		x☐ Electronic ☐ Manual
3.4f	Final deliverable		x☐ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Section 4. Project Team[ii]

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

Name	Role	Type (e.g., Contractor, Employee)
Allied Security	Installation of equipment and software	Contractor
Shawn Raleigh	Project Manager	Employee
Doug Dorn	Facility and Security Lead Manager	Employee

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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the recommended improvements to correct a similar problem in the future.

Problem Statement	Problem Description	References	Recommendation
Timeline to meet DHS schedule	Project needed to be completed by 8/12/20, we had a plan in place to cover us until the project was completed.		

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
None	

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$364,000	**$535,845**	($171,845)

Reasons for Variance	Impact
Change order #1	$30,000
Change order #2	$34,000
2021 Toyota Rav4- Fleet charge. Incorrectly charges to project. Correct project 8843-2090. Project 8843-2090 2020 Budget $198K. 8843-2090 Project had $201K underrun in 2020.	$36,092
Kenworth T370 Dump Truck- Incorrectly charges to project. Correct project 8843-2090. Project 8843-2090 2020 Budget $198K. 8843-2090 Project had $201K underrun in 2020.	$106,335

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

Project Close Out Report 2020

Registry of All Job Codes (Regional, Corporate, LABs)

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project
[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Liberty Utilities

Capital Project Expenditure Form | 2020

Project Name:	**Keene Facilities Capital Improvements**		
Financial Work Order (FWO):		**Project ID #:**	8843-2093
Requesting Region or Group:	New Hampshire-Energy North	**Date of Request (MM/DD/YY):**	1/17/2020
Project Sponsor:	Rich Foley	**Project Start Date:**	3/1/2020
Project Lead:	Doug Dorn	**Project End Date:**	12/31/2020
Prepared by:	Doug Dorn	**Requested Capital ($)**	$25,000
Planned or Unplanned Projects:	☒ Planned ☐Unplanned		
Project Type: (Click appropriate boxes)	☐ Safety ☐ Mandated ☐ Growth ☐ Regulatory Supported ☒ Discretionary		

Details of Request

Project description

These funds are to be utilized throughout the EN (keene) portfolio as blanket monies to support various capital facility improvements required to support the buildings and grounds of the Keene NH locations.

Is this project growth or customer connection related? If "yes", list the specific locations and how expenditure aligns with customer expansion objectives.

NO

Please describe any permitting requirements, environmental impacts, or resulting performance obligations that may or may not result from this expenditure?

Permits may be required depending on the jobs that will be prioritized in 2020.

Will there be assets, greater than $5,000, currently in service removed as a result of this expenditure?

GUIDANCE: If yes, please detail the specific assets that will be removed:

1. *Original Cost of Plant to be removed (if known):*
2. *What is the replacement cost of the plant being removed (if original cost not known)?*
3. *Original Work Order of Plant to be removed (if known):*
4. *Is the Plant being removed reusable?*
5. *What is the year of original installation of the plant being removed*

Liberty Utilities Capital Project Expenditure Form 2020

NA

What alternatives were evaluated and why were they rejected?

NA

What are the risks and consequences of not approving this expenditure?

Not being able to make repairs and upkeep to the facility as needed

Please describe how Health, Safety and Security concerns and impacts as a result of this expenditure been addressed.

Many of the capital jobs that are done capture one if not all of the above in one way or another. That is why these improvements are critical to be done.

Are there other pertinent details that may affect the decision making process?

No

Complete the Financial Summary table only if:

- **Project is less than $100,000; or**
- **Project category is *Mandated* or *Safety* (Business Case Form not required)**

Financial Summary

Next Anticipated Test Year	**2021**	**Was this Capital Project included in the current year's Board Approved Budget?**	☒ Yes ☐ No
Regulatory Lag (Click appropriate box)	☐ Less than 6 months ☐6 – 12 months ☐1 – 3 years ☐Greater than three years		
Which regulatory constructs will be used for recovering this capital spend?	Rate Case		
Please Specify Basis of Estimate For materials, equipment, and construction requiring Engineering drawings please specify the percent complete:[i]	☐Fixed or Firm Price ☒Estimate – Internal ☐Estimate – External ☐Other (specify details) Click here to enter text.		

Liberty Utilities Capital Project Expenditure Form | 2020

Category	Current Year	Future Years	Authorized Amount (to be filled in by Corporate)
Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$25,000		

Approvals and Signatures[ii]

Approved By:				
Role	**Approval Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			Click here to enter a date.
Senior Manager:	Up to $50,000	Douglas Dorn		February 7, 2020
Senior Director/Director:	Up to $250,000	Richard Foley		February 7, 2020
Senior VP/VP:	Up to $500,000	Richard MacDonald		2/21/2020
State President:	Up to $500,000	Susan Fleck		Click here to enter a date.
Regional President:	Up to $3,000,000	James Sweeney		Click here to enter a date.
Corporate – Sr. VP Operations:	Up to $5,000,000			Click here to enter a date.
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			Click here to enter a date.

[i] For Best Practices on estimating project contingencies please see the Capital Policy.

[ii] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Liberty Utilities WATER · GAS · ELECTRIC

Change Order Form

2020

Project Overview			
Reason for Change: (Please Provide a brief explanation for the cause of the change order)			
Project ID:	8843-2093	**Project Name:**	Facility Improvements & Additions - Keene
Change Order Name:	Facility Improvements & Additions - Keene	**Date Prepared:**	
Change Order #:	8843-2093-1	**Financial Work Order (FWO):**[i]	
Project Sponsor:	Richard Foley	**Revised Start Date:**	8/15/2020
Project Lead:	Douglas Dorn	**Revised End Date:**[ii]	12/1/2020
Prepared By:		**Change Type**[iii]	X In Scope ☐ Out of Scope
Project Contingency Available?	☒ Yes ☐ No	**If No is Selected, Please specify source of funds**[iv]	

Financial Assessment/Cost Estimates
(Double click embedded excel file to update; include contingency allowance in excel file)

Category	Original Project Value	Previous Approved Charges	Current Change Order Amount	Total
Internal Labor				
Materials				
Equipment				
Contractor/Subcontractor			$23,822	
Burdens/Overheads			$12,828	
AFUDC				
Total Project Cost	**$25,000**		$36,650	$61,650

Updated Unlevered Internal Rate of Return:

Basis of Current Change Order Amount:

There is a change to the office personnel. One is joining the union in CS and the other needs to move out of the CS space. Due to this change we need to relocate the ready room to the warehouse area to make room for the Supervisor and the other employee that needs to move with the Supervisor. We will install new carpet and a proper AC unit for the spaces. We will deliver two new desks from inventory to accommodate these two. The old Supervisors office will now become the conference room. The Ready Room employees will move their furniture to the back area that we will enclose for them. We also need to install a newer style more secure customer drop box. This means we need to order the new drop box, modify the front windows and install a new concrete pad to this new locations. This is due to a theft of the old drop box that was ripped open and the contents stolen.

Liberty Utilities WATER · GAS · ELECTRIC

Change Order Form

2020

Schedule Impacts (As a result of the Change Order, where applicable, List the Impacts to schedule)		
Baseline Schedule (BL)	**New Forecast (NF)**	**Variance (BL – NF)**

Approvals and Signatures[v]

Approved By:				
Role	**Approval Authority Limit**	**Name**	**Signature**	**Date**
Manager / Staff (requisitioner/buyer):	Up to $25,000			
Senior Manager: :	Up to $50,000		DDorn Digitally signed by DDorn DN: cn=DDorn, o, ou, email=douglas.dorn@libertyutilities.com, c=US Date: 2020.08.14 11:17:39 -04'00'	
Senior Director/Director:	Up to $250,000		Richard Foley Digitally signed by Richard Foley DN: cn=Richard Foley, o=Liberty Utilities, ou, email=richard.foley@libertyutilities.com, c=US Date: 2020.08.14 13:39:11 -04'00'	
State President / Senior VP / VP:	Up to $500,000			
Regional President:	Up to			

Liberty Utilities WATER · GAS · ELECTRIC

Change Order Form

2020

	$3,000,000			
Corporate - Sr VP Operations:	Up to $5,000,000			
Corporate - Exec Team Member (CEO, CFO, COO, Vice Chair):	Over $5,000,000			

[i] The Financial Work Order Section captures the work order this change falls under when the job was initially set-up
[ii] The Revised project end date is dependent on changes in scope that may deviate the schedule from the original plan
[iii] The Change type for In scope or Out of scope changes fall within the following scenario:

- In Scope changes are deviations of scope from the original plan and approved budget that align to the original scope of the project but have revised pricing as a result of changes in pricing of labour, materials, and equipment
- Out of Scope changes are scope changes that were not originally planned for in the project baselines and approved budget. Examples of this type of change are related to changes in technology, missed deliverables, a change in the project design altering the scope of the project, etc.

iv In cases where the project no longer has contingency to cover project change orders, please specify any other sources of funds that would address the project variance (i.e. not executing another project, delaying scope of another project, etc)

[v] Approvals for work orders and purchase orders are subject to the limits set forth in the Approval Limits of Authority Policy owned and amended from time to time by the corporate procurement group.

Project Close Out Report | 2020

Requesting Region or Group:	Liberty Utilities- NH-Gas Operations	**Date of Closeout (MM/DD/YY):**	3/30/2021
Project Name:	Facility Improvements & Additions - Keene 8843-2093		
Requesting Region:	East	**Sponsor** (Name)**:**	Richard Foley
Project Champion:	Doug Dorn	**Project ID**	
Project Status	X☐In Service ☐Complete ☐ Closed		
Project Start Date:		**Project Completion Date:**	
Requested Capital ($)	$25,000	**Expenditure Included in Approved Budget?**	X Yes ☐No

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
Doug Dorn	Project Lead	ddorn Digitally signed by ddorn DN: cn=ddorn, o, ou, email=douglas.dorn@libertyutilities.com, c=US Date: 2021.03.11 12:54:32 -05'00'	
Rich Foley	Project Sponsor	Richard Foley Digitally signed by Richard Foley DN: cn=Richard Foley, o=Liberty Utilities, ou, email=richard.foley@libertyutilities.com, c=US Date: 2021.03.16 17:53:05 -04'00'	
Rich MacDonald	Operations Manager		
	Accounting Manager		

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 X☐ No ☐
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes X☐ No ☐
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 X☐ No ☐

Project Close Out Report 2020

Item	Question	Response
2.4	Has the final unitization estimate been provided to Property Accounting?	Yes X☐ No ☐
2.5	Do you agree the project should be closed? If no, please explain:	Yes X☐ No ☐
	Scale of 1 thru 5; 5 = highest	
	Rate your level of satisfaction with regards to the project outcomes listed below	
2.5	Project Quality	5/5
2.6	Product and/or Service Performance	5/5
2.7	Scope	5/5
2.8	Cost (Budget)	4/5
2.9	Schedule	5/5

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 X☐ No ☐
3.3[i]	Were audits (e.g., project closeout audit) completed and results documented for future reference?		Yes X☐ No ☐
3.4	Identify the storage location for the following project documents items:		
Item	**Document**	**Location (e.g., Google Docs, Webspace)**	**Format**
3.4a	Business Case		X☐ Electronic ☐ Manual
3.4b	If available, the Final Project Schedule		X☐ Electronic ☐ Manual
3.4c	Budget Documentation and Invoices		X☐ Electronic ☐ Manual
3.4d	Status Reports		X☐ Electronic ☐ Manual
3.4e	Risks and Issues Log		X☐ Electronic ☐ Manual
3.4f	Final deliverable		X☐ Electronic ☐ Manual
3.4g	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.		

Project Close Out Report | 2020

Section 4. Project Team [ii]

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

Name	Role	Type (e.g., Contractor, Employee)
Doug Dorn	Project lead	employee
Shawn Raleigh	PM	employee
Fulcrum Associates		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).If available please include a Lesson Learned Log in the attached.. Please summarize the top three issues on the project and the recommended improvements to correct a similar problem in the future.

Problem Statement	Problem Description	References	Recommendation
NONE			

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
NONE	

Section 8. Project Cost Summary

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

Cost Category	1- Budget	2- Actual	3 = 1 -2 Variance

Project Close Out Report 2020

Cost of Design & Engineering ($)			
Cost of Materials ($)			
Cost of Construction ($)			
External Costs ($)			
Internal Costs ($)			
Other ($)			
AFUDC ($)			
Total Project Costs ($)	$25,000	$64,185	($39,185)

Reasons for Variance	Impact
Change order #1	$36,650

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)

[i] This section assumes an accounting audit has been completed ensuring all outstanding payments have been reconciled to the project
[ii] For Section 4 in filling out the Project Team Section, for those projects following the materiality limit set forth in the work order approval limits greater than $5M please complete this section, all other projects do not require this.

Liberty (EnergyNorth)
Bill Impact

Docket No. DG 20-105
Page 1 of 1

Line		Annual Impact
1	Annual Increase due to Step Increase	$4,000,000
2		
3	Annual Throughput (see DG 20-104 COG filing - schedule 10B)	178,132,666
4		
5	Increase Factor	$0.0225
6		
7		
8	**Typical R-3 Residential bill**	$1,112
9		
10	Typical Usage	811
11		
12	Annual Increase for Residential Heating customer	$18.21
13		
14	Percent Bill Increase	1.64%
15		
16		
17	**Typical G-41**	$2,819
18		
19	Typical Usage	2,261
20		
21	Annual Increase for G-41 customer	$50.77
22		
23	Percent Bill Increase	1.80%
24		
25		
26	**Typical G-42**	$18,647
27		
28	Typical Usage	18,075
29		
30	Annual Increase for G-42 customer	$405.88
31		
32	Percent Bill Increase	2.18%
33		
34		
35	**Typical G-52**	$15,015
36		
37	Typical Usage	17,937
38		
39	Annual Increase for G-52 customer	$402.78
40		
41	Percent Bill Increase	2.68%