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August 14, 2015

Susan M. Hudson, Clerk  
Vermont Public Service Board  
1 12 State Street  
Montpelier, VT 05620-2701

Re: Tariff No. 8580 – Green Mountain Power Base Rate Filing – Larkin Report

Dear Mrs. Hudson:

Enclosed for filing with the Public Service Board is the Report of Larkin & Associates, PLLC (with exhibit) regarding its review of the Base Rate filing made on July 31, 2015 by Green Mountain Power Corporation (GMP). This filing is made pursuant to section (III)(E) of GMP's Alternative Regulation Plan.

Thank you for your attention to this matter. If any additional information would be helpful, please let me know.

Sincerely,



Timothy M. Duggan  
Special Counsel

Enclosures

cc: Charlotte Ancel, Esq., Green Mountain Power Corporation  
Robert A. Bingel, Green Mountain Power Corporation  
Philene Taormina, AARP



LARKIN & ASSOCIATES, PLLC  
REPORT ON ANALYSIS OF RATE YEAR ENDING  
SEPTEMBER 30, 2016  
GREEN MOUNTAIN POWER CORPORATION  
COST OF SERVICE REQUEST  
AND COST OF CAPITAL REQUEST  
UNDER ALTERNATIVE REGULATION

August 14, 2015

GREEN MOUNTAIN POWER CORPORATION  
ALTERNATIVE REGULATION PLAN REPORT

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## EXECUTIVE SUMMARY

### Successor Plan

On December 20, 2013 Green Mountain Power Corporation ("GMP") filed two petitions seeking Board approval of base rate decrease and approval of a successor Alternative Regulation Plan. The Board opened Docket 8190 for the Rate Docket and Docket 8191 for the Plan Docket. After several rounds of discovery, testimony, meetings, and a workshop, agreements were reached between the Vermont Department of Public Service ("DPS" or "the Department"), International Business Machines ("IBM"), AARP, Associated Industries of Vermont ("AIV") and GMP. The Memorandum of Understandings ("MOU") dated May 30, 2014 and as amended on June 4, 2014 presents the agreements between the Petitioners and the Parties including revisions to the provisions related to shared savings between GMP and ratepayers as part of the Earnings Sharing Adjustor Band, a definition of Major Storm, an agreement to flow through to ratepayers any Vermont Yankee Revenue Sharing Funds to which GMP is entitled to through September 30, 2017, a reduction of \$573,045 to incentive compensation included in Base O&M, continuation of the Alternative Regulation Plan ("Alt Reg") referred to as the Successor Plan ("Plan"), and a Transmission Rate Freeze.

The Successor Plan allows GMP to adjust its rates annually based on four rate adjustment mechanisms. The mechanisms include a Base Rate Adjustment mechanism, Earnings Sharing Adjustor, Exogenous Change Adjustment and a Power Adjustor. Larkin would note that under Alt Reg the Company is operating under a different ratemaking theory than what historically has been referred to as traditional ratemaking. Under

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traditional ratemaking the Company is afforded an opportunity to earn a reasonable rate of return. Under Alt Reg, which includes four separate rate mechanisms, the Company is essentially guaranteed a return with minimal risk. This difference in regulation is discussed in more detail later as it is an important factor considered as part of the review process.

### **Vermont Public Service Board Order in Docket Nos. 8190 & 8191**

The August 25, 2014, Vermont Public Service Board's Order in Docket No. 8190 and 8191 included the approval of the Memorandum of Understanding dated May 30, 2014 and June 04, 2014. This Order and MOU provided for a 1.46% base rate reduction effective October 1, 2014 and an agreement as to a Successor Plan as discussed above.

### **Vermont Public Service Board Order in Docket No. 7770**

On June 15, 2012, the Vermont Public Service Board's Order in Docket No. 7770 included the approval of the Memorandum of Understanding dated March 26, 2012. This Order approved the acquisition of CVPS by a subsidiary of Gaz Métro in addition to the merger of CVPS and GMP. GMP is the surviving corporation after the merger; therefore, the Combined Company will be referred to as GMP in this report.

The Order provides that GMP will guarantee at least \$144 million in savings to retail customers as a result of the merger during the ten years beginning October 1, 2012. If savings are less than that amount, GMP will credit the difference to customers under a plan that will be subject to the Board's approval. The Order provides that GMP will

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provide credits to GMP's base rate cost of service in the aggregate amounts of \$2.5 million, \$5.0 million and \$8.0 million in years 1, 2 and 3, respectively. In years 4,5,6,7 and 8, GMP's base-rate cost of service will be credited \$10.5 million, \$12.0 million, \$13.0 million, \$14.0 million and \$14.5 million, respectively. To the extent that these amounts are different from 50% of actual savings in each year a billing adjustment will be made in conjunction with the next ESAM filing.

In the first eight years subsequent to the merger GMP and its ratepayers will share O&M cost savings that result from the merger. During the first three years, GMP will credit its base-rate cost of service with the amount of annual guaranteed savings due to its customers for that year before it receives any applicable O&M cost savings resulting from the merger for that year. The benefits of applicable merger-related cost savings in years 4 through 8 will be split evenly between GMP and its customers. GMP's customers will receive all of the O&M merger-related cost savings after the 8th year. For a minimum of ten years following the merger, GMP will also be required to file an annual report of savings that result from the merger.

GMP will be required to exclude any costs or savings related to the deployment of Smart Grid and Advanced Meter Infrastructure (AMI), the Kingdom Community Wind Project, CVPS's acquisition of the assets of Vermont Marble Power Division of Omya, Inc., and any CVPS staff reductions associated with the Docket 7496 MOU from base O&M costs. In each future base-rate adjustment in which merger savings are shared, the Order states that base O&M costs are subject to change "to reflect the change in the Consumer Price Index for All Urban Consumers (CPI-U) Northeast Region, any

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Exogenous Costs and the impact of the Non-Power Cost Cap as defined in GMP's Alt Reg Plan, and any further changes agreed upon by GMP and the Department and approved by the Board." And as noted above, GMP and the Department agreed to such a change with respect to the appropriate level of incentive compensation costs.

### **Summary**

The Company's rate base and cost of service included in the proposed filing were reviewed by Larkin & Associates, PLLC (Larkin). The analysis performed took into consideration the Vermont ratemaking principles, precedents and previous Board Orders. The analysis evaluated the development and the reasonableness of the cost of service, including rate base, capital structure and cost of capital for the rate year ending September 30, 2016. The Company was consulted and had indicated agreement with some proposed adjustments or variations of those adjustments. The proposed adjustments determined by Larkin, whether made or not, are discussed within the report. As part of the process the Department and the Company had a number of discussions to resolve differences with the proposed adjustments. As part of this process the Company offered to increase the merger savings from \$12.5 million to \$13.3 million. The Company also proposed to adjust the capital structure by increasing debt and decreasing equity by an equal amount. A third offer to mitigate the increase was the Company's proposal to accelerate the write-off of Contributions In Aid of Construction from the asset life to two years. This adjustment reduced depreciation/amortization expense \$5.1 million in the current rate year, with the expectation of a similar reduction in the following rate year. While not all of Larkin's recommended adjustments were adopted

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by the Company, the Department believes that with the mitigation adjustments the filing under the alternative regulation process is sufficient for establishing just and reasonable rates to be effective October 1, 2015. Larkin has reviewed the proposed revised filing and has determined that the changes agreed upon by the Department and the Company have been made and properly flowed through.

Included in the report is the Department's conclusion that the projected Category A and Category B expenses as presented in the cost of service for power supply and transmission costs are reasonable. This portion of the review was conducted in accordance with the MOU and final order in Docket No. 8389, in which the Department and Larkin committed to jointly review whether certain cost categories should be reflected in O&M costs rather than in the power adjustor.

### **THE PROPOSED FILING**

The Company has based its cost of service (Company Schedule 2.3/2) filing on the twelve months ended March 31, 2015. The cost of service was adjusted to reflect the platform costs approved in the Docket No. 8190 for the rates effective October 1, 2014. The filing adjusts the test year to the FY2014 platform costs using a negative .4% CPI for New England, changes to power costs, transmission costs and other non-base O&M costs. The Company has based its rate base filing (Company Attachment B, Schedule 2) on the average twelve months ended March 31, 2015, adjusted for projected plant

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additions and projected changes to other rate base categories for the rate period ending September 30, 2016.

GMP provided a filing that included all of its schedules and almost all the work papers. Additional information was requested for amounts linked to workpapers that were hard coded (i.e. income tax papers for ADIT) and that information was provided in a timely manner.

In past reviews it was noted that supporting documentation to meet the known and measurable standard was insufficient in many cases. To resolve this issue, the Company and Department agreed as a condition of the MOU in Docket Nos. 8190/8191 that the Successor Plan would include Attachment 7, which set forth the documentation standards for proposed plant additions and the ramifications of not satisfying them. Attachment 7 was included as part of the Successor Alternative Regulation Plan filed on June 4, 2014. With Attachment 7 the Company has specific direction as to what is required to be included in the filing as supporting documentation. This documentation should be available at the time the proposed filing is submitted for review and not have to be requested during the review or developed and/or obtained subsequent to preparation. This is true whether it is for plant additions or cost of service items. There was a significant improvement in providing cost documentation for the projected plant additions, however, there was still some project detail (i.e. project description and financial analysis) that while supplied after the initial information was supplied, was considered less than sufficient. This will be discussed in more detail as part of the review section of the report.

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### Recommendations

1. The Company should continue to file its schedules with links to other files in a single folder for ease of review and to assure that all the linked files are accessible. If hard coded workpapers are the source of the linked information an excel workpaper showing the development of the hard coded numbers should also be provided. The Company should also continue to provide a hard copy of the filing as is maintained by the Company for the review.
2. Company personnel should be required to familiarize themselves with the known and measurable requirements as memorialized in Attachment 7.
3. Larkin suggests that the Company in developing its schedules that are printed for filing with the Board and as part of the initial hard copy provided to the Department for review note on the Schedules and/or workpapers the electronic file where the detail can be located. This will aid the review process and should provide a measure of consistency from filing to filing.

### **REVIEW**

The review analyzes the cost of service and rate base as presented by the Company. The cost of service review will include analysis of O&M and other expenses in the test year on a very limited basis. The majority of costs, other than power costs, depreciation and taxes are within the platform and any changes to those costs would not impact rates. Those changes would impact the amount of cost savings that occurred in

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the test year. The Department and Larkin did perform a detailed review of power costs, depreciation and taxes.

The rate base review included an analysis of historical plant additions since the last review, a comparative analysis of budget to actual of projected additions included in the last filing, an analysis of selected test year costs, a comparison of selected historical costs to the test year, analysis of adjustments to the test year, identification of concerns regarding costs reflected in the filing, and an assessment of the reasonableness of the Company's rate request for the year ended September 30, 2016. For projected additions to plant, a selection of 134 specific projects was made for a more specific review and/or verification of projected/actual costs on a test basis. Blanket and joint owner project projections were also reviewed for reasonableness. After reviewing the information supplied, discussions took place with Company personnel regarding concerns with some costs and/or cost estimates. The Company either resolved some of the concerns with an explanation and/or additional detail, or the Company made some adjustment to the proposed filing to eliminate and/or reduce the concern. Issues were generally resolved.

### **Specifics of Review**

The review undertaken for this filing consisted of essentially an evaluation of seven different cost components. To be reviewed was the Capital budget of GMP, other rate base amounts, the select non base O&M costs for GMP, the Exogenous costs excluded from the test year, the Power Adjustor costs for the first and second quarter of the rate year ended September 30, 2015, test year costs and the calculated increase to the Base O&M Platform. Multiple discussions also took place regarding the filing, the

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establishing of the O&M Base Platform and the cost to be included, vegetation management, Smart Grid costs, questioned costs included in the Power Adjustor filings, Exogenous costs, the accounting for the Net Operating Loss (NOL) for tax purposes and its impact on Accumulated Deferred Income Taxes (ADIT) and various other issues as they were identified during the review process.

### **Review Process**

The intent of the review process under the Plan is for the Department's consultant to analyze the proposed projects for the rate year covered by the proposed rate filing and to identify any major concerns prior to the Company completing the initial draft of GMP's proposed rate filing. The next step is the review of the initial draft of GMP's proposed rate filing, evaluate the reasonableness of support, evaluate the propriety of costs classifications and suggest revisions to the filing prior to the finalizing of the proposed change in rates that will be submitted to the Board. During this time frame the Department and Larkin are also reviewing the costs included in the Power Adjustor and the Exogenous cost filings. The review process allows for an analysis of historical information included in the test year and the Company's proposed adjustments made to develop a rate year cost of service.

During the review, the Company and the reviewer(s) are to attempt to resolve any potential issues, prior to the Company's filing for a proposed change in rates. Throughout the review process the Company has allowed the Department and the Department's consultant unrestricted access to Company personnel ultimately responsible for various cost components in the filing. Also there are periodic conference calls to

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discuss the current status of the review or any specific issues identified. Requests for information were responded to by the Company in a timely manner. We encourage the Company to continue this practice as it enhances the Alternative Regulation process.

### **Time Period of Review**

This report concerns the Company's annual filing for a change in base rates effective October 1, 2015 for the year ended September 30, 2016. The review of costs impacting the rate year beginning October 1, 2015 and ending September 30, 2016 began in March 2015 and continued through July 2015. The timeline of the review was as follows:

- The Company's filing of the 1<sup>st</sup> Quarter Power costs on January 30, 2015.
- Discussion between the Company, the Department and Larkin in March 2015 regarding the capitalization and accounting for exogenous storm costs.
- The Company's filing of the 2<sup>nd</sup> Quarter Power costs on April 30, 2015.
- The Company files the Exogenous Change Adjustment on April 30, 2015.
- Larkin's receipt of project listing for proposed capital projects to be added to plant and included in the proposed base filing on April 29, 2015 and Larkin's selection of projects for review was sent on May 1, 2015.
- Larkin is provided a flash drive with selected project folders and performs an on-site review at GMP South (formerly CVPS) from May 5<sup>th</sup> through 7<sup>th</sup> of 2015.
- The Company files an amended Exogenous Change Adjustment on May 26, 2015.
- The Company files a version of the proposed filing on June 1, 2015 and that version was the basis of our review.
- The Company provides an updated version of the proposed filing reflecting specific adjustments as of July 1, 2015.
- On July 31, 2015 the Company files its official 2016 base rate filing.

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**Projected Capital Additions**

GMP provided the projected capital additions budgets for the respective departments on April 29, 2015. The projected capital additions selected for review were sent to the Company on May 1, 2015. The Company's original project listing included a request for \$141,778,905 of project additions and \$21,950,586 of plant retirements. The \$141,778,905 of additions included \$50,261,780 for blanket work orders and \$5,017,766 for joint owner capital additions. There were a total of 206 specific projects totaling \$86,499,359. Larkin selected 134 of the 206 projects (65%) for review for a total of \$83,904,933 of costs or 97% of the project specific costs. The support for the \$50,261,780 of blanket work orders and \$5,017,766 of joint owner capital additions was also reviewed for reasonableness based on historical cost trends and the use of the five average cost standard. That equates to \$139,184,479 of the \$141,778,905 (98.2%) of the requested project costs being evaluated for reasonableness. Attached as Exhibit HWS-1, is a summary of the projects with some notable observations from the review. GMP provided Larkin with a flash drive of the project folders and copies of other supporting documentation for the projected capital additions during the on-site review. The project request provided for review by Larkin identified capital additions to plant for the interim period April 1, 2015 through September 30, 2015 and for the twelve months ended September 30, 2016.

The budget consisted of sixteen classifications. The classifications are communications, computer hardware, computer software, distribution lines, distribution

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substations, general plant, joint ownership, meters, new initiatives, production, property and structures, regulators and capacitors, transformers, transmission lines, transmission substations, and transportation. During the on-site review supporting documentation for the selected projects was reviewed and discussions with Company personnel took place to clarify questions that arose and to discuss the process. The reviewed documents consisted of work order forms, various cost summaries that tie into respective lines on the work order forms, supporting documents for the costs included on the respective cost summaries and documents identified as a “Financial Analysis”. Support for internal labor costs was based on a labor rate summary for the year. Costs for materials and supplies were based on a materials and supplies inventory summary. Direct materials costs were based on a cost manual that included quotes, estimates and/or actual invoices. The direct materials in the cost summaries were coded so the cost could be readily traced to the cost manual. Contract labor and fixed contracts were based on various types of documents including quotes and/or estimates, external email quotes or invoices from the project or prior projects similar in nature. The joint ownership requested was based on the joint owner budgets. Direct materials purchases and contract labor were based on various types of documents including quotes and/or estimates, external email quotes or invoices from the project or prior projects similar in nature.

Prior to the on-site, GMP provided a sample of the “Financial Analysis” document that was to be included with each project. Larkin noted the selected project was a reliability project so the required information may be different from the information included for other projects. The Company informed Larkin that a complete

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book of the selected project Financial Analysis would be subsequently provided. The project book of Financial Analysis was reviewed in detail for project justification, whether alternatives were considered and for financial analysis as required by Attachment 7 for projects between \$300,000 and \$3,000,000. A number of the projects generated a concern. Larkin deemed the financial analysis on the documents provided was insufficient. Larkin has noted some of the concerns on Exhibit HWS-1. Under strict application of Attachment 7 to the Successor Plan a large number of the projects could have been excluded from the request. Larkin identified the numerous concerns and noted that while an adjustment could be made, only selected recommended adjustments were being proposed. Larkin notes that because this is the first testing under Attachment 7, and in light of the Company's improvement in providing underlying supporting cost documentation, some allowances were made. This discussion of the issue should be considered as notice to the Company that future allowances will have to be justified.

Exhibit HWS-1 was prepared using the original project listing. Columns were added as part of the review process and Larkin has identified the added columns with a yellow highlight. Specifically, the column "Start Month Per Project Analysis" was added to verify the start date that was identified in the filing. While not depicted, Larkin also verified the in-service date and project cost to the Installation and Retirement Work Order form. The Column "Spending through 5-31-15" was added to determine whether projects that were supposed to have started did start and to determine the progress of projects.

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The next three columns were added as part of the review of the Financial Analysis form. Because a large number of projects stated the project would have no O&M impact, that no cost savings would occur, and that no alternatives were considered, Larkin summarized the findings. As shown on Exhibit HWS-1, 64.93% of the Financial Analysis forms indicated that there would be no O&M cost impact. Based on experience Larkin believes that number to be overstated. Even with new equipment, whether it be conductor, new or replacement poles, or other equipment, some added costs would be expected for more of the additions. Even more concern exists when 88.81% of the projects will not generate a cost savings. That figure is troublesome since a number of projects are replacing old, worn out equipment that no doubt has had to have some maintenance. There is also the concern the projects undertaken to improve performance did not have any cost savings. Finally, 55.22% of the projects were undertaken without any alternatives considered. This is a real concern since that means the project cost cannot be proven to be reasonable. Because so many of the cost related questions were responded to with "NO," the Financial Analysis for the projects is considered less than sufficient. As discussed above no adjustment was made because this was the first review under Attachment 7 and there was the significant improvement in cost documentation for the projects estimated cost.

The Company, after discussion, revised its request by eliminating selected projects that were questioned and by adjusting the in-service dates for a number of projects due to concerns noted by Larkin regarding slippage. Based on a review of the revised summary, GMP made all the recommended adjustments proposed by Larkin.

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### Cost of Service

#### General

On June 1, 2015, Larkin received the entire GMP base rate filing for the year ended September 30, 2016. The filing indicated a revenue deficiency of \$7.021 million requiring a 1.26% increase in revenues. The filing reflected a lower revenue requirement than would have been included due to the \$12.5 million ratepayer share of the merger-related shared savings being factored in, which is \$2 million more than the \$10.5 million provided for under the MOU in Docket No. 7770.

A subsequent revenue requirement was provided on July 1, 2015 indicating a revenue deficiency of \$9.412 million requiring a 1.69% increase in revenues. The change was primarily related to the elimination of an investment and the estimated return reflected in other earnings. It should also be noted that there was a change in the information summarized. The initial filing showed the revenue deficiency as being the difference between the “Total Cost of Service to Ultimate Consumers” and “Revenue from Ultimate Consumers.” The July 1st filing shows the revenue deficiency of \$9.412 million as being the difference between the “Total Cost of Service to Ultimate Consumers” of \$603.427 million and the “Revenue from Ultimate Consumers” of \$593.034 million, less the “Increase in Revenue due to Smart Power Implementation” of \$981,000. This change was the result of reclassifying as a separate line Smart Power revenue previously included in the Revenue from Ultimate Consumers line.

The final revenue requirement filed on July 31<sup>st</sup> indicates a revenue deficiency of \$473,000 requiring a .08% increase in revenues. The change was the result of changes to

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project costs included in rate base, adjustments to various costs outside the platform, elimination of a request for a new working capital component, the Company's proposal to write-off one half of the unamortized CIAC balance, an increase of \$800,000 in the merger savings and a change to the capital structure. Again it should be noted that this revenue requirement calculation was consistent with the July 1<sup>st</sup> presentation but different from the initial filing on June 1st. While the initial filing showed the revenue deficiency as being the difference between the "Total Cost of Service to Ultimate Consumers" and "Revenue from Ultimate Consumers," the July 1st filing and the July 31<sup>st</sup> filing show the revenue deficiency as being the difference between the "Total Cost of Service to Ultimate Consumers" and the "Revenue from Ultimate Consumers" less the "Increase in Revenue due to Smart Power Implementation."

### GMP

GMP provided an electronic copy of its proposed filing and workpapers on June 1, 2015. The use of the platform primarily limits the review to non-base O&M costs. The review focused on depreciation, income taxes, the non-base O&M costs for KCW, and Smart Grid. Power costs were reviewed by the Department except Larkin assisted in review of the costs charged to power costs as part of the Power Adjustor filings.

### **PROJECTED PLANT ADDITIONS**

As discussed earlier, Larkin was provided a summary of proposed plant additions and selected 134 specific projects for review. In past reviews, GMP was advised of the importance of having sufficient supporting documentation to meet the known and

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measurable standard as required under traditional Vermont ratemaking and yet there continued to be issues in assembling sufficient support. The review of the current filing found there was a significant improvement compared to previous filings with respect to the supporting detail for estimating the cost of specific projects. Larkin is encouraged with the improvement and the concern by the Company with the quality of cost documentation. However, as discussed earlier there is concern that project detail was not sufficient, specifically with respect to the financial analyses. The Company's compliance with the known and measurable standard from a cost perspective is improved but project justification in the form of analysis of cost impact and alternatives considered continues to be a concern, especially with the provision in the Successor Plan that requires compliance with Attachment 7.

As part of the review, Larkin requested a comparison of the project request filing in Docket No. 8190 and the current status of the projects using a June 30, 2015 cut-off. The results raised a great concern as to the reasonableness of the Company's projections. The major issue identified was that in-service dates identified in the filing were overly optimistic as a vast number of projects recorded in-service dates that were later than projected. This is an issue because ratepayers begin paying for the plant and depreciation based on the Company estimated in-service date, and the delays noted provide the Company with free cash working capital. Another issue identified was that there were a number of projects that not only did not go into service on time, but there were no project costs for the project even though the filing indicated it would be in-service as of June 30, 2015. A third issue is project substitution. This is particularly an issue with IT projects.

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The listing shows that a number of projects were not done or the cost requested exceeded the actual cost incurred because costs were transferred to another project. The other projects were not part of the review process therefore no determination can be made as to the appropriateness of the cost. The findings from the review of past projects will be discussed in more detail in the respective project categories.

### **GMP Capital Additions**

GMP initially projected for the year ended September 30, 2016, a net increase of \$142.167 million to plant in service and a decrease of \$60.881 million to Construction Work in Progress (CWIP). The Company focused heavily on complying with Attachment 7 to the Successor Plan by communicating with the Department and Larkin regarding the detail to be presented as support for the projected additions. As was done in the past, our review consisted of an on-site review allowing Larkin to review information readily and providing the opportunity for interaction with the Company.

During the review, a request was made for a budget to actual comparison of the projects included in the base case filing in Docket No. 8190 to assess the reasonableness of the past projections and to establish a confidence level in the projected additions in the current filing. This analytical procedure is critical and provides evidence as to the reliability of the Company's projection process. The review of the budget to actual showed a significant number of variances in cost and even more so in projected in-service dates. The cost variances were both under and over budget. The variance explanations were limited but provided sufficient information to assess the issue and reach a conclusion. Some deferrals were identified but the cost amount was not considered

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material. The major concern identified and communicated to the Company was the slippage that occurred in the completion of the projects and the fact that projects not completed had costs assigned to other projects not previously identified and/or reviewed. The concern with the Company's optimistic projected in-service dates is ratepayers are funding plant investment ahead of the point where the investment becomes used and useful. The Company did revise some current project in-service dates in response to our concern. As will be discussed later, most of the projects in the Docket No. 8190 base case filing had met the known and measurable requirements but due to changes in planning and delays, the project estimates and completion dates have been too optimistic. This factored into our analysis of projects and our recommendations.

The projected additions for 2015 and 2016 incorporated in the filing for the establishment of rates for FY 2016 were reviewed based on a sampling of one hundred and thirty-four of the two hundred and six projects, excluding blankets, on the list provided by GMP. The one hundred and thirty-four projects selected for review totaled to \$83.905 million. The sample did not include blankets since blankets are evaluated based on historical spending. The sample was 65.0% of the Company's requested projects excluding blankets and approximately 97% of the requested cost excluding blankets. The reasonableness of the amounts requested was verified to supporting cost documentation and/or historical cost information. The Company projected the costs for blanket work orders based on an indexed five year average of costs closed to plant.

The projected additions analyzed were reviewed for cost development and substantiation of cost estimates to quotes, estimates, historical averages, actual costs to

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date and/or similar historical cost detail. A full complement of detail was provided with the Company caveat that the Financial Analysis provided will be supplemented in full at a later date. This practice, except for the supplementing, should be continued in future filings. In our review of the selected projects, we noted that most projects had estimate sheets for direct materials, direct internal labor, contract labor, contract costs, etc. Documentation was provided as support for the contract labor and the contract costs that were included in the project cost estimate. Testing of direct internal labor costs, stock materials and direct materials was done using project cost reference documents. For example, the cost for the materials and supplies was tested to the Company's materials and supplies inventory listing. Overhead costs were based on various overhead rates as summarized and provided by the Company.

### Observations

The Company was requested to provide a summary of projects included in the filing for 2015 and 2016. The plant addition summary provided was used to determine the sample test for projected plant costs. In an attempt to expedite the review process, a sample listing was provided to the Company in advance. The selected project files were downloaded to a flash drive and made available upon our arrival at the Company. The documentation supporting the projected capital addition direct external costs was generally included with an exception for the updated Financial Analysis as discussed earlier. The readily available information is a reflection of the progress made by GMP

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and is an indication that the alternative regulation process is working to encourage compliance with filing requirements.

The current process allows for review of project costs being requested prior to the filing of a proposed change in rates. This provides the Company the opportunity to assemble information and support for the requested plant additions that it may not have been afforded in a typical rate proceeding. This fact was a major factor in determining whether an adjustment would be proposed.

### Concerns

1. As noted above, we are concerned that there are cost variances between budget and actual for the numerous projects included in rates. We are also concerned with the slippage of project completion dates.
2. A concern exists with the fact that in compliance with Attachment 7 to the Successor Plan, numerous projects should include a financial analysis that provides substantive financial information and does not simply answer questions regarding cost impact and cost savings with a simple yes or no without explanations. The Board in the past has excluded the costs for projects that should have been evaluated with a cost benefit analysis and Attachment 7 provides that failure to meet the documentation requirements could result in a cost disallowance.
3. We tested the reasonableness of general blanket work orders to the Company's calculated actual five year average and the average utilizing the CPI inflation index. While most of the amounts appeared reasonable based on the indexed

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historical averages using a CPI index, we do not believe indexing is justified based on actual historical costs. We note the Company did estimate the blanket costs based on a CPI index but because the estimates were at least in part based on the escalated values we continue to note our concern.

### Recommendations

1. The Company should provide, *as part of each prospective filing*, a summary of plant additions as requested in the previous rate request that compares the “as requested” amount to actual for jobs completed and jobs still in process. The summary should also identify the as-projected date of completion and the actual completion date, or the latest estimated completion date. Because of the Alternative Regulation Process and the use of the ESAM we believe this should be a standard part of the Company filing and should not have to be requested each filing by the Department. For projects that are completed, the Company should provide a *detailed* explanation for any cost variances of 10% or more. For projects in process or not yet started, the Company should provide a *detailed* explanation for any estimated changes in the cost projection and explain any changes in the estimated date of completion. This analysis will provide valuable information to the Board and the Department for evaluating the reasonableness of the Company’s current estimates incorporated in the current filing.
2. To address Larkin’s concern with slippage and variances the Company should factor in the variances and slippage when establishing the new budgets for plant additions.

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3. The Company should continue to use the master material and supplies inventory, labor summary and overhead summary in developing the project estimates. The Company should continue to reference the applicable pages from the master list in the project folder.
4. We are concerned that projects not completed had costs assigned to other projects not previously identified and/or reviewed. It is recommended that the Company include with its initial filing submitted for review a list of all projects that were undertaken during the test year that were not subject to review in the prior filing. This summary should include the cost, date started, date completed (if completed) and an explanation why the project was undertaken. The same detail made available for the projected additions should also be available for review for these projects.

**Communications**

The August 1 filing includes \$1.349 million for Communication projects. Larkin reviewed the cost for one project that totaled \$1.224 million of the \$1.349 million requested. The AMI Gatekeeper LTE project was a prime example of the concern with respect to the Financial Analysis prepared by the Company. The analysis indicated the project had no O&M impact, no cost savings were identified and no alternatives were considered. Since the project cost of \$1.224 million is related to smart meters it is hard to conceive how there would be no cost impact, whether it be added cost or cost savings, and why there is no explanation why there was no alternative considered. Larkin also evaluated the timing of the projects and recommended that another project due to be

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completed in October 2015 have the in-service date extended 3 months. The Company agreed to the in-service date adjustment.

### **Computer Hardware**

The projected addition for computer hardware reflected in the initial filing was \$7.721 million for specific projects and \$652,998 for blankets. As noted earlier there are concerns with projections for computer hardware because of the number of changes and the timing of in-service. Some examples include, but are not limited to, the Plant NW Switch, the Conference Room Video Displays and Dell Blade Enc. The Plant NW Switch projected in service November 2013 at a cost of \$150,293. The response to DPS 3-12 indicates the project was closed for \$63,707 with an in-service date of June 2014. The Conference Room Video Displays was projected in service January 2014 at a cost of \$12,995. The response to DPS 3-12 indicates the project was closed for \$1,081 with an in-service date of June 2014. And the Dell Blade Enc was projected to be in service February 2014 at a cost of \$1,185,406. The response to DPS 3-12 indicates the project was closed for \$781,091 with an in-service date of July 2014. These 3 projects were the first 3 projects on an extensive list and they all were less than projected and went into service at least 5 months after they were supposed to. The explanation for the projects for the unused funds was that the remaining funds were moved to another project. The issues with IT are perennial and are a major concern. While documentation existed to justify the projected cost in many of the projects, the quality of that cost documentation and the estimates will now be questioned. The shifting of funds is also a major concern because the project funding for wherever the funds were shifted to has not been subject to a review which means there is no assurance that the project is an appropriate cost to be passed onto rate payers. The optimism of in-service has always been an issue with GMP for IT projects. In future reviews, the in-service date will be viewed with skepticism until the Company can prove its estimates are reasonable.

Larkin recommended that 5 of the project in-service dates be shifted by 3 months and a project for \$555,424 be deleted. The deleted project was for security cameras and the start date was April 2015 and as of June 2015 there was no action taken. This is

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another concern since a project described as being for safety/security is not done when it is supposed to be. From a review perspective a question now exists as to whether the labeling of projects as necessary can be relied on. The Company agreed to make the changes recommended.

### **Computer Software**

GMP requested \$8.220 million for computer software projects. The Company's original request consisted of 28 projects ranging from \$15,475 to \$1,867,248. Due to past concerns Larkin analyzed 25 of the 28 projects totaling \$8.137 million. Similar to the Computer Hardware projects there were delays and spending that did not occur with projections made for Docket No. 8190. A project labeled Room Wizards with an in-service date of November 2013 actually went into service March 2015. Another project identified as CIS Enablement for \$146,105 with a projected in-service date of December 2013 went into service March 2015 at a cost of \$53,060. A third project issue is the project identified as Cross Bow for \$177,338 due to be in-service January 2014. The project was canceled and the funds were moved to another project. This is a sample of the first three of many projects where costs did not occur or the date in-service date was overly optimistic.

Another issue was the Financial Analysis, where 20 of the 25 projects indicated there was no impact on O&M expense. Then, in review of the cost savings question there were 2 where it was indicated the savings can't be calculated, 6 indicated the any savings would be reallocated, 11 indicated efficiencies would result without any quantification, 5 indicated there were no savings, and 1 indicated a savings of \$162 per incident. To add to the inadequacy of support for the acquisition, 11 Financial Analyses indicated that no alternatives were considered and 5 indicated that an alternative was considered but provided no explanation why that alternative was not selected or why it was rejected. With the requirements listed in Attachment 7 to the Successor Plan the next review will be less lenient in evaluating the appropriateness of the IT requests.

Larkin recommended that 4 projects totaling \$1,060,117 be deleted and 1 project move its in-service date 3 months. The Company agreed with the recommendation.

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### **Distribution Lines**

The GMP request for Distribution Lines totaled \$36.242 million. The request is based on 18 months of additions for April 2015 through September 2015 and all of FY2016. The escalated five year average was annualized for the interim period and the rate effective period. Based on historical spending the amount requested appears reasonable.

### **Distribution Substation**

The initial capital request provided consisted of \$9.567 million for specific projects and blanket expenditures of \$1.008 million. The specific projected expenditures consisted of 24 projects. Larkin reviewed 11 of the 24 specific projects with the 11 totaling \$9.035 million. The workorder 34 amount for blankets was considered reasonable based on past historical spending that averaged \$675,859. On an annualized basis for the interim period and the rate effective period the blanket would be approximately \$1.008 million. Again Larkin identified an issue with slippage. The Company filing in Docket No. 8190 included 11 specific projects and for 6 of the 11 the in-service date slipped. Adding to the concern is that 2 of the projects were to be completed in 2014 and are still not in service. No adjustments were recommended but there is justification for making a change.

### **General Plant**

The Company projections for General Plant are different from past filings. Past filings included equipment and vehicle purchases but this year the costs consist of amortization of communication equipment, computer equipment, laboratory equipment and various other categories. The \$5.138 million is not included in capital costs but is a charge to retirements. The cost categories of communication and computer equipment did not reflect any retirements so the amount here is a reclassification. Larkin did not take issue with the retirement amounts here but in future requests the continuation of classifying the costs here may be questioned.

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### **Joint Ownership**

The initial request for the current filing included \$5.018 million for joint owner projects. The Company uses the owner budgets to estimate costs. Reliance on past budgets has not proven to be a reliable way of estimating costs. The Company and Larkin discussed the issue and agreed to begin with a 3 year average of performance and move to a 5 year average as more information becomes available. No changes were recommended.

### **Meters**

The meter blanket request in the filing is \$1.067 million. The escalated average is for a year is \$538,090. Annualized for the 18 month period April 2015 through September 2016 is \$807,135. While an adjustment of approximately \$260,000 could have been recommended Larkin determined based on the cyclical changes the amount is reasonable.

### **New Initiatives**

New Initiatives consists of 6 specific projects totaling \$9.778 million. The projects were all to begin in April 2015 but only 3 were started with 2 of the 3 having expended approximately 25% of the project budget. Larkin recommended that the 3 projects not started be deleted. The Company requested that one of the projects remain but with a later in-service date. A new quote was provided as support for this request. Larkin agreed to the September 2016 in-service date as long as the Company reduced the cost \$200,240 based on the new quote. The Company agreed with Larkin's recommendation.

### **Production**

GMP's initial request was for \$20.969 million for specific projects and \$991,974 for blanket projects. Two of the listed projects totaling \$13.651 million are essentially the same project. The cost to date totaled \$13.275 million indicating the project should

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be on target. Larkin reviewed 24 of the 27 specific projects for a total review of \$20.819 million of project costs. The 5 year average cost for production blankets is \$500,167. Annualized for the 18 month period the cost would be \$750,250 indicating a possible excess of approximately \$240,000. Since there is a downward trend in blanket spending the Company is put on notice that there should not be any excess in future filings. No specific project costs were recommended for adjustment. However, in review of the projected additions from Docket No. 8190 it was noted that of 43 specific projects that were to be in-service before or by June 2015, 23 were not in-service by the filing in-service date and another 13 projects were either canceled or not started yet. This is a major concern due to the dollars involved. Larkin notes that 13 of the current projects have not had any spending as of June 2015. Because of the concern Larkin recommended that 7 project in-service dates should be moved to March 2016 which is later than initially indicated. Larkin recommends the Company consider a more in-depth evaluation of the projects in the future because a continuation of the trend from the rate case would prompt a recommendation that some project costs be deleted.

### **Property and Structures**

The FY 2016 request for property and structures in the initial filing was \$7.047 million. The initial request included 29 projects of which 7 were for the purchase of land. The issue with this request was the inclusion of the land purchases for some prospective future plant project, 13 of the projects indicated there was no O&M impact, 15 projects indicated there was no cost savings and another 16 projects were planned without considering any alternatives. Adding to the concern was of the 23 projects in Docket No.

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8190 that had an in-service date of or prior to June 2015, 4 did not occur and 12 have slippage with the in-service date. Larkin conservatively recommended the land purchase be removed and one project have its in-service date moved from June 2015 to September 2015. The Company agreed to the recommendations.

### **Regulators/Capacitors and Transformers**

The blankets for regulators, capacitors and transformers is \$8.410 million. The 5 year average for blankets is \$4.241 million. The Company request is excessive because they included a full year for the six month period April 2015 through September 2015. Larkin did not recommend an adjustment because Larkin did not identify the excess for 6 months FY 2015 until after the Department and GMP reached an agreement on the filing. The request should have been adjusted by approximately \$2 million. The over-all impact is mitigated by the fact that the Company used a year end in-service date instead of monthly or quarterly in-services dates which means the rate base impact for the \$8.41 million was \$4.496 million.

### **Transmission Lines**

The Transmission line request of \$10.376 million included 17 projects. Larkin selected 14 projects totaling \$10.265 million for review. Larkin noted that of the 18 projects in Docket No. 8190 there were 13 that were to be completed and in-service by June 2015. Only four of the projects were done by the filed in-service date leaving 13 projects with an in-service date that was beyond the date used in the filing. Larkin recommended that 1 project be removed from the filing and 3 projects have the in-service

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date set back. The Company agreed to remove the project and change the in-service dates.

### **Transmission Substations**

GMP requested \$4.114 million for specific Transmission Substation projects and \$1.888 million for blanket work order 32. There were 26 specific projects and Larkin selected 9 projects totaling \$3.286 million for review. The Financial Analysis provided had indicated there was “No Loss Savings” for 8 of the projects. Again there is a concern as to whether the projects have been properly justified. In reviewing the status of the 16 projects in Docket No. 8190 Larkin observed that 10 were to be in-service by June 2015 yet one was not being done until a future date and 7 were put in-service after the date used in the filing. As noted before this means ratepayers are paying for plant that is not used and useful and this is a major concern. The five year escalated average spending was \$1.266 million. When annualized for the 6 month interim period (April 2013/September 2013) and the rate effective period this equals \$1.899 million. The requested blanket amount is reasonable. Larkin recommended that 3 project in-service dates be set back because the projects were done when they were supposed to be and the Company agreed to the change.

### **Transportation**

The five projects requested for transportation vehicles totals \$7.359 million. The replacement vehicles according to the Financial Analysis would not provide any cost savings and no alternatives were considered for any of the acquisitions. In Docket No. 8190 the Company had nine projects with eight of the projects having an in-service date

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prior to June 2015. Five of the projects in-service dates had slippage. In the current filing two of the acquisitions were to have occurred and the vehicles were to be in-service. No acquisitions have occurred as of June 2015. Larkin recommended the two acquisitions that did not meet the in-service date be set back to March 2016. The Company agreed to make the changes.

### Concerns:

1. The Company assembly of documents has improved significantly compared to past filings. However, the Company's optimism with in-service dates is not supported by a comparison of actual historical in-service dates to projected in-service dates. In addition, the Financial Analyses prepared by the Company are not considered sufficient. With the high level of "No" responses to the questions regarding costs and alternatives considered there is significant concern that the least cost alternative may have not been acted upon and the financial justification does not exist for undertaking the project. It is Larkin's opinion, that the Company must improve the Financial Analysis process or more costs will be recommended for exclusion in future filings.
2. As indicated above, there is concern with the in-service dates being overly optimistic. This optimism is costing rate payers because plant is included in rate base before it becomes used and useful.
3. The Company had one project that required a cost benefit analysis. The analysis provided was in PDF format and because of that that assumptions and calculations could not be reviewed.

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### Recommendations:

1. The Company should instruct employees as to what the purpose of the Financial Analysis is and direct the employees to provide information of substance. Some analysis must exist as to whether there is an O&M impact and how the impact was determined should be explained. The same process applies to determining whether a cost savings will occur. It is the cost savings that can be used to justify the financial investment in the project. Finally, the consideration of alternatives is significant. Employees do not just walk in and write a check for any car, they review the options and look at different makes and models. This same process should be applied when the Company undertakes a project. After that alternative is considered, the analysis should indicate why the one alternative was selected and the others were not.
2. To the extent a cost benefit analysis is prepared, the analysis should be included with the supporting cost documentation, in electronic form, along with a reference and/or explanation regarding how the cost savings were reflected in the filing.

### **OTHER RATE BASE ITEMS**

Other rate base additions include items such as Investments in Affiliates, Special Deposits, Unamortized Discounts, Preliminary Surveys, Regulatory Assets, Low Income Payments, Efficiency Fund Payments, Storm Deferrals, Retired Meters, the Community Energy & Efficient Development Fund (CEED), Capital Expense, AMI Investment and the Working Capital Allowance. Other rate base deductions include Accumulated

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Depreciation, Customer Deposits and Advances For Construction, Capital Leases, Accumulated Deferred Income Taxes, Accrued Pension Expense, Accrued Post Retirement Expense and Other Current Liabilities (Deferred Credits). This report will discuss the respective additions and/or reductions to rate base where issues were identified and discussed with the Company. Larkin not taking issue with certain rate base items should not be construed to mean there is no issue. Due to time constraints not all costs are looked at in the same level of detail.

### **Working Capital**

Prior to the merger, CVPS and GMP working capital allowance calculations were done differently when the annual filings were prepared under Alternative Regulation and in past litigated proceedings. CVPS submitted a working capital allowance that included a lead lag approach, the average materials and supplies inventory, Millstone fuel inventory, prepayments and an adjustment for accrued interest. GMP used what is commonly referred to as the formula method or one-eighth of operating expense allowance plus the average materials and supplies inventory, fuel inventory, prepayments and an adjustment for accrued interest. During the merger and subsequent to the merger, the Company filed a working capital request based on the one-eighth of operating expense method. The use of a lead lag study was discussed, and as discussed in prior reports the Company, the Company opted to use the formula method because it would have been burdensome to prepare a lead lag study due to the fact that the information for the test year was on two systems. Larkin agreed under the circumstances that use of the formula would be best and indicated that while a lead lag approach is preferred, due to

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the circumstances identified it would okay to utilize the formula method at the time. However, Larkin did advise in their report for the rate year ending September 30, 2014 that the Company in future filings should prepare a lead lag study especially with the filing for the year ended September 30, 2015 being of a more traditional nature. The Company verbally agreed with this recommendation during discussions. As noted in the direct testimony of Helmuth Schultz in Docket No. 8190 the Company again used the formula approach instead of a lead lag study. Once again it was stated “that it should be clear that in a future filing the Company should use a lead lag study.”<sup>1</sup> After each of the last filings based on representations by Company personnel, it was Larkin’s understanding that the Company would use a lead lag analysis in the next filing. GMP has failed to comply with its commitment. If this filing were to be litigated, Larkin would recommend that no cash working capital allowance be allowed because of the Company’s failure to comply. Larkin is recommending that the Company be ordered to prepare a lead lag analysis in the next filing or risk a full disallowance of the formula amount.

**Accumulated Deferred Income Taxes**

The Company’s original filing included an accumulated deferred income tax (“ADIT”) offset to rate base of \$304,242,096. This deferred balance is net of a deferred tax asset of \$31,550,430 for net operating losses (“NOL”) that the Company has not been able to utilize. This offset prompted a concern because there is a question as to whether

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<sup>1</sup> Prefiled Testimony of Helmuth Schultz III in Docket No. 8190 at page 89.

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the offset is appropriate given the fact that even though the Company pays no income taxes to the Internal Revenue Service (“IRS”), ratepayers paid the deferred income taxes to the Company. In the initial filing submitted for review this income tax was \$33,203,000. The Company’s accounting for this unique issue is critical because in some cases recognition of the NOL may not be appropriate and ratepayers are not properly credited for the advance payment of taxes.

When identified as a potential issue, the Company stated that if the NOL is not recognized GMP would have a normalization violation. The Company also supplied the Department with summaries of 4 Private Letter Rulings (“PLR”) that they believe would support the Company’s accounting treatment for ratemaking. The concern is that the while the Company places reliance on the Internal Revenue Code (“Code”) and the Internal Revenue Regulations (“Regs”) that discuss normalization requirements there is no specific discussion on the treatment of an NOL. The only discussion in the Code and Regs is that a determination should be made by the Internal Revenue Service as to how to account for an NOL. Private Letter Rulings are company specific and have to be requested. No such request or determination has been made for GMP. Larkin notes that there is a recent PLR that states based on the facts the NOL offset to deferred income taxes would not be a normalization violation. This is also critical because while it is not precedent, nor are the other PLRs cited by the Company, it shows that the determination is made on a case by case basis. The Company and Larkin had extensive discussions on the issue and various analyses and scenarios were reviewed. The Company did state that they viewed the issue as being an equity issue more than a normalization issue. Based on

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information supplied Larkin determined that the deferred income taxes on the books of GMP have been accounted for in a manner that would reflect a zero impact on rate base from the NOL asset being netted against the deferred tax liability. This issue has been a major topic of discussion in the regulatory process in many jurisdictions. Based on current tax law bonus depreciation is scheduled to expire which would purportedly eliminate the NOL issue. However, because this tax election has been extended in the past and current legislation exists to extend it, NOLs may continue to be an issue in the future. The accounting by GMP in future filings will be scrutinized for consistency and to provide assurance that ratepayers are not being deprived of the appropriate credit for taxes paid to the Company but not remitted to the IRS.

Another issue identified with the ADIT is the Company calculation of the balance for the test year is based on a 13 month average while the rate year balance is based on year end averages adjusted by a formula that supposedly provides a hybrid 13 month average. Larkin believes that since other rate base components are calculated based on a true 13 month average this balance should also be calculated based on a 13 month average. The Company indicated that information was not available to make a true 13 month average calculation. If not calculated using a 13 month average, Larkin recommends the use of a simple average of the projected beginning and ending balance of the rate year. In the current filing, Larkin recommended and the Company agreed to adjust the rate year balance based on the Larkin recommendation. Based on the information currently available, the net deferred tax credit, as revised, appears

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reasonable. Larkin will review this treatment further during the Company's next filing to further confirm the appropriateness of the accounting for the NOL.

**Contributions In Aid of Construction**

The Company's initial request reflected a reduction to rate base of \$10.746 million for contributions in aid of construction (CIAC). The CIAC is ratepayer funds advanced to the Company prior to construction specifically for the customer. The Company has been amortizing the balance in CIAC over the expected life of the asset constructed as a credit in other revenue which reduces the cost of service. The Company proposed a change in accounting for the CIAC and suggested a write-off of the \$10.746 million over 2 years. This accelerated write-off mitigates the increase that would have been required had the Company continued its current method of accounting.

The Department agreed to the proposed treatment but is concerned that the offer to change the accounting for CIAC was not presented until after the Department had identified the adjustments it was proposing to the Company filing. The Department and Larkin recommend that the Company propose any such changes when the filing is made and not when discussions are taking place regarding the Departments proposed adjustments.

**TEST YEAR EXPENSES**

**Base and Non Base O&M Expense**

The use of the platform eliminated much of the review of expenses included in the cost of service. Larkin verified the platform costs to the previous filing and tested the calculated decrease for the (.4%) inflation factor applied. Larkin verified the O&M

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expenses to the Company's summary of revenue and expenses by FERC account. The test year O&M costs were reduced by \$15.283 million for the Company's requested exogenous adjustment.

**Joint Owner Cost**

The initial Company filing reflected a total joint owner expense of \$9,705,875 reflecting an increase of \$944,886 over the test year expense of \$8,760,988. The costs are classified as O&M, Property Taxes and Property Insurance. Since insurance is a cost included in base O&M costs, the actual adjustment in the filing is \$781,954. Larkin took exception to the increase because historically projected joint owner costs have exceeded actual costs. The Company in the updated filing of July 1 reduced the request to \$686,675 due to an owner change in projected costs. The Company agreed to eliminate the request for the additional \$686,675.

**Non Base O&M Costs – KCW**

The test year expense for Non Base O&M Costs – KCW was \$678,000. The initial Company filing did not reflect a change in the KCW costs for the rate year. Included in the KCW costs are \$587,760 specifically related to the synchronous condenser. The Department and Larkin opined that the costs for the synchronous condenser are separate from KCW costs. Approval of the synchronous condenser and the KCW costs were separate and therefore treatment should be separate. In addition, the KCW costs when initiated did not include costs for the synchronous condenser, instead

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the cost were the result of systems impact study conducted by ISO-NE. The decision in Docket No. 7770, dated June 15, 2012, specifically mentions Kingdom Community Wind costs with no reference to the synchronous condenser costs. The reason the synchronous condenser is not mention is because that project start date based on the Company work order from the Alternative Regulation filing for the FY 2014 was October 2013. Larkin is of the opinion that the assumption that the synchronous condenser is part and parcel of the KCW costs referred to in Docket No. 7770 would be akin to assuming any other connecting lines after the fact as being KCW costs. Larkin believes the synchronous condenser costs are separate and distinct and should be considered as such.

The Company disagreed, and provided a memorandum supporting its position that O&M costs associated with the synchronous condenser should be considered non-base O&M (KCW) costs, excluded from the platform. The Company and the Department discussed the issue and no specific adjustment was made. As discussed earlier a global adjustment was made to address some of the specific concerns not adjusted, including this one.

**Smart Power Cost**

The test year expense for Smart Power was \$2,333,042. The Company proposed increasing the test year by \$420,710 to \$2,753,752. The Company provided the supporting detail for the rate year expense in response to Informal Request DPS 1-11. The response provided a summary of the outside costs for various vendors. The sum total for outside vendors was \$2,191,401. The Company also provided an Attachment to the response summarizing the vendor and cost and that total was \$2,041,401, a \$150,000

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difference from the written response. The \$562,351 difference between the \$2,753,752 requested and the \$2,141,401 is for internal labor and overheads. The test year vendor cost and internal labor costs were \$1,935,996 and \$397,046, respectively.

Larkin and the Department reviewed the cost projection and supporting detail and recommended adjustments for various costs. Larkin recommended three adjustments totaling \$328,493. The first adjustment was for the \$150,000 difference between the written response and the schedule of vendor costs in the attachment to the response. The Company in discussions indicated the written response was the proper number. The second adjustment was a net reduction of \$25,100 that Company identified in the response to Informal Request DPS 1-11 as being needed. The final adjustment was \$153,393 for the labor related costs. Larkin noted there were no changes in the employees from the test year to the rate year so the test year labor costs were simply escalated by 3% to get a rate year labor cost of \$408,957. The Department recommended various other adjustments to the vendor costs. The Department and the Company ultimately agreed to reduce the initial request of \$2,753,752 to \$2,114,174 a reduction of \$639,578.

### **Other O&M Expense**

The review of other operation and maintenance expense included verification of the depreciation expense to the plant addition model and a review of the income tax calculation. Additionally, Larkin reviewed the Equity in Earnings of Affiliates and Other Operating Revenues.

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### **POWER COSTS AND TRANSMISSION COSTS**

The DPS Finance and Economics Division along with Larkin examined GMP's forecasted power supply requirements and transmission expense for the base rate period. The projected Category A and Category B expenses as adjusted in the Cost of Service for power supply and transmission costs are reasonable.

As part of the review, Larkin assisted the Department in analyzing costs included in the Power Adjustor. The review performed was in accordance with Finding No. 6 of the Order in Docket Nos. 8389 and 8456, dated March 20, 2015. The Department with the assistance of Larkin reviewed the 2015 First and Second Quarter Power Adjustor costs of GMP (Joint Review). The review consisted of an analysis of the proposed power cost filings as submitted by GMP, multiple rounds of discovery and some discussion with the Company. The information reviewed included account summaries, invoices, responses to informal discovery and cost classifications. The findings of the Joint Review are as explained in detail as to whether costs should be excluded from the Power Adjustor.

Larkin observed that while the parameters of the Power Adjustor have been previously set, that the recovery of power costs for GMP are significantly different from power cost mechanisms elsewhere. The GMP power costs include FERC Accounts 500-556 and 560-574. Power clauses and/or mechanisms typically provide for recovery of costs in Account 501 (Fuel); Account 518 (Nuclear Fuel Expense); Account 547 (Fuel) and Account 555 Purchased Power. In some cases, fuel handling charges may also be included. The various other operational and maintenance accounts, allowed GMP, are

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not automatically passed through a recovery mechanism in other jurisdictions. This difference in treatment has resulted in other costs being charged to the production O&M costs that would and should be charged elsewhere. This shifting of costs is attributed to interpreting FERC account definitions to allow for miscellaneous costs not specified in the FERC description to be charged to production O&M accounts. The Department is not proposing a change to what accounts are included in the Power Adjustor but is taking issue with some costs charged to Power Adjustor accounts, as opposed to other, more appropriate O&M accounts, and reserves the right to challenge other costs as part of evaluations in future filings.

**Account 549 Miscellaneous other power generation expenses.**

Legal Fees

The Power Adjustor filing included \$20,064 charged to Account 54930 for legal fees to Sheehey Furlong & Behm PC in the first Quarter and \$33,185 charged to Account 54930 for legal fees to Sheehey Furlong & Behm PC in the second Quarter. Account 549 is a miscellaneous account and nowhere in the description of costs are attorney fees identified. A review of the FERC account description for the broad range of accounts that are included in the Power Adjustor could not find any reference to attorney fees. Account 923 “Outside Services Employed” references attorney fees. The Company was asked to explain why this charge to Account 549 was appropriate. The explanation was the description for Account 549 allows for charging costs not captured in other accounts. Specifically, the Account 549 description states “This account shall include the cost of

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labor, materials used and expenses incurred in the operation of other power generating stations which are not specifically provided for or not readily assignable to other generation expense accounts.”<sup>2</sup> The Department disagreed with the Company’s broad interpretation. The FERC Account 549 description also identifies various costs to be included that include minor costs such as first aid supplies, office supplies, meals, hand held tools, etc. No mention of legal fees and no mention of outside consulting services.

In addition to the misclassification of the legal fees it was noted that two of the invoice amounts included errors. One was a payment of a net past due amount of \$405 that could not be traced to any bill and the second error was a payment of \$2,003.56 for the March 16 fees of \$906.62 plus the previous months balance due of \$1,096.94 which was already included separately. Larkin notes that when the platform rates were set, legal fees were included in the platform and no legal fees were included in power costs.<sup>3</sup> By charging legal costs to the Power Adjustor, the Company understates O&M expense in the ESAM. This means to the extent legal fees were charged to the Power Adjustor the Company’s shareholders benefited from the overstated savings twofold. First because ratepayers assumed responsibility for those costs as a direct pass through and secondly by flowing through the overstated savings to shareholders. The 2015 First and Second Quarter Power Adjustor costs should be reduced by \$53,249 and any reclassification should be limited to \$51,747 due to the payment errors. The Company agreed to adjust

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<sup>2</sup> Company response to Power Adjustor informal requests Q. 1DPS 2-4.

<sup>3</sup> Company response to informal Base Rate request DPS 2-3.

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the power costs in the filing by reclassifying test year legal fees totaling \$156,430 from Production Power to the platform.

### Monitoring

The First Quarter included an expense of \$28,598 for sound monitoring and \$28,987 for bird and bat monitoring at KCW. The Second Quarter included an expense of \$5,259 for sound monitoring and \$12,964 for bird and bat monitoring at KCW. The Company believes the cost are properly charged to Account 54930 because they are for “Miscellaneous Labor” and are not readily assignable to other generation expense.<sup>4</sup> As discussed above outside services should be charged to Account 923 and there is no provision in the description for Account 549 for outside services to be charged to this power generation expenses account. The Company agreed to reclassify the test year expense of \$297,548 from Production Power costs to Non Base O&M Costs – KCW.

### Community Outreach

The First Quarter and Second Quarter included expenses of \$1,500 and \$4,500, respectively for a location for landowner meetings and running summer tours for KCW. Larkin is of the opinion the costs are clearly image building and promotional in nature and should be excluded from both the Power Adjustor and base O&M expense. The Department and the Company agreed to reclassify the test year expense of \$17,050 from Production Power costs to Non Base O&M Costs – KCW.

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<sup>4</sup> Company response to Power Adjustor informal requests Q. 1DPS 2-17 and 2-18.

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### Good Neighbor Fund

The Company paid 5 municipalities \$188,617 for what is labeled “Good Neighbor Fund” in the Second Quarter. The payments are made based on “Memo Invoices” that are internally generated. During the First Quarter, the Company indicated that no payment was made but that \$45,000 was accrued. The Company in past discussions has suggested the costs are operating costs of the facility and are comparable to the landowner lease/royalty payments. That claim presents a different issue because landowner payments are charged to Account 555 (Rent). The Department objects to the classification and description of the “Good Neighbor Fund” payments and recommends the costs be included in the non-platform KCW costs. The Company agreed to reclassify the test year expense of \$188,617 from Production Power costs to Non Base O&M Costs – KCW.

### Utility Charges

The Company has included First Quarter and Second Quarter charges of \$54,255 and \$56,659, respectively, from Vermont Electric Cooperative. The charges are labeled KCW Expenses and except for one payment are for usage at Lowell. One billing for \$12,731 is for maintenance that is a monthly charge generally charged to the Non-platform KCW costs. The maintenance billing is charged to this account in error and should be reclassified to Non-platform KWC costs. The Company agreed to reclassify the test year expense of \$12,731 from Production Power costs to Non Base O&M Costs – KCW.

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### Cleaning

GMP receives a monthly bill for \$950 for “Lowell Office Cleaning.” An invoice error was noted. The January invoice includes January’s charge plus an overdue balance of \$950 for December. December’s invoice was also paid and so was included twice. There should be a reduction of \$950 for this expense and it should be excluded from the cost of service. The Department and the Company agreed to reclassify the test year expense of \$950 from Production Power costs to Non Base O&M Costs – KCW.

### Mitigation Surveys

GMP was questioned on the engineering expense in Quarter 1 of \$7,450 and the response stated that these surveys were performed on various portions of the mitigation parcels as a requirement of the Wind Farm Easement agreement which had to be completed once the project was completed. The survey identified portions of land that were no longer needed by GMP and could be returned to the landowner. The costs were charged to 549 as Care of Grounds – or a necessary expense related to the grounds of the project. Account 549 lists ‘care of grounds as ‘Care of grounds, including snow removal, cutting grass, etc.’ and not outside consulting of this nature. The total expense for the 1<sup>st</sup> and 2<sup>nd</sup> quarters is \$10,625 and should be charged to outside services and reflected as Non-platform KCW expenses. The Company agreed to reclassify the test year expense of \$18,936 from Production Power costs to Non Base O&M Costs – KCW.

### Other

A consulting invoice for \$2,483 for “KCW Wind Farm, includes \$250 having a description of “review of ANR certified mail letters for notices of violations at KCW and

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W. Danville. File search and sent pertaining documents to GMP and VHB.” At the very least the \$250 of costs pertaining to violations should be more appropriately assigned to an administrative account for outside services. The Company agreed to reclassify the test year expense of \$250 from Production Power costs to Non Base O&M Costs – KCW.

**Account 554 Maintenance of miscellaneous other power generation plant.**

During the First Quarter this account included a charge to Account 55430 for \$4,013 that was for “Outreach” and “Performance Monitoring” and the Second Quarter included a charge of \$1,351. The charges were questioned and the Company explained the costs were for tours and performance monitoring<sup>5</sup>. The tours explanation for the Outreach is clarified but there is no clear indication what monitoring is performed. The title for Account 554 is “Maintenance of Miscellaneous Other Power Generation Plant (Major only)” and there is no indication the costs are for maintenance, especially plant tours. Plant tours are essentially promotional in nature and are questionable costs for recovery whether in Power Costs or in O&M expense. The costs should not be included in the Company’s Power Adjustor and Larkin believes the cost should be charged below the line to the extent they are promotional. The Department and the Company agreed to reclassify the test year expense of \$10,728 from Production Power costs to Non Base O&M Costs – KCW.

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<sup>5</sup> Company response to Power Adjustor informal requests Q.1 DPS 2-7.

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### **EXOGENOUS COST and ADJUSTMENT**

On April 30, 2015, the Company filed its proposed Exogenous Change Adjustment of \$15,288,734 for the period October 1, 2014 through March 31, 2015 pursuant to Section III(C) of the Alt Reg Plan<sup>6</sup> and as specified in the Order in Docket Nos. 8190/8191. On May 26, 2015, the Company filed an amended calculation of the proposed Exogenous Change Adjustment for the period October 1, 2014 through March 31, 2015. The revised requested amount was \$15,282,683. Based on the Company's request, the December 9, 2014 storm had costs totaling \$16,095,743 from which the Company deducted an exogenous factor threshold of \$600,000 and \$213,060 of joint owner costs collected. The Company summary identified the major cost component for storm restoration to be the \$12,739,778, paid for outside services. Those costs were subject to a detailed review as well as a high level review of other costs to evaluate the propriety of costs requested.

The review consisted of two sets of discovery and verification of costs incurred to supporting documentation. Larkin identified five specific cost issues and one overall cost concern. The cost issues are as follows:

- The \$600,000 threshold adjustment instead of the \$1,200,000 threshold,
- Non-incremental overtime included in the storm costs,
- Payment of bonuses to exempt employees,
- An excessive payroll tax rate,

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<sup>6</sup> Alternative Regulation Plan approved in Docket Nos. 8190/8191 decision dated August 25, 2014.

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- Undocumented costs and
- The level of costs incurred and the impact on costs due to lack of an aggressive vegetation maintenance program.

### **Threshold**

In order to qualify as an exogenous storm event the costs for the storm must exceed \$1,200,000. This requirement is specifically identified in Alt Reg Plan<sup>7</sup> and the Board Order in Docket Nos. 8190/8191.<sup>8</sup> The Company only reduced the storm costs by \$600,000 (one-half of the \$1,200,000) because the storm costs are for a storm within the six month period from October 1, 2014 through March 31, 2015. Larkin is of the opinion this reduction to the threshold is contrary to the Alt Reg Plan and the Order in Docket Nos. 8190/8191. It is clear from the Alt Reg Plan and the Board's decision that the only way the costs qualify as an exogenous event is because the total storm costs exceed \$1,200,000 not the \$600,000 recognized by GMP.

The Alt Reg Plan specifically states:

2. Exogenous Storm Changes shall consist of increased costs experienced by the company relating to the incremental maintenance expenses incurred for Major Storms (as defined in the Company's Service Quality & Reliability Performance, Monitoring & Reporting Plan (the "SQRP")), and further defined as a storm that causes the Company to incur maintenance expenses in excess of \$1,200,000, adjusted annually for inflation ( $\$1.2M \times (1 + \text{CPI}_U \text{ Northeast})$ ), to the extent the aggregate amount in any year exceeds \$1,200,000 adjusted annually for inflation ( $\$1.2M \times (1 + \text{CPI}_U \text{ Northeast})$ ). In the event that the Company has not exceeded the amount related to storm costs included in Base O&M Costs, Exogenous Storm

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<sup>7</sup> Alternative Regulation Plan filed June 4, 2014 Section III(c) (2).

<sup>8</sup> Vermont Public Service Board Order dated August 25, 2014, pages 9 and 22.

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Changes shall be reduced by such difference.<sup>9</sup>

There is no specific provision for modification of the \$1,200,000 storm requirement even though the Alt Reg Plan specifically references the first Exogenous Change Adjustment period as being from October 1, 2014 through March 31, 2015.

In addition, the Boards Order explains the calculation as follows:

The mechanics work as follows: *if any single major storm* during the year causes damage expenses in excess of \$ 1,200,000, *then the costs in excess of \$ 1,200,000 will be deferred* and fully recovered in the next year's rates, provided GMP had exceeded the amount provided for storm costs in its base rates. For example, if GMP experiences five storms in a year, each of which meets the definition of a major storm but each of which only causes GMP to incur maintenance expenses of \$ 1,000,000, then GMP would need to cover those expenses with existing rates. However, if GMP experiences a major storm that causes the Company to incur \$1,300,000, then the Company could defer and recover later the \$100,000 above the ESAF threshold, provided that GMP had exceeded the amount provided for storm costs in its base rates.<sup>10</sup> (Emphasis added)

This explanation makes no provision for the deferral of costs over \$600,000. The Order specifically states “any single major storm” and that the costs to be deferred are those in excess of \$1,200,000. The Company is correct that the period covered is not a year. However, in Larkin’s opinion, the basis for classification is not a year but the cost level of a storm or storms during the period being observed and there is no specific provision for limiting the storm in this exogenous adjustment to \$600,000. It is our opinion and was our recommendation that the costs should be reduced by \$1,200,000 instead of the \$600,000 reduction reflected by the Company. The Company disagreed

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<sup>9</sup> Alternative Regulation Plan filed June 4, 2014 Section III(c) (2).

<sup>10</sup> Vermont Public Service Board Order dated August 25, 2014 at 22.

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with this recommendation. This adjustment was not made, as it was ultimately resolved pursuant to a global agreement.

**Non-incremental overtime**

The Company storm cost request included \$1,689,927 of overtime costs. In reviewing the costs there was a concern as to whether the overtime reflected non-incremental overtime. Larkin has found in reviewing storm costs in other jurisdictions that with the increased storm activity that overtime typically incurred and included in base rates is being shifted to storm work. The result of that shift is the test year cost for overtime is less than the amount allowed in base rates. Absent an accounting for that differential ratepayers will pay for the same labor dollars twice, once for the overtime in base rates and not charged in the test year and then a second time as part of the storm costs. Based on the information supplied by the Company, Larkin determined that the test year overtime was \$62,711 lower than the amount allowed in rates for the test year. Larkin recommended that the exogenous adjustment be made reducing the deferred amount by the \$62,711 and the associated payroll taxes of \$5,644. The Company agreed to make this adjustment.

**Storm Bonuses**

The exogenous request includes bonus payments of \$770,410 to exempt employees for extra time during the storm events. Exempt employees are salaried employees that are not eligible for overtime. This amount was included in a line with the description "Payroll: Other Earnings." There is also a line in the cost summary labeled as

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“Bonuses” that totaled \$10,333. The Company justification for bonus payments is that the salaried employees worked “more than 5 hours during the storm”<sup>11</sup> and management determined that the employees should be compensated for this added effort. The Company was questioned whether this was a formal policy and in response the Company provided a document labeled “Storm Restoration Bonus-Salaried Employees.”<sup>12</sup> The document identifies a level of payment based on a range of hours worked and the document specifically states “Storm Bonuses are at the sole discretion of GMP’s management.”

Larkin took issue with the \$770,410 of storm bonuses included in the “Payroll: Other Earnings” category. Ratepayers are being inconvenienced due to the impact of the significant storm and will pay most if not all the cost associated with the restoration effort. The costs for this storm event are significant and for ratepayers to have to pay bonuses to salaried employees who are expected, as part of a salaried employees job, to work extra hours as needed is not appropriate. First, the bonuses are discretionary so if management believes they are justified then shareholders should share some responsibility for these costs since the damage impacts shareholders and they are benefitted by the restoration effort. A second consideration is whether payment of employees bonuses are appropriate for ratepayers to pay when the level of damage and the cost associated could be attributed in part to the Company’s decisions with respect to preventative maintenance. This is a concern discussed in more depth later. Larkin does

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<sup>11</sup> Company response to Informal Request DPS 1-5.

<sup>12</sup> Company response to Informal Request DPS 2-2, Attachment 2-2c.

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not dispute that a need exists for employees to step up in storm conditions but the discretionary cost of that effort should not be at ratepayer's expense, and at the very least, should not be at the ratepayer's *sole* expense. Larkin recommended the \$770,410 plus the associated payroll taxes of \$69,337 be excluded from the deferral and the Company rejected this recommendation. This adjustment was not made, as it was ultimately resolved pursuant to a global agreement.

### **Payroll Tax Rate**

The Company calculated payroll taxes using a 9.00% tax rate. Based on the response to Exogenous Informal Request DPS 2-3 the effective payroll tax rate for the test year was 7.35% and the Company agreed that rate should be used. Larkin recommended an adjustment of \$16,854 to remove the excess taxes from the Company's request for deferral. The Company agreed to make the adjustment.

### **Undocumented Cost**

The Company included \$11,976 in the request for which no supporting documentation was available. Larkin recommended the \$11,976 be removed from the storm cost deferral and the Company agreed with the recommendation.

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### VEGETATION MANAGEMENT IMPACT

The storm damage and cost from the December 2014 snow storm was significant. In response to Exogenous Informal Request DPS 1-11, the Company indicated that it was estimated that 95% of the storm damage was due to trees brought down by heavy snow. Heavy snow on trees causes damage either by having untrimmed trees along the right of way making contact due to the added weight or from trees outside the right of way because of the added weight and the condition of the trees outside the right of way. In response to Exogenous Informal Request DPS 2-5, the Company indicated that “a large percentage of the trees that impacted these areas during the storm event were from outside the right of way” and then provided pictures showing examples of the damage. The pictures corroborated the explanation. Tree maintenance is critical in mitigating storm damage. The International Society of Arboriculture (“ISA”) has numerous manuals on vegetation maintenance and some are specifically related to utilities. For example, a June 1993 edition of “A Handbook of Hazard Tree Evaluation for Utility Arborists” identifies what trees should be considered for site management. Specifically, the handbook states that any tree that could strike a target, such as a pole or line, should be evaluated even if it is off the right-of-way. GMP has not proactively done this and as evidenced by the date of the handbook this is a practice that should have been in existence years ago.

As part of Docket Nos. 8389 and 8456 vegetation management was identified as an issue. The Larkin Report, in Docket No. 8389, identified and discussed 3 issues with

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the exogenous storm costs.<sup>13</sup> The current filing reflects an improvement in addressing the first concern which was recouping of costs from companies with pole attachments. Larkin was advised of the agreements and while it is an improvement, Larkin informed the Company that that sharing by the telephone companies was lower than he has seen in other jurisdictions. The Company has also addressed the second concern with the capitalization of storm costs by applying a 3 factor to labor costs to reflect the increase in cost associated with storm restoration. The third concern was the Company's vegetation maintenance. In the Larkin Report, it was indicated that with the increase in storm activity companies have taken a new approach in vegetation maintenance to mitigate storm costs. The approach is a shorter trim cycle and an aggressive enhanced maintenance program that focuses on danger and hazard trees. These trees are generally found on the outer edge of the right-of-way or just outside the right-of-way. The report noted that absent a proactive program, the level of storm cost restoration is increased and may not be justified. The recommendation was for GMP to perform or have performed a newer tree growth study that can be relied on for improving the maintenance on the system. As part of MOU in Docket Nos. 8389/8456, the Company agreed to perform a growth study and would determine whether an increased or expanded enhanced vegetation management program would provide a benefit.

During the review process of the current filing the Company provided a discussion on a proposed vegetation plan and in response to Exogenous Informal Request DPS 2-6 the Company provided the agreed upon growth study. The study did indicate

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<sup>13</sup> Larkin Report filed on February 17, 2015 at pages 11-17.

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that a six year cycle could be maintained. The results provided a growth analysis by species and an annual growth rate at which the current 10 foot clearance would be exceeded by regrowth. There are 4 species which make up the largest frequency/or density (48.7%) on the system. The sugar maple which is considered one of the hardest maples is 17.6% and its 10 foot regrowth is from 6 to 7 years. Next is the eastern white pine at 10.7% with a 10 year regrowth rate of 7 years. That is followed by the ash and red maple that together are 20.4% and have a regrowth rate of 4-5 years. Based on the results, the Company's current trim cycle of 7.8 years is inadequate, and the Company should shorten the trim cycle just for basic reliability purposes. The study did not address hazard and danger trees which as noted are the primary cause of damage during storms.

The Company and the Department did discuss a plan to address the cycle issue and to aggressively address the hazard/danger tree issue that is causing the damage during storms. These discussions remain ongoing, and are noted here to provide context for Larkin's concern. It is Larkin's opinion that the current level of exogenous costs could have been adjusted to account for the Company not proactively addressing the hazard/danger tree issue as other companies have. Failure to address the hazard/danger tree issue will only increase storm damage and costs in the future and that increased cost should not be inappropriately recovered in full from ratepayers. Ultimately, an adjustment was not made on this basis, however, this discussion should put the company on notice that improvements to vegetation management programs are necessary and will be examined in connection with future storm recovery costs proposed for recovery as Exogenous Events.

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### **CONCLUSION**

This review showed a significant improvement in the Company's compliance with providing supporting documentation for the projected costs. The Company did try to mitigate the rate impact with the suggested accounting change for CIAC, a global reduction to costs and the increase in merger savings offset. The Company provided timely responses to questions asked and promptly made personnel available to discuss issues identified. However, there still remain some areas of concern that are significant in nature. The Company should improve on the financial analyses that are provided as justification for projects and the Company should consider being less optimistic about the in-service dates especially based on its history of actual dates when compared to projected dates. Exogenous storm events have resulted in significant costs to ratepayers and because the ratepayers are ultimately responsible for this cost the Company should focus on vegetative management practices that will mitigate the costs. Under the current Alt Reg Plan, this year's base rate review process was considered positive and the resulting rates are considered reasonable.

**Green Mountain Power**

Projects include in Filing as of 4/27/2015

Exhibit HWS-1

Construction Summary by Category and Project		Start Month Per Filing	Start Month Per Project Analysis	Per Filing	Per Filing		Spending Through 5-31-15	O&M Impact	Cost Savings	Alternatives Considered	Recommend
				In Service Month	In Service Year	Addition	Retirement				
1	141542: AMI Gatekeeper LTE Retro	Oct-14	Jan-15	9	2016	1,224,168		517,374	No	None ID	No
	143692: RNMS			4	2016	29,519					
	143700: SCADA Head-End Comm			10	2015	95,249					Move 3 months
	IT Blanket 2015		Sep-15	9	2015	323,742		205,617			
2	140455: CALAMP/AVL	Jul-14	Jan-15	9	2015	815,668		775,767	\$59k + \$66k	Efficiency - No \$	\$Diff
3	141671 : 2015 Laptop Refresh	Oct-14		7	2015	480,958		358,394	No	No	No
4	141673: Continuation of Colchester Visualization		Oct-15	3	2016	1,213,007			\$31k	Efficiency - No \$	Yes
5	141810: 2015 District Repeaters	Oct-14		5	2015	107,609		143,131			
6	143200: Core Network Upgrade		#####	6	2016	756,979			\$12k	No	Yes*
	143202: Upgrade Wireless Controllers			3	2016	45,832					
	143203: Brattleboro Phone/Network	Apr-15		4	2016	47,428		920			
	143204: RDSC Phone/Network	Mar-15		10	2015	17,825		20,604			
	143205: EMAC Phone/Network			1	2016	43,846					
7	143206: Replace Video Conferencing		Jun-16	8	2016	281,641			No	Efficiency - No \$	Yes*
8	143207: Replace Security Camera Systems		Apr-15	12	2015	555,424		#	No	No	No
9	143210: Zeacom Web Chat		Nov-15	12	2015	21,028		#	No	Efficiency - No \$	No
10	143211: Cell Boosting		Oct-15	9	2016	415,578			No	No	No
	143212: Replace Rutland Internet Routers			4	2016	14,220					
	143220: Replace Conference Phones			10	2015	22,566		#			Move 3 months
	143223: UPS Unit Replacements			12	2015	39,274		#			Move 3 months
11	143224: Solar Back Up for UPS Units		Oct-15	9	2016	160,216			No	Efficiency - No \$	No
12	143225: Packet Shaper		Nov-15	12	2015	207,203		#	No	Efficiency - No \$	No
13	143242: Hadoop Infrastructure (Redundancy and DR)		Jan-16	2	2016	256,424			\$960	Efficiency - No \$	No
14	143243: Backup and Recovery (data protector and Tivoli) Solutic		Dec-15	2	2016	297,045			No	No	Yes w/Cost Detail
15	143244: Physical Server Replacements		Jan-16	5	2016	39,708			No	No	No
16	143245: Storage - NetApp		Mar-16	3	2016	429,177			No	No	No
17	143251: FS for Rutland		#####	7	2016	206,729		178	\$26k	No	No
18	143252: SRM		Feb-16	3	2016	132,859			No	No	No
19	143253: Security Event Correlation		Nov-15	11	2015	188,077		#	No	No	Yes*
20	143262: Technology Device Refresh		Oct-15	9	2016	474,159			No	Efficiency - No \$	No
21	143264: Colchester Multi Media Refresh		Jan-16	4	2016	140,889			\$1,025	Efficiency - No \$	Yes*
	143265: 4K TV Applications			11	2015	38,204		#			Move 3 months
	143266: Kiosk			11	2015	20,200		#			Move 3 months
	143267: Electronic Signage			1	2016	60,354					
	143268: Control Center Polycom			11	2015	70,694		#			Move 3 months
22	143945: Personal Beacon Locators		#####	5	2015	120,459		119,650	No	No	-
	IT Blanket 2016			9	2016	329,246					
23	141166: Customer Self Service Web Site	Sep-14	Apr-15	9	2015	217,167		319,630	No	Can't be calculated	Yes/w higher costs
24	141681: BI for Engineering	Oct-14	Oct-14	9	2015	477,492		200,850	No	Efficiency - No \$	No
25	142859: iFactor mobile app enhancements	Jan-15	#####	9	2015	172,523		121,430	\$6,300	Savings Reallocated	Yes*
	143201: APC Datacenter Management Software			6	2016	15,475					
	143208: Zeacom Upgrade			12	2015	39,441		#			Move 3 months
26	143229: Mobile APP Enhancements		Mar-16	9	2016	226,434			No	Savings Reallocated	Yes*
27	143230: CSS Enhancements 2016		Apr-16	9	2016	123,506			No	Savings Reallocated	Yes/w higher costs
28	143232: Notifi Enhancements		Apr-16	9	2016	144,656			No	Savings Reallocated	Yes/w higher costs
29	143233: NMS RGI 2015		#####	9	2015	125,751		#	No	No	-
30	143237: GMP API Enhancements/Opportunities	Apr-15	Oct-15	9	2016	371,479		1,382	No	Efficiency - No \$	Yes*
31	143257: BI - 2016		Oct-15	9	2016	616,987			No	Savings Reallocated	Yes*

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32	143258: UI Cap Budget & Forecasting		Nov-15	2	2016	332,078			No	Efficiency - No \$	Yes*	
33	143259: Light Notice App Solution		Nov-15	4	2016	483,167			\$60k	Savings Reallocated	No	
34	143260: GIS Upgrade 2016		Nov-15	11	2015	110,153		#	No	Efficiency - No \$	No	
35	143406: NRG Account Summary Emails	Feb-15	Feb-15	9	2015	247,547		104,293	No	Efficiency - No \$	No	
36	143548: Vegetation Management		Apr-15	9	2015	559,065		#	\$40k	Efficiency - No \$	No	Delete
37	143646: Controller	Apr-15	Apr-15	7	2015	97,156		53,060	No	No	Yes	
38	143657: BI Power Supply		Oct-15	9	2016	499,560			No	Efficiency - No \$	No	
39	143658: BI Technology Upgrade		Apr-16	9	2016	198,907			No	Efficiency - No \$	No	
40	143659: Bromium		Mar-16	3	2016	130,347			No	No	Yes	
	143661: Hunk			1	2016	28,620						
41	143664: 2015 GMP Mobile App	#####	Apr-15	9	2015	259,726		21,859	\$6,300	Efficiency - No \$	Yes	
42	143665: 2015 GMP API Project		Mar-15	9	2015	229,283		#	No	Efficiency - No \$	Yes	Delete
43	143667: Work Management for Substations	Apr-15	Jun-15	4	2016	1,867,248		269	No	No	No	
44	143679: Tripwire		Mar-15	3	2016	69,358			No	No	No	
45	143682: NRG Simply Smart Account Summary		Oct-15	3	2016	340,418			No	Can't be Calculated	No	
46	143691: Crossbow		Jan-16	1	2016	90,831			\$5,700	\$162 per incident	No	
47	143988: Daily Work		Mar-15	9	2015	146,018		#	No	Efficiency - No \$	Yes	Delete
	Distribution Lines			1	2016	2,024,733	270,378					
	Distribution Lines			2	2016	2,024,733	270,378					
	Distribution Lines			3	2016	2,024,733	270,378					
	Distribution Lines			4	2016	2,024,733	270,378					
	Distribution Lines			5	2016	2,024,733	270,378					
	Distribution Lines			6	2016	2,024,733	270,378					
	Distribution Lines			7	2016	2,024,733	270,378					
	Distribution Lines			8	2016	2,024,733	270,378					
	Distribution Lines			9	2016	2,024,733	270,378					
	Distribution Lines			4	2015	1,990,888	265,858	2,963,602				
	Distribution Lines			5	2015	1,990,888	265,858	2,120,022				
	Distribution Lines			6	2015	1,990,888	265,858					
	Distribution Lines			7	2015	1,990,888	265,858					
	Distribution Lines			8	2015	1,990,888	265,858					
	Distribution Lines			9	2015	1,990,888	265,858					
	Distribution Lines			10	2015	2,024,733	270,378					
	Distribution Lines			11	2015	2,024,733	270,378					
	Distribution Lines			12	2015	2,024,733	270,378					
	135213: South Shaftsbury RTU	Apr-14		6	2016	71,542	6,953	17,732				
48	138164: Waterbury Substation	Mar-14	Oct-14	11	2015	1,953,679	233,766	672,203	No	\$483	Yes	
	139030: GILMAN - SUB SECURITY	Nov-14		6	2015	34,696		21,892				
	141590: Dorset Street Security	Dec-14		6	2015	48,223		41,312				
	141592: Queen City Security	Dec-14		6	2015	50,406		31,128				
	141593: Middlebury Lower Security	Nov-14		7	2015	40,065		27,104				
49	141596: Vergennes Substation Security	Oct-14	Jan-15	6	2015	47,817		49,567	No	No Loss Savings	Yes	
	141605: Bay Street Substation Security	Oct-14		5	2015	29,956		35,605				
	141606: Fair Haven Substation Security	Nov-14		5	2015	39,416		15,461				
	141607: Hewitt Road Sub Security	Oct-14		5	2015	46,337		22,361				
	141609: 141609-Weybridge Security	Apr-15		7	2015	42,129		16,926				
50	141614: 2015 White River Jct Rebuild	Jan-15	Oct-14	11	2015	2,079,928	185,005	628,964	\$1,928	\$11,414	Discussed	
	141619: Telecom Test Equipment 2015	Nov-14		9	2015	29,810		1,538				
	141621: Brownsville Fence	#####	Oct-14	5	2015	135,173	1,996	59,749	No		No - Had to do	
52	143110: South Rutland RGI	Apr-15	Apr-15	8	2015	564,828	61,695	53,504	(\$1,220)	No Loss Savings	Same Discussion	
53	143112: Gas Turbine RGI breakers relay scada	Feb-15	Mar-15	10	2015	276,655	25,349	28,167	(\$915)	No Loss Savings	Same Discussion	
54	143113: Lalor RGI relay scada	Apr-15	Oct-14	9	2015	156,604	23,438	29,301	(\$178)	No Loss Savings	Same Discussion	
55	143288: Wallingford Transformer Upgrade Substation & Securit		Oct-15	5	2016	589,643	31,640		(\$216)	\$1,599	Discussed	
56	143291: Airport Distribution Substation	Apr-15	Oct-15	9	2016	1,994,871		1,625	\$1,576	\$6,655	Discussed	

Construction Summary by Category and Project		Start Month Per Filing	Start Month Per Project Analysis	Per Filing	Per Filing		Spending Through 5-31-15	O&M Impact	Cost Savings	Alternatives Considered	Recommend		
	143295: Substation Security - Montpelier			6	2016	35,909							
	143296: Georgia Substation Security Purchase and Install			5	2016	43,038							
	143307: Spare 15kV Breaker			2	2016	20,533							
57	143308: 15/28MVA 69/46-12.47kV Spare Transformer		Oct-15	5	2016	848,282		No	No Loss Savings	No			
58	143309: 15/28MVA 34.5-12.47kV Spare Transformer		Oct-15	6	2016	387,437		No	No Loss Savings	No			
	Distribution Substation Minor Adds 2015			4	2015	55,380	9,111	#					
	Distribution Substation Minor Adds 2015			5	2015	55,380	9,111	#					
	Distribution Substation Minor Adds 2015			6	2015	55,380	9,111						
	Distribution Substation Minor Adds 2015			7	2015	55,380	9,111						
	Distribution Substation Minor Adds 2015			8	2015	55,380	9,111						
	Distribution Substation Minor Adds 2015			9	2015	55,380	9,111						
	Distribution Substation Minor Adds 2016			1	2016	56,322	9,266						
	Distribution Substation Minor Adds 2016			2	2016	56,322	9,266						
	Distribution Substation Minor Adds 2016			3	2016	56,322	9,266						
	Distribution Substation Minor Adds 2016			4	2016	56,322	9,266						
	Distribution Substation Minor Adds 2016			5	2016	56,322	9,266						
	Distribution Substation Minor Adds 2016			6	2016	56,322	9,266						
	Distribution Substation Minor Adds 2016			7	2016	56,322	9,266						
	Distribution Substation Minor Adds 2016			8	2016	56,322	9,266						
	Distribution Substation Minor Adds 2016			9	2016	56,322	9,266						
	Distribution Substation Minor Adds 2016			10	2015	56,322	9,266						
	Distribution Substation Minor Adds 2016			11	2015	56,322	9,266						
	Distribution Substation Minor Adds 2016			12	2015	56,322	9,266						
	Communications Equip Amort			9	2015		#####	##					
	Communications Equipm Amort			9	2016	445,624							
	Computer Equipment Amort			9	2016	748,453							
	Computer Equipment Amort			9	2015		#####	##					
	Laboratory Equipment Amort			9	2016	21,779							
	Laboratory Equipment Amort			9	2015	322,359							
	Miscellaneous Equipment Amort			9	2015	36,100							
	Office and Equipment General Amort			9	2016	121,536							
	Office and Equipment General Amort			9	2015	701,673							
	Stores Amort			9	2016	108,395							
	Stores Amort			9	2015	237,670							
	Tools, Shop and Equipment Amort			9	2016	125,214							
	Tools, Shop and Equipment Amort			9	2015	210,924							
	120024 : Stony Brook		On-going	6	2016	11,639	5,000	563,814			9/30/2016		
	120025: Highgate JO 2010		On-going	6	2015	1,239,970	250,000	1,548,673			9/30/2015		
	120025: Highgate JO 2010			6	2016	502,323	100,000				9/30/2016		
	120026 : McNeil Capital		On-going	6	2015	725,317	100,000	1,063,218			9/30/2015		
	120026 : McNeil Capital			6	2016	1,093,965	250,000				9/30/2016		
	126487: Millstone 3 Construction		Nov-12	6	2015	597,018	100,000	2,261,184			9/30/2015		
	126487: Millstone 3 Construction			6	2016	683,210	100,000				9/30/2016		
	126488: Wyman		Nov-12	6	2015	67,127	25,000	83,909			9/30/2015		
	126488: Wyman			6	2016	97,197	25,000				9/30/2016		
	Meter Blanket 2015		Jan-15	9	2015	529,095	11,018	398,783					
	Meter Blanket 2016			9	2016	538,090	11,205						
59	134298: Heat Pump Rental Pilot		Aug-13	Apr-15	9	2016	3,845,553	908,606	\$15k	-	No		
60	137316: eVGO		Jan-14	Apr-15	9	2016	1,143,103	296,073	\$5k	-	Yes*		
61	143534: eHome			Apr-15	9	2016	1,676,049	#	\$15k	-	No		
62	143535: Heat Pump Water Heaters		#####	Apr-15	9	2016	1,434,812	14,547	\$3k	-	No		
63	143537: eGenerator			Apr-15	9	2016	236,169	#	\$5k	-	Best Pricing		
64	143677: DERMS Circuit 51			Apr-15	10	2015	1,441,932	#	\$100k	-	High Level Research		
65	126631 : Proctor Mech Mod ###		Nov-12	Jan-15	5	2015	9,051,802	#####	##	9,035,116	\$277k yr plus	#Benefits in Cost	Discussed

Construction Summary by Category and Project		Start Month Per Filing	Start Month Per Project Analysis	Per Filing	Per Filing			Spending Through 5-31-15	O&M Impact	Cost Savings	Alternatives Considered	Recommend	
66	126632 : Proctor Elec Mod ###	Production	Nov-12	Jan-15	5	2015	4,599,062		4,240,144	Tax & Ins. of \$100k			
67	140385: T4 Searsurg Gearbox Rebuild	Production	Jul-14	Apr-15	9	2015	128,429	12,800	60,774	No	-	No	
	141602: Vergennes Plant Yard Security	Production	Oct-14		9	2015	43,894		26,862				
68	141772: Essex Dam Resurface	Production		Mar-15	10	2015	673,082	100,000	#	No	No	No	3/31/2016
69	141777: Gorge GT Upgrades	Production	Mar-15	Jan-15	10	2015	459,096	75,000	659,736	No	No	Discussed	
70	141779: 2015 Middlesex Unit 1 Mechanical Upgrades	Production		Jul-15	10	2015	220,489	25,000	#	No	No	Discussed	
71	141780 : Peacham Pond Level Indication	Production		Mar-15	8	2015	67,715		#	No	No	No	3/31/2016
72	141843: Proctor Intake Modernization & FERC Post License	Production	Nov-14	Mar-15	11	2015	553,808		2,478	No	No	No	
73	142381: KCW Reveg	Production		Apr-15	9	2015	77,943		#	No	No	-	3/31/2016
74	142742: Weybridge Arch	Production	Jan-15	Jan-15	1	2016	166,263		38,027	No	No	No	
75	142744: Vergennes Archeology oblig	Production	Dec-14	Jan-15	1	2016	136,559		20,067	No	No	No	
76	143334: Arnold Falls Fishing Access	Production	Feb-15	#####	9	2015	147,405		16,763	No	No	Discussed	
77	143336: Belden Hydraulic Grapple & Ferc Rec Improvements	Production		Jan-16	9	2016	109,952			No	No	Discussed	
78	143341: Cavendish Unit 1 & 2 Exciter Control Replacement	Production		Dec-15	3	2016	76,196	5,000		No	No	Discussed	
79	143355: Essex Transformer Containment Upgrades	Production		Sep-15	12	2015	214,149	30,000	#	No	No	No	
80	143356: Fairfax Bearing, Runner, Rotor & Exciter Upgrades	Production		Jun-16	9	2016	129,275	10,000		No	No	No	
81	143364: Marshfield SCADA and Switchgear Upgrades	Production		Jun-15	11	2015	772,786	80,000	#	No	No	No	3/31/2016
82	143367: Middlesex Sluice Gate Rebuild	Production	#####	Mar-15	10	2015	414,380	50,000	527	No	No	No	3/31/2016
83	143375: Silver Lake Generator Rewind	Production		Nov-15	6	2016	342,305			No	No	No	
84	143376: Silver Lake Trashracks and Spillway Upgrades	Production	Apr-15	Mar-16	9	2016	648,650	65,000	1,091	No	No	No	
85	143388: Berlin GT Manifold Upgrades	Production	#####	Apr-15	7	2015	255,595	30,000	6,587	No	No	Discussed	3/31/2016
86	143389: Berlin PLC & HMI Upgrades	Production		Apr-16	9	2016	554,462	50,000		No	No	Yes*	
	143621: Belden Archaeology	Production			1	2016	43,323						
87	143793: Marshfield Roof Upgrades	Production		Jun-15	8	2015	172,566	20,000	#	No	No	No	3/31/2015
	143795: KCW Reveg 2016	Production	Apr-15		9	2016	62,270		221				
88	144147 Stafford Additional Battery Storage and Conduit	Production	Apr-15	Apr-15	8	2015	847,115		8,837	No	No	No	
	Hydro Blanket 2015	Production		Sep-15	9	2015	491,807	33,197	454,943				
	Hydro Blanket 2016	Production		Sep-16	9	2016	500,167	33,761			No	No	
89	138967: New Brattleboro S.C.	Property and Structures	#####	Jan-15	12	2015	2,401,658	#####	377,422	\$18,335	No	Discussed	
90	141447: 2015 Facility Blanket	Property and Structures	Oct-14	Jan-15	9	2015	183,039		75,612	Syr avg	No	No	
	141632 : Col. boiler replacement	Property and Structures			6	2015	11,003	2,136	#				
91	141633: Colchester switchgear replacement	Property and Structures		Aug-15	9	2015	186,481		#	\$500	No	Discussed	
92	141635 : Middlebury office Remodel	Property and Structures	Mar-15	Mar-15	6	2015	443,056	35,000	246,336	No	\$5,000	No	9/30/2015
93	141637: Westminster conf. room	Property and Structures		Jun-15	9	2015	38,070		#	No	No	No	
94	141639: Purchase Dover Land	Property and Structures		Jan-15	8	2015	113,990		#	No	No	No	Delete
95	143162: 2016 Capital Blanket	Property and Structures		Oct-15	9	2016	186,151			Syr avg	No	No	
	143179: Replace Fire Alarm System	Property and Structures			12	2015	5,940	1,000	#				
	143313: HVAC data closets	Property and Structures			12	2015	13,838		#				
	143314: Security System Upgrades	Property and Structures			5	2016	23,979	2,000					
	143467: Poultney Lighting upgrade 16	Property and Structures			3	2016	6,271	3,000					
96	143539: Purchase Land for Burl Sub	Property and Structures	#####	Jan-15	9	2015	115,310		253	No	No	No	Delete
97	143540: Purchase Land Hinesburg	Property and Structures		Oct-15	7	2016	113,844			No	No	No	Delete
98	143541: Purchase Land in Websterville	Property and Structures		Oct-15	7	2016	113,825			No	No	No	Delete
99	143543: Purchase Land in Windsor	Property and Structures		Oct-15	7	2016	113,863			No	No	No	Delete
100	143544: Purchase Land in Bennington	Property and Structures		Oct-15	7	2016	113,823			No	No	No	Delete
101	143545: Purchase Land in Barre	Property and Structures		Oct-15	9	2016	115,063			No	No	No	Delete
102	143551: New OH Door's at WRJ	Property and Structures		Oct-15	7	2016	46,144			No	No	No	
	143552: Canopy Addition WRJ	Property and Structures			9	2016	15,171						
103	143553: DDC Upgrade	Property and Structures		Oct-15	9	2016	57,240	8,000		No	\$120/trip	No	
	143555: EMF-Oil Filled Equipment Containment Area	Property and Structures			9	2016	29,549	5,000					
	143556: Springfield DDC System Additions	Property and Structures			9	2016	23,166	1,000					
	143557: Sunderland DDC Additions	Property and Structures			9	2016	21,708	1,000					
	143560: Operations Headquarters-Covered Vehicle Storage	Property and Structures			9	2016	51,072						
	143575: Montpelier/Colchester Fuel Island	Property and Structures			2	2016	143,664	15,000					

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104	143576: Colchester Data Center	Property and Structures	Oct-15	9	2016	1,812,912	50,000		\$1,000	No	No		
105	143577: White River District Pavement install	Property and Structures	Oct-15	2	2016	408,615			No	\$5,000 yr	No		
106	143649 Middlebury Generator	Property and Structures	Oct-15	10	2015	138,573	30,000		No	No	No		
	Regulators and Capacitor	Regulators and Capacitor		9	2016	848,319	13,470						
	Regulators and Capacitor	Regulators and Capacitor		9	2015	834,139	13,245	#					
	Transformers	Transformers		9	2016	3,392,582	53,868						
	Transformers	Transformers		9	2015	3,335,873	52,968	3,391,526					
	135212 : So Shaftsbury SCADA MOABs	Transmission Lines	Apr-14	6	2016	22,065	7,610	8,409					
107	138957: 2016 Marble Street to Danby Reconstruction	Transmission Lines	Oct-15	9	2016	1,569,335	187,231		No	No Loss Savings	Discussed		
108	141651: TL Line 36 Reconstruction 2015	Transmission Lines	Oct-14	9	2015	841,762	97,271	435,260	No	No Loss Savings	Discussed		
109	141653 : Milton to Wyeth Reconductor	Transmission Lines	Nov-14	Feb-15	5	2015	1,158,234	115,000	198,815	No	No Loss Savings	Discussed	3/31/2016
110	141654 : White River Tap 46kV Transmission Line	Transmission Lines	Nov-14	Feb-15	9	2015	1,386,985		134,808	\$2,224	No Loss Savings	Discussed	3/31/2016
111	141655 : 3309 Line Reconstruction for 16Y3	Transmission Lines	Nov-14	Feb-15	4	2015	533,466	53,000	420,689	No	No Loss Savings	Discussed	6/30/2015
112	141656: 2015 Loadbreaks and Motor Operators	Transmission Lines	#####	9	2015	94,540		#	No	No Loss Savings	No	Delete	
113	141657 : Purchase 46kV Transmission Line from VELCO	Transmission Lines	Sep-15	9	2015	2,203,272		#	\$4,538	No Loss Savings	Discussed		
114	143180: Smead Rd to Quarry Rd 46kV Partial Reconductor	Transmission Lines	Jun-16	6	2016	100,350	10,000		No	\$5k over 20yrs.	Discussed		
115	143181: Smead Rd to Silver Lake 46kV Reconductor	Transmission Lines	Jun-16	8	2016	493,582	48,000		No	\$45k over 20yrs.	Discussed		
116	143182: Claremont to Charlestown Partial Reconductor	Transmission Lines	#####	5	2016	252,765	11,000		No	\$17k over 20yrs.	No		
117	143183: East Jamaica Tap 236 and 827 Motor Operators	Transmission Lines	Aug-16	8	2016	192,769	20,000		\$502	No Loss Savings	Discussed		
118	143184: Sherburne Tap Loadbreaks and Motor Operators	Transmission Lines	Jun-16	6	2016	272,945	7,000		\$502	No Loss Savings	Discussed		
	143506: Husky Tap RTU	Transmission Lines		4	2016	40,338	7,610						
	143507: North Elm Tap RTU	Transmission Lines		4	2016	47,821	7,610						
119	143570: Fiber to Marshfield Dam	Transmission Lines	Oct-14	7	2016	94,179			No	-	Yes*		
120	143694 : Ascutney to Claremont Partial Reconductor	Transmission Lines	Jun-16	9	2016	1,071,126	100,000		No	-	No		
121	132935: Ballard Road Substation	Transmission Substations	Jul-13	Jan-15	5	2015	1,253,179	1,368,737	\$1,992	\$22,294	Discussed		
	138411: HSCAT 3303 87L	Transmission Substations	Jun-14	5	2015	34,727	23,289					9/30/2015	
	138413: HSCAT 3326 87L	Transmission Substations	Jul-14	2	2016	35,598	12,305						
	138415: HSCAT 3325 PUTT	Transmission Substations	Apr-14	2	2016	25,981	12,633						
	138416: HSCAT 3321 PUTT	Transmission Substations	Apr-14	4	2015	76,722	97,534						
	138418: HSCAT 3309 PUTT	Transmission Substations	Apr-14	7	2015	53,495	32,207						
	138419: HSCAT 3312 87L	Transmission Substations	Apr-14	7	2015	34,794	8,200						
	138420: HSCAT 3302 87L	Transmission Substations	Apr-14	9	2015	27,613	8,339						
	138422: HSCAT 3313 PUTT	Transmission Substations	Jul-14	3	2016	48,624	11,673						
	138423: HSCAT 3304 Putt	Transmission Substations	Feb-15	3	2016	70,710	5,025						
	138424: HSCAT 3306 Putt	Transmission Substations	Feb-15	3	2016	71,869	6,707						
	139035: JOHNSON - SUB SECURITY	Transmission Substations	Aug-14	6	2015	35,338	19,293						
	139962: Sand Rd 3302 Relocation	Transmission Substations	Jul-14	6	2015	144,165	126,738					9/30/2015	
	141608: Smead Road Sub Security	Transmission Substations	Oct-14	5	2015	40,966	17,003					9/30/2015	
122	141613: Gorge 16Y3 Breaker Reactors	Transmission Substations	#####	Jun-15	11	2015	336,536	73,083	\$413	No Loss Savings	Discussed		
	143297: Transmission Breaker Change Out Essex 3314	Transmission Substations		1	2016	98,619	50,874						
123	143299: Transmission Breaker Change Out Digital 3330 & 3332	Transmission Substations	Oct-15	4	2016	176,507	29,086		(\$432)	No Loss Savings	Discussed		
124	143301: Transmission Breaker Change Out Cavendish B-17	Transmission Substations	Oct-15	4	2016	116,289	43,212		(\$216)	No Loss Savings	Discussed		
125	143303: Fence Job - Ascutney	Transmission Substations	Apr-15	Oct-15	11	2015	110,022	3,877	820	No	No Loss Savings	Fence not current	
126	143305 : Middlesex Substation #2 Security	Transmission Substations		Jan-15	5	2016	37,068		No	No Loss Savings	Motion Detectors		
127	143311: VELCO Irasburg H14	Transmission Substations	Oct-15	10	2015	38,182	9,694	#	(\$89)	No Loss Savings	No		
128	143312: VELCO Fairfax Capacitor Bank	Transmission Substations	Oct-15	10	2015	932,509		#	\$89	No Loss Savings	Discussed		
	143498 : ADAS Montpelier	Transmission Substations		1	2016	9,501							
	143502: ADAS Little River	Transmission Substations		2	2016	10,323							
	143503: ADAS Vergennes	Transmission Substations		3	2016	9,502							
129	143584: Line VT Replacements	Transmission Substations	Oct-15	2	2016	285,521	6,084		No	No Loss Savings	No		
	Transmission Substation Minor Adds 2015	Transmission Substations		4	2015	103,738	9,882	#					
	Transmission Substation Minor Adds 2015	Transmission Substations		5	2015	103,738	9,882	#					
	Transmission Substation Minor Adds 2015	Transmission Substations		6	2015	103,738	9,882						
	Transmission Substation Minor Adds 2015	Transmission Substations		7	2015	103,738	9,882						

Construction Summary by Category and Project		Start Month Per Filing	Start Month Per Project Analysis	Per Filing	Per Filing		Spending Through 5-31-15	O&M Impact	Cost Savings	Alternatives Considered	Recommend	
	Transmission Substation Minor Adds 2015			8	2015	103,738	9,882					
	Transmission Substation Minor Adds 2015			9	2015	103,738	9,882					
	Transmission Substation Minor Adds 2015			10	2015	105,502	10,050					
	Transmission Substation Minor Adds 2015			1	2016	105,502	10,050					
	Transmission Substation Minor Adds 2015			2	2016	105,502	10,050					
	Transmission Substation Minor Adds 2015			3	2016	105,502	10,050					
	Transmission Substation Minor Adds 2015			4	2016	105,502	10,050					
	Transmission Substation Minor Adds 2015			5	2016	105,502	10,050					
	Transmission Substation Minor Adds 2015			6	2016	105,502	10,050					
	Transmission Substation Minor Adds 2015			7	2016	105,502	10,050					
	Transmission Substation Minor Adds 2015			8	2016	105,502	10,050					
	Transmission Substation Minor Adds 2015			9	2016	105,502	10,050					
	Transmission Substation Minor Adds 2015			11	2015	105,502	10,050					
	Transmission Substation Minor Adds 2015			12	2015	105,502	10,050					
130	141919: 2015 Fleet		Oct-14	9	2015	2,872,109	##### #	#	\$98k	No	No Alternatives	3/31/2016
131	143561: 2016 Pur Buckets and Diggers	Mar-15	Oct-15	6	2016	2,858,694	##### #	75	\$69k	No	No Alternatives	
132	143562: 2016 Pur Trailers		Jan-15	10	2015	124,768		#	\$814	No	No Alternatives	3/31/2016
133	143563: 2016 Pur Small Trucks		Oct-15	3	2016	1,282,841	323,802		\$52k	No	No Alternatives	
134	143565: Fleet Fuel System		Jan-16	3	2016	220,261	161,020		\$4k	No	No Alternatives	
						<u>141,778,905</u>	<u>21,950,586</u>	<u>38,625,941</u>				

No cost or cost savings or alternatives considered								87	111	71
Not addressed									8	3
	Not started as noted or no start date.				# - No 2015 costs	Percentages		64.93%	88.81%	55.22%

\* No explanation why alternative was not selected.  
 ### Cost benefit analysis provided is in PDF so it is impossible to review computation and assumptions.