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**Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty  
2023 Vegetation Management Program Plan  
Attachment 1 - O&M Expenses**

| Line No. |  | CY 2023            | CY 2023            | Variance            |
|----------|--|--------------------|--------------------|---------------------|
|          |  | Budgeted Expenses  | Actual Expenses    | Budget Less Actuals |
|          |  | (a)                | (b)                | (c)                 |
| 1        | Planned Miles  | 165.09             | 146.34             | 18.75               |
| 2        |  |                    |                    |                     |
| 3        | <b>VMP O&amp;M Costs</b>                                       |                    |                    |                     |
| 4        | <b>UNPLANNED WORK</b>  |                    |                    |                     |
| 5        | Spot Tree Trimming   | \$46,500           | \$28,951           | \$17,549            |
| 6        | Make Safe Removals   | \$20,000           | \$44,161           | (\$24,161)          |
| 7        | Trouble and Restoration Maintenance                            | \$46,500           | \$85,218           | (\$38,718)          |
| 8        | Interim Trimming   | \$46,500           | \$66,751           | (\$20,251)          |
| 9        |  |                    |                    |                     |
| 10       | <b>PLANNED WORK</b>  |                    |                    |                     |
| 11       | (a) Circuit Work   |                    |                    |                     |
| 12       | Work Planners for Veg Plan                                     | \$220,000          | \$321,803          | (\$101,803)         |
| 13       | Planned Cycle Trimming   | \$1,435,663        | \$1,195,887        | \$239,777           |
| 14       | Hazard Tree Removal  | \$50,000           | \$8,163            | \$41,837            |
| 15       |  |                    |                    |                     |
| 16       | (b) Right of Way ("ROW")                                       |                    |                    |                     |
| 17       | Herbicide  | \$69,210           | \$4,080            | \$65,130            |
| 18       | Pollinator Education/Habitat                                   | \$5,000            | \$0                | \$5,000             |
| 19       | Monarch Butterfly Conservation                                 | \$20,000           | \$0                | \$20,000            |
| 20       | Sub-Transmission Right of Way Clearing                         | \$0                | \$8,459            | (\$8,459)           |
| 21       |  |                    |                    |                     |
| 22       | (c) OTHER  |                    |                    |                     |
| 23       | Police Detail Expenses - Cycle Trimming & Other                | \$324,836          | \$312,066          | \$12,769            |
| 24       | Tree Planting  | \$20,000           | \$0                | \$20,000            |
| 25       | AI- Dash   | \$42,000           | \$42,000           | \$0                 |
| 26       | Terra Spectrum   | \$25,000           | \$22,670           | \$2,330             |
| 27       | Mailers/ Permissions   | \$3,500            | \$8,303            | (\$4,803)           |
| 28       | Permit Fees  | \$25,000           | \$1,250            | \$23,750            |
| 29       | Training*  | \$20,000           | \$0                | \$20,000            |
| 30       | <b>Total VMP O&amp;M Expenses (Over)/Under</b>                 | <b>\$2,419,709</b> | <b>\$2,149,760</b> | <b>\$269,949</b>    |
| 31       | *Training was completed and reflected in line 13.              |                    |                    |                     |
| 32       |  |                    |                    |                     |
| 33       | Base Distribution Rates per Order No. 26,376                   | \$2,200,000        |                    |                     |
| 34       | Authorized Increase/(Decrease) per Order No. 26,805            | \$0                |                    |                     |
| 35       | 10% Overage Cap per Order No. 26,376                           | \$220,000          |                    |                     |
| 36       | Total VMP with Cap   | \$2,420,000        |                    |                     |
| 37       |  |                    |                    |                     |
| 38       | Total Allowed Recovery per DE 19-064 Settlement                | \$2,420,000        | \$2,420,000        |                     |
| 39       | <b>Difference from Total VMP O&amp;M Expenses (Over)/Under</b> | <b>(\$291)</b>     | <b>\$270,240</b>   |                     |
| 40       |  |                    |                    |                     |
| 41       | Total Collected in Rates                                       | \$2,200,000        | \$2,200,000        |                     |
| 42       | <b>Difference from Total VMP O&amp;M Expenses (Over)/Under</b> | <b>\$219,709</b>   | <b>\$50,240</b>    |                     |
| 43       |  |                    |                    |                     |
| 44       | <b>Cost Per Mile</b>   | <b>\$14,657</b>    | <b>\$14,690</b>    |                     |

*Reference:*

*Column (a): Original Budget for 2023*

*Column (b): Actual Spending for 2023*

*Column (c): Column (a) - Column (b)*

**Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty  
2023 Vegetation Management Program Plan  
Attachment 2**

| <u>Line No.</u> | <u>Activities</u>                               | <u>Program Plan (*)</u>                  | <u>Reference</u>                                  |
|-----------------|---|--|---|
| 1               | Spot Tree Trimming                              | As needed                                | See Appendix 4 of CY2023 VMP Plan for definitions |
| 2               | Trouble and Restoration Maintenance             | As needed                                | See Appendix 4 of CY2023 VMP Plan for definitions |
| 3               | Planned Cycle Trimming                          | 165.09                                   | See Appendix 4 of CY2023 VMP Plan for definitions |
| 4               | Police Detail Expenses - Cycle Trimming & Other | As needed                                | See Appendix 4 of CY2023 VMP Plan for definitions |
| 5               | Hazard Tree Removal                             | As needed                                | See Appendix 4 of CY2023 VMP Plan for definitions |
| 6               | Enhanced Hazard Tree Removal                    | As needed                                | See Appendix 4 of CY2023 VMP Plan for definitions |
| 7               | Interim Trimming                                | As needed                                | See Appendix 4 of CY2023 VMP Plan for definitions |
| 8               | Tree Planting                                   | As needed                                | See Appendix 4 of CY2023 VMP Plan for definitions |
| 9               |   |  |   |
| 10              | <b>Substation</b>                               | <b>Feeder</b>                            | <b>OH - Distribution Planned</b>                  |
| 11              | Golden Rock #19                                 | 19L8                                     | 11.28   |
| 12              | Spicket River #13                               | 19L6                                     | 10.24   |
| 13              | Spicket River #13                               | 13L2                                     | 18.75   |
| 14              | Villas Bridge #12                               | 12L1                                     | 124.82  |
| 15              |   | <b>Total OH Miles - Distribution</b>     | <b>165.09</b>                                     |
| 16              |   |  |   |
| 17              | <b>Sub transmission</b>                         |  | <b>OH Miles - Sub transmission</b>                |
| 18              |   | <b>Total OH Miles - Sub transmission</b> | <b>0 Miles &amp; 0 Acres</b>                      |
| 19              |   |  | <b>OH Miles - Sub transmission Completed</b>      |
|                 |   |  | <b>0 Miles &amp; 0 Acres</b>                      |



CY2023 Vegetation Management Program (VMP) Plan

# Report on CY2023 Vegetation Management Program (VMP) Plan

November 15, 2022





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## 1. Executive Summary

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty (“Liberty” or the “Company”) hereby submits its proposed Vegetation Management Plan (“VMP”) for the calendar year 2023 (“CY2023 Plan”). This CY2023 Plan is submitted consistent with the requirements in Attachment F to the Settlement Agreement in Docket No. DE 13-063 which was approved by the Commission in Order No. 25,638 (March 17, 2014), as further amended by the Settlement Agreement in Docket No. DE 19-064 approved by Commission Order No. 26,376 (June 30, 2020). For convenience, a copy of the VMP Plan from DE 13-063 is included in Appendix 3 and the definitions are included in Appendix 4. Liberty is proposing to trim 165 miles in 2023 at a cost of \$2,419,709.

The following information contained within this plan will provide an outline of Liberty’s 2023 program.

## 2. Program History

Since 2007, the Company has followed the Vegetation Management and Reliability Enhancement Programs provided to the Company from Order No. 24,777 (July 12, 2007), as amended by Order No. 25,638 (March 17, 2014), as further amended by Order No. 26,005 (April 12, 2017), and the latest amendment which was part of a settlement agreement in Docket No. DE 19-064, which provided for \$2,200,000 included in base rates, with a cap of up to an additional ten percent, for a potential total annual spend of \$2,420,000.

In general, the VMP includes categories of O&M spending targeted to maintain and improve reliability performance. The program is premised on the understanding that a certain amount of annual spending on O&M activities is necessary to maintain the safety and reliability of the Company’s electric distribution system. The VMP activities consist of Planned Cycle Trimming, Interim, Spot, and Trouble Tree Trimming, Work Planning, Traffic Detail, Tree Removal, Tree Planting, and Right of Way work for floor and side.

The current VMP establishes the following corridor requirements for clearances under Puc 307.10 on no more than a five-year cycle:

- 10 feet below the conductors,
- 8 feet to the side of the nearest conductor, and
- 15 feet above the conductors, at the time of clearing.

In rural areas, the Company seeks to obtain the clearance of all capable tree seedlings and lower branches of established trees to minimize future work. In urban areas, where work can be more



## CY2023 Vegetation Management Program (VMP) Plan

customer-sensitive, Liberty seeks the same clearance as the rural areas but allows a reduced scope of work for concerns and sensitivities of the adjacent landowner where needed or requested. In urban areas, Liberty leaves lower branches under the communication wires, often referred to as a “shelf,” when requested or if previously established. The Company still seeks to remove young capable trees in this zone; however, in urban areas, if requested Liberty may trim the top of that capable brush to leave a requested screening.

### A. Right of Way (ROW) Maintenance

The Company’s first four-year cycle adjusted the scope of work to obtain improved corridor maintenance with improved sight line and reduced vegetation contact potential. The Company, now in its second four-year cycle, is now able to mow the supply ROW lines to provide the much-needed sight line visibility. This activity also prepares the corridors for Integrated Vegetation Management (IVM) of a variety of sustainable and cost-effective techniques as Liberty moves through the upcoming cycles of work. The 2023 budget includes plans to reinstate the selective herbicide treatment that National Grid previously incorporated into the VM program. Selective herbicide applications will be one of many necessary methods of addressing the ROW in the future.

The 2023 budget does not have mowing or sideline work budgeted for the ROWs. The Company adjusted most of the 2022 and 2023 ROW clearing and side work to be performed in CY2021 for the Lebanon ROWs to accommodate workforce availability and needs. Additionally, much of the Salem area ROWs were mowed as part of the 2020 and 2022 ROW maintenance and preparation of capital construction. The result is the ROWs in both areas have been addressed, thus the Company has a small budget for spot or emergency work to perform along the ROWs in 2023. Most of the budget allocation is for herbicide and other program needs as shown in Appendix 1 lines 13 through 20.

### B. PUC 307.10 & ANSI Z133-2017 impacts to the Company VMP

Additional safety standards were created for tree pruning: Puc 307.10 in 2014, and ANSI Z133-2017 in 2017.

Prior to Puc 307.10, the Company’s tree removals were mostly Fall-In risks. Fall-in trees are those that are tall enough and within a distance from the conductor that their high risk is that they fall in. The corridor was fairly established, and unit price trees started at 9” Diameter at Breast Height (DBH) (diameter of tree four and one-half feet from ground). With the implementation of Puc 307.10 and its definition of a *narrower* corridor,



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the quantity of Grow-In/Corridor Creation trees was well beyond the quantity and scope and allocated funds required to remove these impacted trees within the newly defined corridor. The result of this to Liberty and its customers is the inability to achieve the 8' corridor given current funding.

Tree removal is necessary to move from the previous six-foot side clearance to the new eight-foot side clearance requirement of Puc 307.10 and to potentially decrease the number of future removals of five-inch to twelve-inch diameter trees in subsequent cycles.

### C. Tree Risk Management

The best way to achieve the requirements of Puc 307.10 is through removal, rather than pruning or allowing the trees to remain in the corridor. These tree and limb removals align with best practices in the industry and follow professional standards of arboriculture, reliability concerns, and cost-effectiveness.

Under ANSI Z133-2017, if a property owner engaged a trained and skilled private tree care company to perform tree work within proximity to the wires, there are situations in which that contractor could not perform the work. While the contractor may be qualified to work for a utility when working for residential customers, their standards are different. These implications can lead to the Utility having to trim in locations where residential contractors would have been able to trim, therefore leading to increased costs for the utility.

### 3. Funding the VMP Program

The DE 19-064 Settlement Agreement provided for \$2,200,000 to be included in base rates, with a cap of up to an additional ten percent, for a potential total annual spend of \$2,420,000.

Up until 2020, the Company also received payment from Consolidated Communications for their portion of the VMP costs. The average Company spend on VMP from 2010 through 2019, when Consolidated reimbursements were included in the VMP filings, was approximately \$1,800,000, plus an average annual revenue from Consolidated Communications of approximately \$369,150, or 21%. In 2019, the Company was notified by Consolidated Communications that they would no longer pay their portion of the VMP Program due to language within the existing contract between the Company and Consolidated Communications dating back to the early 1980s when both telecommunications and utilities were regulated. A provision embedded within the contract provided for either company to cancel payment with notice provided. During the last rate case





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proceeding, (Docket No. DE 19-064), the Company included the revenue from Consolidated Communications within the calculations for required VMP funding. Therefore, without this incremental revenue provided by Consolidated Communications, the Company was left deficient in sufficient funding required to fully exercise the proposed VMP.

As described above, the DE 19-064 agreed-upon funding of \$2,200,000 plus an up to ten percent overage (\$2,420,000 total) does not fully fund the Liberty required four-year trim cycle nor its ability to meet Puc 307.10. The funding level agreed to within DE 19-064 including the Consolidated Communication revenue, which at the time the Agreement was negotiated, was sufficient. Given the circumstances that occurred beyond the ruling of DE 19-064, the Company has been unable to meet the current four-year trim cycle and Puc 307.10 clearances. Table 1 provides an overview of total costs and costs per mile since 2017.

**Table 1 – Overall Costs 2017 – 2021**

| Overall Costs |                            |        |          |
|---------------|----------------------------|--------|----------|
| Year          | Planned Cycle              |        | Cost     |
|               | Trimming Cost <sup>1</sup> | Miles  | Per Mile |
| 2017          | \$1,734,375                | 220.17 | \$7,877  |
| 2018          | \$1,853,064                | 219.54 | \$8,441  |
| 2019          | \$1,871,335                | 222.44 | \$8,413  |
| 2020          | \$2,252,131                | 194.13 | \$11,601 |
| 2021          | \$1,651,358                | 83.94  | \$19,673 |

<sup>1</sup> Spot tree trimming, trouble & restoration maintenance, planned cycle trimming, police detail, hazard tree removal, interim trimming, sub transmission

**A. Incremental Cost Drivers**

When considering the above incremental cost factors, a cyclical cause-and-effect impact is occurring. The backlog miles and ANSI trimming requirements and fewer tree removals are leading to more “trim triage” where the Company is having to spend incremental dollars allocated to cycle trimming on “hot spots” to triage the current electrical distribution system. As the Company continues to have funding at current levels, this cyclical impact of “trim triage” will continue and have a much larger and more significant O&M impact on the Company.

**B. Traffic Control**

The field requirement for traffic control depends on the traffic visibility, volume, and speed of the work area. There are varying levels of control needs. The cost of traffic



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control is directly related to how many tree crews are performing various planned and unplanned maintenance activities and in which municipalities those crews are working. Liberty's Salem district towns, comprised of Salem, Pelham, Windham, and Derry, continue to require police details and at times require multiple units. Depending on what circuits are trimmed each year will dictate the traffic control costs. Table 2 provides an overview of traffic control costs incurred since 2017.

**Table 2 – Summary of Traffic Control Costs**

| Traffic Control |           |        |          |
|-----------------|-----------|--------|----------|
| Year            | Total     | Miles  | Cost     |
|                 | Costs     |        | Per Mile |
| 2017            | \$330,698 | 220.17 | \$1,502  |
| 2018            | \$402,083 | 219.54 | \$1,831  |
| 2019            | \$323,140 | 222.44 | \$1,453  |
| 2020            | \$267,960 | 194.13 | \$1,380  |
| 2021            | \$97,436  | 83.94  | \$1,161  |

#### 4. State of Liberty Utilities Vegetation Management Contractors

During the 2022 VMP proceeding, the Company stated that it would trim 153 miles for a cost of \$3,069,639. The Company also stated that its current contractor, Asplundh, was assessing the addition of a “mechanized” tree trimmer. The benefit of a mechanized tree trimmer was to address the workforce shortage plaguing the Vegetation Management industry. It functions as a workforce multiplier.

In the second quarter of 2022, the Company, in collaboration with Asplundh, was able to secure the mechanized tree trimmer along with a full-time permanent tree crew within its Salem territory in the third quarter. The Company is now fully staffed with full-time Vegetation Management tree crews in its operating areas (Salem, Lebanon/Charlestown). It is projected in 2023 that with full-time staffing and the mechanized trimmer, Liberty is on track to trim approximately 165 miles, which will get the Company close to a five-year trim cycle.

#### 5. Deferred work

Based on the information provided above regarding the makeup of crews and revenue shortfall, the Company currently has 214 miles that are deferred. While the Company will trim 165 miles in 2023, this will not have an impact on the current backlog. It will however slow the growth of the



CY2023 Vegetation Management Program (VMP) Plan

backlog of a four-year cycle. The deferred pruning work, in addition to owner-restricted pruning sites and deferred removals, will adversely affect our reliability and expenses of unplanned work.

**6. CY2023 Plan**

The O&M costs for VMP activities for 2023 are shown in Appendix 1. As stated above, the costs include accommodations for the loss of monetary contribution from Consolidated Communications, the increased costs of the workforce, and the current costs related to vegetation management work to perform the work and meet a five-year cycle. The Company is committed to spending a total of \$2,419,709. This will allow the Company to complete 165 miles of trimming in 2023.

The cost offset to trim 165 miles in 2023 is a reduction in spending for tree removals and work planning. It costs approximately \$2,070 per mile to remove identified hazard trees on the circuits being trimmed. If the 165 miles of trimming included tree removals, the total tree removal cost would be \$341,736. To trim all of the 12L1 circuit in the Charlestown area, the Company will not be removing trees during the trimming process and has budgeted \$50,000 for limb removals during cycle pruning and whole tree removals in need of immediate attention due to safety. Liberty has also reduced its work planners from three to two to allow for more dollars to be allocated to trimming circuit miles.

Table 3 provides a summary of VMP costs for 2023. The table breaks down four scenarios, (A) trimming at the DE 19-064 approved amount, (B) five-year cycle, (C.) four-year cycle, and (D) four-year cycle plus catch up of previous years.

**Table 3 – Summary of VMP 2023 Costs**

|                | Summary of VMP Costs |             |             |                   |
|----------------|----------------------|-------------|-------------|-------------------|
|                | (A)                  | (B)         | (C)         | (D)               |
|                | CY 2023              | CY 2023     | CY 2023     | CY 2023 Trim Plus |
|                | 5+ Yr Cycle          | 5 Yr Cycle  | 4 Yr Cycle  | Deferred Miles    |
| Deferred Miles | 0                    | 0           | 0           | 214               |
| 2023 Miles     | <u>165</u>           | <u>194</u>  | <u>214</u>  | <u>194</u>        |
| Total Miles    | 165                  | 194         | 214         | 408               |
| Total Cost     | \$2,419,709          | \$3,086,423 | \$3,305,853 | \$6,023,957       |

The approximate cost per mile is \$14,657 for 2023 as shown in Appendix 1 line 26.

The Company has also included the following items in Appendix 1:



## CY2023 Vegetation Management Program (VMP) Plan

- Spot tree trimming/removals: \$46,500, single trees found that may need removal or trimming outside of planned cycle work.
- Herbicide treatment: \$69,210, most of the supply lines have been mowed so the Company is treating these sub-transmission areas with herbicide for efficient maintenance of the corridor; this was deferred from 2022.
- The company has entered a Pilot program with Ai-Dash to investigate the value of satellite imagery and artificial intelligence to assist in identifying the condition of the system as it related to vegetation and consider Condition Based Management viability. Liberty intends to review the findings and compare them to field findings and look to implement some of the priority work recommendations as samples to identify potential alternate work efficiencies. The total cost is \$42,000.

## 7. Conclusion

### A. 2022 Successes

While a myriad of different challenges have created implications for the Company's VMP, the Company was able to adjust the program to allow for a local Salem crew to be on property full-time to address the required trimming miles in the Salem area. In collaboration with Asplundh, the Company was able to secure and approve the use and dedication of mechanized equipment, mechanical mower, and pruner (Jarraff) to function as workforce multipliers. This will stabilize resources and costs moving forward. The Company was also able to secure two incremental contracted resources in 2022, Enviro Arbor Solutions Tree Service and Wright Tree Service, to accomplish approximately 60 miles of vegetation in the Salem district.

### B. 2023 Plan

Liberty believes that implementation of the vegetation management programs described herein, particularly including funding at the level exceeding the O&M budget, is necessary to ensure that Liberty remains on its current path targeted to maintaining and continually improving reliability performance, performing industry best practices and comply with Puc 307.10 and ANSI Z133-2017. These programs have contributed to actual performance improvements seen in recent years, and Liberty is committed to sustaining that improvement. Liberty intends to engage the Department of Energy to discuss the 2023 Plan as presented.



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**Appendix 1 - O&M Expenses**

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| Line | (A)                   | (B)                   | (C)                   | (D)                               |
|------|-----------------------|-----------------------|-----------------------|-----------------------------------|
|      | CY 2023<br>5 Yr Cycle | CY 2023<br>5 Yr Cycle | CY 2023<br>4 Yr Cycle | CY 2023 Trm P us<br>Deferred M es |
| 1    |                       |                       |                       | 214.00                            |
| 2    | 165.09                | 194.38                | 213.79                | 194.00                            |
| 3    | 165.09                | 194.38                | 213.79                | 408.00                            |
| 4    | <u>VMP Costs</u>      |                       |                       |                                   |
| 5    | \$220,000             | \$330,000             | \$330,000             | \$660,000                         |
| 6    | \$46,500              | \$61,500              | \$61,500              | \$61,500                          |
| 7    | \$46,500              | \$46,500              | \$46,500              | \$46,500                          |
| 8    | \$1,435,663           | \$1,535,750           | \$1,661,779           | \$1,610,335                       |
| 9    | \$324,836             | \$414,096             | \$434,774             | \$746,345                         |
| 10   | \$50,000              | \$402,367             | \$442,545             | \$844,477                         |
| 11   | \$46,500              | \$46,500              | \$46,500              | \$46,500                          |
| 12   | \$20,000              | \$20,000              | \$20,000              | \$20,000                          |
| 13   | \$69,210              | \$69,210              | \$69,210              | \$69,210                          |
| 14   | \$5,000               | \$5,000               | \$5,000               | \$5,000                           |
| 15   | \$20,000              | \$20,000              | \$20,000              | \$20,000                          |
| 16   | \$42,000              | \$42,000              | \$42,000              | \$42,000                          |
| 17   | \$3,500               | \$3,500               | \$3,500               | \$3,500                           |
| 18   | \$25,000              | \$25,000              | \$25,000              | \$25,000                          |
| 19   | \$25,000              | \$25,000              | \$25,000              | \$25,000                          |
| 20   | \$20,000              | \$20,000              | \$20,000              | \$20,000                          |
| 21   | \$0                   | \$0                   | \$31,545              | \$96,811                          |
| 22   | \$20,000              | \$20,000              | \$20,000              | \$20,000                          |
| 23   | \$2,419,709           | \$3,086,423           | \$3,304,853           | \$4,362,178                       |
| 24   | \$2,420,000           | \$2,420,000           | \$2,420,000           | \$2,420,000                       |
| 25   | \$291                 | \$666,423             | \$884,853             | \$1,942,178                       |
| 26   | \$14,657              | \$15,878              | \$15,458              | \$10,692                          |

Appendix 2 - O&M Expenses

CY 2022 Vegetation Management Activities

|      | (A)            |               | (B)            |               | (C)            |               | (D)            |               |
|------|----------------|---------------|----------------|---------------|----------------|---------------|----------------|---------------|
| Line | <u>Circuit</u> | <u>Miles</u>  | <u>Circuit</u> | <u>Miles</u>  | <u>Circuit</u> | <u>Miles</u>  | <u>Circuit</u> | <u>Miles</u>  |
| 1    |                |               |                |               |                |               |                |               |
| 2    | 19L8           | 11.28         | 12L1           | 124.82        | 1L1            | 13.35         | 12L1           | 124.82        |
| 3    | 19L6           | 10.24         | 14L3           | 33.60         | 6L3            | 26.79         | 1L3            | 8.07          |
| 4    | 13L2           | 18.75         | 19L6           | 11.28         | 13L2           | 23.75         | 11L2           | 5.41          |
| 5    | 12L1           | 124.82        | 19L8           | 10.24         | 14L3           | 33.60         | 6L4            | 0.96          |
| 6    | Tota           | <u>165.09</u> | 6L4            | 0.96          | 14L4           | 16.49         | 7L2            | 33.39         |
| 7    |                |               | 11L2           | 5.41          | 15 1           | 11.41         | 13L2           | 23.75         |
| 8    |                |               | 1L3            | 8.07          | 16L1           | 41.74         | 14L3           | 33.60         |
| 9    |                |               | Tota           | <u>194.38</u> | 16L3           | 9.24          | 19L8           | 11.28         |
| 10   |                |               |                |               | 16L5           | 9.29          | 19L6           | 10.24         |
| 11   |                |               |                |               | 18L2           | 10.91         | 1L1            | 13.35         |
| 12   |                |               |                |               | 18L3           | 5.95          | 6L3            | 26.79         |
| 13   |                |               |                |               | 39L1           | 1.87          | 14L4           | 16.49         |
| 14   |                |               |                |               | 40L1           | 9.40          | 15 1           | 11.41         |
| 15   |                |               |                |               | Tota           | <u>213.79</u> | 16L1           | 41.74         |
| 16   |                |               |                |               |                |               | 16L3           | 9.24          |
| 17   |                |               |                |               |                |               | 16L5           | 9.29          |
| 18   |                |               |                |               |                |               | 18L2           | 10.91         |
| 19   |                |               |                |               |                |               | 18L3           | 5.95          |
| 20   |                |               |                |               |                |               | 39L1           | 1.87          |
| 21   |                |               |                |               |                |               | 40L1           | 9.40          |
| 22   |                |               |                |               |                |               | Tota           | <u>407.96</u> |

## Granite State Electric Company

### Reliability Enhancement Program and Vegetation Management Program

#### Docket No. DE 13-063

#### I. **REP and VMP Commitment**

Beginning April 1, 2014 and until the conclusion of the Company's next distribution rate case, the Company will continue its Reliability Enhancement Program ("REP") and a Vegetation Management Program ("VMP") (collectively, the "Program"), as set forth below.

#### II. **Definitions of REP and VMP Activities**

- a. Activities included in the REP are the following:
  - i. Spacer Cable Expansion/Bare Conductor Replacement
  - ii. Single Phase Recloser Replacement/Expansion
  - iii. Trip Saver Applications
  
- b. **Activities and expenses included in the VMP are set forth below:**
  - i. Spot Tree Trimming;
  - ii. Trouble & Restoration Maintenance;
  - iii. Planned Cycle Trimming;
  - iv. Cycle Trimming Police Details Expenses;
  - v. Hazard Tree Removal;
  - vi. Interim Trimming;
  - vii. Tree Planting;
  - viii. Subtransmission Right of Way Clearing; and
  - ix. Other Police Detail Expenses.

#### III. **REP and VMP for FY 2014 and Thereafter**

- a. Beginning with November 15, 2014, the Company will provide its REP and VMP plan (the "Plan") to Staff for the following calendar year for Staff's review. The Company will meet with Staff in technical sessions to discuss the Plan, obtain comments, and answer any questions regarding the plan to be implemented for the subsequent calendar year. After review by Staff, the Company will take all reasonable steps it deems appropriate to carry out and implement the Plan, taking into account the comments of Staff. Review by Staff of the Plan does not relieve the Company of its obligation to operate its business and maintain safe, reliable service through expenditures and other capital investments in the ordinary course of business that are not set forth in the Plan, nor does it bind Staff to a particular position regarding the adequacy and/or effectiveness of the Plan.



- b. The Plan shall provide a description of the activities along with targeted expenditures and investments of the proposed Plan to be implemented during the following calendar year. The Plan will itemize the proposed activities by general category and provide budgets for both operation and maintenance ("O&M") expenses and capital investments expected from implementation of the Plan. The O&M budget will be \$1,360,000 (the "Base Plan O&M") for the calendar year ("Base Plan O&M Budget"). The Company may also provide for consideration an alternative Plan with O&M budgets that exceed the O&M Base Amount for the calendar year. The Company will reconcile actual expenditures and investments with the Base Plan O&M amount of \$1,360,000 and shall be subject to the REP/VMP Adjustment Provision, as set forth in Section IV below. All of the combined expenses will be counted against the Base Plan O&M amount, along with any REP-related O&M that does not relate to a VMP category.

#### IV. **REP/VMP Adjustment Provision**

- a. During each calendar year, the Company shall track all O&M expenses incurred in implementing the components of the REP and VMP Plan. By March 15 of each year, the Company will make a reconciliation filing with the Commission. To the extent that the Company, in implementing the Plan, incurs expenses in an amount less than the Base Plan O&M amount, the difference between the Base Plan O&M amount and the amount of expenses actually incurred shall be refunded to customers or credited to customers for future REP/VMP program O&M expenditures, as the Commission determines is appropriate, with interest accruing at the customer deposit rate.
- b. To the extent the Plan submitted for review prior to the calendar year includes a budget higher than the Base Plan O&M Budget and the Company incurs expenses over the Base Plan O&M amount (consistent with the alternative budget reviewed by Staff), the incremental expense above the Base Plan O&M amount shall be included in rates, subject to Commission approval, through a uniform adjustment factor on a per kilowatt-hour basis and recovered over a twelve month period, commencing for usage on and after May 1, with interest accruing at the customer deposit rate. Any over or under-recoveries at the end of the twelve month period shall be taken into account in the next REP/VMP Adjustment Provision reconciliation period.

#### V. **REP Capital Investment Allowance**

The REP capital investment target shall be \$1 million annually. The Company shall track all capital investments made in accordance with the REP for each calendar year. At the same time that the Company makes its reconciliation filing for the REP/VMP Adjustment reconciliation, Granite State shall file a report detailing the actual amount of capital investments made in accordance with implementing the REP during the prior calendar year. The report shall include a calculation of the revenue requirement for adding these additional capital investments into rate

base, using the Company's current Commission approved capital structure and debt and equity. Provided that the investments were made in accordance with the REP, the Company will be allowed, subject to Commission approval, a permanent increase in its base distribution rates to recover the annual revenue requirement for those investments. This permanent REP Capital Investment Allowance will take effect for usage on and after May 1, at the same time as any REP/VMP Adjustments are implemented for the preceding calendar year as discussed in Section IV above.

**VI. Procedure for Adjusting Base Distribution Rates for the REP Capital Investment Allowance**

Base distribution rates shall be increased by the ratio of: (i) the incremental revenue requirement associated with the REP capital investment; and (ii) forecasted base distribution revenue for the prospective year.

**VII. Annual Report, Plan Deviations, and SAIDI/SAIFI Results**

- a. At the same time the Company makes its reconciliation and rate adjustment filing (by March 15 of each year), the Company will file an annual report on the prior calendar year's activities. In implementing the Plans, the circumstances encountered during the year may require reasonable deviations from the original Plans reviewed by Staff. In such cases, the Company would include an explanation of any deviations in the report. For cost recovery purposes, the Company has the burden to show that any deviations were due to circumstances out of its reasonable control or, if within its control, were reasonable and prudent. Included in the annual report, the Company will report its SAIDI and SAIFI results for the prior calendar year.
- b. The Company shall also report SAIDI/SAIFI results:
  - i. Inclusive of all events identified in items ii, iv and v below;
  - ii. Using the criteria for major storm exclusions set forth by the Commission and IEEE Standard 1366.
  - iii. On a rolling five-year average for each metric in order to minimize the impact of uncontrollable factors;
  - iv. Excluding the effect on performance by supply assets owned by others given the potential impact of transmission on the Company's reliability performance;
  - v. Excluding planned and notified outages from its calculation of SAIDI and SAIFI, and;
  - vi. Consistent with the Puc 300 rules.
- c. The Commission's definition of a major storm qualifying for exclusion from SAIDI and SAIFI reporting is 30 concurrent troubles and 15% of customers interrupted, or 45 concurrent troubles. (Troubles are defined as interruption events occurring on either primary or secondary lines).

## **Definitions**

**Augmented Tree-Trimming and Clearing:** This program involves the removal of hazard trees and limbs beyond what is normally included in tree trimming to reduce the risk of interruptions on the overhead distribution system. In addition to removing dead, dying, and damaged limbs from above the conductor, we also increase overhead clearances to fifteen feet where practical. This additional work is integrated into routine scheduled trimming program to create a more aggressive approach to removing tree hazards and overhang.

### **Spot Tree Trimming: (Unplanned Work)**

This captures all charges for field follow up, review and execution of corrective action required, if any, to mitigate vegetation management concerns requested or reported by a customer.

### **Trouble and Restoration Maintenance: (Unplanned Work)**

This captures all charges for response and corrective action to mitigate isolated tree related trouble, overhead line requests to mitigate tree related trouble and storm responses not covered by a storm specific charge number.

### **Planned Cycle Trimming:**

This captures all charges for annual fiscal year planned cycle pruning activities but does not include police detail expenses.

### **Cycle Trimming Police Detail Expenses:**

This captures all charges for police detail expenses associated with annual planned cycle trim and tree removals.

### **Tree Hazard Removal:**

This captures all charges for removal of dead, dying and/or structurally weak trees, limbs and leads.

**Enhanced Hazard Tree Removal –EHTM:** captures all charges for the hazard tree removal program directed at improving reliability of on and off cycle poor performing circuits based on removing dead, dying and/or structurally weak trees, limbs and leads on the three phase portions of those targeted circuits using a Customer Served approach beyond each major reliability device point including the lockout section or station breaker to the first reliability device.

### **Interim Trimming: (Unplanned work)**

This captures all charges for mitigation of tree conditions that threaten reliability of one or more sections of primary conductor on a circuit or circuits not contained in the current fiscal year's annual plan of work.

### **Tree Planting:**

This captures all charges for tree replacements in exchange for tree removals of full clearance, tree replacement to remediate property owner complaints, trees planted for Arbor Day events.

**Sub-transmission Right of Way Clearing:**

This captures all charges for activities related to cutting, clearing, herbicide application and danger tree removal on substation supply lines up to 46 kV.

**Other Police Detail Expenses:**

This captures charges for all O&M police detail expenses not associated with Planned Cycle Trim.

**Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty  
2023 Vegetation Management Program Plan  
VMP O&M Adjustment Factor - Summary of Annual Spending**

| Line No. | Incremental VMP and REP O&M Spend Description | Actual         | Actual         | Actual         | Actual         | Actual         | Actual         | Actual          | Actual         | Actual         | Actual         | Actual         | Actual         | Actual         | Actual         | Actual         | Actual         |                |
|----------|---|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|          |   | FY 2008<br>(a) | FY 2009<br>(b) | FY 2010<br>(c) | FY 2011<br>(d) | FY 2012<br>(e) | FY 2013<br>(f) | CYS 2013<br>(f) | CY 2014<br>(g) | CY 2015<br>(h) | CY 2016<br>(i) | CY 2017<br>(j) | CY 2018<br>(k) | CY 2019<br>(l) | CY 2020<br>(m) | CY 2021<br>(n) | CY 2022<br>(o) | CY 2023<br>(p) |
| 1        | Actual VMP                                    | \$2,169,258    | \$1,477,916    | \$2,556,530    | \$1,245,985    | \$1,467,486    | \$1,560,973    | \$1,055,861     | \$1,395,166    | \$1,994,184    | \$1,633,896    | \$2,495,406    | \$2,422,443    | \$2,096,528    | \$2,461,057    | \$1,870,813    | \$3,229,291    | \$2,149,760    |
| 2        |   |                |                |                |                |                |                |                 |                |                |                |                |                |                |                |                |                |                |
| 3        | Annual Program Budget                         | \$1,950,000    | \$1,473,832    | \$2,556,530    | \$1,552,000    | \$1,556,000    | \$1,721,585    | \$1,238,200     | \$1,521,200    | \$1,860,397    | \$1,948,000    | \$2,281,803    | \$2,157,086    | \$2,307,000    | \$2,200,000    | \$2,200,000    | \$2,200,000    | \$2,200,000    |
| 4        |   |                |                |                |                |                |                |                 |                |                |                |                |                |                |                |                |                |                |
| 5        | Amount Subject to Recovery                    | \$1,950,000    | \$1,473,832    | \$2,556,530    | \$1,245,985    | \$1,467,486    | \$1,560,973    | \$1,055,861     | \$1,395,166    | \$1,994,184    | \$1,633,896    | \$2,495,406    | \$2,422,443    | \$2,096,528    | \$2,420,000    | (\$329,187)    | \$2,749,187    | (\$50,240)     |
| 6        |   |                |                |                |                |                |                |                 |                |                |                |                |                |                |                |                |                |                |
| 7        | VMP and REP Base Spending Level               | \$1,950,000    | \$1,360,000    | \$1,360,000    | \$1,360,000    | \$1,360,000    | \$1,360,000    | \$1,020,000     | \$1,360,000    | \$1,360,000    | \$1,360,000    | \$1,500,000    | \$1,500,000    | \$1,500,000    | \$1,850,000    | \$2,200,000    | \$2,749,187    | \$2,200,000    |
| 8        |   |                |                |                |                |                |                |                 |                |                |                |                |                |                |                |                |                |                |
| 9        | Total Revenue Requirement                     | \$0            | \$113,832      | \$1,196,530    | (\$114,015)    | \$107,486      | \$200,973      | \$35,861        | \$35,166       | \$634,184      | \$273,896      | \$995,406      | \$922,443      | \$596,528      | \$570,000      | \$0            | \$0            | \$0            |
| 10       |   |                |                |                |                |                |                |                 |                |                |                |                |                |                |                |                |                |                |
| 11       | Less Reimbursements from Consolidated         | \$0            | \$0            | (\$148,760)    | (\$644,098)    | (\$402,693)    | (\$253,054)    | (\$311,701)     | (\$245,751)    | (\$288,000)    | (\$350,000)    | (\$442,992)    | (\$478,142)    | (\$495,381)    | \$0            | \$0            | \$0            | \$0            |
| 12       |   |                |                |                |                |                |                |                 |                |                |                |                |                |                |                |                |                |                |
| 13       | Total Incremental Revenue Requirement         | \$0            | \$113,832      | \$1,047,770    | (\$758,113)    | (\$295,207)    | (\$52,081)     | (\$275,840)     | (\$210,585)    | \$346,184      | (\$76,104)     | \$552,414      | \$444,301      | \$101,147      | \$570,000      | \$0            | \$0            | \$0            |
| 14       |   |                |                |                |                |                |                |                 |                |                |                |                |                |                |                |                |                |                |
| 15       | Total O&M Recovery / Carryover                | \$1,950,000    | \$1,473,832    | \$2,407,770    | \$601,887      | \$1,064,793    | \$1,307,919    | \$744,160       | \$1,149,415    | \$1,706,184    | \$1,283,896    | \$2,052,414    | \$1,944,301    | \$1,601,147    | \$2,420,000    | (\$329,187)    | \$2,749,187    | (\$50,240)     |

Reference:

Line No. 1: 2023 Actual VMF

Line No. 3: Annual Program Budget

Line No. 5: Line 3 minus Line 1. If Line 1 is greater than Line 3, Line 5 will be zero

Line No. 7: Per Docket No. DE 19-064, if Line 1 is greater than Line 3, Add 10% to Line

Line No. 9: Line 7 minus Line 5

Line No. 11: Reflects reimbursements related to Vegetation Management Expenses from Consolidated Communication

Line No. 13: Line 9 plus Line 11

Line No. 15: Line 5 plus Line 11

**Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty  
2023 Vegetation Management Program Plan  
Reconciliation of CY 2023 O&M Expense**

| <b>Line No.</b> | <b>Month</b>                       | <b>Beginning Balance with Interest</b> | <b>Revenue</b> | <b>(Over)/Under Ending Balance</b> | <b>Balance Subject to Interest</b> | <b>Interest Rate</b> | <b>Interest</b> | <b>Cumulative Interest</b> |
|-----------------|------------------------------------|--|----------------|------------------------------------|------------------------------------|----------------------|-----------------|----------------------------|
|                 |                                    | (a)                                    | (b)            | (c)                                | (d)                                | (e)                  | (f)             | (g)                        |
| 1               |                                    |  |                |                                    |                                    |                      |                 |                            |
| 2               | 2022/2023 (Over)/ Under Collection | (\$16,586)                             |                |                                    |                                    |                      |                 |                            |
| 3               | May-23                             | (\$16,586)                             | (\$18)         | (\$16,568)                         | (\$16,577)                         | 8.00%                | (\$107)         | (\$107)                    |
| 4               | Jun-23                             | (\$16,674)                             | (\$1,264)      | (\$15,410)                         | (\$16,042)                         | 8.25%                | (\$106)         | (\$213)                    |
| 5               | Jul-23                             | (\$15,517)                             | (\$1,712)      | (\$13,805)                         | (\$14,661)                         | 8.25%                | (\$97)          | (\$310)                    |
| 6               | Aug-23                             | (\$13,902)                             | (\$1,769)      | (\$12,134)                         | (\$13,018)                         | 8.50%                | (\$89)          | (\$399)                    |
| 7               | Sep-23                             | (\$12,222)                             | (\$1,746)      | (\$10,477)                         | (\$11,349)                         | 8.50%                | (\$77)          | (\$476)                    |
| 8               | Oct-23                             | (\$10,554)                             | (\$1,352)      | (\$9,202)                          | (\$9,878)                          | 8.50%                | (\$67)          | (\$544)                    |
| 9               | Nov-23                             | (\$9,269)                              | (\$1,365)      | (\$7,904)                          | (\$8,587)                          | 8.50%                | (\$59)          | (\$602)                    |
| 10              | Dec-23                             | (\$7,963)                              | (\$1,403)      | (\$6,560)                          | (\$7,261)                          | 8.50%                | (\$50)          | (\$652)                    |
| 11              | Jan-24                             | (\$6,609)                              | (\$1,596)      | (\$5,014)                          | (\$5,811)                          | 8.50%                | (\$40)          | (\$692)                    |
| 12              | Feb-24                             | (\$5,053)                              | (\$1,516)      | (\$3,537)                          | (\$4,295)                          | 8.50%                | (\$29)          | (\$721)                    |
| 13              | Mar-24                             | (\$3,566)                              | (\$1,509)      | (\$2,057)                          | (\$2,812)                          | 8.50%                | (\$19)          | (\$740)                    |
| 14              | Apr-24                             | (\$2,076)                              | (\$1,388)      | (\$689)                            | (\$1,383)                          | 8.50%                | (\$9)           | (\$749)                    |
| 15              | Total                              |  | (\$16,637)     | (\$698)                            |                                    |                      | (\$749)         |                            |
| 16              |                                    |  |                |                                    |                                    |                      |                 |                            |
| 17              |                                    |  |                |                                    |                                    |                      |                 |                            |
| 18              |                                    |  |                |                                    |                                    |                      |                 |                            |
| 19              |                                    |  |                |                                    |                                    |                      |                 |                            |
| 20              |                                    |  |                |                                    |                                    |                      |                 |                            |
| 21              |                                    |  |                |                                    |                                    |                      |                 |                            |
|                 |                                    |  |                |                                    | <b>(\$16,637)</b>                  |                      |                 |                            |
|                 |                                    |  |                |                                    | <b>(\$16,586)</b>                  |                      |                 |                            |
|                 |                                    |  |                |                                    | <b>(\$51)</b>                      |                      |                 |                            |
|                 |                                    |  |                |                                    | <b>(\$749)</b>                     |                      |                 |                            |
|                 |                                    |  |                |                                    | <b>\$698</b>                       |                      |                 |                            |

*Reference:*  
Column (a): Per GL  
Column (b): Per Financial Records  
Column (c): Column (a) + Column (b)  
Column (d): [Column (a) + Column (c)] / 2  
Column (e): Interest Rate on Customer Deposits  
Column (f): Column (d) x [ (1+ Column (e)) ^ (1 / 12)-1 ]  
Column (g): Column (f) + Prior Month's Column (g)  
\* Projected Revenues (Forecasted Sales \* VMP Rate of (\$0.00002))

**Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty  
2023 Vegetation Management Program Plan  
Rate Calculation Effective May 1, 2024 - April 30, 2025**

| <u>Line No.</u> | <u>Description</u>  | <u>Amount</u> |
|-----------------|---|---------------|
| 1               | CY 2023 O&M Expense Above Base O&M Expense  | \$0           |
| 2               |   |               |
| 3               | Final Balance of Reconciliation Calendar Year Incremental O&M (Over)/Under Collection | \$698         |
| 4               |   |               |
| 5               | Total (Over)/Under collection   | \$698         |
| 6               |   |               |
| 7               | Estimated kWh deliveries May 1, 2024 - April 30, 2025                                 | 940,503,873   |
| 8               |   |               |
| 9               | Vegetation Management Plan Adjustment Factor  | \$0.00000     |

*Reference:*

*Line No. 1: If Unspent Budget is not Carried Over - Attachment 4, Page 1, Line 15, Column (p)*

*Line No. 2: Attachment 4, Page 2, Line 21*

*Line No. 5: Line 1 + Line 3*

*Line No. 7: Per Company Forecast*

*Line No. 9: Line 5 / Line 7*

**Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty  
2023 Vegetation Management Program Plan  
Rates Effective May 1, 2024**

| <u>Line No.</u> | <u>Rate Class</u> | <u>Distribution Rate Component</u>        | March 1, 2024<br>Current<br>Distribution<br><u>Rates</u><br>(a) | Current RDAF<br><u>Rate</u><br>(b) | Proposed<br>May 1 2024<br>REP/VMP<br>Adjustment<br><u>Factor</u><br>(c) | Total Net Distribution<br>May 1, 2024<br><u>Rates</u><br>(d) |
|-----------------|-------------------|---|---|------------------------------------|---|--|
| 1               |                   |   |   |                                    |   |  |
| 2               |                   |   |   |                                    |   |  |
| 3               | D                 | Customer Charge                           | \$14.74   |                                    |   | \$14.74  |
| 4               |                   | All kWh                                   | \$0.06752   | \$0.00281                          | \$0.00000   | \$0.07033  |
| 5               |                   | 16 Hour Off Peak kWh                      | \$0.05829   | \$0.00281                          | \$0.00000   | \$0.06110  |
| 6               |                   | Farm kWh                                  | \$0.06374   | \$0.00281                          | \$0.00000   | \$0.06655  |
| 7               |                   | D-6 kWh                                   | \$0.04949   | \$0.00281                          | \$0.00000   | \$0.05230  |
| 8               | D-10              | Customer Charge                           | \$14.74   |                                    |   | \$14.74  |
| 9               |                   | On Peak kWh                               | \$0.14355   | \$0.00180                          | \$0.00000   | \$0.14535  |
| 10              |                   | Off Peak kWh                              | \$0.00190   | \$0.00180                          | \$0.00000   | \$0.00370  |
| 11              | D-11              | Customer Charge                           | \$14.74   |                                    |   | \$14.74  |
| 12              |                   | Off Peak                                  | \$0.05262   |                                    | \$0.00000   | \$0.05262  |
| 13              |                   | Mid Peak                                  | \$0.07887   |                                    | \$0.00000   | \$0.07887  |
| 14              |                   | Critical Peak                             | \$0.11230   |                                    | \$0.00000   | \$0.11230  |
| 15              | EV                | Customer Charge                           | \$11.35   |                                    |   | \$11.35  |
| 16              |                   | Off Peak                                  | \$0.05262   |                                    | \$0.00000   | \$0.05262  |
| 17              |                   | Mid Peak                                  | \$0.07887   |                                    | \$0.00000   | \$0.07887  |
| 18              |                   | Critical Peak                             | \$0.11230   |                                    | \$0.00000   | \$0.11230  |
| 19              | EV-L              | Customer Charge                           | \$502.08  |                                    |   | \$502.08   |
| 20              |                   | Demand Charge                             | \$5.32  |                                    |   | \$5.32   |
| 21              |                   | Off Peak                                  | \$0.02698   |                                    | \$0.00000   | \$0.02698  |
| 22              |                   | Mid Peak                                  | \$0.02900   |                                    | \$0.00000   | \$0.02900  |
| 23              |                   | Critical Peak                             | \$0.03376   |                                    | \$0.00000   | \$0.03376  |
| 24              | EV-M              | Customer Charge                           | \$83.66   |                                    |   | \$83.66  |
| 25              |                   |   | \$5.34  |                                    |   | \$5.34   |
| 26              |                   | Off Peak                                  | \$0.04002   |                                    | \$0.00000   | \$0.04002  |
| 27              |                   | Mid Peak                                  | \$0.04138   |                                    | \$0.00000   | \$0.04138  |
| 28              |                   | Critical Peak                             | \$0.04736   |                                    | \$0.00000   | \$0.04736  |
| 29              | G-1               | Customer Charge                           | \$502.08  |                                    |   | \$502.08   |
| 30              |                   | Demand Charge                             | \$10.63   |                                    |   | \$10.63  |
| 31              |                   | On Peak kWh                               | \$0.00679   | \$0.00104                          | \$0.00000   | \$0.00783  |
| 32              |                   | Off Peak kWh                              | \$0.00199   | \$0.00104                          | \$0.00000   | \$0.00303  |
| 33              |                   | Credit for High Voltage Delivery > 2.4 kv | (\$0.57)  |                                    |   | (\$0.57)   |
| 34              | G-2               | Customer Charge                           | \$83.66   |                                    |   | \$83.66  |
| 35              |                   | Demand Charge                             | \$10.67   |                                    |   | \$10.67  |
| 36              |                   | All kWh                                   | \$0.00267   | \$0.00151                          | \$0.00000   | \$0.00418  |
| 37              |                   | Credit for High Voltage Delivery > 2.4 kv | (\$0.57)  |                                    |   | (\$0.57)   |
| 38              | G-3               | Customer Charge                           | \$19.20   |                                    |   | \$19.20  |
| 39              |                   | All kWh                                   | \$0.06093   | \$0.00253                          | \$0.00000   | \$0.06346  |



**Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty  
2023 Vegetation Management Program Plan  
Rates Effective May 1, 2024**

|    |                   |  | March 1, 2024<br>Current<br>Distribution<br><u>Rates</u><br>(a) | Current RDAF<br><u>Rate</u><br>(b) | Proposed<br>May 1 2024<br>REP/VMP<br>Adjustment<br><u>Factor</u><br>(c) | Total Net Distribution<br>May 1, 2024<br><u>Rates</u><br>(d) |
|----|-------------------|--|---|------------------------------------|---|--|
| 40 | <u>Rate Class</u> | <u>Distribution Rate Component</u>           |   |                                    |   |  |
| 41 |                   |  |   |                                    |   |  |
| 42 | M                 | Luminaire Charge Description                 |   |                                    |   |  |
| 43 |                   | HPS 4,000                                    | \$9.81  |                                    |   | \$9.81   |
| 44 |                   | HPS 9,600                                    | \$11.35   |                                    |   | \$11.35  |
| 45 |                   | HPS 27,500                                   | \$18.86   |                                    |   | \$18.86  |
| 46 |                   | HPS 50,000                                   | \$23.47   |                                    |   | \$23.47  |
| 47 |                   | HPS 9,600 (Post Top)                         | \$13.32   |                                    |   | \$13.32  |
| 48 |                   | HPS 27,500 Flood                             | \$19.07   |                                    |   | \$19.07  |
| 49 |                   | HPS 50,000 Flood                             | \$25.46   |                                    |   | \$25.46  |
| 50 |                   | Incandescent 1,000                           | \$12.61   |                                    |   | \$12.61  |
| 51 |                   | Mercury Vapor 4,000                          | \$8.70  |                                    |   | \$8.70   |
| 52 |                   | Mercury Vapor 8,000                          | \$9.79  |                                    |   | \$9.79   |
| 53 |                   | Mercury Vapor 22,000                         | \$17.51   |                                    |   | \$17.51  |
| 54 |                   | Mercury Vapor 63,000                         | \$29.62   |                                    |   | \$29.62  |
| 55 |                   | Mercury Vapor 22,000 Flood                   | \$20.04   |                                    |   | \$20.04  |
| 56 |                   | Mercury Vapor 63,000 Flood                   | \$38.86   |                                    |   | \$38.86  |
| 57 | LED-1             | LED-1 Fixtures                               |   |                                    |   |  |
| 58 |                   | 30 Watt Pole Top                             | \$6.36  |                                    |   | \$6.36   |
| 59 |                   | 50 Watt Pole Top                             | \$6.63  |                                    |   | \$6.63   |
| 60 |                   | 130 Watt Pole Top                            | \$10.24   |                                    |   | \$10.24  |
| 61 |                   | 190 Watt Pole Top                            | \$19.65   |                                    |   | \$19.65  |
| 62 |                   | 30 Watt URD                                  | \$14.85   |                                    |   | \$14.85  |
| 63 |                   | 90 Watt Flood                                | \$10.08   |                                    |   | \$10.08  |
| 64 |                   | 130 Watt Flood                               | \$11.60   |                                    |   | \$11.60  |
| 65 |                   | 30 Watt Caretaker                            | \$5.70  |                                    |   | \$5.70   |
| 66 |                   | Rates M, LED-1 & LED-2 Pole Accessory Charge |   |                                    |   |  |
| 67 |                   | Pole -Wood                                   | \$11.14   |                                    |   | \$11.14  |
| 68 |                   | Fiberglass - Direct Embedded                 | \$11.61   |                                    |   | \$11.61  |
| 69 |                   | Fiberglass w/Foundation <25 ft               | \$19.59   |                                    |   | \$19.59  |
| 70 |                   | Fiberglass w/Foundation >=25 ft              | \$32.75   |                                    |   | \$32.75  |
| 71 |                   | Metal Poles - Direct Embedded                | \$23.35   |                                    |   | \$23.35  |
| 72 |                   | Metal Poles with Foundation                  | \$28.17   |                                    |   | \$28.17  |
| 73 |                   | Rate M, LED-1                                |   |                                    |   |  |
| 74 |                   | All kWh                                      | \$0.04686   |                                    | \$0.00000   | \$0.04686  |
| 75 |                   | Rate LED-2                                   | \$0.04686   |                                    | \$0.00000   | \$0.04686  |
| 76 | T                 | Customer Charge                              | \$17.01   |                                    |   | \$17.01  |
| 77 |                   | All kWh                                      | \$0.05469   | \$0.00285                          | \$0.00000   | \$0.05754  |
| 78 | V                 | Minimum Charge                               | \$19.20   |                                    |   | \$19.20  |
| 79 |                   | All kWh                                      | \$0.06266   | \$0.00291                          | \$0.00000   | \$0.06557  |

\* Proposed Rates pending Commission Approval for Docket DE 22-035- Step Adjustment

**Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty  
2023 Vegetation Management Program Plan  
Bill Calculation - Residential Rate D**

| <u>Line No.</u> |                                      |     |            | Rate Effective<br>March 1, 2024 | May 1, 2024<br>Proposed<br>Rates | Current<br>Bill | May 1, 2024<br>Proposed<br>Bill |
|-----------------|--------------------------------------|-----|------------|---------------------------------|----------------------------------|-----------------|---------------------------------|
|                 | Usage                                | 650 | kWh        | (a)                             | (b)                              | (c)             | (d)                             |
| 2               |                                      |     |            |                                 |                                  |                 |                                 |
| 3               | Customer Charge                      |     |            | \$14.74                         | \$14.74                          | \$14.74         | \$14.74                         |
| 4               | Distribution Charge                  |     |            | \$0.06752                       | \$0.06752                        | \$43.89         | \$43.89                         |
| 5               | Revenue Decoupling Adjustment Factor |     |            | \$0.00281                       | \$0.00281                        | \$1.83          | \$1.83                          |
| 6               | <b>REP/VMP</b>                       |     |            | (\$0.00002)                     | \$0.00000                        | (\$0.01)        | \$0.00                          |
| 7               | Storm Recovery Adjustment            |     |            | \$0.00000                       | \$0.00000                        | \$0.00          | \$0.00                          |
| 8               | Transmission Charge                  |     |            | \$0.03334                       | \$0.03334                        | \$21.67         | \$21.67                         |
| 9               | Stranded Cost Charge                 |     |            | (\$0.00031)                     | (\$0.00031)                      | (\$0.20)        | (\$0.20)                        |
| 10              | System Benefits Charge               |     |            | \$0.00727                       | \$0.00727                        | \$4.73          | \$4.73                          |
| 11              | Electricity Consumption Tax          |     |            | \$0.00000                       | \$0.00000                        | <u>\$0.00</u>   | <u>\$0.00</u>                   |
| 12              | Subtotal Retail Delivery Services    |     |            |                                 |                                  | \$86.64         | \$86.65                         |
| 13              | Energy Service Charge                |     |            | \$0.09758                       | \$0.09758                        | <u>\$63.43</u>  | <u>\$63.43</u>                  |
| 14              |                                      |     | Total Bill |                                 |                                  | \$150.06        | \$150.08                        |
| 15              |                                      |     |            |                                 |                                  |                 | <b>\$0.01</b>                   |
| 16              |                                      |     |            |                                 |                                  |                 | <b>0.01%</b>                    |

*Reference:*

(a) Order No. 26,777 in Docket No. DE 23-006, dated February 23, 2023 & Order No. 26,913 in Docket No. DE 23-044, dated December 15, 2023.

(b) Does not include the proposed step adjustment rates, effective December 1, 2023, in Docket No. 22-035.