

**STATE OF NEW HAMPSHIRE  
BEFORE THE  
PUBLIC UTILITIES COMMISSION**

Docket No. DE 21-xxx

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty  
Reliability Enhancement Program and Vegetation Management Program

Calendar Year 2020 Annual Report and Reconciliation and Rate Adjustment Filing

**DIRECT TESTIMONY**

**OF**

**HEATHER GREEN,**

**JOEL RIVERA,**

**AND**

**ANTHONY STRABONE**

March 15, 2021



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1   **I.       INTRODUCTION**

2       **Heather Green**

3   **Q.       Mrs. Green, would you please state your full name and business address?**

4   A.       My name is Heather Green and my business address is 407 Miracle Mile, Lebanon, New  
5           Hampshire.

6   **Q.       By whom are you employed and in what position?**

7   A.       I am employed by Liberty Utilities Service Corp. (“LUSC”) as the Program Manager of  
8           Inspections and Vegetation. In that capacity I support Electric Operations and plan,  
9           budget, and manage Liberty Utilities (Granite State Electric) Corp.’s (“Liberty” or “the  
10          Company”) inspection and vegetation management programs, vendor performance, and  
11          storm and regulatory support on the distribution and sub transmission assets.

12   **Q.       Please describe your educational background.**

13   A.       I graduated from Purdue University in 1994 with a Bachelor’s Degree of Science in  
14          Forestry with an Urban Option.

15   **Q.       Please describe your professional experience.**

16   A.       I joined LUSC in March of 2018. Prior to that I worked for the State of New Hampshire  
17          Division of Forests and Lands as a Community Forester. I worked in the role of  
18          Municipal Arborist from 1998 to 2013 in the Chicago suburbs in both a north shore  
19          community of Park Ridge and a south shore community of Oak Lawn. I have also  
20          worked for a variety of commercial tree care companies and gardens.

1 I have been very active in professional organizations. I currently sit on the Board of  
2 Directors as the President Elect for the New England Chapter of the International Society  
3 of Arboriculture (NEC-ISA). I also held a variety of positions on the Illinois Arborist  
4 Association (IAA) Board of Directors, including President. I am a current member of the  
5 New Hampshire Community Forestry Advisor Committee.

6 **Q. Have you previously testified before the Commission?**

7 A. Yes, I previously testified before the Commission on the Company's Vegetation  
8 Management Program in 2019 and 2020. I have also submitted written testimony in  
9 support of the Company's rate case in Docket No. DE 19-064 with respect to the  
10 Company's vegetation management practices.

11 **Joel Rivera**

12 **Q. Mr. Rivera, please state your full name and business address.**

13 A. My name is Joel Rivera and my business address is 9 Lowell Road, Salem, New  
14 Hampshire.

15 **Q. By whom are you employed and in what position?**

16 A. I am employed as the Director of Electric Control and Dispatch by LUSC, which  
17 provides services to Liberty. In my capacity as Director of Electric Control and Dispatch,  
18 I am responsible for managing the operations and maintenance ("O&M") and capital  
19 budgets, and coordinate the workflow and staffing requirements for these two work areas.  
20 I also assist in the development of policies, procedures, and plans for operating,  
21 maintaining, and improving the electric infrastructure.

1 **Q. Please describe your educational background and certifications.**

2 A. I graduated from Universidad Interamericana de Puerto Rico in 2003, earning a  
3 bachelor's degree in electrical engineering. I also graduated from the University at  
4 Buffalo in 2017, earning a master's degree in electrical engineering. I am a registered  
5 professional engineer in the State of New Hampshire.

6 **Q. Please describe your professional experience.**

7 A. In 2006, I began my engineering career as an associate engineer with National Grid USA  
8 ("National Grid") in Buffalo, New York. By 2009 I had progressed to senior engineer in  
9 the distribution planning department for National Grid's electric distribution system in  
10 Buffalo. In 2009, I was promoted to lead engineer and was responsible for distribution  
11 planning functions for National Grid's electric distribution system in both New England  
12 and New York. In 2013, I assumed the role of Planning Engineer - Electric for LUSC.  
13 In 2018, I was promoted to Manager of GIS and Electric System Planning and was  
14 responsible for electric and gas map records and developing and implementing the  
15 Company's electric planning initiatives in the electric delivery business. In 2021, I was  
16 promoted to my current position as Director of Electric Control and Dispatch.

17 **Q. Have you previously testified before the New Hampshire Public Utilities**  
18 **Commission (the "Commission")?**

19 A. Yes, I previously testified before the Commission on the Company's Reliability  
20 Enhancement Program in 2018, 2019, and 2020. I have also submitted written testimony  
21 in support of the Company's rate case in Docket No. DE 19-064.

1        **Anthony Strabone**

2        **Q.     Mr. Strabone, please introduce yourself.**

3        A.     My name is Anthony Strabone, my business address is 9 Lowell Road, Salem, New  
4               Hampshire, and I am employed by LUSC. I am the Senior Manager of Electrical  
5               Engineering and am responsible for the electric capital work plan whereby I manage  
6               engineering and construction resources for capital projects.

7        **Q.     Please describe your educational background and training.**

8        A.     I graduated from Merrimack College in 2004 with a Bachelor of Science degree in  
9               Electrical Engineering. I received a Master's of Business Administration from Southern  
10              New Hampshire University in 2006. I received a Project Management Professional  
11              (PMP) Certification in 2017 from the Project Management Institute. In 2019, I received  
12              my license as a Professional Engineer in the State of New Hampshire.

13       **Q.     Please describe your professional background.**

14       A.     I joined LUSC in November 2014. Prior to my employment at LUSC, I was employed  
15               by Public Service Company of New Hampshire as a Substation Supervisor in Substation  
16               Maintenance from 2010 to 2014. Prior to my position in Substation Maintenance, I was a  
17               Substation Engineer in Substation Engineering from 2008 to 2010 and an Engineer in the  
18               System and Planning Strategy department from 2004 to 2008.

1 **Q. Have you previously testified before the Commission?**

2 A. Yes, I presented direct and rebuttal testimony and further testimony in support of the  
3 2020 step adjustment in Docket No. DE 19-064, and I testified in support of the  
4 Company's 2019 step adjustment in Docket No. DE 16-383.

5 **II. PURPOSE OF TESTIMONY**

6 **Q. What is the purpose of your testimony?**

7 A. Our testimony provides the Commission with background information regarding the  
8 Reliability Enhancement Program ("REP") and Vegetation Management Program  
9 ("VMP") that Liberty implemented during Calendar Year 2020 and as described in the  
10 Company's Calendar Year 2020 Reliability Enhancement Program and Vegetation  
11 Management Program Report dated March 15, 2021 (the "CY2020 REP/VMP Report"),  
12 submitted as Attachment A to this testimony. This testimony provides support for the  
13 Company's request to recover an additional \$220,000, above the base amount of  
14 \$2,200,000 currently in rates in vegetation management costs for 2020, as approved in  
15 Docket No. DE 19-064. The Settlement Agreement in that docket allows the Company to  
16 recover \$2,200,000 annually in vegetation management costs, plus ten percent, for a  
17 maximum annual recovery of \$2,420,000.

18 This testimony also supports the Company's request to recover the revenue requirement  
19 of \$213,246 for the capital projects, which is the amount associated with a total of  
20 \$1,566,370 in capital investment during CY2020. Information regarding the calculation  
21 of the REP/VMP Adjustment Provision and the REP Capital Investment Allowance, and

1 the associated rate impacts, is set forth in the joint testimony of David Simek and Adam  
2 Hall, which is a part of this filing.

3 **III. OVERVIEW OF REP AND VMP**

4 **Q. Please explain the purpose of the REP and VMP.**

5 A. Prior to 2020, the Company continued its Vegetation Management and Reliability  
6 Enhancement Programs at spending levels described in several rate case settlement  
7 agreements, subject to annual Commission approval. *See* Order No. 25,638 (March 17,  
8 2014) (approving the Settlement Agreement in Docket No. DE 13-063), as amended by  
9 Order No. 26,005 (April 12, 2017) (approving the Settlement Agreement in Docket No.  
10 DE 16-383), and as amended by Order No. 26,376 (June 30, 2020) (approving the  
11 Settlement Agreement in Docket No. DE 19-064) (together, the “Settlement  
12 Agreement”). In general, the REP and VMP include categories of both capital (REP) and  
13 O&M (VMP) spending targeted to improve reliability performance. The REP and VMP  
14 are premised on the understanding that a certain amount of annual spending on both  
15 capital and O&M activities is necessary to maintain the safety and reliability of the  
16 Company’s electric distribution system. The Settlement Agreement in Docket No. DE  
17 16-383 assumed that a base amount of \$1,500,000 would be spent on O&M activities  
18 associated with the VMP during a fiscal year. In addition, the REP program included a  
19 targeted budget of \$1,500,000 for REP capital investments for each calendar year. As



1 noted above, Docket No. DE 19-064 changed the total spending level for vegetation  
2 management. Specifically, the Settlement Agreement in that Docket provided:

3 *Under the VMP, the Company shall maintain a four-year*  
4 *cycle for tree trimming and vegetation management and*  
5 *shall continue with the filings and reporting requirements*  
6 *currently in place. The base rate increase agreed to in this*  
7 *Agreement includes an increase in the VMP spending to*  
8 *\$2,200,000 for 2020, which shall continue until changed in*  
9 *a future base rate case. The Company shall not recover any*  
10 *VMP expenses that exceed 10% of that amount, or in excess*  
11 *of \$2,420,000, through the annual reconciliation filing, or*  
12 *otherwise. The VMP spending shall be reconciled each year,*  
13 *with any under spending carried into the next program year*  
14 *or returned to customers, as determined by the Commission.*  
15 *(Settlement Agreement in Docket No. DE 19-064, Hearing*  
16 *Exhibit 37, at 11.)*

17 Also included in the Settlement Agreement is the following language ending the annual  
18 reconciliation of REP after this CY 2020 reconciliation filing:

19 *The REP shall terminate with the final order in the*  
20 *“Calendar Year 2020 Annual Report and Reconciliation*  
21 *and Rate Adjustment Filing,” docket, which will seek*  
22 *recovery of REP investments made during the 2020*  
23 *construction season. Staff and the OCA accept the 2020 REP*  
24 *capital budget, Attachment 7, as presented during the*  
25 *February 6, 2020, REP/VMP meeting. (Settlement*  
26 *Agreement in Docket No. DE 19-064, Hearing Exhibit 37, at*  
27 *10.)*

28 As such, this filing will mark the end of the REP portion of the filings and the Company  
29 will recover reliability enhancement projects through future rate cases only.

1 **Q. Please describe what types of activities were included in the 2020 REP and VMP.**

2 A. A significant portion of the REP capital budget targeted the re-conductoring of  
3 approximately 4 miles of bare mainline primary conductor with spacer cable. These  
4 projects are identified in Appendices 2 and 3 of the CY2020 REP/VMP Report. The  
5 vegetation management activities consisted of Planned Cycle Trimming, Tree Removal,  
6 Right of Way work, and Interim, Spot, and Trouble Tree Trimming, identified in  
7 Appendices 4 and 5 of the CY2020 REP/VMP Report.

8 **Q. Please explain how the Company decides to allocate funds towards vegetation**  
9 **management and reliability activities within a given year's budget, and the process**  
10 **the Company uses to determine which REP/VMP projects to undertake in any given**  
11 **year.**

12 A. Each year, the Company develops an Annual Work Plan that is designed to achieve the  
13 overriding performance objectives of the business (safety, reliability, efficiency, customer  
14 satisfaction, and environmental responsibility). At the outset, the Company compiles a  
15 draft work plan that consists of proposed spending for asset replacement, system  
16 capacity, and performance initiatives, and individual capital projects and work activities  
17 required to comply with franchise or tariff requirements such as pole relocations,  
18 response to damage/failure, and new business construction. Each potential project  
19 specified within the plan includes a business category/justification for the project and  
20 estimated costs. The Company then prioritizes the projects based on the relative risk or  
21 opportunity associated with each project proposal to facilitate the selection of appropriate  
22 projects to be included in the Annual Work Plan. All of the proposed projects then

1 undergo review and are prioritized to achieve an optimized portfolio of projects  
2 considering the reliability performance data compared to the reliability improvements  
3 targeted by the various programs and the deliverability of the various programs within the  
4 calendar year. The process is designed to ensure the Company arrives at a budget that  
5 provides the optimal balance in terms of selecting the investments necessary to maintain  
6 and improve the performance of the system, while also ensuring a cost-effective use of  
7 the Company's available resources.

8 **Q. Please explain how REP capital investments relate to the other capital investments**  
9 **made by the Company on its system.**

10 A. The REP capital improvements are developed within the Company's overall capital  
11 investment plans. The REP/VMP Plan is a subset of that overall plan and seeks to  
12 develop and implement initiatives to improve the Company's delivery system  
13 performance while still meeting investment obligations in the areas of franchise/tariff  
14 requirements, capacity, and asset replacement.

15 **Q. Please summarize the Company's actual results from the CY2020 REP/VMP**  
16 **activities and the level of recovery the Company is requesting.**

17 A. For CY2020, Liberty proposed to spend \$1,500,000 for capital investments, plus  
18 \$100,000 of carryover costs from 2019 projects. The final spending level was  
19 \$1,566,370. Further details of the projects and actual spending amounts are detailed in  
20 the Report.

1 With respect to vegetation management activities, the Company initially proposed during  
2 Docket No. DE 19-064 the options of continuing a 4-year trimming cycle or returning to  
3 a 5-year cycle. Recognizing that annual reimbursements that it had historically received  
4 from Consolidated Communications, Inc. (“CCI”) would no longer be available to offset  
5 the total amount of VMP O&M expenses incurred, because CCI exercised its contractual  
6 option not to participate in the vegetation management aspect of the Joint Ownership  
7 Agreement after 2019, all annual vegetation management costs are the responsibility of  
8 the Company and its customers.

9 The result of the rate case Settlement Agreement allowed for a total annual spend of  
10 \$2,200,000, further limited by a cap of 10%, or a maximum potential allowance of  
11 \$2,420,000, with or without billing CCI for their portion of tree trimming costs. As the  
12 option to bill CCI was no longer available, LU adjusted the 2020 budget towards this  
13 figure. The actual spending for CY2020 was \$2,461,057. Being that the total cost of  
14 vegetation management is greater than the allowed \$2,420,000, the Company is only  
15 requesting cost recovery for the allowed amount. Information regarding any excess  
16 amounts are provided to allow the Commission to see the total costs associated with  
17 vegetation management activities in 2020.

18 **Q. Please explain why the Company’s actual O&M spending for CY2020 varied from**  
19 **the Company’s original budget.**

20 **A.** The major spending variances are as follows below:

- 21 • Work planning -- \$3,926 more spent than anticipated;

- Spot Tree Trimming -- \$7,490 less than anticipated;
- Trouble and Restoration Maintenance -- \$36,491 more than anticipated;
- Planned Cycle Trimming -- \$55,123 more than anticipated;
- Police Detail (Traffic Control) -- \$52,040 less than anticipated;
- Hazard Tree Removal -- \$10,947 more than anticipated;
- Interim Trimming -- \$9,552 more than anticipated; and
- ROW -- \$45,008 less than anticipated.

Additional details of the variances are available in the Report.

**Q. Please explain why the Company's actual capital spending for CY2020 varied from the Company's original budget.**

A. The major spending variances are the \$66,370 higher than anticipated spending on the 2020 bare conductor replacement projects, offset by the 2020 carryover from 2019 projects not being included in this filing because the carryover is being included in the 2021 Step Adjustment filing due April 6, 2021. Additional details of the variances are available in the Report.

**Q. Did the Company undertake all of the bare wire replacement provided in the plan submitted to Staff on November 15, 2019?**

A. No. The Company completed approximately two-thirds of the work described to Staff. The Company deferred replacing bare wires along Burns Road and Mammoth Road until 2021 to offset a higher than expected investment in the Bridge Street project.

1 **Q. Please explain why the Company only undertook a portion of the work provided to**  
2 **Staff?**

3 A. The Company reduced the amount of bare wire replacement to offset a higher than  
4 expected investment in the Bridge Street project. The higher costs for the Bridge Street  
5 project were driven by increased per mile costs, increased material charges, and total tree  
6 trimming costs for those projects that came in higher than estimated. The estimated cost  
7 per mile used was \$380,000, but the actual cost per mile for Bridge Street was \$778,162.  
8 This higher cost was primarily due to higher than anticipated contractor bids, along with  
9 the tree trimming costs being budgeted at approximately \$40,000, but the total charges  
10 came in at approximately \$117,000. The actual cost for Nashua Road was \$486,596 per  
11 mile. As provided in discovery in Docket No. DE 20-036, the Company found that the  
12 \$380,000 cost per mile should be approximately \$450,000. The findings of this change  
13 occurred after review of the 2019 job costs after December 31, 2019. The budget for  
14 calendar year 2020 had already been approved by the Company and Staff had already  
15 been supplied with the calendar year 2020 project list on November 15, 2019.

16 **Q. Please summarize the reliability results shown in the CY2020 REP/VMP Report.**

17 A. The Company did not meet its SAIFI and SAIDI targets of 0.829 and 97.88 minutes,  
18 respectively, for the reasons described below, which are based on a five-year rolling  
19 average and are shown in Appendix 7. The actual results for CY2020 were 0.855 and  
20 104.747, respectively. This marks the first time in six years that the Company has not  
21 met its SAIFI and SAIDI targets. Liberty nonetheless expects overall positive  
22 performance in SAIFI and SAIDI to continue as further positive impacts from the

1 reliability initiatives are experienced. Additional details of the reliability results are  
2 provided in the Report.

3 **Q. Please explain the major incidents that led to the Company not meeting its SAIFI**  
4 **and SAIDI targets for 2020.**

5 A. Some level of variability is to be expected in the year-to-year metrics, primarily rooted in  
6 weather pattern changes, and that was certainly the case in 2020. On September 30, the  
7 Company experienced a weather event that resulted in a daily SAIDI that exceeded the  
8 threshold for IEEE 1366 major event day but did not exceed the threshold for PUC  
9 regulatory criteria of 45 concurrent events. This weather event included the lockout of  
10 the Vilas Bridge 12L2 circuit breaker in Vermont after a tree fell and caused eight  
11 sections of primary and secondary wires to come down. The fact that the Vilas Bridge  
12 12L2 feeder is mainly a radial line with minimal backup ties to other sources delayed the  
13 restoration of power to customers. From an outage duration standpoint, this feeder  
14 lockout is the single worst incident for Liberty since March 2014 and contributed to a  
15 SAIDI and SAIFI of 11.3 minutes and 0.029, respectively. For reference, the Company  
16 missed its SAIDI and SAIFI targets by 6.87 minutes and 0.026, respectively.

17 **Q. Are the REP/VMP expenditures for which the Company is now seeking recovery**  
18 **reasonable?**

19 A. Yes. As described in this filing, the expenditures were reasonable because these  
20 expenditures were made for programs that are specifically referenced in the Settlement  
21 Agreement and were necessary to achieve continued improvement in the Company's  
22 system reliability. The work undertaken for vegetation management, single phase

1 recloser installations, and bare conductor replacement was incurred for the explicit  
2 purpose of improving system reliability and is consistent with the intent of the Settlement  
3 Agreement. These expenditures are expected to generate real customer benefits in the  
4 form of improved reliability performance. As such, the Commission should approve  
5 recovery of these expenditures and permit the requested rate adjustments to become  
6 effective for usage on and after May 1, 2021.

7 **IV. CONCLUSION**

8 **Q. Does that conclude your testimony?**

9 **A.** Yes, it does.





# Reliability Enhancement Program and Vegetation Management Program

CY2020 REP/VMP Report

March 15, 2021





## I. Introduction

Liberty Utilities (Granite State Electric) Corp. ("Liberty" or "the Company") hereby submits the results of the Reliability Enhancement Plan ("REP") and Vegetation Management Plan ("VMP") for the calendar year 2020 ("CY2020"). These results for the CY2020 Plan are submitted consistent with the requirements in Attachment F to the Settlement Agreement in Docket No. DE 13-063 that was approved by Commission Order No. 25,638 (March 17, 2014), as amended by the Settlement Agreement in Docket No. DE 16-383 that was approved by Order No. 26,005 (April 12, 2017), and that was further amended by the Settlement Agreement in Docket No. DE 19-064 that was approved in Order No. 26,376 (June 30, 2020) (together, the "Settlement Agreement"). This report contains the following information:

1. A comparison of actual to budgeted spending on operating and maintenance ("O&M") activities related to the VMP in CY2020. Appendix 1, line 12, column (b), shows that total actual O&M spending that occurred during 2020 was \$2,461,057 with a request to recover a total of \$2,420,000, made up of base spending \$2,200,000, plus ten percent above as approved in Docket No. DE 19-064;
2. A comparison of actual investment to budgeted spending on capital projects for REP in CY2020. Appendix 2, line 6, column (c) shows that the total capital investment recorded on Liberty's books in CY2020 was \$1,566,370, with a request to recover \$213,246 in revenue requirement associated with 2020 capital investment, as provided in the testimony of David Simek and Adam Hall;
3. A summary of reliability performance for CY2020.

The Company is submitting the joint testimony of Heather Green, Joel Rivera, and Anthony Strabone, which provides further information regarding the Company's actual O&M cost and capital investment made during CY2020. In addition, the joint testimony of David Simek and Adam Hall addresses the Company's request for a net increase in distribution rates associated with the REP/VMP Adjustment Provision and the REP Capital Investment Allowance described above, and includes typical bill impacts.

### Section I: CY2020 O&M Budget vs. Actual O&M Expenses for VMP

The proposed operating and maintenance ("O&M") budget for VMP activities for CY2020 is shown in Appendix 1, line 12, column (a).

The Company initially proposed in Docket No. DE 19-064 the options of continuing a 4-year or returning to a 5-year cycle. However, the Consolidated Communications, Inc. ("CCI")



1 reimbursements had to be excluded from the total amount of VMP O&M expenses to be  
2 recovered because CCI exercised its contractual option to not participate in the vegetation  
3 management aspect of the Joint Ownership Agreement after 2019, resulting in the Company  
4 taking on all the costs of vegetation activities annually of the VMP expense budget of  
5 \$2,449,556 as shown in Appendix 1, line 14.

6 The rate case was settled after the budget was proposed. The rate case allowed for a total  
7 spend of \$2,200,000 with a 10% variance, or a total allowance of \$2,420,000. Liberty requested  
8 to move to a 5-year cycle to accommodate the cap on spending. As part of the Settlement  
9 Agreement, parties agreed the Company would continue with the 4-year trim cycle, but with  
10 the aforementioned budget. As the ability to bill Consolidated was no longer available and  
11 the rate case provided this new budget, the Company adjusted its budget and spending to  
12 align with the new figure. The actual spending for CY2020 was \$2,461,057.

13 As shown in Appendix 1, line 14, column (b), the Company's actual total spending level for  
14 CY2020 was \$2,461,057 for O&M activities related to the VMP, or \$11,501 more than the filed  
15 budgeted amount of \$2,449,556. Budget variances related to the total CY2020 VMP O&M  
16 spending are described below. In addition to Appendix 1, which shows total O&M expenses,  
17 Appendix 5 shows the actual VMP O&M expenses by month, while Appendix 4 contains the  
18 work plan of completed VMP O&M activities by feeder.

19 As described above, the Company revised its budget and spending during 2020 to more  
20 closely align with the spending levels arrived in the DE 19-064 Settlement Agreement. Some of  
21 the spending variances are described below:

22 The Company spent \$3,926 more on work planning than anticipated. The Company brought  
23 in an additional work planner for a few weeks to catch up on work planning and the Company  
24 also enhanced the new software program to better manage the workflow process.

25 Spot tree trimming was under spent \$7,490 due to deferring requested work of electric service  
26 orders and customer calls.

27 The trouble and restoration budget is for unplanned work based on actual occurrence.  
28 Spending exceeded the budget by \$36,491 due to an increase in unplanned non-storm related  
29 trouble call volume and support of the overhead line department. The Company encountered  
30 an increased amount of actively failing or urgent off cycle work requested by customers.

31 The Company spent \$55,123 more on planned cycle pruning due to the 8LI delayed work in  
32 relation to the railroad permitting and additional operational costs for new work management  
33 program which includes the costs for tablets, licenses, and training.

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1 The Company spent \$52,040 less than anticipated for traffic control. The areas the Company  
2 trimmed in 2020 required less detail than would be the case if the Company were trimming in  
3 the more urban areas and less miles were worked as some miles were deferred.

4 The Company spent \$10,947 more than budgeted on hazard tree removals due to the quality  
5 and quantity of high risk trees that could not be deferred. .

6 Interim trimming is generally unplanned work. The Company overspent by \$9,552.

7 Tree planting came in at the budget of \$0 as we cancelled our Arbor Day celebrations due to  
8 COVID-19.

9 Sub-Transmission Right of Way sideline work was underspent by \$45,008. Fewer removals  
10 were performed than were estimated. The plan to work the remainder of the 2376W circuit  
11 has been pushed further to 2021 due to difficulty with an abutter.

## 12 **Section 2: CY2020 Capital Budget vs. Actual Capital Investment for** 13 **REP**

14 The proposed capital investment budget for REP activities for 2020 is shown in Appendix 2, line  
15 6, column (b). For the calendar year 2020, Liberty proposed to spend \$1,600,000 on capital  
16 investments related to REP activities, including \$100,000 related to CY2019 carryover work  
17 (Appendix 2, line 5, column (b)). The carryover work will be included in the Company's 2021  
18 Step Adjustment filing due April 6, 2021. As discussed with Commission Staff, the capital budget  
19 included replacement of 4 miles of bare primary conductors with spacer cable in tree outage  
20 prone areas where it is too costly to rely on vegetation management practices alone to  
21 mitigate feeder lockouts. The application of spacer cable, a covered conductor that is  
22 resistant to tree related outages, significantly improves mainline circuit performance during  
23 windy and stormy conditions, and affords protection against incidental tree-conductor  
24 contact at the end of the trim cycle and contact resulting from branches falling from above  
25 or outside the trim zone.

26 Details of the REP capital investment projects and costs are included in Appendix 3.

27 As shown on line 4, column (c) of Appendix 2, the Company's total spending for CY2020 was  
28 \$1,566,370 for 2020 capital activities related to REP, or \$66,370 more than the filed budgeted  
29 amount for those projects of \$1,500,000.

30 Additional details of the variance in each of the CY2020 REP projects are provided below:



## **Bare Conductor Replacement:**

As shown in Appendix 2, line 1, column (c), CY2020 capital expenditures incurred for Bare Conductor Replacement amounted to \$1,566,370, or \$66,370 more than the proposed target of \$1,500,000.

Originally, there were two bare wire replacement projects planned in 2020. The first project targeted replacement of bare wires along Bridge Street and Wheeler Avenue in the town of Salem. As shown in Appendix 3, line 1, column (e), CY2020 capital expenditures incurred for Bridge Street and Wheeler Avenue amounted to \$933,795, or \$433,795 more than the proposed budget of \$500,000. Key factors contributing to the difference between the budgeted amount and the actual capital investment are (1) the changes in actual versus estimated costs as site specific requirements were determined by engineering, and (2) by bid prices being higher than expected which resulted in a higher than forecasted investment.

The second project targeted replacement of bare wires along Nashua Road, Burns Road, and Mammoth Road in the town of Pelham, for which the company budgeted \$1,000,000. In order to mitigate the higher than expected investment for the Bridge Street project in Salem, the Company decided to replace 1.3 miles of bare wires along Nashua Road and defer replacing 1.5 miles of bare wires along Burns Road and Mammoth Road until 2021. As shown in Appendix 3, line 2, column (e), this amounted to \$632,575, or \$367,425 less than the proposed budget of \$1,000,000.

## **Section 3: Reliability Results – Calendar Year 2020**

Consistent with Attachment F, Section VII.b, of the Settlement Agreement, reliability metrics for CY2020 are presented in the table below based on both the PUC Standard<sup>1</sup> for excluding major weather events and the IEEE Standard 1366<sup>2</sup> method for excluding major event days. The metrics also exclude transmission supply outages, planned or notified outages, and all other

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<sup>1</sup> PUC Major Storm: [(CI >= 15 % of Customers Served and 30 concurrent events) or (45 concurrent events)], Using PUC criteria, two days were excluded in Calendar Year 2020: August 4 and August 5.

<sup>2</sup> IEEE Major Event Days: Using IEEE criteria, three days were excluded in Calendar Year 2020: August 4, August 5 and September 30.



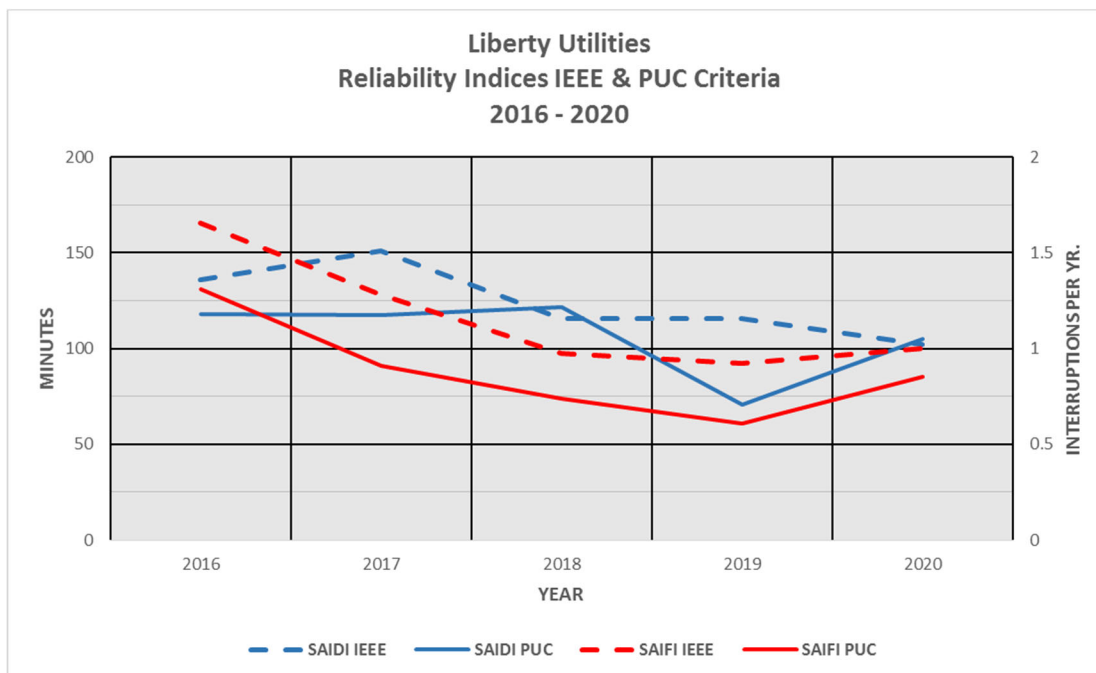
applicable exclusions<sup>3</sup>. The metrics include customers interrupted (“CI”), customer minutes interrupted (“CMI”), system average interruption frequency index (“SAIFI”), system average interruption duration index (“SAIDI”), customer average interruption duration index (CAIDI), and customers interrupted per interruption index (CIII).

No Exclusions								
Year	Events	Customers Interrupted	Customer Minutes Interrupted	Customers Served	SAIFI	SAIDI	CAIDI	CIII
2020	701	53,471	6,857,241	45,192	1.1830	151.500	128.24	76.28
Excludes Only IEEE Major Events								
Year	Events	Customers Interrupted	Customer Minutes Interrupted	Customers Served	SAIFI	SAIDI	CAIDI	CIII
2020	605	44,923	4,554,679	45,192	0.9950	100.866	101.39	74.25
Excludes Only PUC Major Events								
Year	Events	Customers Interrupted	Customer Minutes Interrupted	Customers Served	SAIFI	SAIDI	CAIDI	CIII
2020	634	48,722	5,307,841	45,192	1.0786	117.428	108.94	76.85
Excludes Only Loss of Supply by Other Utility or Transmission Outage								
Year	Events	Customers Interrupted	Customer Minutes Interrupted	Customers Served	SAIFI	SAIDI	CAIDI	CIII
2020	698	46,639	6,489,141	45,224	1.0311	143.318	139.14	66.82
Excludes Only Planned Maintenance								
Year	Events	Customers Interrupted	Customer Minutes Interrupted	Customers Served	SAIFI	SAIDI	CAIDI	CIII
2020	629	52,352	6,789,881	45,192	1.1583	150.010	129.70	83.23
All Exclusions: IEEE Major Events, loss of supply, transmission, planned maintenance, Load Shedding, Single Customer Outages, Fire/Police Request								
Year	Events	Customers Interrupted	Customer Minutes Interrupted	Customers Served	SAIFI	SAIDI	CAIDI	CIII
2020	430	34,834	3,983,415	45,192	0.7713	88.1967	114.35	81.01
All Exclusions: PUC MEDs, loss of supply, transmission, planned maintenance, Load Shedding, Single Customer Outages, Fire/Police Request								
Year	Events	Customers Interrupted	Customer Minutes Interrupted	Customers Served	SAIFI	SAIDI	CAIDI	CIII
2020	454	38,628	4,736,058	45,192	0.8548	104.747	122.61	85.08

<sup>3</sup> Events that are excluded are those involving loss of supply from another utility, customer-owned facilities, fire or police emergencies, load shedding, planned maintenance, events whose duration was 5 minutes or less and/or events which involve only one customer.



1 The Company's historical reliability performance for the time period from 2016 to 2020 is  
2 outlined in the chart below. This chart displays annual SAIDI and SAIFI performance using IEEE-  
3 1366 and PUC criteria.



4  
5 In terms of SAIDI, the reliability performance for the Company in 2020 (based on IEEE-1366) was  
6 the best performance in the last five years. The SAIDI performance of 100.87 minutes in 2020  
7 is lower than the five-year average of 124.2 minutes.

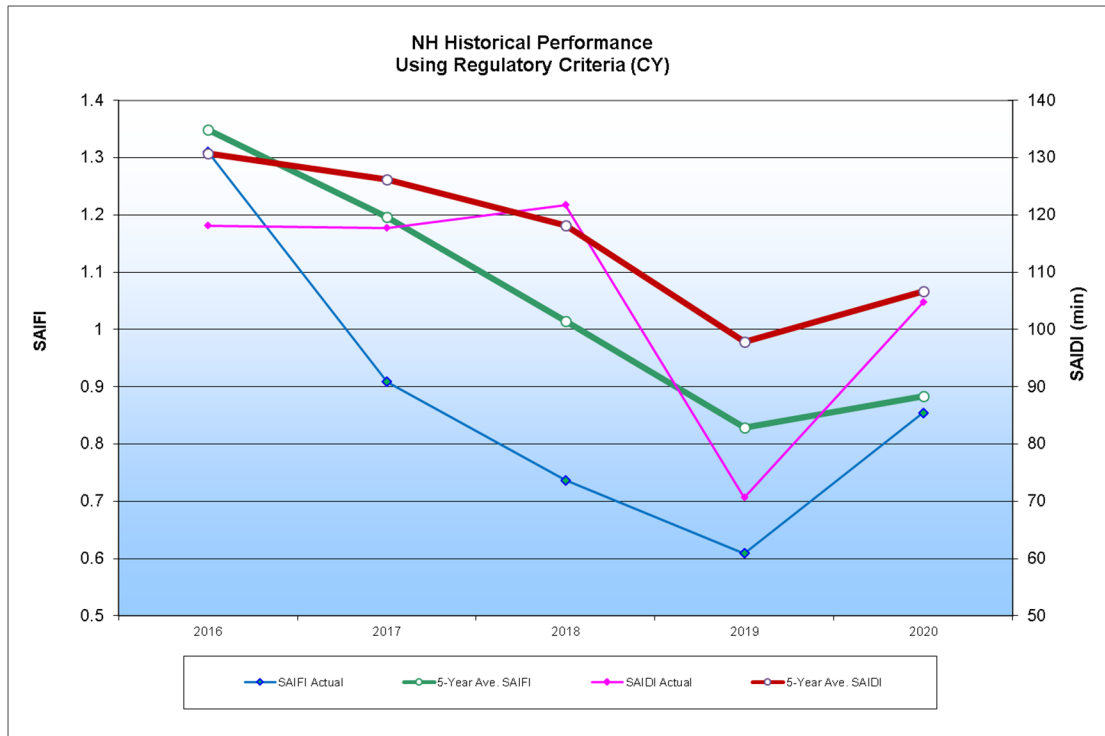
8 In terms of SAIFI, the reliability performance for the Company in 2020 (based on IEEE-1366) was  
9 the third best performance in the last five years. The SAIFI performance of 1.0 is lower than the  
10 five-year average of 1.16 minutes.

11 In 2020, there were three events that met the IEEE-1366 criteria for a Major Event Day.

12 As shown on the NH Historical Performance chart below (based on PUC criteria), the SAIFI  
13 performance of 0.85 and the SAIDI performance of 104.7 for CY2020 continue on an improving,  
14 downward trend, with the 2020 SAIFI and SAIDI results being the second best and third best  
15 respectively in five years. In summary, in 2020 the Company did not meet its SAIFI and SAIDI  
16 targets of 0.829 and 97.88 minutes, respectively, which are based on a five-year rolling  
17 average and are shown in Appendix 7 and the table below. The Company met its SAIDI and  
18 SAIFI targets for five consecutive years (2014–2019). Liberty expects this overall positive  
19 performance in SAIFI and SAIDI to continue as further positive impacts from our reliability and  
20 vegetation management initiatives are experienced.

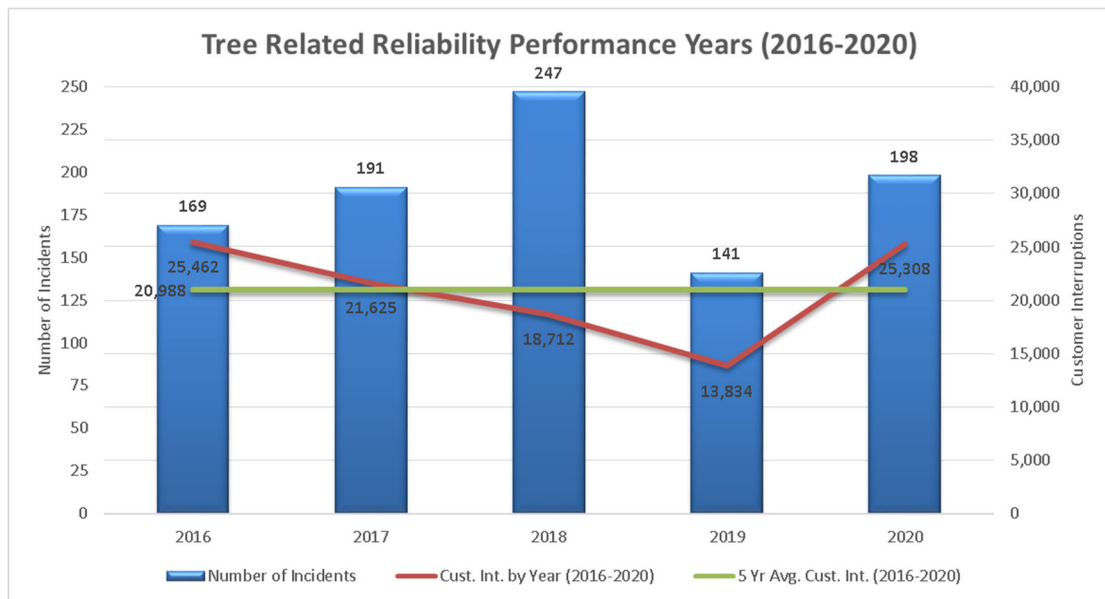






1

2 The tree related reliability performance for the Company was reviewed using NH PUC criteria.  
 3 The chart below displays the number of tree related incidents per year and the number of  
 4 customers interrupted from tree related incidents from 2016 to 2020. For comparison the five-  
 5 year average of number of customers interrupted from tree related incidents is also shown.



6



1       The chart above shows the Company's tree related reliability performance between 2016 and  
2       2020. The customers interrupted show a declining trend in the number of customers  
3       interrupted from 2016 through 2019 and an increase in 2020. The number of tree related events  
4       increased from 2015 through 2018 and again in 2020.



**Appendix 1 - O&M Expenses**

Line	(a) CY 2020 Adjusted Budget Expenses	(b) CY 2020 Actual Expenses	(c) Variance	(d) Reference	(e) CY 2020 Variance Actual vs. Budget
1 <b>VMP O&amp;M</b>					
2 Work Planners for Veg Plan	\$ 205,000	\$ 208,926	\$ 3,926	Appendix 4	<p>We deferred requests unless urgent.</p> <p>Includes a higher volume of unplanned trouble response/line department support.</p> <p>Includes work delayed on 8L1 for RR permit delays and transition to new work program.</p> <p>We deferred miles and therefore deferred traffic control.</p> <p>At the time budget was adjusted, we had spent \$100,000. The additional \$11,000 were tree removals that could not be deferred.</p> <p>At the time budget was adjusted, we attempted to reduce budget to zero. However, we found a portion of the 11L2 that could not be deferred.</p> <p>-</p> <p>We reduced amount of tree removals to accommodate needs in other portion of the budget. Also 2373W delayed.</p>
3 Spot Tree Trimming	\$ 30,000	\$ 22,510	\$ (7,490)	Appendix 4	
4 Trouble and Restoration Maintenance	\$ 30,000	\$ 66,491	\$ 36,491	Appendix 4	
5 Planned Cycle Trimming	\$ 1,505,556	\$ 1,560,679	\$ 55,123	Appendix 4	
6 Police Detail Expenses - Cycle Trimming & Other	\$ 320,000	\$ 267,960	\$ (52,040)	Appendix 4	
7 Hazard Tree Removal	\$ 100,000	\$ 110,947	\$ 10,947	Appendix 4	
8 Interim Trimming	\$ -	\$ 9,552	\$ 9,552	Appendix 4	
9 Tree Planting	\$ -	\$ -	\$ -	Appendix 4	
10 Sub-Transmission Right of Way Clearing	\$ 259,000	\$ 213,992	\$ (45,008)	Appendix 4	
11 Sub-Transmission Right of Way Sideline	\$ -	\$ -		Appendix 4	
12 Total VMP O&M Expenses	\$ 2,449,556	\$ 2,461,057	\$ 11,501		
13 Less: Reimbursements from Consolidated	\$ -	\$ -	\$ -		
14 VMP O&M Expenses Net of Consolidated Credits	\$ 2,449,556	\$ 2,461,057	\$ 11,501		

**Appendix 2 - REP Capital Investments - Summary**

Line	Projects	(a) 2020 Goal	(b) CY 2020 Capital Investment Budget(*)	(c) CY 2020 Actual Capital Investment	(d) CY 2019 Capital Carryover Investment	Reference
1	Bare Conductor Replacement	4 mi	\$ 1,500,000	\$ 1,566,370	\$ -	Appendix 3, line 1&2
2	Single Phase Reclosing Installations	None	\$ -	\$ -	\$ -	
3	Single Phase Fuse Saver Installations	None	\$ -	\$ -	\$ -	
4	Calendar Year 2020 Totals		\$ 1,500,000	\$ 1,566,370		Appendix 3, line 5
5	Previous CY Carryover		\$ 100,000		\$ -	Appendix 3, line 4
6	Totals		\$ 1,600,000	\$ 1,566,370	\$ -	
7					\$ -	

(\*) From CY 2020 Plan submitted to Staff on November 15, 2019.

**Appendix 3 - Reliability Enhancement Program Capital Costs**

Line	(a) Activities	(b) Project Description	(c) Work Order	(d) CY 2020 Budgeted Capital Investment (107)*	(e) CY 2020 Capital Investment Closed to Plant (101/106/108)	(f) CY 2020 Total
1	13L3 Bridge St Salem Bare Conductor Replacement	Replace approximately 1.2 miles of bare conductors along Bridge St Salem	301946-01003	\$ 500,000	\$ 933,795	\$ 933,795
2	14L2 Nashua Rd Pelham Bare Conductor Replacement	Replace approximately 1.3 miles of bare conductors along Nashua Rd Pelham	302046-01002	\$ 1,000,000	\$ 632,575	\$ 632,575
3	14L2 Burns Rd-Mammoth Rd Pelham Bare Conductor Replacement	Replace approximately 1.5 miles of bare conductors along Burns Rd and Mammoth Rd Pelham	302046-01001		\$ -	\$ -
4	Capital Investment Carryover from previous CY			\$ 100,000		
5	Totals			\$ 1,600,000	\$ 1,566,370	\$ 1,566,370

(\*) From CY 2020 Plan submitted to Staff on November 15, 2019.

## Appendix 4 - O&M Expenses

### CY 2020 Vegetation Management Activities

CY 2020			
Line	Activities	Program Plan (*)	Reference
1	Spot Tree Trimming	As needed	See Appendix 6 for definitions
2	Trouble and Restoration Maintenance	As needed	See Appendix 6 for definitions
3	Planned Cycle Trimming	223.78	See Appendix 6 for definitions
4	Cycle Trimming Police Detail Expenses	As needed	See Appendix 6 for definitions
5	Hazard Tree Removal	As needed	See Appendix 6 for definitions
6	Enhanced Hazard Tree Removal	As needed	See Appendix 6 for definitions
7	Interim Trimming	As needed	See Appendix 6 for definitions
8	Tree Planting	As needed	See Appendix 6 for definitions
10	Other Police Detail Expenses	As needed	See Appendix 6 for definitions
11	Substation	Feeder	OH Miles - Distribution
12	Craft Hill #11	11L1	14.66
13	Slayton Hill #39	39L2	30.31
15	Hanover #6	6L2	4.06
16	Enfield #7	7L1	78.41
17	Spicket River #13	13L3	0.00
18	Pelham #14	14L2	35.39
20	Salem Depot #9	9L1	10.40
22	Salem Depot #9	9L2	1.36
23	Salem Depot #9	9L3	15.04
24	Michael Ave #40	40L3	4.5
25	Total OH Miles - Distribution		194.13
26	Sub transmission	OH Miles - Sub transmission	
32	BARRON AVE. #10/SALEM DEPOT #9	2352	3.15 Miles/ 30.13 Acres
33	BARRON AVE. #10	2393	.89 Miles/ 6.57 Acres
35	HANOVER #6/MT. SUPPORT #16/LEB #1*	1303/1304	3.15 Miles (6.3 Total)
27	Total OH Miles - Sub transmission		7.19 mi/36.7 acres

\* Portion completed in 2019

Appendix 5 - VMP Spend by Month

VM Only Jobs	GL Posting Month												
Job	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Grand Total
VM1000	\$ 14,400.36	\$ 14,782.58	\$ 34,307.52	\$ 11,366.58	\$ 14,195.18	\$ 13,652.36	\$ 17,928.79	\$ 15,243.59	\$ 12,417.53	\$ 12,551.20	\$ 2,525.35	\$ 45,554.70	\$ 208,925.74
VM1010	1,296.83	(547.79)	1,100.66	1,459.41	1,114.38	2,525.93	2,626.97	5,133.18	(862.46)	3,712.23	2,482.89	2,467.45	22,509.68
VM1210	3,673.71	7,536.78	(4,012.63)	5,087.72	2,419.50	7,203.54	1,538.88	13,379.86	9,702.48	3,623.16	7,531.09	8,806.94	66,491.03
VM1215	156,987.30	(23,766.75)	103,912.82	181,026.33	122,787.97	117,812.79	99,878.68	107,325.65	118,572.29	228,348.48	304,258.75	43,535.14	1,560,679.45
VM1218	63,063.00	(43,997.00)	(41,807.26)	100,104.50	65,094.00	(15,695.00)	21,990.00	10,160.00	52,872.70	14,345.00	21,295.00	20,535.00	267,959.94
VM1220	51,131.02	(32,490.94)	31,752.45	29,167.58	23,564.53	(3,404.85)	11,227.14						110,946.93
VM1235								6,016.34	8,598.93	(5,063.04)			9,552.23
VM1280	68,290.90	(63,301.50)		7,891.66	12,599.14	670.16	57,766.52	45,479.38	50.00	-	3,147.48	81,398.08	213,991.82
Grand Total	\$ 358,843.12	\$ (141,784.62)	\$ 125,253.56	\$ 336,103.78	\$ 241,774.70	\$ 122,764.93	\$ 212,956.98	\$ 202,738.00	\$ 201,351.47	\$ 257,517.03	\$ 341,240.56	\$ 202,297.31	\$ 2,461,056.82

Includes 2020 charges paid in 2020 and December 2020 accruals for 2020 charges not yet paid

## **Appendix 6 - VMP O&M Definitions**

**Inspection and Maintenance:** The inspection and maintenance component of the REP involves a comprehensive overhead assessment of the Company's equipment and feeders prior to performance of the REP work.

**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 outside of residential areas. 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:** 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:** 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:** This 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:** 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.

**Appendix 7 - 5 year rolling averages SAIDI/SAIFI**

<b>CY</b>	<b>Sum of CI</b>	<b>Sum of CMI</b>	<b>Sum of SAIFI (right)</b>	<b>5-Year Avg. SAIFI (right)</b>	<b>Sum of SAIDI (left)</b>	<b>5-Year Avg. SAIDI (left)</b>
2000	75,896	4,079,729	2.00		107.76	
2001	85,017	8,219,366	2.22		214.39	
2002	65,099	6,042,438	1.68		155.28	
2003	56,341	3,971,111	1.43		100.86	
2004	67,956	8,313,277	1.71	1.81	207.53	157.16
2005	84,188	12,085,278	2.08	1.82	301.25	195.86
2006	106,935	10,363,197	2.70	1.92	263.83	205.75
2007	79,070	9,196,797	1.96	1.98	228.36	220.37
2008	93,197	8,609,475	2.30	2.15	212.05	242.60
2009	47,270	4,763,099	1.17	2.04	115.94	224.29
2010	72,089	8,156,936	1.74	1.97	196.44	203.32
2011	49,176	4,997,759	1.17	1.67	119.60	174.48
2012	69,677	5,829,537	1.70	1.62	140.06	156.82
2013	68,033	6,792,013	1.64	1.48	162.28	146.86
2014	63,878	7,145,798	1.54	1.56	172.12	158.10
2015	24,893	2,618,074	0.58	1.33	61.05	131.02
2016	56,784	5,124,815	1.31	1.35	118.14	130.73
2017	39,831	5,156,572	0.91	1.19	117.74	126.27
2018	32,681	5,406,674	0.74	1.01	121.79	118.17
2019	27,269	3,161,319	0.61	0.83	70.66	97.88
2020	38,628	4,736,058	0.85	0.88	104.75	106.61
2021 Projection	39,039	4,277,397	0.88	0.80	106.62	104.31

**STATE OF NEW HAMPSHIRE  
BEFORE THE  
PUBLIC UTILITIES COMMISSION**

Docket No. DE 21-xxx

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty  
Reliability Enhancement Program and Vegetation Management Program

Calendar Year 2020 Reconciliation Filing

**DIRECT TESTIMONY**

**OF**

**DAVID B. SIMEK**

**AND**

**ADAM M. HALL**

March 15, 2021



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1   **I. INTRODUCTION**

2   **Q. Please state your full name and business address.**

3   A. (DS) My name is David B. Simek. My business address is 15 Buttrick Road,  
4       Londonderry, New Hampshire.

5       (AH) My name is Adam M. Hall. My business address is 15 Buttrick Road,  
6       Londonderry, New Hampshire.

7   **Q. Please state by whom you are employed.**

8   A. We are employed by Liberty Utilities Service Corp. (“LUSC”), which provides service to  
9       Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty (“Liberty” or “the  
10       Company”).

11   **Q. Please describe your educational and professional background.**

12   A. (DS) I graduated from Ferris State University in 1993 with a Bachelor of Science in  
13       Finance. I received a Master’s of Science in Finance from Walsh College in 2000. I also  
14       received a Master’s of Business Administration from Walsh College in 2001. In 2006,  
15       earned a Graduate Certificate in Power Systems Management from Worcester  
16       Polytechnic Institute. In August 2013, I joined LUSC as a Utility Analyst and I was  
17       promoted to Manager, Rates and Regulatory Affairs in August 2017. Prior to my  
18       employment at LUSC, I was employed by NSTAR Electric & Gas (“NSTAR”) as a  
19       Senior Analyst in Energy Supply from 2008 to 2012. Prior to my position in Energy  
20       Supply at NSTAR, I was a Senior Financial Analyst with the NSTAR Investment  
21       Planning group from 2004 to 2008.

(AH) I graduated from Siena College in 2014 with a Bachelor of Science in Finance. I also received a Master's of Business Administration from Franklin Pierce University in 2016. I joined LUSC as an Analyst, Rates and Regulatory Affairs in January 2019. Prior to this, I was employed by Southern New Hampshire University from 2016 to 2019.

**Q. Have you previously testified in regulatory proceedings before the New Hampshire Public Utilities Commission (the "Commission")?**

(DS) Yes, I have testified on numerous occasions before the Commission.

(AH) Yes, most recently I testified in Docket No. DE 20-053.

**II. PURPOSE OF TESTIMONY**

**Q. What is the purpose of your testimony?**

A. This testimony supports Liberty's request for Commission approval to recover the incremental operating and maintenance ("O&M") expense and the revenue requirement for capital investment associated with the Reliability Enhancement Program ("REP") and Vegetation Management Program ("VMP") for 2020. The programs were implemented during calendar year 2020 ("CY2020") as described in the Company's CY2020 REP and VMP Report ("CY2020 REP/VMP Report") included in this filing.

The Company seeks to recover \$570,000 of CY2020 O&M costs. This amount is incremental allowed CY2020 O&M spend above the Base Plan O&M amount of \$1,850,000. The Base Plan O&M amount is derived by using half of the base spending level of \$1,500,000 for the first six months of 2020, and half of the base spending level of \$2,200,000 for the last six months of 2020, the increased amount having been approved

1 in Liberty's last rate case by Order No. 26,376 (June 30, 2020). The Company also seeks  
2 to recover the revenue requirement of \$213,246, associated with a total of \$1,566,370 in  
3 capital investment.

4 **III. SUMMARY OF SCHEDULES**

5 **Q. Please describe Schedule DBS-AMH-1 attached to this testimony.**

6 A. Schedule DBS-AMH-1 consists of 17 pages and provides the calculation of the revenue  
7 requirement for the capital and O&M expenditures for CY2020. Schedule DBS-AMH-1,  
8 Page 1 provides the summary of the revenue requirement calculation. Schedule DBS-  
9 AMH-1, Page 2 shows that the total program spend for CY2020 for O&M was  
10 \$2,461,057. As compared to the base level in rates of \$1,850,000, the net result is an  
11 incremental recovery for CY2020 in the amount of \$570,000. The total REP capital  
12 investment during CY2020 was \$1,566,370. The revenue requirement associated with  
13 that investment is \$213,246, and the calculation of which is detailed on Schedule DBS-  
14 AMH-1, Page 3. The remaining pages of Schedule DBS-AMH-1 provide supporting  
15 detail for the tax depreciation associated with the annual capital investment.

16 **Q. Please describe the calculation of tax depreciation expense that underlies the**  
17 **calculation the deferred tax reserve described above.**

18 A. Tax depreciation expense for federal and state taxes for each year is comprised of three  
19 components: (1) a capital repairs tax deduction; (2) bonus depreciation for federal tax  
20 only; and (3) accelerated depreciation based on the Internal Revenue Service's ("IRS")  
21 Modified Accelerated Cost Recovery System ("MACRS") rates for 20-year utility  
22 property.

1 The calculation of the components of tax depreciation expense described above for each  
2 year is shown on Pages 4 through 17 of Schedule DBS-AMH-1. The capital repairs  
3 deduction component is shown on Lines 1 through 4 of Pages 4 through 17. During  
4 2009, the IRS issued guidance under Internal Revenue Code (“IRC”) Section 162 related  
5 to certain expenditures that could be deemed to be repair and maintenance expenses, and  
6 thus eligible for immediate tax deduction for income tax purposes, but were capitalized  
7 by the Company for book purposes. This tax deduction has the effect of increasing  
8 deferred taxes and lowering the revenue requirement that customers will pay under the  
9 REP. The percentage of REP capital expenditures that could be classified as repair  
10 expense varies by year. For calendar years 2013 through 2020, none of the REP capital  
11 work performed was in the nature of capital repairs, so zero percent (0%) was used in the  
12 calculation of the revenue requirement.

13 Bonus depreciation, as allowed in the respective years, for federal tax purposes was then  
14 calculated on the REP capital additions, net of additions subject to the capital repairs  
15 deduction. During 2008, Congress passed the Economic Stimulus Act of 2008 which  
16 established a 50 percent bonus depreciation deduction for certain eligible plant additions.  
17 Congress subsequently passed additional laws that extended and changed the bonus  
18 depreciation rate over the succeeding years. The Tax Cuts and Jobs Act of 2017  
19 eliminated the eligibility of utility property for bonus depreciation beginning in 2018. As  
20 such, the bonus depreciation deduction rate applicable to capital additions made in  
21 CY2020 is zero percent (0%) percent.



1 For federal tax purposes, any capital additions not subject to the capital repairs deduction  
2 or bonus depreciation are subject to the 20-year MACRS depreciation rates as shown in  
3 the Remaining Tax Depreciation (Federal) section of Pages 4 through 17. For state tax  
4 purposes, any capital additions not subject to the capital repairs deduction are then  
5 subject to 20-year MACRS depreciation rates as shown in the Remaining Tax  
6 Depreciation (State) section of Pages 4 through 17. Total tax depreciation for federal and  
7 state taxes is shown on the last two lines of Pages 4 through 17.

8 **Q. Please describe how the return allowance for the REP capital investment was**  
9 **calculated.**

10 A. The Company's year-end net rate base of \$10,609,344, on which the Company's return  
11 allowance is calculated, is shown in Schedule DBS-AMH-1, Page 3, Line 58.

12 The return allowance for the REP capital investment for each rate adjustment is based on  
13 the prior year-end rate base times the Company's currently approved pre-tax weighted  
14 average cost of capital of 9.36 percent, determined using the capital structure and equity  
15 found in the Settlement Agreement approved in Docket No. DE 19-064 with an updated  
16 weighted average cost of debt. The resulting return allowance is the fiscal year-end rate  
17 base of \$10,609,344 times the pre-tax return rate of 9.36 percent, or \$992,522 as shown  
18 on Line 63. Annual depreciation expense of \$422,073 and property taxes of \$371,407, on  
19 Lines 64 and 65, respectively, are added to the return amount to arrive at the total revenue  
20 requirement of \$1,786,001 on Line 66. The property tax amount is based on the actual  
21 ratio of municipal tax expense to net plant in service for CY2019, as calculated in DBS-  
22 AMH-5 applied to the year-end net plant in service, or the sum of Lines 55 and 56.

1 **Q. Why did the Company not calculate book depreciation and property tax amounts**  
2 **for CY2020?**

3 A. The Company uses the FERC Form 1 to calculate the book depreciation and property tax  
4 expenses for the REP/VMP reconciliation filing. The FERC Form 1 for 2020 will not be  
5 available until mid-April and, according to the Settlement Agreement in Docket No. DE  
6 13-063, the REP/VMP filing is due March 15 each year. Due to the fact that the  
7 REP/VMP filing is due prior to the FERC Form 1 completion, the property tax and book  
8 depreciation rates for the 2020 calendar year are not available at the time of this filing,  
9 thus Liberty used the 2019 calendar year calculation as seen in Schedules DBS-AMH-5  
10 and DBS-AMH-6. The use of prior year property tax information for the purpose of the  
11 calculation is consistent with what has been approved in prior years' filings.

12 **Q. Please describe Schedule DBS-AMH-2 attached to this testimony.**

13 A. Schedule DBS-AMH-2 provides the calculation of proposed rates for (i) the capital  
14 expenditures recorded during CY2020 (i.e., the "REP Capital Investment Allowance"),  
15 and (ii) the REP/VMP Adjustment Factor associated with incremental O&M spending.  
16 The total average percentage adjustment proposed for the REP Capital Investment  
17 Allowance is 0.46%. The Company is proposing a REP/VMP Adjustment Factor of  
18 \$0.00064 per kilowatt-hour (kWh), an increase of \$0.00056 per kWh from the \$0.00008  
19 per kWh Adjustment Factor calculated in last year's REP/VMP filing, Docket No. DE  
20 20-036.

1 **Q. Please describe the procedure for adjusting distribution rates for the REP Capital**  
2 **Investment Allowance.**

3 A. The procedure for adjusting distribution rates is in Schedule DBS-AMH-2. On Page 2 of  
4 Schedule DBS-AMH-2, the capital investment allowance related to the REP on Line 1 is  
5 divided by the revenue requirement (Line 2) calculated by using a forecast of billing  
6 determinants, which are then applied to each of the Company's base distribution charge  
7 components.

8 **Q. Please explain how the Company calculated the D-11 and D-12 rates.**

9 A. Customers participating in the battery pilot program (D-11) are required to take time-of-  
10 use (TOU) rates for Distribution and Transmission, and, unless the customer is enrolled  
11 with a competitive electric power supplier, Energy Service charges. The TOU rate  
12 design is cost-based. Customers who enroll in the electric vehicle charging rate (D-12)  
13 are only required to have a separately metered circuit to accommodate charging, the  
14 whole home is not subject to the rate.

15 These rates change periodically when one of the components (energy service,  
16 transmission, or distribution) change, and they change seasonally. In this instance, the  
17 rates are not only changing due to a distribution rate change, but they are changing to  
18 summer rates as approved in Docket No. DE 17-189. The mechanics of the model are  
19 further described in the technical statement of Heather Tebbetts, Lon Huber, and Clifton  
20 Below filed with the Settlement Agreement in that docket.

1 The tariff pages pertaining to these rates provide that summer rates will become effective  
2 May 1, 2021.

3 **Q. Please provide a summary of Schedule DBS-AMH-3 attached to this testimony.**

4 A. Schedule DBS-AMH-3 provides the reconciliation of the CY2019 O&M Expense. The  
5 Company is proposing to refund \$6,259 through the REP/VMP Adjustment Factor  
6 effective May 1, 2021.

7 **IV. EFFECTIVE DATE AND BILL IMPACT**

8 **Q. When is the Company proposing that this rate change be implemented?**

9 A. The Company is proposing that these distribution rate changes be made effective for  
10 service rendered on and after May 1, 2021.

11 **Q. Has the Company determined the impact of these REP/VMP rate changes on**  
12 **customers' bills?**

13 A. Yes. For an Energy Service residential customer using 650 kWh per month the total bill  
14 impact of the REP/VMP rates proposed in this filing, as compared to rates in effect today,  
15 is a monthly bill increase of \$0.60, or 0.52%.

16 **V. CONCLUSION**

17 **Q. Does this conclude your testimony?**

18 A. Yes, it does.

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty  
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Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty  
REP/VMP Revenue Requirement  
Annual Rate Changes  
Annual Incremental Rate Adjustments

	Actual 7/1/2008 (a)	Actual 7/1/2009 (b)	Actual 7/1/2010 (c)	Actual 7/1/2011 (d)	Actual 7/1/2012 (e)	Actual 7/1/2013 (f)	Actual 6/1/2014 (g)	Actual 5/1/2015 (h)	Actual 6/1/2016 (i)	Actual 5/1/2017 (j)	Actual 5/1/2018 (k)	Actual 5/1/2019 (l)	Actual 5/1/2020 (m)	Actual 5/1/2021 (n)
<b>Annual Incremental Rate Adjustment:</b>														
1 REP/VMP O&M Adjustment Factor	\$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
2 REP Capital Program	\$165,840	\$75,740	\$163,663	\$102,941	(\$18,005)	\$125,829	\$37,374	\$253,423	\$180,132	\$120,019	\$76,833	\$149,538	\$210,503	\$213,246
3 Total for Fiscal Year	\$165,840	\$189,572	\$1,211,433	(\$655,172)	(\$313,213)	\$73,748	(\$238,466)	\$42,838	\$526,316	\$43,915	\$629,247	\$593,839	\$311,650	\$783,246
4 Termination of Prior Period O&M Recovery	\$0	\$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)
5 Net Change in Recovery	\$165,840	\$189,572	\$1,097,601	(\$1,702,942)	\$444,900	\$368,955	(\$186,385)	\$318,678	\$736,901	(\$302,269)	\$705,351	\$41,425	(\$132,651)	\$682,099

Notes:  
Line 1 From DBS-AMH-1, Page 2 of 17, Line 7  
Line 2 From DBS-AMH-1, Page 3 of 17, Line 66  
Line 3 Line 1 + Line 2  
Line 4 Line 1 of Prior Year  
Line 5 Line 3 + Line 4

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Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty  
REP/VMP O&M Adjustment Factor  
Computation of Annual Revenue Requirement  
CY 2020 Actual

	Actual FY <u>2008</u> (a)	Actual FY <u>2009</u> (b)	Actual FY <u>2010</u> (c)	Actual FY <u>2011</u> (d)	Actual FY <u>2012</u> (e)	Actual FY <u>2013</u> (f)	Actual CYS <u>2013</u> (f)	Actual CY <u>2014</u> (g)	Actual CY <u>2015</u> (h)	Actual CY <u>2016</u> (i)	Actual CY <u>2017</u> (j)	Actual CY <u>2018</u> (k)	Actual CY <u>2019</u> (l)	Actual CY <u>2020</u> (m)
<b><u>Incremental VMP and REP O&amp;M Spend</u></b>														
1 Actual VMP and REP Program Spending	\$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
2 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
3 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
4 VMP and REP Base Spending Level	<u>\$1,950,000</u>	<u>\$1,360,000</u>	<u>\$1,360,000</u>	<u>\$1,360,000</u>	<u>\$1,360,000</u>	<u>\$1,360,000</u>	<u>\$1,020,000</u>	<u>\$1,360,000</u>	<u>\$1,360,000</u>	<u>\$1,360,000</u>	<u>\$1,500,000</u>	<u>\$1,500,000</u>	<u>\$1,500,000</u>	<u>\$1,850,000</u>
5 Total Revenue Requirement	<u>\$0</u>	<u>\$113,832</u>	<u>\$1,196,530</u>	<u>(\$114,015)</u>	<u>\$107,486</u>	<u>\$200,973</u>	<u>\$35,861</u>	<u>\$35,166</u>	<u>\$634,184</u>	<u>\$273,896</u>	<u>\$995,406</u>	<u>\$922,443</u>	<u>\$596,528</u>	<u>\$570,000</u>
6 Less Reimbursements from Consolidated	<u>\$0</u>	<u>\$0</u>	<u>(\$148,760)</u>	<u>(\$644,098)</u>	<u>(\$402,693)</u>	<u>(\$253,054)</u>	<u>(\$311,701)</u>	<u>(\$245,751)</u>	<u>(\$288,000)</u>	<u>(\$350,000)</u>	<u>(\$442,992)</u>	<u>(\$478,142)</u>	<u>(\$495,381)</u>	<u>\$0</u>
7 Total Incremental Revenue Requirement	<u>\$0</u>	<u>\$113,832</u>	<u>\$1,047,770</u>	<u>(\$758,113)</u>	<u>(\$295,207)</u>	<u>(\$52,081)</u>	<u>(\$275,840)</u>	<u>(\$210,585)</u>	<u>\$346,184</u>	<u>(\$76,104)</u>	<u>\$552,414</u>	<u>\$444,301</u>	<u>\$101,147</u>	<u>\$570,000</u>
8 Total O&M Recovery	<u>\$1,950,000</u>	<u>\$1,473,832</u>	<u>\$2,407,770</u>	<u>\$601,887</u>	<u>\$1,064,793</u>	<u>\$1,307,919</u>	<u>\$744,160</u>	<u>\$1,149,415</u>	<u>\$1,706,184</u>	<u>\$1,283,896</u>	<u>\$2,052,414</u>	<u>\$1,944,301</u>	<u>\$1,601,147</u>	<u>\$2,420,000</u>

**Notes:**

Line 1 2020 Actual VMP and REP program spending

Line 4 VMP and REP base spending level per Docket No. DE 19-064

Line 5 Line 3 minus Line 4

Line 6 Reflects reimbursements related to vegetation management expenses from Consolidated Communications

Line 7 Line 5 plus Line 6

Line 8 Line 3 plus Line 6

**Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty**  
**REP/MP Revenue Requirement**  
**Computation of REP Revenue Requirement**  
**CY 2020 Actual**

	Revised FY 2008	Revised FY 2009	Revised FY 2010	Revised FY 2011	Revised FY 2012	Actual FY 2013	Actual CYS 2013	Actual CY 2014	Actual CY 2015	Actual CY 2016	Actual CY 2017	Actual CY 2018	Actual CY 2019	Actual CY 2020
<b>Deferred Tax Calculation</b>														
1 REP Program Annual Spend	\$950,000	\$500,000	\$876,243	\$610,835	\$398,239	\$545,916	\$416,755	\$2,201,899	\$1,321,456	\$849,390	\$1,699,030	\$756,363	\$1,837,934	\$1,566,370
2 Cumulative REP Program Spend	\$950,000	\$1,450,000	\$2,326,243	\$2,937,078	\$3,335,317	\$3,881,233	\$4,297,988	\$6,499,887	\$7,821,343	\$8,670,733	\$10,369,763	\$11,126,126	\$12,964,060	\$14,530,430
3														
4 Book Depreciation Rate (a)	3.70%	3.72%	3.71%	3.73%	3.72%	3.33%	3.72%	2.88%	2.86%	2.86%	2.76%	2.75%	2.63%	2.90%
5 FEDERAL Vintage Year Tax Depreciation:														
6 FY 2008 Spend	\$429,887	\$39,010	\$36,081	\$33,379	\$30,872	\$28,559	\$14,858	\$19,810	\$24,112	\$24,106	\$24,112	\$24,106	\$24,106	\$24,106
7 FY 2009 Spend		\$338,156	\$12,139	\$11,227	\$10,387	\$9,606	\$4,999	\$6,665	\$8,219	\$7,503	\$7,501	\$7,503	\$7,501	\$7,503
8 FY 2010 Spend			\$550,022	\$24,467	\$22,630	\$20,936	\$10,892	\$14,522	\$17,913	\$16,567	\$15,123	\$15,120	\$15,123	\$15,120
9 FY 2011 Spend				\$481,705	\$9,685	\$8,958	\$4,662	\$6,215	\$7,665	\$7,090	\$6,558	\$5,986	\$5,985	\$5,986
10 FY 2012 Spend					\$377,329	\$2,968	\$1,544	\$2,059	\$2,539	\$2,349	\$2,173	\$2,009	\$1,834	\$1,834
11 FY 2013 Spend						\$332,964	\$11,900	\$15,867	\$14,676	\$13,577	\$12,557	\$11,616	\$10,744	\$9,807
12 CYS 2013 Spend							\$212,773	\$5,861	\$15,043	\$13,913	\$12,871	\$11,905	\$11,013	\$10,185
13 CY 2014 Spend								\$1,142,236	\$79,478	\$73,510	\$68,006	\$62,897	\$58,185	\$53,814
14 CY 2015 Spend									\$685,505	\$47,698	\$44,117	\$40,813	\$37,747	\$34,919
15 CY 2016 Spend										\$440,621	\$30,659	\$28,357	\$26,233	\$24,263
16 CY 2017 Spend											\$881,372	\$61,326	\$56,722	\$52,475
17 CY 2018 Spend												\$28,364	\$54,602	\$50,502
18 CY 2019 Spend													\$68,923	\$132,680
19 CY 2020 Spend														\$58,739
20 Annual Tax Depreciation	\$429,887	\$377,166	\$598,242	\$550,778	\$450,902	\$403,992	\$261,627	\$1,213,235	\$855,149	\$646,934	\$1,105,049	\$271,638	\$378,718	\$481,934
21 Cumulative Tax Depreciation	\$429,887	\$807,053	\$1,405,295	\$1,956,073	\$2,406,975	\$2,810,967	\$3,072,594	\$4,285,829	\$5,140,977	\$5,787,911	\$6,892,960	\$7,164,598	\$7,543,316	\$8,025,249
22														
23 STATE Vintage Year Tax Depreciation:														
24 FY 2008 Spend	\$334,991	\$46,127	\$42,664	\$39,469	\$36,504	\$33,770	\$17,568	\$23,425	\$28,511	\$28,504	\$28,511	\$28,504	\$28,504	\$28,504
25 FY 2009 Spend		\$176,311	\$24,277	\$22,455	\$20,773	\$19,213	\$9,998	\$13,330	\$16,438	\$15,006	\$15,002	\$15,006	\$15,002	\$15,006
26 FY 2010 Spend			\$223,801	\$48,935	\$45,261	\$41,872	\$21,784	\$29,045	\$35,825	\$33,134	\$30,246	\$30,239	\$30,246	\$30,239
27 FY 2011 Spend				\$199,462	\$30,854	\$28,538	\$14,850	\$19,800	\$24,417	\$22,588	\$20,891	\$19,071	\$17,086	\$15,071
28 FY 2012 Spend					\$181,087	\$19,837	\$10,320	\$13,761	\$16,973	\$15,698	\$14,522	\$13,431	\$12,261	\$11,258
29 FY 2013 Spend						\$179,810	\$20,395	\$27,193	\$25,151	\$23,268	\$21,520	\$19,908	\$18,412	\$16,808
30 CYS 2013 Spend							\$8,791	\$11,721	\$30,086	\$27,827	\$25,743	\$23,809	\$22,026	\$20,371
31 CY 2014 Spend								\$82,571	\$158,955	\$147,021	\$136,011	\$125,794	\$116,370	\$107,629
32 CY 2015 Spend									\$49,555	\$95,396	\$88,234	\$81,626	\$75,495	\$69,839
33 CY 2016 Spend										\$31,852	\$61,317	\$56,714	\$52,467	\$48,526
34 CY 2017 Spend											\$63,714	\$122,653	\$113,444	\$104,949
35 CY 2018 Spend												\$28,364	\$54,602	\$50,502
36 CY 2019 Spend													\$68,923	\$132,680
37 CY 2020 Spend														\$58,739
38 Annual Tax Depreciation	\$334,991	\$222,438	\$290,742	\$310,320	\$314,480	\$323,039	\$103,706	\$220,846	\$385,912	\$440,294	\$505,712	\$477,817	\$626,819	\$715,121
39 Cumulative Tax Depreciation	\$334,991	\$557,429	\$848,171	\$1,158,492	\$1,472,971	\$1,796,010	\$1,899,716	\$2,120,562	\$2,506,473	\$2,946,767	\$3,452,479	\$3,930,296	\$4,557,115	\$5,272,236
40														
41 Book Depreciation	\$35,150	\$53,940	\$86,304	\$109,645	\$124,074	\$129,109	\$119,933	\$140,398	\$223,690	\$247,983	\$286,205	\$306,305	\$341,565	\$422,073
42 Cumulative Book Depreciation	\$35,150	\$89,090	\$175,394	\$285,039	\$409,113	\$538,222	\$658,155	\$798,553	\$1,022,243	\$1,270,226	\$1,556,431	\$1,862,736	\$2,204,302	\$2,626,374
43														
44 Book/Tax Timer (Federal)	\$394,737	\$717,963	\$1,229,901	\$1,671,034	\$1,997,862	\$2,272,745	\$2,414,439	\$3,487,276	\$4,118,734	\$4,517,685	\$5,336,528	\$5,301,861	\$5,339,014	\$5,398,875
45 less: Deferred Tax Reserve (State)	\$25,486	\$39,809	\$57,186	\$74,243	\$90,428	\$106,912	\$125,788	\$158,955	\$198,555	\$247,983	\$306,305	\$341,565	\$398,875	\$422,073
46 Net Book/Tax Timer (Federal)	\$369,251	\$678,154	\$1,172,715	\$1,596,791	\$1,907,435	\$2,165,833	\$2,308,906	\$3,328,721	\$3,919,759	\$4,269,702	\$5,030,223	\$5,152,465	\$5,157,847	\$5,195,144
47 Effective Tax Rate (Federal)	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	34.00%	34.00%	34.00%	34.00%	34.00%	21.00%	21.00%	21.00%
48 Deferred Tax Reserve (Federal)	\$129,238	\$237,354	\$410,450	\$558,877	\$667,602	\$758,041	\$854,028	\$1,147,468	\$1,357,475	\$1,487,561	\$1,761,558	\$1,079,958	\$1,083,148	\$1,090,980
49 Book/Tax Timer (State)	\$299,841	\$468,339	\$672,778	\$873,453	\$1,063,859	\$1,257,788	\$1,241,561	\$1,322,009	\$1,484,231	\$1,676,542	\$1,896,048	\$2,067,559	\$2,352,813	\$2,645,862
50 Effective Tax Rate (State)	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.20%	7.70%	7.70%	7.70%
51 Deferred Tax Reserve (State)	\$25,486	\$39,809	\$57,186	\$74,243	\$90,428	\$106,912	\$125,788	\$158,955	\$198,555	\$247,983	\$306,305	\$341,565	\$398,875	\$422,073
52 TOTAL Deferred Tax Reserve	\$154,724	\$277,163	\$467,636	\$633,120	\$758,030	\$864,953	\$890,561	\$1,259,839	\$1,483,635	\$1,630,067	\$1,917,034	\$1,239,161	\$1,264,315	\$1,294,712
53														
54 <b>Rate Base Calculation</b>														
55 Plant In Service	\$950,000	\$1,450,000	\$2,326,243	\$2,937,078	\$3,335,317	\$3,881,233	\$4,297,988	\$6,499,887	\$7,821,343	\$8,670,733	\$10,369,763	\$11,126,126	\$12,964,060	\$14,530,430
56 Accumulated Book Depreciation	(\$35,150)	(\$89,090)	(\$175,394)	(\$285,039)	(\$409,113)	(\$538,222)	(\$658,155)	(\$798,553)	(\$1,022,243)	(\$1,270,226)	(\$1,556,431)	(\$1,862,736)	(\$2,204,302)	(\$2,626,374)
57 Deferred Tax Reserve	(\$154,724)	(\$277,163)	(\$467,636)	(\$633,120)	(\$758,030)	(\$864,953)	(\$890,561)	(\$1,259,839)	(\$1,483,635)	(\$1,630,067)	(\$1,917,034)	(\$1,239,161)	(\$1,264,315)	(\$1,294,712)
58 Year End Rate Base	\$760,126	\$1,083,747	\$1,683,213	\$2,018,919	\$2,168,174	\$2,478,057	\$2,749,272	\$4,441,496	\$5,315,465	\$5,770,440	\$6,896,298	\$8,024,229	\$9,495,444	\$10,609,344
59														
60 <b>Revenue Requirement Calculation</b>														
61 Year End Rate Base	\$760,126	\$1,083,747	\$1,683,213	\$2,018,919	\$2,168,174	\$2,478,057	\$2,749,272	\$4,441,496	\$5,315,465	\$5,770,440	\$6,896,298	\$8,024,229	\$9,495,444	\$10,609,344
62 Pre-Tax ROR	11.91%	11.91%	11.91%	11.91%	11.91%	11.91%	11.91%	11.36%	11.36%	11.36%	8.74%	9.43%	9.43%	9.36%
63 Return and Taxes	\$90,515	\$129,051	\$200,435	\$240,410	\$258,183	\$295,084	\$312,413	\$504,338	\$603,837	\$655,522	\$603,059	\$756,740	\$895,485	\$992,522
64 Book Depreciation	\$35,150	\$53,940	\$86,304	\$109,645	\$124,074	\$129,109	\$119,933	\$140,398	\$223,690	\$247,983	\$286,205	\$306,305	\$341,565	\$422,073
65 Property Taxes (b)	\$21,773	\$27,218	\$66,676	\$89,904	\$110,318	\$118,343	\$149,961	\$190,995	\$161,819	\$232,376	\$323,449	\$299,207	\$335,704	\$371,407
66 Annual Revenue Requirement	\$147,438	\$210,209	\$353,415	\$439,960	\$492,575	\$542,536	\$582,307	\$835,730	\$1,015,862	\$1,135,881	\$1,212,714	\$1,362,252	\$1,572,755	\$1,786,001
67 Prior Period Change for Repairs Tax Deduct & Bonus Depreciation (FY 08 - 14) (e)					(\$73,471)	\$2,397								
68 Adjusted Annual Revenue Requirement	\$147,438	\$210,209	\$353,415	\$439,960	\$419,104	\$544,933	\$582,307	\$835,730	\$1,015,862	\$1,135,881	\$1,212,714	\$1,362,252	\$1,572,755	\$1,786,001
69 <b>Annual Rate Adjustment</b>	7/1/2008	7/1/2009	7/1/2010	7/1/2011	7/1/2012	7/1/2013	6/1/2014	5/1/2015	6/1/2016	5/1/2017	5/1/2018	5/1/2019	5/1/2020	5/1/2021
70 Incremental Annual Rate Adjustment	\$147,438	\$62,771	\$143,205	\$86,545	(\$20,856)	\$125,829	\$37,374	\$253,423	\$180,132	\$120,019	\$76,833	\$149,538	\$210,503	\$213,246
71 Prior Period Correction (f)												\$48,274	\$0	\$0
72 Incremental Annual Rate Adjustment with Prior Period Correction												\$197,812	\$210,503	\$213,246
73														
74 <b>Imputed Capital Structure (c)</b>														
75														
76 Long Term Debt	Ratio	Rate												

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Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty  
REP/VMP Revenue Requirement  
Calculation of REP Tax Depreciation 2008 - Per Tax Return  
Using Capital Repairs Tax Return Rate

	(a) <u>2008</u>	(b) <u>2009</u>	(c) <u>2010</u>	(d) <u>2011</u>	(e) <u>2012</u>	(f) <u>2013</u>	(g) <u>CYS2013</u>	(h) <u>CY2014</u>	(i) <u>CY2015</u>	(j) <u>CY2016</u>	(k) <u>CY2017</u>	(l) <u>CY2018</u>	(m) <u>CY2019</u>	(n) <u>CY2020</u>
1 <u>Capital Repairs Deduction</u>														
2 Plant Additions	\$950,000													
3 Capital Repairs Deduction Rate	32.74%													
4 Capital Repairs Deduction	\$311,030													
5														
6 <u>Bonus Depreciation</u>														
7 Plant Additions	\$950,000													
8 Less Capital Repairs Deduction	\$311,030													
9 Plant Additions Net of Capital Repairs Deduction	\$638,970													
10														
11 Percent of Plant Additions Eligible for Bonus Depreciation April 2007 - December 2007	69.14%													
12 Plant Additions Eligible for Bonus Depreciation April 2007 - December 2007	\$441,784													
13 Bonus Depreciation rate April 2007- December 2007	0%													
14 Bonus Depreciation for April 2007 - December 2007	\$0													
15														
16 Plant Additions Eligible for Bonus Depreciation for January 2008 - March 2008	30.86%													
17 Plant Additions Eligible for Bonus Depreciation for January 2008 - March 2008	\$197,186													
18 Bonus Depreciation rate January 2008 - March 2008	50%													
19 Bonus Depreciation for January 2008 - March 2008	\$98,593													
20														
21 Bonus Depreciation	\$98,593													
22														
23 <u>Remaining Tax Depreciation (Federal)</u>														
24 Plant Additions	\$950,000													
25 Less Capital Repairs Deduction	\$311,030													
26 Less Bonus Depreciation	\$98,593													
27 Additions Subject to 20 YR MACRS Tax Depreciation	\$540,377	\$540,377	\$540,377	\$540,377	\$540,377	\$540,377	\$540,377	\$540,377	\$540,377	\$540,377	\$540,377	\$540,377	\$540,377	\$540,377
28 20 YR MACRS Tax Depreciation Rates	3.750%	7.219%	6.677%	6.177%	5.713%	5.285%	3.666%	4.888%	4.462%	4.461%	4.462%	4.461%	4.461%	4.461%
29 Remaining Tax Depreciation	\$20,264	\$39,010	\$36,081	\$33,379	\$30,872	\$28,559	\$14,858	\$19,810	\$24,112	\$24,106	\$24,112	\$24,106	\$24,106	\$24,106
30														
31 <u>Remaining Tax Depreciation (State)</u>														
32 Plant Additions	\$950,000													
33 Less Capital Repairs Deduction	\$311,030													
34 Additions Subject to 20 YR MACRS Tax Depreciation	\$638,970	\$638,970	\$638,970	\$638,970	\$638,970	\$638,970	\$638,970	\$638,970	\$638,970	\$638,970	\$638,970	\$638,970	\$638,970	\$638,970
35 20 YR MACRS Tax Depreciation Rates	3.750%	7.219%	6.677%	6.177%	5.713%	5.285%	3.666%	4.888%	4.462%	4.461%	4.462%	4.461%	4.461%	4.461%
36 Remaining Tax Depreciation	\$23,961	\$46,127	\$42,664	\$39,469	\$36,504	\$33,770	\$17,568	\$23,425	\$28,511	\$28,504	\$28,511	\$28,504	\$28,504	\$28,504
37														
38 Federal Tax Depreciation	\$429,887	\$39,010	\$36,081	\$33,379	\$30,872	\$28,559	\$14,858	\$19,810	\$24,112	\$24,106	\$24,112	\$24,106	\$24,106	\$24,106
39 State Tax Depreciation	\$334,991	\$46,127	\$42,664	\$39,469	\$36,504	\$33,770	\$17,568	\$23,425	\$28,511	\$28,504	\$28,511	\$28,504	\$28,504	\$28,504

**Note:** Plant additions not subject to the capital repairs deduction may be subject to bonus depreciation. During 2008, Congress passed the Economic Stimulus Act of 2008 which established a 50% bonus depreciation deduction for certain eligible plant additions. Congress has passed further laws which have extended and changed the bonus depreciation rate at different periods of time. The bonus depreciation rates in effect since the start of the Company's REP/VMP program have been as follows:

Period	Rate
April 1, 2007 to December 31, 2007	0%
January 1, 2008 to September 7, 2010	50%



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REP/VMP Revenue Requirement  
Calculation of REP Tax Depreciation 2009 - Per Tax Return  
Using Capital Repairs Tax Return Rate

	(a) 2009	(b) 2010	(c) 2011	(d) 2012	(e) 2013	(f) CYS2013	(g) CY2014	(h) CY2015	(i) CY2016	(j) CY2017	(k) CY2018	(l) CY2019	(m) CY2020
1 <u>Capital Repairs Deduction</u>													
2 Plant Additions	\$500,000												
3 Capital Repairs Deduction Rate	32.74%												
4 Capital Repairs Deduction	\$163,700												
5													
6 <u>Bonus Depreciation</u>													
7 Plant Additions	\$500,000												
8 Less Capital Repairs Deduction	\$163,700												
9 Plant Additions Net of Capital Repairs Deduction	\$336,300												
10													
11 Percent of Plant Additions Eligible for Bonus Depreciation	100.00%												
12 Plant Additions Eligible for Bonus Depreciation	\$336,300												
13 Bonus Depreciation Rate	50%												
14 Bonus Depreciation	\$168,150												
15													
16 Bonus Depreciation	\$168,150												
17													
18 <u>Remaining Tax Depreciation (Federal)</u>													
19 Plant Additions	\$500,000												
20 Less Capital Repairs Deduction	\$163,700												
21 Less Bonus Depreciation	\$168,150												
22 Additions Subject to 20 YR MACRS Tax Depreciation	\$168,150	\$168,150	\$168,150	\$168,150	\$168,150	\$168,150	\$168,150	\$168,150	\$168,150	\$168,150	\$168,150	\$168,150	\$168,150
23 20 YR MACRS Tax Depreciation Rates	3.750%	7.219%	6.677%	6.177%	5.713%	3.964%	5.285%	4.888%	4.462%	4.461%	4.462%	4.461%	4.462%
24 Remaining Tax Depreciation	\$6,306	\$12,139	\$11,227	\$10,387	\$9,606	\$4,999	\$6,665	\$8,219	\$7,503	\$7,501	\$7,503	\$7,501	\$7,503
25													
26 <u>Remaining Tax Depreciation (State)</u>													
27 Plant Additions	\$500,000												
28 Less Capital Repairs Deduction	\$163,700												
29 Additions Subject to 20 YR MACRS Tax Depreciation	\$336,300	\$336,300	\$336,300	\$336,300	\$336,300	\$336,300	\$336,300	\$336,300	\$336,300	\$336,300	\$336,300	\$336,300	\$336,300
30 20 YR MACRS Tax Depreciation Rates	3.750%	7.219%	6.677%	6.177%	5.713%	3.964%	5.285%	4.888%	4.462%	4.461%	4.462%	4.461%	4.462%
31 Remaining Tax Depreciation	\$12,611	\$24,277	\$22,455	\$20,773	\$19,213	\$9,998	\$13,330	\$16,438	\$15,006	\$15,002	\$15,006	\$15,002	\$15,006
32													
33 Federal Tax Depreciation	\$338,156	\$12,139	\$11,227	\$10,387	\$9,606	\$4,999	\$6,665	\$8,219	\$7,503	\$7,501	\$7,503	\$7,501	\$7,503
34 State Tax Depreciation	\$176,311	\$24,277	\$22,455	\$20,773	\$19,213	\$9,998	\$13,330	\$16,438	\$15,006	\$15,002	\$15,006	\$15,002	\$15,006

**Note:** Plant additions not subject to the capital repairs deduction may be subject to bonus depreciation. During 2008, Congress passed the Economic Stimulus Act of 2008 which established a 50% bonus depreciation deduction for certain eligible plant additions. Congress has passed further laws which have extended and changed the bonus depreciation rate at different periods of time. The bonus depreciation rates in effect since the start of the Company's REP/VMP program have been as follows:

Period	Rate
April 1, 2007 to December 31, 2007	0%
January 1, 2008 to September 7, 2010	50%

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REP/VMP Revenue Requirement  
Calculation of REP Tax Depreciation 2010 - Per Tax Return  
Using Capital Repairs Tax Return Rate

	(a) 2010	(b) 2011	(c) 2012	(d) 2013	(e) CYS2013	(f) CY2014	(g) CY2015	(h) CY2016	(i) CY2017	(j) CY2018	(k) CY2019	(l) CY2020
1 <u>Capital Repairs Deduction</u>												
2 Plant Additions	\$876,243											
3 Capital Repairs Deduction Rate	22.64%											
4 Capital Repairs Deduction	\$198,381											
5												
6 <u>Bonus Depreciation</u>												
7 Plant Additions	\$876,243											
8 Less Capital Repairs Deduction	\$198,381											
9 Plant Additions Net of Capital Repairs Deduction	\$677,862											
10												
11 Percent of Plant Additions Eligible for Bonus Depreciation	100.00%											
12 Plant Additions Eligible for Bonus Depreciation	\$677,862											
13 Bonus Depreciation Rate	50%											
14 Bonus Depreciation	\$338,931											
15												
16 Bonus Depreciation	\$338,931											
17												
18 <u>Remaining Tax Depreciation (Federal)</u>												
19 Plant Additions	\$876,243											
20 Less Capital Repairs Deduction	\$198,381											
21 Less Bonus Depreciation	\$338,931											
22 Additions Subject to 20 YR MACRS Tax Depreciation	\$338,931	\$338,931	\$338,931	\$338,931	\$338,931	\$338,931	\$338,931	\$338,931	\$338,931	\$338,931	\$338,931	\$338,931
23 20 YR MACRS Tax Depreciation Rates	3.750%	7.219%	6.677%	6.177%	4.285%	5.713%	5.285%	4.888%	4.462%	4.461%	4.462%	4.461%
24 Remaining Tax Depreciation	\$12,710	\$24,467	\$22,630	\$20,936	\$10,892	\$14,522	\$17,913	\$16,567	\$15,123	\$15,120	\$15,123	\$15,120
25												
26 <u>Remaining Tax Depreciation (State)</u>												
27 Plant Additions	\$876,243											
28 Less Capital Repairs Deduction	\$198,381											
29 Additions Subject to 20 YR MACRS Tax Depreciation	\$677,862	\$677,862	\$677,862	\$677,862	\$677,862	\$677,862	\$677,862	\$677,862	\$677,862	\$677,862	\$677,862	\$677,862
30 20 YR MACRS Tax Depreciation Rates	3.750%	7.219%	6.677%	6.177%	4.285%	5.713%	5.285%	4.888%	4.462%	4.461%	4.462%	4.461%
31 Remaining Tax Depreciation	\$25,420	\$48,935	\$45,261	\$41,872	\$21,784	\$29,045	\$35,825	\$33,134	\$30,246	\$30,239	\$30,246	\$30,239
32												
33 Federal Tax Depreciation	\$550,022	\$24,467	\$22,630	\$20,936	\$10,892	\$14,522	\$17,913	\$16,567	\$15,123	\$15,120	\$15,123	\$15,120
34 State Tax Depreciation	\$223,801	\$48,935	\$45,261	\$41,872	\$21,784	\$29,045	\$35,825	\$33,134	\$30,246	\$30,239	\$30,246	\$30,239

**Note:** Plant additions not subject to the capital repairs deduction may be subject to bonus depreciation. During 2008, Congress passed the Economic Stimulus Act of 2008 which established a 50% bonus depreciation deduction for certain eligible plant additions. Congress has passed further laws which have extended and changed the bonus depreciation rate at different periods of time. The bonus depreciation rates in effect since the start of the Company's

Period	Rate
April 1, 2007 to December 31, 2007	0%
January 1, 2008 to September 7, 2010	50%
September 8, 2010 to December 31, 2010	100%

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REP/VMP Revenue Requirement  
Calculation of REP Tax Depreciation 2011 - Per Tax Return  
Using Capital Repairs Tax Return Rate

	(a) <u>2011</u>	(b) <u>2012</u>	(c) <u>2013</u>	(d) <u>CYS2013</u>	(e) <u>CY2014</u>	(f) <u>CY2015</u>	(g) <u>CY2016</u>	(h) <u>CY2017</u>	(i) <u>CY2018</u>	(j) <u>CY2019</u>	(k) <u>CY2020</u>
1 <u>Capital Repairs Deduction</u>											
2 Plant Additions	\$610,835										
3 Capital Repairs Deduction Rate	30.03%										
4 Capital Repairs Deduction	\$183,434										
5											
6 <u>Bonus Depreciation</u>											
7 Plant Additions	\$610,835										
8 Less Capital Repairs Deduction	\$183,434										
9 Plant Additions Net of Capital Repairs Deduction	\$427,401										
10											
11 Percent of Plant Additions Eligible for Bonus Depreciation April 2010 - September 2010	62.78%										
12 Plant Additions Eligible for Bonus Depreciation April 2010 - September 2010	\$268,322										
13 Bonus Depreciation rate April 2010- September 2010	50%										
14 Bonus Depreciation for April 2010 - September 2010	\$134,161										
15											
16 Plant Additions Eligible for Bonus Depreciation for October 2010 - March 2011	37.22%										
17 Plant Additions Eligible for Bonus Depreciation for October 2010 - March 2011	\$159,079										
18 Bonus Depreciation rate October 2010 - March 2011	100%										
19 Bonus Depreciation for October 2010 - March 2011	\$159,079										
20											
21 Bonus Depreciation	\$293,240										
22											
23 <u>Remaining Tax Depreciation (Federal)</u>											
24 Plant Additions	\$610,835										
25 Less Capital Repairs Deduction	\$183,434										
26 Less Bonus Depreciation	\$293,240										
27 Additions Subject to 20 YR MACRS Tax Depreciation	\$134,161	\$134,161	\$134,161	\$134,161	\$134,161	\$134,161	\$134,161	\$134,161	\$134,161	\$134,161	\$134,161
28 20 YR MACRS Tax Depreciation Rates	3.750%	7.219%	6.677%	4.633%	6.177%	5.713%	5.285%	4.888%	4.462%	4.461%	4.462%
29 Remaining Tax Depreciation	\$5,031	\$9,685	\$8,958	\$4,662	\$6,215	\$7,665	\$7,090	\$6,558	\$5,986	\$5,985	\$5,986
30											
31 <u>Remaining Tax Depreciation (State)</u>											
32 Plant Additions	\$610,835										
33 Less Capital Repairs Deduction	\$183,434										
34 Additions Subject to 20 YR MACRS Tax Depreciation	\$427,401	\$427,401	\$427,401	\$427,401	\$427,401	\$427,401	\$427,401	\$427,401	\$427,401	\$427,401	\$427,401
35 20 YR MACRS Tax Depreciation Rates	3.750%	7.219%	6.677%	4.633%	6.177%	5.713%	5.285%	4.888%	4.462%	4.461%	4.462%
36 Remaining Tax Depreciation	\$16,028	\$30,854	\$28,538	\$14,850	\$19,800	\$24,417	\$22,588	\$20,891	\$19,071	\$19,066	\$19,071
37											
38 Federal Tax Depreciation	\$481,705	\$9,685	\$8,958	\$4,662	\$6,215	\$7,665	\$7,090	\$6,558	\$5,986	\$5,985	\$5,986
39 State Tax Depreciation	\$199,462	\$30,854	\$28,538	\$14,850	\$19,800	\$24,417	\$22,588	\$20,891	\$19,071	\$19,066	\$19,071

**Note:** Plant additions not subject to the capital repairs deduction may be subject to bonus depreciation. During 2008, Congress passed the Economic Stimulus Act of 2008 which established a 50% bonus depreciation deduction for certain eligible plant additions. Congress has passed further laws which have extended and changed the bonus depreciation rate at different periods of time. The bonus depreciation rates in effect since the start of the Company's REP/VMP program have been as follows:

<u>Period</u>	<u>Rate</u>
April 1, 2007 to December 31, 2007	0%
January 1, 2008 to September 7, 2010	50%
September 8, 2010 to December 31, 2011	100%

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REP/VMP Revenue Requirement  
Calculation of REP Tax Depreciation 2012 - Per Tax Return  
Using Capital Repairs Tax Return Rate

	(a) <u>2012</u>	(b) <u>2013</u>	(c) <u>CYS2013</u>	(d) <u>CY2014</u>	(e) <u>CY2015</u>	(f) <u>CY2016</u>	(g) <u>CY2017</u>	(h) <u>CY2018</u>	(i) <u>CY2019</u>	(j) <u>CY2020</u>
1 <u>Capital Repairs Deduction</u>										
2 Plant Additions	\$398,239									
3 Capital Repairs Deduction Rate	31.00%									
4 Capital Repairs Deduction	<u>\$123,454</u>									
5										
6 <u>Bonus Depreciation</u>										
7 Plant Additions	\$398,239									
8 Less Capital Repairs Deduction	<u>\$123,454</u>									
9 Plant Additions Net of Capital Repairs Deduction	<u>\$274,785</u>									
10										
11 Percent of Plant Additions Eligible for Bonus Depreciation April 2011 - December, 2011	72.52%									
12 Plant Additions Eligible for Bonus Depreciation April 2011 - December, 2011	<u>\$199,274</u>									
13 Bonus Depreciation rate April 2011- December 2011	100%									
14 Bonus Depreciation for April 2011 - December 2011	<u>\$199,274</u>									
15										
16 Plant Additions Eligible for Bonus Depreciation for January 2012 - March 2012	25.04%									
17 Plant Additions Eligible for Bonus Depreciation for January 2012 - March 2012	<u>\$68,806</u>									
18 Bonus Depreciation rate January 2012 - March 2012	50%									
19 Bonus Depreciation for January 2012 - March 2012	<u>\$34,403</u>									
20										
21 Bonus Depreciation	<u>\$233,677</u>									
22										
23 <u>Remaining Tax Depreciation (Federal)</u>										
24 Plant Additions	\$398,239									
25 Less Capital Repairs Deduction	<u>\$123,454</u>									
26 Less Bonus Depreciation	<u>\$233,677</u>									
27 Additions Subject to 20 YR MACRS Tax Depreciation	\$41,108	\$41,108	\$41,108	\$41,108	\$41,108	\$41,108	\$41,108	\$41,108	\$41,108	\$41,108
28 20 YR MACRS Tax Depreciation Rates	3.750%	7.219%	5.008%	6.677%	6.177%	5.713%	5.285%	4.888%	4.462%	4.461%
29 Remaining Tax Depreciation	<u>\$1,542</u>	<u>\$2,968</u>	<u>\$1,544</u>	<u>\$2,059</u>	<u>\$2,539</u>	<u>\$2,349</u>	<u>\$2,173</u>	<u>\$2,009</u>	<u>\$1,834</u>	<u>\$1,834</u>
30										
31 <u>Remaining Tax Depreciation (State)</u>										
32 Plant Additions	\$398,239									
33 Less Capital Repairs Deduction	<u>\$123,454</u>									
34 Additions Subject to 20 YR MACRS Tax Depreciation	<u>\$274,785</u>	<u>\$274,785</u>	<u>\$274,785</u>	<u>\$274,785</u>	<u>\$274,785</u>	<u>\$274,785</u>	<u>\$274,785</u>	<u>\$274,785</u>	<u>\$274,785</u>	<u>\$274,785</u>
35 20 YR MACRS Tax Depreciation Rates	3.750%	7.219%	5.008%	6.677%	6.177%	5.713%	5.285%	4.888%	4.462%	4.461%
36 Remaining Tax Depreciation	<u>\$10,304</u>	<u>\$19,837</u>	<u>\$10,320</u>	<u>\$13,761</u>	<u>\$16,973</u>	<u>\$15,698</u>	<u>\$14,522</u>	<u>\$13,431</u>	<u>\$12,261</u>	<u>\$12,258</u>
37										
38 Federal Tax Depreciation	<u>\$358,673</u>	<u>\$2,968</u>	<u>\$1,544</u>	<u>\$2,059</u>	<u>\$2,539</u>	<u>\$2,349</u>	<u>\$2,173</u>	<u>\$2,009</u>	<u>\$1,834</u>	<u>\$1,834</u>
39 State Tax Depreciation	<u>\$133,758</u>	<u>\$19,837</u>	<u>\$10,320</u>	<u>\$13,761</u>	<u>\$16,973</u>	<u>\$15,698</u>	<u>\$14,522</u>	<u>\$13,431</u>	<u>\$12,261</u>	<u>\$12,258</u>
40										
41										
42 FY 2012 Safe Harbor True Up (Federal)	<u>\$18,656</u>									
43 FY 2012 Tax Depreciation (Federal)	<u>\$377,329</u>									
44 FY 2012 Safe Harbor True Up (State)	<u>\$47,329</u>									
45 FY 2012 Tax Depreciation (State)	<u>\$181,087</u>									

**Note:** Plant additions not subject to the capital repairs deduction may be subject to bonus depreciation. During 2008, Congress passed the Economic Stimulus Act of 2008 which established a 50% bonus depreciation deduction for certain eligible plant additions. Congress has passed further laws which have extended and changed the bonus depreciation rate at different periods of time. The bonus depreciation rates in effect since the start of the Company's REP/VMP program have

Period	Rate
April 1, 2007 to December 31, 2007	0%
January 1, 2008 to September 7, 2010	50%
September 8, 2010 to December 31, 2011	100%
January 1, 2012 to December 31, 2013	50%

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REP/VMP Revenue Requirement  
Calculation of REP Tax Depreciation 2013 - Per Tax Return  
Using Capital Repairs Tax Return Rate

	(a) 2013	(b) CYS2013	(c) CY2014	(d) CY2015	(e) CY2016	(f) CY2017	(g) CY2018	(h) CY2019	(i) CY2020
1 <u>Capital Repairs Deduction</u>									
2 Plant Additions	\$545,916								
3 Capital Repairs Deduction Rate	31.00%								
4 Capital Repairs Deduction	\$169,234								
5									
6 <u>Bonus Depreciation</u>									
7 Plant Additions	\$545,916								
8 Less Capital Repairs Deduction	\$169,234								
9 Plant Additions Net of Capital Repairs Deduction	\$376,682								
10									
11 Percent of Plant Additions Eligible for Bonus Depreciation April 2012 - December, 2012	62.48%								
12 Plant Additions Eligible for Bonus Depreciation April 2012 - December, 2012	\$235,332								
13 Bonus Depreciation rate April 2012- December 2012	50%								
14 Bonus Depreciation for April 2012 - December 2012	\$117,666								
15									
16 Plant Additions Eligible for Bonus Depreciation for January 2013 - March 2013	20.83%								
17 Plant Additions Eligible for Bonus Depreciation for January 2013 - March 2013	\$78,444								
18 Bonus Depreciation rate January 2013 - March 2013	50%								
19 Bonus Depreciation for January 2013 - March 2013	\$39,222								
20									
21 Bonus Depreciation	\$156,888								
22									
23 <u>Remaining Tax Depreciation (Federal)</u>									
24 Plant Additions	\$545,916								
25 Less Capital Repairs Deduction	\$169,234								
26 Less Bonus Depreciation	\$156,888								
27 Additions Subject to 20 YR MACRS Tax Depreciation	\$219,794	\$219,794	\$219,794	\$219,794	\$219,794	\$219,794	\$219,794	\$219,794	\$219,794
28 20 YR MACRS Tax Depreciation Rates	3.750%	5.414%	7.219%	6.677%	6.177%	5.713%	5.285%	4.888%	4.462%
29 Remaining Tax Depreciation	\$8,242	\$11,900	\$15,867	\$14,676	\$13,577	\$12,557	\$11,616	\$10,744	\$9,807
30									
31 <u>Remaining Tax Depreciation (State)</u>									
32 Plant Additions	\$545,916								
33 Less Capital Repairs Deduction	\$169,234								
34 Additions Subject to 20 YR MACRS Tax Depreciation	\$376,682	\$376,682	\$376,682	\$376,682	\$376,682	\$376,682	\$376,682	\$376,682	\$376,682
35 20 YR MACRS Tax Depreciation Rates	3.750%	5.414%	7.219%	6.677%	6.177%	5.713%	5.285%	4.888%	4.462%
36 Remaining Tax Depreciation	\$14,126	\$20,395	\$27,193	\$25,151	\$23,268	\$21,520	\$19,908	\$18,412	\$16,808
37									
38 Federal Tax Depreciation	\$334,364	\$11,900	\$15,867	\$14,676	\$13,577	\$12,557	\$11,616	\$10,744	\$9,807
39 State Tax Depreciation	\$183,360	\$20,395	\$27,193	\$25,151	\$23,268	\$21,520	\$19,908	\$18,412	\$16,808
40									
41									
42 Effect of FY 2012 Safe Harbor True Up on FY 2013 Tax Depreciation (Federal)	(\$1,400)								
43 FY 2013 Tax Depreciation (Federal)	\$332,964								
44 Effect of FY 2012 Safe Harbor True Up on FY 2013 Tax Depreciation (State)	(\$3,550)								
45 FY 2013 Tax Depreciation (State)	\$179,810								

**Note:** Plant additions not subject to the capital repairs deduction may be subject to bonus depreciation. During 2008, Congress passed the Economic Stimulus Act of 2008 which established a 50% bonus depreciation deduction for certain eligible plant additions. Congress has passed further laws which have extended and changed the bonus depreciation rate at different periods of time. The bonus depreciation rates in effect since the start of the

Period	Rate
April 1, 2007 to December 31, 2007	0%
January 1, 2008 to September 7, 2010	50%
September 8, 2010 to December 31, 2011	100%
January 1, 2012 to December 31, 2013	50%

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REP/VMP Revenue Requirement  
Calculation of REP Tax Depreciation 2013 - Per Tax Return  
Using Capital Repairs Tax Return Rate

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	<u>CYS2013</u>	<u>CY2014</u>	<u>CY2015</u>	<u>CY2016</u>	<u>CY2017</u>	<u>CY2018</u>	<u>CY2019</u>	<u>CY2020</u>
1 <u>Capital Repairs Deduction</u>								
2 Plant Additions	\$416,755							
3 Capital Repairs Deduction Rate	0.00%							
4 Capital Repairs Deduction	\$0							
5								
6 <u>Bonus Depreciation</u>								
7 Plant Additions	\$416,755							
8 Less Capital Repairs Deduction	\$0							
9 Plant Additions Net of Capital Repairs Deduction	\$416,755							
10								
11 Plant Additions Eligible for Bonus Depreciation for April 2013 - December 2013	100.00%							
12 Plant Additions Eligible for Bonus Depreciation for April 2013 - December 2013	\$416,755							
13 Bonus Depreciation rate April 2013 - December 2013	50%							
14 Bonus Depreciation for April 2013 - December 2013	\$208,378							
15								
16 Bonus Depreciation	\$208,378							
17								
18 <u>Remaining Tax Depreciation (Federal)</u>								
19 Plant Additions	\$416,755	\$416,755	\$416,755	\$416,755	\$416,755	\$416,755	\$416,755	\$416,755
20 Less Capital Repairs Deduction	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21 Less Bonus Depreciation	\$208,378	\$208,378	\$208,378	\$208,378	\$208,378	\$208,378	\$208,378	\$208,378
22 Additions Subject to 20 YR MACRS Tax Depreciation	\$208,378	\$208,378	\$208,378	\$208,378	\$208,378	\$208,378	\$208,378	\$208,378
23 20 YR MACRS Tax Depreciation Rates	2.813%	3.750%	7.219%	6.677%	6.177%	5.713%	5.285%	4.888%
24 Remaining Tax Depreciation	\$4,395	\$5,861	\$15,043	\$13,913	\$12,871	\$11,905	\$11,013	\$10,185
25								
26 <u>Remaining Tax Depreciation (State)</u>								
27 Plant Additions	\$416,755	\$416,755	\$416,755	\$416,755	\$416,755	\$416,755	\$416,755	\$416,755
28 Less Capital Repairs Deduction	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
29 Additions Subject to 20 YR MACRS Tax Depreciation	\$416,755	\$416,755	\$416,755	\$416,755	\$416,755	\$416,755	\$416,755	\$416,755
30 20 YR MACRS Tax Depreciation Rates	2.813%	3.750%	7.219%	6.677%	6.177%	5.713%	5.285%	4.888%
31 Remaining Tax Depreciation	\$8,791	\$11,721	\$30,086	\$27,827	\$25,743	\$23,809	\$22,026	\$20,371
32								
33 Federal Tax Depreciation	\$212,773	\$5,861	\$15,043	\$13,913	\$12,871	\$11,905	\$11,013	\$10,185
34 State Tax Depreciation	\$8,791	\$11,721	\$30,086	\$27,827	\$25,743	\$23,809	\$22,026	\$20,371

**Note:** Plant additions not subject to the capital repairs deduction may be subject to bonus depreciation. During 2008, Congress passed the Economic Stimulus Act of 2008 which established a 50% bonus depreciation deduction for certain eligible plant additions. Congress has passed further laws which have extended and changed the bonus depreciation rate at different periods

<u>Period</u>	<u>Rate</u>
April 1, 2007 to December 31, 2007	0%
January 1, 2008 to September 7, 2010	50%
September 8, 2010 to December 31, 2011	100%
January 1, 2012 to December 31, 2013	50%

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Calculation of REP Tax Depreciation 2014 - Per Tax Return  
Using Capital Repairs Tax Return Rate

	(a) CY 2014	(b) CY 2015	(c) CY 2016	(d) CY 2017	(e) CY 2018	(f) CY 2019	(g) CY 2020
1 <u>Capital Repairs Deduction</u>							
2 Plant Additions	\$2,201,899						
3 Capital Repairs Deduction Rate	0.00%						
4 Capital Repairs Deduction	\$0						
5							
6 <u>Bonus Depreciation</u>							
7 Plant Additions	\$2,201,899						
8 Less Capital Repairs Deduction	\$0						
9 Plant Additions Net of Capital Repairs Deduction	\$2,201,899						
10							
11 Plant Additions Eligible for Bonus Depreciation	100.00%						
12 Plant Additions Eligible for Bonus Depreciation	\$2,201,899						
13 Bonus Depreciation rate	50%						
14 Bonus Depreciation rate	\$1,100,950						
15							
16 Bonus Depreciation	\$1,100,950						
17							
18 <u>Remaining Tax Depreciation (Federal)</u>							
19 Plant Additions	\$2,201,899	\$2,201,899	\$2,201,899	\$2,201,899	\$2,201,899	\$2,201,899	\$2,201,899
20 Less Capital Repairs Deduction	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21 Less Bonus Depreciation	\$1,100,950	\$1,100,950	\$1,100,950	\$1,100,950	\$1,100,950	\$1,100,950	\$1,100,950
22 Additions Subject to 20 YR MACRS Tax Depreciation	\$1,100,950	\$1,100,950	\$1,100,950	\$1,100,950	\$1,100,950	\$1,100,950	\$1,100,950
23 20 YR MACRS Tax Depreciation Rates	3.750%	7.219%	6.677%	6.177%	5.713%	5.285%	4.888%
24 Remaining Tax Depreciation	\$41,286	\$79,478	\$73,510	\$68,006	\$62,897	\$58,185	\$53,814
25							
26 <u>Remaining Tax Depreciation (State)</u>							
27 Plant Additions	\$2,201,899	\$2,201,899	\$2,201,899	\$2,201,899	\$2,201,899	\$2,201,899	\$2,201,899
28 Less Capital Repairs Deduction	\$0	\$0	\$0	\$0	\$0	\$0	\$0
29 Additions Subject to 20 YR MACRS Tax Depreciation	\$2,201,899	\$2,201,899	\$2,201,899	\$2,201,899	\$2,201,899	\$2,201,899	\$2,201,899
30 20 YR MACRS Tax Depreciation Rates	3.750%	7.219%	6.677%	6.177%	5.713%	5.285%	4.888%
31 Remaining Tax Depreciation	\$82,571	\$158,955	\$147,021	\$136,011	\$125,794	\$116,370	\$107,629
32							
33 Federal Tax Depreciation	\$1,142,236	\$79,478	\$73,510	\$68,006	\$62,897	\$58,185	\$53,814
34 State Tax Depreciation	\$82,571	\$158,955	\$147,021	\$136,011	\$125,794	\$116,370	\$107,629

**Note:** Plant additions not subject to the capital repairs deduction may be subject to bonus depreciation. During 2008, Congress passed the Economic Stimulus Act of 2008 which established a 50% bonus depreciation deduction for certain eligible plant additions. Congress has passed further laws which have extended and changed the bonus depreciation rate at different

Period	Rate
January 1, 2007 to December 31, 2007	0%
January 1, 2008 to September 7, 2010	50%
September 8, 2010 to December 31, 2011	100%
January 1, 2012 to December 31, 2013	50%
January 1, 2014 to December 31, 2014	50%

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Calculation of REP Tax Depreciation 2015 - Per Tax Return  
Using Capital Repairs Tax Return Rate

	(a) CY 2015	(b) CY 2016	(c) CY 2017	(d) CY 2018	(e) CY 2019	(f) CY 2020
1 <u>Capital Repairs Deduction</u>						
2 Plant Additions	\$1,321,456					
3 Capital Repairs Deduction Rate	0.00%					
4 Capital Repairs Deduction	\$0					
5						
6 <u>Bonus Depreciation</u>						
7 Plant Additions	\$1,321,456					
8 Less Capital Repairs Deduction	\$0					
9 Plant Additions Net of Capital Repairs Deduction	\$1,321,456					
10						
11 Plant Additions Eligible for Bonus Depreciation	100.00%					
12 Plant Additions Eligible for Bonus Depreciation	\$1,321,456					
13 Bonus Depreciation rate	50%					
14 Bonus Depreciation rate	\$660,728					
15						
16 Bonus Depreciation	\$660,728					
17						
18 <u>Remaining Tax Depreciation (Federal)</u>						
19 Plant Additions	\$1,321,456	\$1,321,456	\$1,321,456	\$1,321,456	\$1,321,456	\$1,321,456
20 Less Capital Repairs Deduction	\$0	\$0	\$0	\$0	\$0	\$0
21 Less Bonus Depreciation	\$660,728	\$660,728	\$660,728	\$660,728	\$660,728	\$660,728
22 Additions Subject to 20 YR MACRS Tax Depreciation	\$660,728	\$660,728	\$660,728	\$660,728	\$660,728	\$660,728
23 20 YR MACRS Tax Depreciation Rates	3.750%	7.219%	6.677%	6.177%	5.713%	5.285%
24 Remaining Tax Depreciation	\$24,777	\$47,698	\$44,117	\$40,813	\$37,747	\$34,919
25						
26 <u>Remaining Tax Depreciation (State)</u>						
27 Plant Additions	\$1,321,456	\$1,321,456	\$1,321,456	\$1,321,456	\$1,321,456	\$1,321,456
28 Less Capital Repairs Deduction	\$0	\$0	\$0	\$0	\$0	\$0
29 Additions Subject to 20 YR MACRS Tax Depreciation	\$1,321,456	\$1,321,456	\$1,321,456	\$1,321,456	\$1,321,456	\$1,321,456
30 20 YR MACRS Tax Depreciation Rates	3.750%	7.219%	6.677%	6.177%	5.713%	5.285%
31 Remaining Tax Depreciation	\$49,555	\$95,396	\$88,234	\$81,626	\$75,495	\$69,839
32						
33 Federal Tax Depreciation	\$685,505	\$47,698	\$44,117	\$40,813	\$37,747	\$34,919
34 State Tax Depreciation	\$49,555	\$95,396	\$88,234	\$81,626	\$75,495	\$69,839

**Note:** Plant additions not subject to the capital repairs deduction may be subject to bonus depreciation. During 2008, Congress passed the Economic Stimulus Act of 2008 which established a 50% bonus depreciation deduction for certain eligible plant additions. Congress has passed further laws which have extended and

Period	Rate
January 1, 2007 to December 31, 2007	0%
January 1, 2008 to September 7, 2010	50%
September 8, 2010 to December 31, 2011	100%
January 1, 2012 to December 31, 2013	50%
January 1, 2014 to December 31, 2014	50%
January 1, 2015 to December 31, 2015	50%



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Calculation of REP Tax Depreciation 2016 - Per Tax Return  
Using Capital Repairs Tax Return Rate

	(a) CY 2016	(b) CY 2017	(c) CY 2018	(d) CY 2019	(e) CY 2020
1 <u>Capital Repairs Deduction</u>					
2 Plant Additions	\$849,390				
3 Capital Repairs Deduction Rate	0.00%				
4 Capital Repairs Deduction	\$0				
5					
6 <u>Bonus Depreciation</u>					
7 Plant Additions	\$849,390				
8 Less Capital Repairs Deduction	\$0				
9 Plant Additions Net of Capital Repairs Deduction	\$849,390				
10					
11 Plant Additions Eligible for Bonus Depreciation	100.00%				
12 Plant Additions Eligible for Bonus Depreciation	\$849,390				
13 Bonus Depreciation rate	50%				
14 Bonus Depreciation	\$424,695				
15					
16 Bonus Depreciation	\$424,695				
17					
18 <u>Remaining Tax Depreciation (Federal)</u>					
19 Plant Additions	\$849,390	\$849,390	\$849,390	\$849,390	\$849,390
20 Less Capital Repairs Deduction	\$0	\$0	\$0	\$0	\$0
21 Less Bonus Depreciation	\$424,695	\$424,695	\$424,695	\$424,695	\$424,695
22 Additions Subject to 20 YR MACRS Tax Depreciation	\$424,695	\$424,695	\$424,695	\$424,695	\$424,695
23 20 YR MACRS Tax Depreciation Rates	3.750%	7.219%	6.677%	6.177%	5.713%
24 Remaining Tax Depreciation	\$15,926	\$30,659	\$28,357	\$26,233	\$24,263
25					
26 <u>Remaining Tax Depreciation (State)</u>					
27 Plant Additions	\$849,390	\$849,390	\$849,390	\$849,390	\$849,390
28 Less Capital Repairs Deduction	\$0	\$0	\$0	\$0	\$0
29 Additions Subject to 20 YR MACRS Tax Depreciation	\$849,390	\$849,390	\$849,390	\$849,390	\$849,390
30 20 YR MACRS Tax Depreciation Rates	3.750%	7.219%	6.677%	6.177%	5.713%
31 Remaining Tax Depreciation	\$31,852	\$61,317	\$56,714	\$52,467	\$48,526
32					
33 Federal Tax Depreciation	\$440,621	\$30,659	\$28,357	\$26,233	\$24,263
34 State Tax Depreciation	\$31,852	\$61,317	\$56,714	\$52,467	\$48,526

**Note:** Plant additions not subject to the capital repairs deduction may be subject to bonus depreciation. During 2008, Congress passed the Economic Stimulus Act of 2008 which established a 50% bonus depreciation deduction for certain eligible plant additions. Congress has passed further laws which have extended and changed the bonus depreciation rate at different periods of time. The bonus depreciation rates in effect since the start of the

<u>Period</u>	<u>Rate</u>
January 1, 2007 to December 31, 2007	0%
January 1, 2008 to September 7, 2010	50%
September 8, 2010 to December 31, 2011	100%
January 1, 2012 to December 31, 2013	50%
January 1, 2014 to December 31, 2014	50%
January 1, 2015 to December 31, 2015	50%
January 1, 2016 to December 31, 2016	50%

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Calculation of REP Tax Depreciation 2017 - Per Tax Return  
Using Capital Repairs Tax Return Rate

	(a) CY 2017	(b) CY 2018	(c) CY 2019	(d) CY 2020
1 <u>Capital Repairs Deduction</u>				
2 Plant Additions	\$1,699,030			
3 Capital Repairs Deduction Rate	0.00%			
4 Capital Repairs Deduction	\$0			
5				
6 <u>Bonus Depreciation</u>				
7 Plant Additions	\$1,699,030			
8 Less Capital Repairs Deduction	\$0			
9 Plant Additions Net of Capital Repairs Deduction	\$1,699,030			
10				
11 Plant Additions Eligible for Bonus Depreciation	100.00%			
12 Plant Additions Eligible for Bonus Depreciation	\$1,699,030			
13 Bonus Depreciation rate	50%			
14 Bonus Depreciation rate	\$849,515			
15				
16 Bonus Depreciation	\$849,515			
17				
18 <u>Remaining Tax Depreciation (Federal)</u>				
19 Plant Additions	\$1,699,030	\$1,699,030	\$1,699,030	\$1,699,030
20 Less Capital Repairs Deduction	\$0	\$0	\$0	\$0
21 Less Bonus Depreciation	\$849,515	\$849,515	\$849,515	\$849,515
22 Additions Subject to 20 YR MACRS Tax Depreciation	\$849,515	\$849,515	\$849,515	\$849,515
23 20 YR MACRS Tax Depreciation Rates	3.750%	7.219%	6.677%	6.177%
24 Remaining Tax Depreciation	\$31,857	\$61,326	\$56,722	\$52,475
25				
26 <u>Remaining Tax Depreciation (State)</u>				
27 Plant Additions	\$1,699,030	\$1,699,030	\$1,699,030	\$1,699,030
28 Less Capital Repairs Deduction	\$0	\$0	\$0	\$0
29 Additions Subject to 20 YR MACRS Tax Depreciation	\$1,699,030	\$1,699,030	\$1,699,030	\$1,699,030
30 20 YR MACRS Tax Depreciation Rates	3.750%	7.219%	6.677%	6.177%
31 Remaining Tax Depreciation	\$63,714	\$122,653	\$113,444	\$104,949
32				
33 Federal Tax Depreciation	\$881,372	\$61,326	\$56,722	\$52,475
34 State Tax Depreciation	\$63,714	\$122,653	\$113,444	\$104,949

**Note:** Plant additions not subject to the capital repairs deduction may be

Period	Rate
January 1, 2007 to December 31, 2007	0%
January 1, 2008 to September 7, 2010	50%
September 8, 2010 to December 31, 2011	100%
January 1, 2012 to December 31, 2013	50%
January 1, 2014 to December 31, 2014	50%
January 1, 2015 to December 31, 2015	50%
January 1, 2016 to December 31, 2016	50%
January 1, 2017 to December 31, 2017	50%

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Using Capital Repairs Tax Return Rate

	(a) <u>CY 2018</u>	(b) <u>CY 2019</u>	(c) <u>CY 2020</u>
1 <u>Capital Repairs Deduction</u>			
2 Plant Additions	\$756,363		
3 Capital Repairs Deduction Rate	0.00%		
4 Capital Repairs Deduction	\$0		
5			
6 <u>Bonus Depreciation</u>			
7 Plant Additions	\$756,363		
8 Less Capital Repairs Deduction	\$0		
9 Plant Additions Net of Capital Repairs Deduction	\$756,363		
10			
11 Plant Additions Elig ble for Bonus Depreciation	100.00%		
12 Plant Additions Elig ble for Bonus Depreciation	\$756,363		
13 Bonus Depreciation rate	0%		
14 Bonus Depreciation rate	\$0		
15			
16 Bonus Depreciation	\$0		
17			
18 <u>Remaining Tax Depreciation (Federal)</u>			
19 Plant Additions	\$756,363	\$756,363	\$756,363
20 Less Capital Repairs Deduction	\$0	\$0	\$0
21 Less Bonus Depreciation	\$0	\$0	\$0
22 Additions Subject to 20 YR MACRS Tax Depreciation	\$756,363	\$756,363	\$756,363
23 20 YR MACRS Tax Depreciation Rates	3.750%	7.219%	6.677%
24 Remaining Tax Depreciation	\$28,364	\$54,602	\$50,502
25			
26 <u>Remaining Tax Depreciation (State)</u>			
27 Plant Additions	\$756,363	\$756,363	\$756,363
28 Less Capital Repairs Deduction	\$0	\$0	\$0
29 Additions Subject to 20 YR MACRS Tax Depreciation	\$756,363	\$756,363	\$756,363
30 20 YR MACRS Tax Depreciation Rates	3.750%	7.219%	6.677%
31 Remaining Tax Depreciation	\$28,364	\$54,602	\$50,502
32			
33 Federal Tax Depreciation	\$28,364	\$54,602	\$50,502
34 State Tax Depreciation	\$28,364	\$54,602	\$50,502

**Note:** Plant additions not subject to the capital repairs deduction may be

<u>Period</u>	<u>Rate</u>
January 1, 2007 to December 31, 2007	0%
January 1, 2008 to September 7, 2010	50%
September 8, 2010 to December 31, 2011	100%
January 1, 2012 to December 31, 2013	50%
January 1, 2014 to December 31, 2014	50%
January 1, 2015 to December 31, 2015	50%
January 1, 2016 to December 31, 2016	50%
January 1, 2017 to December 31, 2017	50%
January 1, 2018 to December 31, 2018	0%

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Calculation of REP Tax Depreciation 2019 - Per Tax Return  
Using Capital Repairs Tax Return Rate

	(a) <u>CY 2019</u>	(b) <u>CY 2020</u>
1 <u>Capital Repairs Deduction</u>		
2 Plant Additions	\$1,837,934	
3 Capital Repairs Deduction Rate	0.00%	
4 Capital Repairs Deduction	\$0	
5		
6 <u>Bonus Depreciation</u>		
7 Plant Additions	\$1,837,934	
8 Less Capital Repairs Deduction	\$0	
9 Plant Additions Net of Capital Repairs Deduction	\$1,837,934	
10		
11 Plant Additions Elig ble for Bonus Depreciation	100.00%	
12 Plant Additions Elig ble for Bonus Depreciation	\$1,837,934	
13 Bonus Depreciation rate	0%	
14 Bonus Depreciation rate	\$0	
15		
16 Bonus Depreciation	\$0	
17		
18 <u>Remaining Tax Depreciation (Federal)</u>		
19 Plant Additions	\$1,837,934	\$1,837,934
20 Less Capital Repairs Deduction	\$0	\$0
21 Less Bonus Depreciation	\$0	\$0
22 Additions Subject to 20 YR MACRS Tax Depreciation	\$1,837,934	\$1,837,934
23 20 YR MACRS Tax Depreciation Rates	3.750%	7.219%
24 Remaining Tax Depreciation	\$68,923	\$132,680
25		
26 <u>Remaining Tax Depreciation (State)</u>		
27 Plant Additions	\$1,837,934	\$1,837,934
28 Less Capital Repairs Deduction	\$0	\$0
29 Additions Subject to 20 YR MACRS Tax Depreciation	\$1,837,934	\$1,837,934
30 20 YR MACRS Tax Depreciation Rates	3.750%	7.219%
31 Remaining Tax Depreciation	\$68,923	\$132,680
32		
33 Federal Tax Depreciation	\$68,923	\$132,680
34 State Tax Depreciation	\$68,923	\$132,680

**Note:** Plant additions not subject to the capital repairs deduction may be

<u>Period</u>	<u>Rate</u>
January 1, 2007 to December 31, 2007	0%
January 1, 2008 to September 7, 2010	50%
September 8, 2010 to December 31, 2011	100%
January 1, 2012 to December 31, 2013	50%
January 1, 2014 to December 31, 2014	50%
January 1, 2015 to December 31, 2015	50%
January 1, 2016 to December 31, 2016	50%
January 1, 2017 to December 31, 2017	50%
January 1, 2018 to December 31, 2018	0%
January 1, 2019 to December 31, 2019	0%

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Calculation of REP Tax Depreciation 2020 - Per Tax Return  
Using Capital Repairs Tax Return Rate

	(a) <u>CY 2020</u>
1 <u>Capital Repairs Deduction</u>	
2 Plant Additions	\$1,566,370
3 Capital Repairs Deduction Rate	0.00%
4 Capital Repairs Deduction	\$0
5	
6 <u>Bonus Depreciation</u>	
7 Plant Additions	\$1,566,370
8 Less Capital Repairs Deduction	\$0
9 Plant Additions Net of Capital Repairs Deduction	\$1,566,370
10	
11 Plant Additions Eligible for Bonus Depreciation	100.00%
12 Plant Additions Eligible for Bonus Depreciation	\$1,566,370
13 Bonus Depreciation rate	0%
14 Bonus Depreciation rate	\$0
15	
16 Bonus Depreciation	\$0
17	
18 <u>Remaining Tax Depreciation (Federal)</u>	
19 Plant Additions	\$1,566,370
20 Less Capital Repairs Deduction	\$0
21 Less Bonus Depreciation	\$0
22 Additions Subject to 20 YR MACRS Tax Depreciation	\$1,566,370
23 20 YR MACRS Tax Depreciation Rates	3.750%
24 Remaining Tax Depreciation	\$58,739
25	
26 <u>Remaining Tax Depreciation (State)</u>	
27 Plant Additions	\$1,566,370
28 Less Capital Repairs Deduction	\$0
29 Additions Subject to 20 YR MACRS Tax Depreciation	\$1,566,370
30 20 YR MACRS Tax Depreciation Rates	3.750%
31 Remaining Tax Depreciation	\$58,739
32	
33 Federal Tax Depreciation	\$58,739
34 State Tax Depreciation	\$58,739

**Note:** Plant additions not subject to the capital repairs deduction may be

Period	Rate
January 1, 2007 to December 31, 2007	0%
January 1, 2008 to September 7, 2010	50%
September 8, 2010 to December 31, 2011	100%
January 1, 2012 to December 31, 2013	50%
January 1, 2014 to December 31, 2014	50%
January 1, 2015 to December 31, 2015	50%
January 1, 2016 to December 31, 2016	50%
January 1, 2017 to December 31, 2017	50%
January 1, 2018 to December 31, 2018	0%
January 1, 2019 to December 31, 2019	0%
January 1, 2020 to December 31, 2020	0%

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**Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty**  
**Procedure for Adjusting Distribution Rates for Capital Investment Allowance**  
**Calculation of Percentage Adjustment to Distribution Rates**  
**Based on Rates Effective July 1, 2020**

<u>Rate Class</u>	<u>Distribution Rate Component</u>	Current Base Distribution Rates (a)	Forecasted Units (b)	Forecasted Revenues (c)
D	Customer Charge	\$ 14.74	424,580	\$ 6,258,309
	1st 250 kWh	\$ 0.05705	95,969,225	\$ 5,475,044
	Excess 250 kWh	\$ 0.05705	180,071,056	\$ 10,273,054
	Off Peak kWh	\$ 0.04926	1,120,448	\$ 55,193
	Farm kWh	\$ 0.05385	894,780	\$ 48,184
	D-6 kWh	\$ 0.05017	769,373	\$ 38,599
D-10	Customer Charge	\$ 14.74	5,277	\$ 77,783
	On Peak kWh	\$ 0.12143	2,037,588	\$ 247,424
	Off Peak kWh	\$ 0.00165	3,591,661	\$ 5,926
G-1	Customer Charge	\$ 426.78	1,658	\$ 707,601
	Demand Charge	\$ 9.06	951,328	\$ 8,619,032
	On Peak kWh	\$ 0.00580	166,678,890	\$ 966,738
	Off Peak kWh	\$ 0.00172	212,506,102	\$ 365,510
	Credit for High Voltage Delivery > 2.4 kv	(0.48)	354,348	\$ (170,087)
G-2	Customer Charge	\$ 71.14	10,882	\$ 774,145
	Demand Charge	\$ 9.11	510,109	\$ 4,647,093
	All kWh	\$ 0.00230	147,993,116	\$ 340,384
	Credit for High Voltage Delivery > 2.4 kv	\$ (0.48)	1,949	\$ (936)
G-3	Customer Charge	\$ 16.36	68,040	\$ 1,113,134
	All kWh	\$ 0.05182	88,095,304	\$ 4,565,099
M	Luminaire Charge			\$ 1,127,629
	All kWh	\$ 0.03985	3,836,676	\$ 152,892
T	Customer Charge	\$ 14.74	11,565	\$ 170,468
	All kWh	\$ 0.04631	15,352,073	\$ 710,955
V	Minimum Charge	\$ 16.36	211	\$ 3,452
	All kWh	\$ 0.05330	328,389	\$ 17,503
Total Forecasted Revenues				\$ 46,590,130

(a) Distribution Rates Effective July 1, 2020

(b) Company forecast

(c) Column (a) x column (b)

Luminaire forecasted revenues determined by attachmentment 5 of Settlement Agreement in Docket DE 19-064

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**Liberty Utilities (Granite State Electric) d/b/a Liberty**  
**REP/VMP Rate Design**  
**Procedure for Adjusting Distribution Rates for Capital Investment Allowance**  
**Calculation of Percentage Adjustment to Distribution Rates**  
**Rates Effective May 1, 2021**

(1) Increase in Annual Revenue Requirement	\$213,246
(2) Forecasted Base Distribution Revenues	\$46,590,130
(3) Percentage of Adjustment to Distribution Rates	0.46%

- (1) DBS-AMH-1 Page 3 Line 70  
(2) Forecasted Base Distribution Revenues for the period of May 1, 2020 - April 30, 2021  
(3) Line (1) ÷ Line (2)

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**Liberty Utilities (Granite State Electric) d/b/a Liberty**  
**Calculation of Reliability Enhancement Program and Vegetation Management Plan Adjustment Factor**  
**Rates Effective May 1, 2021**

(1) CY 2020 O&M Expense Above Base O&M Expense	\$570,000
(2) Final Balance of Reconciliation Calendar Year Incremental O&M (Over)/Under Collection	<u>(\$6,259)</u>
(3) Reliability Enhancement Program and Vegetation Management Plan Expense	\$563,741
(4) Estimated kWh deliveries May 1, 2021 - April 30, 2022	879,426,489
(5) Reliability Enhancement Program and Vegetation Management Plan Adjustment Factor	\$0.00064

- (1) Schedule DBS-AMH-1, Page 2, Line 7
- (2) Schedule DBS-AMH-3, Page 1, Line 15
- (3) Line (1) + Line (2)
- (4) Per Company forecast
- (5) Line (3) ÷ Line (4), truncated after 5 decimal places



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Liberty Utilities (Granite State Electric) d/b/a Liberty  
REP/VMP Rate Design  
Procedure for Adjusting Distribution Rates for Capital Investment Allowance & Incremental O&M Expense  
Rates Effective May 1, 2021

Rate Class	Distribution Rate Component	Current Rates (a)	% Increase/ % (Decrease) (b)	Base Distribution Charges (c)	REP/VMP Adjustment Factor (d)	May 1, 2021 Rates (e)
D	Customer Charge	\$14.74	0.00%	\$14.74		\$14.74
	All kWh	\$0.05705	0.64%	\$0.05741	\$0.00064	\$0.05805
	16 Hour Off Peak kWh	\$0.04926	0.64%	\$0.04957	\$0.00064	\$0.05021
	Farm kWh	\$0.05385	0.64%	\$0.05419	\$0.00064	\$0.05483
	D-6 kWh	\$0.05017	0.64%	\$0.05049	\$0.00064	\$0.05113
D-10	Customer Charge	\$14.74	0.00%	\$14.74		\$14.74
	On Peak kWh	\$0.12143	0.60%	\$0.12215	\$0.00064	\$0.12279
	Off Peak kWh	\$0.00165	0.60%	\$0.00165	\$0.00064	\$0.00229
D-11	Customer Charge	\$14.74		\$14.74		\$14.74
	Off Peak	\$0.04196		\$0.03625	\$0.00064	\$0.03689
	Mid Peak	\$0.06289		\$0.05334	\$0.00064	\$0.05398
	Critical Peak	\$0.08955		\$0.09667	\$0.00064	\$0.09731
EV	Customer Charge	\$11.35		\$11.35		\$11.35
	Off Peak	\$0.04196		\$0.03625	\$0.00064	\$0.03689
	Mid Peak	\$0.06289		\$0.05334	\$0.00064	\$0.05398
	Critical Peak	\$0.08955		\$0.09667	\$0.00064	\$0.09731
G-1	Customer Charge	\$426.78	0.46%	\$428.73		\$428.73
	Demand Charge	\$9.06	0.46%	\$9.10		\$9.10
	On Peak kWh	\$0.00580	0.46%	\$0.00582	\$0.00064	\$0.00646
	Off Peak kWh	\$0.00172	0.46%	\$0.00172	\$0.00064	\$0.00236
	Credit for High Voltage Delivery > 2.4 k	(\$0.48)	0.46%	(\$0.48)		(\$0.48)
G-2	Customer Charge	\$71.14	0.46%	\$71.46		\$71.46
	Demand Charge	\$9.11	0.46%	\$9.15		\$9.15
	All kWh	\$0.00230	0.46%	\$0.00231	\$0.00064	\$0.00295
	Credit for High Voltage Delivery > 2.4 k	(\$0.48)	0.46%	(\$0.48)		(\$0.48)
G-3	Customer Charge	\$16.36	0.46%	\$16.43		\$16.43
	All kWh	\$0.05182	0.46%	\$0.05205	\$0.00064	\$0.05269
M	Luminaire Charge					
	<u>Description</u>					
	HPS 4,000	\$8.39	0.46%	\$8.42		\$8.42
	HPS 9,600	\$9.69	0.46%	\$9.73		\$9.73
	HPS 27,500	\$16.07	0.46%	\$16.14		\$16.14
	HPS 50,000	\$19.08	0.46%	\$19.16		\$19.16
	HPS 9,600 (Post Top)	\$11.36	0.46%	\$11.41		\$11.41
	HPS 27,500 Flood	\$16.24	0.46%	\$16.31		\$16.31
	HPS 50,000 Flood	\$21.69	0.46%	\$21.78		\$21.78
	Incandescent 1,000	\$10.75	0.46%	\$10.79		\$10.79
	Mercury Vapor 4,000	\$7.44	0.46%	\$7.47		\$7.47
	Mercury Vapor 8,000	\$8.36	0.46%	\$8.39		\$8.39
	Mercury Vapor 22,000	\$14.93	0.46%	\$14.99		\$14.99
	Mercury Vapor 63,000	\$25.21	0.46%	\$25.32		\$25.32
	Mercury Vapor 22,000 Flood	\$17.08	0.46%	\$17.15		\$17.15
	Mercury Vapor 63,000 Flood	\$33.06	0.46%	\$33.21		\$33.21

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**Liberty Utilities (Granite State Electric) d/b/a Liberty**  
**REP/VMP Rate Design**  
**Procedure for Adjusting Distribution Rates for Capital Investment Allowance & Incremental O&M Expense**  
**Rates Effective May 1, 2021**

<u>Rate Class</u>	<u>Distribution Rate Component</u>	<u>Current Rates</u> (a)	<u>% Increase/ % (Decrease)</u> (b)	<u>Base Distribution Charges</u> (c)	<u>REP/VMP Adjustment Factor</u> (d)	<u>May 1, 2021 Rates</u> (e)
LED-1	LED-1 Fixtures					
	30 Watt Pole Top	\$5.44	0.46%	\$5.46		\$5.46
	50 Watt Pole Top	\$5.67	0.46%	\$5.69		\$5.69
	130 Watt Pole Top	\$8.75	0.46%	\$8.79		\$8.79
	190 Watt Pole Top	\$16.75	0.46%	\$16.82		\$16.82
	30 Watt URD	\$12.67	0.46%	\$12.72		\$12.72
	90 Watt Flood	\$8.62	0.46%	\$8.65		\$8.65
	130 Watt Flood	\$9.90	0.46%	\$9.94		\$9.94
	30 Watt Caretaker	\$4.88	0.46%	\$4.90		\$4.90
	Rates M, LED-1 & LED-2 Pole Accessory Charge					
	Pole -Wood	\$9.47	0.46%	\$9.51		\$9.51
	Fiberglass - Direct Embedded	\$9.87	0.46%	\$9.92		\$9.92
	Fiberglass w/Foundation <25 ft	\$16.65	0.46%	\$16.73		\$16.73
	Fiberglass w/Foundation >=25 ft	\$27.84	0.46%	\$27.97		\$27.97
	Metal Poles - Direct Embedded	\$19.85	0.46%	\$19.94		\$19.94
	Metal Poles with Foundation	\$23.94	0.46%	\$24.05		\$24.05
	Rate M, LED-1					
	All kWh	\$0.03985	0.46%	\$0.04003	\$0.00064	\$0.04067
	Rate LED-2	\$0.03985	0.46%	\$0.04003	\$0.00064	\$0.04067
T	Customer Charge	\$14.74	0.00%	\$14.74		\$14.74
	All kWh	\$0.04631	0.57%	\$0.04657	\$0.00064	\$0.04721
V	Minimum Charge	\$16.36	0.46%	\$16.43		\$16.43
	All kWh	\$0.05330	0.46%	\$0.05354	\$0.00064	\$0.05418

Rates D-11 and EV are calculated through the TOU model approved in Docket DE 17-189.

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**Liberty Utilities (Granite State Electric) d/b/a Liberty**  
**Reconciliation of CY 2019 O&M Expense**

		Beginning Balance With Interest (a)	Revenue (b)	Ending Balance (c)	Balance Subject to Interest (d)	Effective Interest Rate (e)	Interest (f)	Cumulative Interest (g)
1	May-20	\$77,582	\$17,960	\$59,622	\$68,602	3.25%	\$183	\$183
2	June-20	\$59,805	\$6,359	\$53,446	\$56,626	3.25%	\$151	\$334
3	July-20	\$53,597	\$7,151	\$46,446	\$50,022	3.25%	\$134	\$468
4	August-20	\$46,580	\$6,986	\$39,594	\$43,087	3.25%	\$115	\$583
5	September-20	\$39,709	\$6,044	\$33,665	\$36,687	3.25%	\$98	\$681
6	October-20	\$33,762	\$5,356	\$28,406	\$31,084	3.25%	\$83	\$764
7	November-20	\$28,489	\$5,227	\$23,262	\$25,875	3.25%	\$69	\$833
8	December-20	\$23,331	\$6,048	\$17,283	\$20,307	3.25%	\$54	\$887
9	January-21	\$17,337	\$6,379	\$10,958	\$14,148	3.25%	\$38	\$925
10	February-21	\$10,996	\$6,059	\$4,936	\$7,966	3.25%	\$21	\$946
* 11	March-21	\$4,958	\$5,843	(\$885)	\$2,036	3.25%	\$5	\$951
* 12	April-21	(\$880)	\$5,370	(\$6,250)	(\$3,565)	3.25%	(\$10)	\$942
13		(Over)/Under Recovery:		(\$6,259)				

- (a) Line 1: Per Company Records  
(a) Lines 2 - 12: Prior month Column (c) + Prior month Column (f)  
(b) Revenues per the Company's Records  
(c) Column (a) - Column (b)  
(d) Average of Column (a) and Column (c)  
(e) Interest rate on customer deposits  
(f)  $\text{Column (d)} \times [ (1 + \text{Column (e)}) ^ { ( 1 \div 12 ) } - 1 ]$   
(g) Prior month Column (g) + Current month Column (f)  
\* Estimate

Usage	650	kWh		
	Current Rates (a)	May 1, 2021 Proposed Rates (b)	Current Bill	May 1, 2021 Proposed Bill
Customer Charge	\$14.74	\$14.74	\$14.74	\$14.74
Distribution Charge				
Base Distribution Charge	\$0.05705	\$0.05741	\$37.08	\$37.32
VMP	\$0.00008	\$0.00064	\$0.05	\$0.42
Storm Recovery Adjustment	\$0.00000	\$0.00000	\$0.00	\$0.00
Transmission Charge	\$0.02660	\$0.02660	\$17.29	\$17.29
Stranded Cost Charge	(\$0.00072)	(\$0.00072)	-\$0.47	-\$0.47
System Benefits Charge	\$0.00678	\$0.00678	\$4.41	\$4.41
Electricity Consumption Tax	\$0.00000	\$0.00000	<u>\$0.00</u>	<u>\$0.00</u>
Subtotal Retail Delivery Services			\$73.10	\$73.70
Energy Service Charge	\$0.06426	\$0.06426	<u>\$41.77</u>	<u>\$41.77</u>
		Total Bill	\$114.87	\$115.47
<b>\$ increase in 650 kWh Total Residential Bill</b>			<b>\$0.60</b>	
<b>% increase in 650 kWh Total Residential Bill</b>			<b>0.52%</b>	

(b) Rates proposed in this filing only and effective May 1, 2021

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**Liberty Utilities (Granite State Electric) d/b/a Liberty**  
**Municipal Taxes as a Percentage of Net Plant**

	<u>12/31/2018</u>	<u>12/31/2019</u>
1 Plant in Service, per Form 1, Page 200, Line 3 (+) Line 6	247,731	262,416
2 Depreciation Reserve, per Form 1, Page 200, Line 12 (+) Line 18	<u>(93,624)</u>	<u>(99,447)</u>
3 Net Plant	<u>154,107</u>	<u>162,969</u>
4 Average Net Plant		
5 Plant in Service	238,514	255,074
6 Depreciation Reserve	<u>(86,707)</u>	<u>(96,536)</u>
7 Net Plant	<u>151,807</u>	<u>158,538</u>
8 Municipal Taxes, Form 1, Page 262, Line 1	<u>4,730</u>	<u>4,858</u>
9 % Municipal Taxes to Net Plant	<u>3.12%</u>	<u>3.06%</u>

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**Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty**  
**Book Depreciation Calculation Using 2019 FERC Form 1 Data Filed April 18, 2020**

	Depreciation Expense		Depreciable Plant Balances		Average Depreciable Plant	Depreciation Rate
	12/31/2018	12/31/2019	12/31/2018	12/31/2019		
1 Distribution	5,463,619	6,442,418	215,580,549	227,997,637	221,789,093	2.90%
2 General	703,675	824,131	17,651,307	18,966,996	18,309,152	4.50%
3 Total - Granite	6,167,294	7,266,549	233,231,856	246,964,633	240,098,245	3.03%
4 Depreciation Expense per Form 1:						
5 FERC Form 1, Page 114						
6 Depreciation Expense (403) Line 6	6,167,294	7,266,549				
7 Depreciation Expense for ARO (403.1) Line 7	-	-				
8 Total per Form 1, Page 114	6,167,294	7,266,549				
9 FERC Form 1, Page 336						
10 Distribution (incl ARO) Line 8	5,463,619	6,442,418				
11 General Line 10	703,675	824,131				
12 Total per Form 1, Page 336	6,167,294	7,266,549				
13 Depreciable Plant Balances per Form 1:						
14 FERC Form 1, Page 204-207						
15 Distribution Plant Page 207 Line 75	217,253,495	229,670,583				
16 Land & Land Rights Page 207 Line 60	1,672,946	1,672,946				
17 Total	215,580,549	227,997,637				
18 General Plant Page 207 Line 99	19,271,679	20,587,368				
19 Land & Land Rights Page 207 Line 86	1,620,372	1,620,372				
20 Total	17,651,307	18,966,996				
21 Total, excluding Land & Land Rights	233,231,856	246,964,633				

## **Proposed Tariff Changes**

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## **Rate D**

### Availability

Retail Delivery Service under this rate is available for all domestic purposes in an individual private dwelling or an individual apartment and for farm purposes. If electricity is delivered through more than one meter, the charge for electricity delivered through each meter shall be computed separately under this rate.

### Character of Service

Service supplied under this rate will be single phase, 60 cycle, alternating current, normally three-wire service at a nominal voltage of 120/240 volts or three-wire 120/208 volts, whichever is available at the location.

### Rate Per Month

The rate per month will be the sum of the applicable Customer and Energy Charges subject to the adjustments in this tariff:

### Rates for Retail Delivery Service

Customer Charge	\$14.74 per month
-----------------	-------------------

### Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge All kWh	5.741
Reliability Enhancement/Vegetation Management	0.064
Total Distribution All kWh	5.805
Transmission Charge	2.660
Stranded Cost Charge	(0.072)
Storm Recovery Adjustment Factor	0.000

Off-Peak Use: 16 Hour Control

For all electricity separately metered and delivered between the hours of 11:00 p.m. on each day and 7:00 a.m. on the next day, the price of such electricity shall be:

Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge Off Peak Use	4.957
Reliability Enhancement/Vegetation Management	0.064
Total Distribution	5.021
Transmission Charge	2.660
Stranded Cost Charge	(0.072)
Storm Recovery Adjustment Factor	0.000

If a Customer has installed an electric water heater of a type approved by the Company, electricity is delivered to such water heater is supplied only under this rate.

Off-Peak Use: 6 Hour Control

For all electricity separately metered and subject to the Company's right to limit the operation of the bottom water heating element up to 6 hours a day, the price of such electricity shall be:

Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge Off Peak Use	5.049
Reliability Enhancement/Vegetation Management	0.064
Total Distribution	5.113
Transmission Charge	2.660
Stranded Cost Charge	(0.072)
Storm Recovery Adjustment Factor	0.000

If a Customer has installed an electric water heater of a type approved by the Company, and electricity delivered to such water heater is supplied only under this rate

### Farm Use

The availability of the Farm Use Section is limited to those locations which were served under the Farm Use Section of Domestic Rate D, N.H.P.U.C. No. 8 - Electricity immediately prior to the effective date of this rate. For such farm customers, where all electricity is supplied by the Company, the RATE PER MONTH is modified as follows:

#### Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge*	5.419
Reliability Enhancement/Vegetation Management	0.064
Total Distribution	5.483
Transmission Service Cost Adjustment	2.660
Stranded Cost Adjustment Factor	(0.072)
Storm Recovery Adjustment Factor	0.000

\*All Regular Use kilowatt-hours in excess of the greater of the following:

- i. 500 kilowatt-hours
- ii. 100 kilowatt-hours per kilovolt-ampere of transformer capacity needed to serve the Customer

### **Rate D-10 Optional Peak Load Rate**

#### Availability

Retail Delivery Service under this rate is available for all domestic purposes in an individual private dwelling or an individual apartment and for farm purposes to selected customers presently served under Rate D.

If electricity is delivered through more than one meter, the charge for electricity delivered through each meter shall be computed separately under this rate. The availability of this rate will be subject to the Company's ability to obtain the necessary meters and to render such service.

#### Character of Service

Service supplied under this rate will be single phase, 60 cycle, alternating current, normally three-wire service at a nominal voltage of 120/240 volts or three-wire 120/208 volts, whichever is available at the location.

#### Rate Per Month

The rate per month will be the sum of the applicable Customer and Energy Charges subject to the adjustments in this tariff:

#### Rates for Retail Delivery Service

Customer Charge	\$14.74 per month
-----------------	-------------------

#### Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge On Peak	12.215
Distribution Charge Off Peak	0.165
Reliability Enhancement/Vegetation Management	0.064
Total Distribution Charge On Peak	12.279
Total Distribution Charge Off Peak	0.229
Transmission Charge	2.269
Stranded Cost Charge	(0.072)
Storm Recovery Adjustment Factor	0.000

Peak hours will be from 8:00 a.m. to 9:00 p.m. daily on Monday through Friday excluding holidays.

Rates for Retail Delivery Service

Customer Charge \$428.73 per month  
Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge On Peak	0.582
Distribution Charge Off Peak	0.172
Reliability Enhancement/Vegetation Management	0.064
Total Distribution Charge On Peak	0.646
Total Distribution Charge Off Peak	0.236
Transmission Charge	2.065
Stranded Cost Charge	(0.072)
Storm Recovery Adjustment Factor	0.000

Demand Charges Per Kilowatt

Distribution \$9.10

Distribution Energy Charges Peak Periods

Peak hours will be from 8:00 a.m. to 9:00 p.m. daily on Monday through Friday excluding holidays.

Off-Peak hours will be from 9:00 p.m. to 8:00 a.m. daily Monday through Friday, and all day on Saturdays, Sundays, and holidays.

Demand

The Demand for each month under ordinary load conditions shall be the greatest of the following:

1. The greatest fifteen-minute peak during the peak hours which occurs during such month as measured in kilowatts,
2. 90% of the greatest fifteen-minute peak during the peak hours occurring during such month as measured in kilovolt-amperes where the Customer's kilowatt Demand exceeds 75 kilowatts, or
3. 80% of the greatest Demand as so determined above during the preceding eleven months.

Any Demands established during the eleven (11) months prior to the application of this rate shall be considered as having been established under this rate.

## General Long Hour Service Rate G-2

### Availability

Retail Delivery Service under this rate is available for all purposes except resale subject to the provisions of this section. The sale of electric vehicle charging services to a third party from an electric vehicle charging station shall not be considered resale of electricity. A Customer will take delivery service on this rate if the Company estimates that its average use will be greater than or equal to 20 kW of Demand but is less than 200 kW of Demand. If electricity is delivered through more than one meter, except at the Company's option, the charge for electricity delivered through each meter shall be computed separately under this rate. A customer may be transferred from rate G-2 at its request or at the option of the Company if the customer's twelve (12) month average monthly demand is less than 18 kW of demand for three consecutive months.

If any electricity is delivered hereunder at a given location, then all electricity delivered by the Company at such location shall be furnished hereunder, except such electricity as may be delivered under the provisions of the Limited Commercial Space Heating Rate V.

### Character of Service

Service supplied under this rate will be 60 cycle, three-phase alternating current normally at a nominal voltage of 120/208, 277/480, 2400, 4160, 4800, 7200, 13,200 and 13,800 volts. All voltages are not available in every area.

### Rate Per Month

The Rate Per Month will be the sum of the applicable Customer, Demand and Energy Charges subject to the adjustments in this tariff.

### Rates for Retail Delivery Service

Customer Charge	\$71.46 per month
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### Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge	0.231
Reliability Enhancement/Vegetation Management	0.064
Total Distribution Charge	0.295

Transmission Charge	2.553
Stranded Cost Charge	(0.072)

Storm Recovery Adjustment Factor	0.000
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#### Demand Charges Per Kilowatt

Distribution	\$9.15
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#### Demand

The Demand for each month under ordinary load conditions shall be the greatest of the following:

1. The greatest fifteen-minute peak during the peak hours which occurs during such month as measured in kilowatts,
2. 90% of the greatest fifteen-minute peak occurring during such month as measured in kilovolt-amperes where the Customer's kilowatt Demand exceeds 75 kilowatts, or
3. 80% of the greatest Demand as so determined above during the preceding eleven months.

Any Demands established during the eleven months prior to the application of this rate shall be considered as having been established under this rate.

#### Optional Determination of Demand

However, a Customer who has been served hereunder for one year or more may upon written request have the Demand for each month, beginning with the next month after such request and running for a period of not less than two consecutive months, be based upon the greatest of items a) or b) above. In such case, the Demand Charge and the Energy Charge will be increased by 20% during such period.

#### High Voltage Metering Adjustment

The Company reserves the right to determine the metering installation. Where service is metered at the Company's supply line voltage, in no case less than 2400 volts, thereby saving the Company transformer losses, a discount of 1% will be allowed from the amount determined under the preceding provisions.

## General Service Rate G-3

### Availability

Retail Delivery Service under this rate is available for all purposes except resale. The sale of electric vehicle charging services to a third party from an electric vehicle charging station shall not be considered resale of electricity. A Customer will take delivery service on this rate if the Company estimates that its average use will be less than 20 kW of demand. If electricity is delivered through more than one meter, except at the Company's option, the charge for electricity delivered through each meter shall be computed separately under this rate.

### Character of Service

Service supplied under this rate will be 60 cycle, alternating current either:

- a) Single-phase normally three-wire at a nominal voltage of 120/240 volts.
- b) Three-phase secondary normally at a nominal voltage of 120/208, or 277/480 volts.
- c) Three-phase primary normally at a nominal voltage of 2400, 4160, 4800, 7200, 13,200 or 13,800 volts.

All voltages are not available in every area.

### Rate Per Month

The rate per month will be the sum of the Customer and Energy Charges subject to the adjustments in this tariff:

### Rates for Retail Delivery Service

Customer Charge	\$16.43 per month
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### Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge	5.205
2Reliability Enhancement/Vegetation Management	0.064
Total Distribution Charge	5.269
Transmission Charge	2.550
Stranded Cost Charge	(0.072)
Storm Recovery Adjustment Factor	0.000



### Character of Service

Service supplied under this rate will be single phase, 60 cycle, alternating current, normally three-wire service at a nominal voltage of 120/240 volts or three-wire 120/208 volts, whichever is available at the location.

### Rate Per Month

The rate per month will be the sum of the applicable Customer and Energy Charges subject to the adjustments in this tariff.

### Rates for Retail Delivery Service

Customer Charge \$14.74 per month

### Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge	4.657
Reliability Enhancement/Vegetation Management	0.064
Total Distribution Charge	4.721
Transmission Charge	2.620
Stranded Cost Charge	(0.073)
Storm Recovery Adjustment Factor	0.000

### Terms of Agreement

A Customer served under this rate must provide the Company with one-year prior written notice before installing additional generation for its own use. This notice provision shall be waived with respect to the installation of on-site non-emergency generation from renewable energy resources. Renewable energy resources shall mean fuel cells (including natural gas powered fuel cells), and emerging power generation technologies that produce electricity from wind energy, solar energy, small-scale hydro power, ocean power, landfill gas, sustainably managed biomass, and future clean renewable technologies.

Rates for Retail Delivery Service

Customer Charge \$16.43 per month

Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge 5.354

Reliability Enhancement/Vegetation Management 0.064

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Total Distribution Charge 5.418

Transmission Charge 2.501

Stranded Cost Charge (0.072)

Storm Recovery Adjustment Factor 0.000

Terms of Agreement

A Customer served under this rate must provide the Company with one-year prior written notice before installing additional on-site, non-emergency generation for its own use. This notice provision shall be waived with respect to the installation of on-site non-emergency generation from renewable energy resources. Renewable energy resources shall mean fuel cells (including natural gas powered fuel cells), and emerging power generation technologies that produce electricity from wind energy, solar energy, small-scale hydro power, ocean power, landfill gas, sustainably managed biomass, and future clean renewable technologies.

## Outdoor Lighting Service Rate M

### Availability

#### *Public Lighting*

Available for Street or Highways and areas within the public domain for customers designated as governmental entities, inclusive of the state, municipalities, or other public authorities. Installations on limited access highways, tunnels, bridges and the access and egress ramps thereto are subject to the Special Rate Conditions of this tariff.

#### *Private Lighting*

Available to private customers for outdoor lighting of areas on private property where necessary fixtures can be supported on existing poles and where such service can be supplied from existing secondary distribution facilities.

In special circumstances outlined in the pole and accessory section below, the Company will install a wooden pole.

#### *Lighting Services*

Service under this rate is for full-night service street lighting whereby the luminaire operates for the entire night time period pursuant to the Hours of Operation provision below. In addition, customers may, at their option, take advantage of part-night service in which the luminaire operates for a portion of the night pursuant to the Hours of Operation provision below. Customers may select the part-night service option at the time of lighting installation or at any time during service. Any request to select the part-time night service option must be made in writing.

### Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge	4.003
Reliability Enhancement/Vegetation Management	0.064
Total Distribution	4.067
Transmission Charge	1.520
Stranded Cost Charge	(0.072)
Storm Recovery Adjustment Factor	0.000

No further installation or relocation of Incandescent and Mercury Vapor lights will be made after the effective date of this rate.

### Pole and Accessory Charge

An additional monthly charge enumerated below will be applied where the Company is requested to furnish a suitable wood pole for the sole purpose of supporting a luminaire. If at a future date the pole is used for any purpose approved by the Company in addition to supporting a street and/or floodlight luminaire, the pole charge will be terminated. This pole may not be more than one (1) span from the existing secondary service located along a roadway or thoroughfare, and must be reachable for mechanized equipment.

<b>Description</b>	<b>Monthly Price Per Unit</b>
<b>Overhead Service</b>	
Wood Poles	\$9.51
<b>Underground Service – Non-Metallic Standard</b>	
Fiberglass – Direct Embedded	\$9.92
Fiberglass with Foundation < 25 ft.	\$16.73
Fiberglass with Foundation >= 25 ft.	\$27.97
Metal Poles – Direct Embedded	\$19.94
Metal Poles with Foundation	\$24.05

### Other Charges

Pursuant to RSA 9-E:4, the Company provides a part-night service that, when requested by a customer, will require the replacement of the photoelectric control that will allow for the operation of the luminaire for a portion of the night. The Company shall assess the customer a Part Night Charge of \$150 for the installation of each photoelectric control that must be replaced in order for part-night service to be operational and for the removal of such photoelectric control upon the customer's request to return to full-night service. For installation or removal of each photoelectric control made during a scheduled maintenance visit or during the installation of a new outdoor lighting service, the Company shall assess the customer a Part Night Charge of \$20 for the installation or removal of each such photoelectric control. The Part Night Charge does not include the cost or fees associated with any work-zone protection, traffic control services and/or permits required to perform the customer requested change, all of which shall be the responsibility of the customer.

For Full-Night Schedule and Part-Night Schedule, the monthly distribution charge is based on the monthly cost of the fixture as provided below:

For New and Existing Installations:

Lamp Nominal Light Output	Nominal Power Rating		Monthly Fixed Luminaire Charge	Average Monthly kWh		Monthly kWh Charges		Total Distribution Charges	
				Full Night Schedule	Part-Night Schedule	Full Night Schedule	Part- Night Schedule	Full Night Schedule	Part- Night Schedule
(Lumens)	Watts	Kelvin	\$/month	kWh/ month	kWh/ month	\$/ month	\$/ month	\$/ month	\$/ month
<u>High Pressure Sodium</u>									
4,000	50	2,000	\$8.42	16	8	\$0.64	\$0.32	\$9.06	\$8.74
9,600	100	2,000	\$9.73	33	17	\$1.32	\$0.66	\$11.05	\$10.39
27,500	250	2,000	\$16.14	82	41	\$3.27	\$1.64	\$19.41	\$17.78
50,000	400	2,000	\$19.16	131	66	\$5.23	\$2.62	\$24.39	\$21.78
9,600	100	2,000	\$11.41	33	17	\$1.32	\$0.66	\$12.73	\$12.07
<u>High Pressure Sodium (HPS) Flood</u>									
27,500	250	2,000	\$16.31	82	41	\$3.27	\$1.64	\$19.58	\$17.95
50,000	400	2,000	\$21.78	131	66	\$5.23	\$2.62	\$27.01	\$24.40

For Existing Installations Only:

Lamp Nominal Light Output	Nominal Power Rating		Monthly Fixed Luminaire Charge	Average Monthly kWh		Monthly kWh Charges		Total Distribution Charges	
				Full Night Schedule	Part-Night Schedule	Full Night Schedule	Part- Night Schedule	Full Night Schedule	Part- Night Schedule
(Lumens)	Watts	Kelvin	\$/month	kWh/ month	kWh/ month	\$/ month	\$/ month	\$/ month	\$/ month
<u>Incandescent</u>									
1000	103	2,400	\$10.79	34	17	\$1.36	\$0.68	\$12.15	\$11.47
<u>Mercury Vapor (MV)</u>									
4,000	100	4,000	\$7.47	33	17	\$1.32	\$0.66	\$8.79	\$8.13
8,000	175	4,000	\$8.39	57	29	\$2.28	\$1.14	\$10.67	\$9.53
22,000	400	5,700	\$14.99	131	66	\$5.23	\$2.62	\$20.22	\$17.61
63,000	1000	4,000	\$25.32	328	164	\$13.10	\$6.55	\$38.42	\$31.87
<u>Mercury Vapor (MV) Flood</u>									
22,000	400	5,700	\$17.15	131	66	\$5.23	\$2.62	\$22.38	\$19.77
63,000	1000	4,000	\$33.21	328	164	\$13.10	\$6.55	\$46.31	\$39.76

## Outdoor Lighting Service Rate LED-1

### Availability

#### *Public Lighting*

Available for Street or Highways and areas within the public domain for customers designated as governmental entities, inclusive of the state, municipalities, or other public authorities. Installations on limited access highways, tunnels, bridges and the access and egress ramps thereto are subject to the Special Rate Conditions of this tariff.

#### *Private Lighting*

Available to private customers for outdoor lighting of areas on private property where necessary fixtures can be supported on existing poles and where such service can be supplied from existing secondary distribution facilities.

In special circumstances outlined in the pole and accessory section below, the Company will install a wooden pole.

#### *Lighting Services*

Service under this rate is for full-night service street lighting whereby the luminaire operates for the entire night time period pursuant to the Hours of Operation provision below. In addition, customers may, at their option, take advantage of part-night service in which the luminaire operates for a portion of the night pursuant to the Hours of Operation provision below. Customers may select the part-night service option at the time of lighting installation or at any time during service. Any request to select the part-time night service option must be made in writing.

### Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge	4.003
Reliability Enhancement/Vegetation Management	0.064
Total Distribution	4.067
Transmission Charge	1.520
Stranded Cost Charge	(0.072)
Storm Recovery Adjustment Factor	0.000

No further installation or relocation of Incandescent and Mercury Vapor lights will be made after the effective date of this rate.

### Pole and Accessory Charge

An additional monthly charge enumerated below will be applied where the Company is requested to furnish a suitable wood pole for the sole purpose of supporting a luminaire. If at a future date the pole is used for any purpose approved by the Company in addition to supporting a street and/or floodlight luminaire, the pole charge will be terminated. This pole may not be more than one (1) span from the existing secondary service located along a roadway or thoroughfare, and must be reachable for mechanized equipment.

<b>Description</b>	<b>Monthly Price Per Unit</b>
<b>Overhead Service</b>	
Wood Poles	\$9.51
<b>Underground Service – Non-Metallic Standard</b>	
Fiberglass – Direct Embedded	\$9.92
Fiberglass with Foundation < 25 ft.	\$16.73
Fiberglass with Foundation >= 25 ft.	\$27.97
Metal Poles – Direct Embedded	\$19.94
Metal Poles with Foundation	\$24.05

### Other Charges

Pursuant to RSA 9-E:4, the Company provides a part-night service that, when requested by a customer, will require the replacement of the photoelectric control that will allow for the operation of the luminaire for a portion of the night. The Company shall assess the customer a Part Night Charge of \$150 for the installation of each photoelectric control that must be replaced in order for part-night service to be operational and for the removal of such photoelectric control upon the customer's request to return to full-night service. For installation or removal of each photoelectric control made during a scheduled maintenance visit or during the installation of a new outdoor lighting service, the Company shall assess the customer a Part Night Charge of \$20 for the installation or removal of each such photoelectric control. The Part Night Charge does not include the cost or fees associated with any work-zone protection, traffic control services and/or permits required to perform the customer requested change, all of which shall be the responsibility of the customer.

For Full-Night Schedule and Part-Night Schedule, the monthly distribution charge is based on the monthly cost of the fixture as provided below:

Lamp Nominal Light Output	Nominal Power Rating		Monthly Fixed Luminaire Charge	Average Monthly kWh		Monthly kWh Charges		Total Distribution Charges	
				Full Night Schedule	Part-Night Schedule	Full Night Schedule	Part- Night Schedule	Full Night Schedule	Part- Night Schedule
(Lumens)	Watts	Kelvin	\$/month	kWh/ month	kWh/ month	\$/ month	\$/ month	\$/ month	\$/ month
<u>LED Roadway/Highway</u>									
4,000	30	4,000	\$5.46	10	5	\$0.40	\$0.20	\$5.86	\$5.66
6,500	50	4,000	\$5.69	16	8	\$0.64	\$0.32	\$6.33	\$6.01
16,500	130	4,000	\$8.79	43	22	\$1.72	\$0.86	\$10.51	\$9.65
21,000	190	4,000	\$16.82	62	31	\$2.48	\$1.24	\$19.30	\$18.06
<u>LED Underground</u>									
3,000	30	3,000	\$12.72	10	5	\$0.40	\$0.20	\$13.12	\$12.92
<u>LED Flood:</u>									
10,500	90	4,000	\$8.65	30	15	\$1.20	\$0.60	\$9.85	\$9.25
16,500	130	4,000	\$9.94	43	22	\$1.72	\$0.86	\$11.66	\$10.80
<u>LED Caretaker II</u>									
4,000	30	3,000	\$4.90	10	5	\$0.40	\$0.20	\$5.30	\$5.10

#### Limitations on Availability

The availability of this rate to any Customer is contingent upon the availability to the Company of personnel and/or other resources necessary to perform the conversion of existing Fixtures.

#### Special Rate Conditions

Charges for the operation of outdoor lights may be increased if, in the Company's opinion, lights are to be installed in locations or under conditions such that estimated income will be insufficient to justify the estimated cost of construction.

#### Choice of Color Temperature

Each fixture type offered under this LED-1 tariff, except the Caretaker II and Underground Residential, is offered with a customer choice of correlated color temperature (CCT) of either 3000 Kelvin (K) or 4000 K. The Caretaker II and Underground Residential lights are only available in 3000 K. If the customer does not select a color temperature, fixtures with a CCT of 3000 K will be provided.



### Additional Requirements

Fixtures must be provided by the Customer for installation on the Company's facilities. Fixtures shall be accepted by the Company in advance of installation and must be compatible with existing line voltage and brackets, and must require no special tools or training to install and maintain. Customers who are replacing existing fixtures with LED fixtures are responsible for the cost of removal and installation. Customers may choose to have this work completed by the Company or may opt to hire and pay a private line contractor to perform the work. Any private contractor shall have all the requisite training, certifications and insurance to safely perform the required installations, and shall be licensed by the State and accepted by the Company. Prior to commencement of work, the municipality must provide written certification of the qualifications to the Company. Contractors shall coordinate the installation work with the Company and submit a work plan subject to approval by the Company, including provisions for either returning removed fixtures to the Company or otherwise disposing of them as approved by the Company. The Customer shall bear all expenses related to the use of such labor, including any expenses arising from damage to the Company's electrical system caused by the contractor's actions.

### Monthly Rates:

The energy charges for each luminaire will be determined by multiplying the energy charges per kilowatt-hour by the average monthly kilowatt-hours. The Customer is responsible for providing the list of fixtures and wattages to allow the Company to calculate the kWh to be billed. The kWh will be calculated based on the 2020 Farmer's Almanac hours of daylight.

### Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge per kWh	4.003
Reliability Enhancement/Vegetation Management	0.064
Total Distribution	4.067
Transmission Charge	1.520
Stranded Cost Charge	(0.072)
Storm Recovery Adjustment Factor	0.000

For the alternative schedule, the monthly kWh shall be determined as set forth under Use of Advanced Controls.

### Failure of Lights to Burn

Should any light fail to burn for the full period provided above, a deduction will be made from the calculated monthly kWh of such light, upon presentation of a claim from the Customer. The provisions of this paragraph do not apply when failure to burn is due to an act of God, or an act or order of any Public Authority or accidental or malicious breakage, provided, however, the necessary repairs are made with reasonable dispatch upon notification by the Customer.

### Use of Advanced Controls

Where lighting controls that meet the current ANSI C12.20 standard have been installed that allow for variation from the Company's outdoor lighting hours schedule under Full-Night Schedule or Part-Night Schedule, the Customer must provide verification of such installation to the Company and a schedule indicating the expected average operating wattage of lights subject to the Customer's control and operation. Upon installation and at any time thereafter, the Customer must also provide the Company access, either directly or indirectly, to the data from the Customer's control system in order for the Company to verify the measured energy use of the lighting systems and modify the billed usage as appropriate on a prospective basis. The schedule of average operating wattage ratings may be revised once per year at the request of the Customer. However, it is the Customer's responsibility to immediately notify the Company of any planned or unplanned changes to its scheduled usage to allow for billing adjustments as may be needed.

The charge for the monthly kilowatt-hours shall be determined on the basis of the average operating wattage of the light sources resulting from installed control adjustments established at the beginning of the billing period multiplied by the average monthly hours of the outdoor lighting hours schedule. The wattage ratings shall allow for the billing of kilowatt-hours according to the schedule submitted by the Customer to the Company and reflect any adjustments from the lighting control system including, but not limited to, fixture trimming, dimming, brightening, variable dimming, and multiple hourly schedules.

### Pole and Accessory Charge

An additional monthly charge enumerated below will be applied where the Company is requested to furnish a suitable wood pole for the sole purpose of supporting a luminaire. If at a future date the pole is used for any purpose approved by the Company in addition to supporting a street and/or floodlight luminaire, the pole charge will be terminated. This pole may not be more than one (1) span from the existing secondary service located along a roadway or thoroughfare, and must be reachable for mechanized equipment.

<b>Description</b>	<b>Monthly Price Per Unit</b>
<b>Overhead Service</b>	
Wood Poles	\$9.51
<b>Underground Service – Non-Metallic Standard</b>	
Fiberglass – Direct Embedded	\$9.92
Fiberglass with Foundation < 25 ft.	\$16.73
Fiberglass with Foundation >= 25 ft.	\$27.97
Metal Poles – Direct Embedded	\$19.94
Metal Poles with Foundation	\$24.05

## **Rate EV Plug In Electric Vehicle D-12**

### Availability

Retail Delivery Service under this rate is available for uses of a customer taking service under Rate D as a separately metered service. By choosing to participate in this Plug In Electric Vehicle rate, the Customer agrees to pay the following charges for a minimum of two years. The charging station shall be connected by means of an approved circuit to a separate electric vehicle charging meter. The rates for energy (kWh) based charges are seasonal with a winter period from November 1 to April 30 and a summer period from May 1 to October 31.

### Character of Service

Service supplied under this rate will be single phase, 60 cycle, alternating current, normally three-wire service at a nominal voltage of 120/240 volts or three-wire 120/208 volts, whichever is available at the location.

### Rates per Month

The rate per month will be the sum of the applicable Customer and Energy Charges subject to the adjustments in this tariff:

#### Rates for Retail Delivery Service Effective May 1, 2021, through October 31, 2021

Customer Charge	\$11.35 per month
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#### Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge Off Peak	3.625
Distribution Charge Mid Peak	5.334
Distribution Charge Critical Peak	9.667
Reliability Enhancement/Vegetation Management	0.064
<hr/>	
Total Distribution Charge Off Peak	3.689
Total Distribution Charge Mid Peak	5.398
Total Distribution Charge Critical Peak	9.731
Transmission Charge Off Peak	0.212
Transmission Charge Mid Peak	0.337
Transmission Charge Critical Peak	13.615
Energy Service Charge Off Peak	7.411
Energy Service Charge Mid Peak	8.871
Energy Service Charge Critical Peak	9.208
Stranded Cost Adjustment Factor	(0.072)
Storm Recovery Adjustment Factor	0.000

Off peak hours will be from 12AM to 8AM and 8PM to 12AM daily.

Mid peak hours will be from 8AM to 3PM daily Monday through Friday, except holidays.

Mid peak hours will be from 8AM to 8PM Saturday, Sunday and holidays.

Critical peak hours will be from 3PM to 8PM daily Monday through Friday, except holidays.

### Control Credits

The Company or Tesla will take control of and dispatch the Powerwall 2 battery equipment during predicted peak events. Customers who lease the Powerwall 2 battery equipment from the Company will be compensated in accordance with the Alternative Net Metering Tariff adopted by the Commission in Order No. 26,029 dated June 23, 2017, as described in Section 51 of this tariff, when the Company dispatches the Powerwall 2 battery equipment for predicted peak events.

### Rates per Month

The rate per month will be the sum of the applicable Customer and Energy Charges subject to the adjustments in this tariff:

#### Rates for Retail Delivery Service Effective May 1, 2021, through October 31, 2021

Customer Charge	\$14.74 per month
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#### Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge Off Peak	3.625
Distribution Charge Mid Peak	5.334
Distribution Charge Critical Peak	9.667
Reliability Enhancement/Vegetation Management	0.064
Total Distribution Charge Off Peak	3.689
Total Distribution Charge Mid Peak	5.398
Total Distribution Charge Critical Peak	9.731
Transmission Charge Off Peak	0.212
Transmission Charge Mid Peak	0.337
Transmission Charge Critical Peak	13.615
Energy Service Charge Off Peak	7.411
Energy Service Charge Mid Peak	8.871
Energy Service Charge Critical Peak	9.208
Stranded Cost Adjustment Factor	(0.072)
Storm Recovery Adjustment Factor	0.000

Off peak hours will be from 12AM to 8AM and 8PM to 12AM daily.

Mid peak hours will be from 8AM to 3PM daily Monday through Friday, except holidays.

Mid peak hours will be from 8AM to 8PM Saturday, Sunday and holidays.

Critical peak hours will be from 3PM to 8PM daily Monday through Friday, except holidays.

NHPUC No. 21 - ELECTRICITY  
LIBERTY UTILITIES

Third Revised Page 126  
Superseding Second Revised Page 126  
Summary of Rates

RATES EFFECTIVE MAY 1, 2021  
FOR USAGE ON AND AFTER MAY 1, 2021

Rate	Blocks	Distribution Charge	REP/VMP	Net Distribution Charge	Transmission Charge	Storm Stranded Cost Charge	Recovery Adjustment Factor	System Benefits Charge	Electricity Consumption Tax	Total Delivery Service	Energy Service	Total Rate
D	Customer Charge	\$ 14.74		<b>14.74</b>						<b>14.74</b>		<b>\$ 14.74</b>
	All kWh	\$ 0.05741	0.00064	<b>0.05805</b>	0.02660	(0.00072)	-	0.00678	-	<b>0.09071</b>	0.06426	<b>\$ 0.15497</b>
Off Peak Water Heating Use 16 Hour Control <sup>1</sup>	All kWh	\$ 0.04957	0.00064	<b>0.05021</b>	0.02660	(0.00072)	-	0.00678	-	<b>0.08287</b>	0.06426	<b>\$ 0.14713</b>
Off Peak Water Heating Use 6 Hour Control <sup>1</sup>	All kWh	\$ 0.05049	0.00064	<b>0.05113</b>	0.02660	(0.00072)	-	0.00678	-	<b>0.08379</b>	0.06426	<b>\$ 0.14805</b>
Farm <sup>1</sup>	All kWh	\$ 0.05419	0.00064	<b>0.05483</b>	0.02660	(0.00072)	-	0.00678	-	<b>0.08749</b>	0.06426	<b>\$ 0.15175</b>
D-10	Customer Charge	\$ 14.74		<b>14.74</b>						<b>14.74</b>		<b>\$ 14.74</b>
	On Peak kWh	\$ 0.12215	0.00064	<b>0.12279</b>	0.02269	(0.00072)	-	0.00678	-	<b>0.15154</b>	0.06426	<b>\$ 0.21580</b>
	Off Peak kWh	\$ 0.00165	0.00064	<b>0.00229</b>	0.02269	(0.00072)	-	0.00678	-	<b>0.03104</b>	0.06426	<b>\$ 0.09530</b>
G-1	Customer Charge	\$ 428.73		<b>428.73</b>						<b>428.73</b>		<b>\$ 428.73</b>
	Demand Charge	\$ 9.10		<b>9.10</b>						<b>9.10</b>		<b>\$ 9.10</b>
	On Peak kWh	\$ 0.00582	0.00064	<b>0.00646</b>	0.02065	(0.00072)	-	0.00678	-	<b>0.03317</b>		
									Effective 2/1/21, usage on or after		0.08245	<b>\$ 0.11562</b>
									Effective 3/1/21, usage on or after		0.07249	<b>\$ 0.10566</b>
									Effective 4/1/21, usage on or after		0.06449	<b>\$ 0.09766</b>
									Effective 5/1/21, usage on or after		0.05979	<b>\$ 0.09296</b>
									Effective 6/1/21, usage on or after		0.05555	<b>\$ 0.08872</b>
									Effective 7/1/21, usage on or after		0.05906	<b>\$ 0.09223</b>
	Off Peak kWh	\$ 0.00172	0.00064	<b>0.00236</b>	0.02065	(0.00072)	-	0.00678	-	<b>0.02907</b>		
									Effective 2/1/21, usage on or after		0.08245	<b>\$ 0.11152</b>
									Effective 3/1/21, usage on or after		0.07249	<b>\$ 0.10156</b>
									Effective 4/1/21, usage on or after		0.06449	<b>\$ 0.09356</b>
									Effective 5/1/21, usage on or after		0.05979	<b>\$ 0.08886</b>
									Effective 6/1/21, usage on or after		0.05555	<b>\$ 0.08462</b>
									Effective 7/1/21, usage on or after		0.05906	<b>\$ 0.08813</b>
G-2	Customer Charge	\$ 71.46		<b>71.46</b>						<b>71.46</b>		<b>\$ 71.46</b>
	Demand Charge	\$ 9.15		<b>9.15</b>						<b>9.15</b>		<b>\$ 9.15</b>
	All kWh	\$ 0.00231	0.00064	<b>0.00295</b>	0.02553	(0.00072)	-	0.00678	-	<b>0.03454</b>		
									Effective 2/1/21, usage on or after		0.08245	<b>\$ 0.11699</b>
									Effective 3/1/21, usage on or after		0.07249	<b>\$ 0.10703</b>
									Effective 4/1/21, usage on or after		0.06449	<b>\$ 0.09903</b>
									Effective 5/1/21, usage on or after		0.05979	<b>\$ 0.09433</b>
									Effective 6/1/21, usage on or after		0.05555	<b>\$ 0.09009</b>
									Effective 7/1/21, usage on or after		0.05906	<b>\$ 0.09360</b>
G-3	Customer Charge	\$ 16.43		<b>16.43</b>						<b>16.43</b>		<b>\$ 16.43</b>
	All kWh	\$ 0.05205	0.00064	<b>0.05269</b>	0.02550	(0.00072)	-	0.00678	-	<b>0.08425</b>	0.06426	<b>\$ 0.14851</b>
T	Customer Charge	\$ 14.74		<b>14.74</b>						<b>14.74</b>		<b>\$ 14.74</b>
	All kWh	\$ 0.04657	0.00064	<b>0.04721</b>	0.02620	(0.00073)	-	0.00678	-	<b>0.07946</b>	0.06426	<b>\$ 0.14372</b>
V	Minimum Charge	\$ 16.43		<b>16.43</b>						<b>16.43</b>		<b>\$ 16.43</b>
	All kWh	\$ 0.05354	0.00064	<b>0.05418</b>	0.02501	(0.00072)	-	0.00678	-	<b>0.08525</b>	0.06426	<b>\$ 0.14951</b>

<sup>1</sup> Rate is a subset of Domestic Rate D

Dated: xxx xx, 2021  
Effective: May 1, 2021

Issued by: /s/Susan L. Fleck  
Susan L. Fleck  
Title: President

Authorized by NHPUC Order No. xxx in Docket No. DE xx-xxx, dated xxx xx, 2021

RATES EFFECTIVE MAY 1, 2021  
FOR USAGE ON AND AFTER MAY 1, 2021

Rate	Blocks	Distribution Charge	REP/VMP	Net Distribution Charge	Transmission Charge	Stranded Cost Charge	Storm Recovery Adjustment Factor	System Benefits Charge	Electricity Consumption Tax	Total Delivery Service	Energy Service	Total Rate
	Customer Charge	\$14.74		<b>\$14.74</b>								<b>\$14.74</b>
	<u>Monday through Friday</u>											
	Off Peak	\$0.03625	\$0.00064	<b>\$0.03689</b>	\$0.00212	(\$0.00072)	-	\$0.00678	-	<b>\$0.04507</b>	\$0.07411	<b>\$0.11918</b>
	Mid Peak	\$0.05334	\$0.00064	<b>\$0.05398</b>	\$0.00337	(\$0.00072)	-	\$0.00678	-	<b>\$0.06341</b>	\$0.08871	<b>\$0.15212</b>
D-11	Critical Peak	\$0.09667	\$0.00064	<b>\$0.09731</b>	\$0.13615	(\$0.00072)	-	\$0.00678	-	<b>\$0.23952</b>	\$0.09208	<b>\$0.33160</b>
	<u>Saturday through Sunday and Holidays</u>											
	Off Peak	\$0.03625	\$0.00064	<b>\$0.03689</b>	\$0.00212	(\$0.00072)	-	\$0.00678	-	<b>\$0.04507</b>	\$0.07411	<b>\$0.11918</b>
	Mid Peak	\$0.05334	\$0.00064	<b>\$0.05398</b>	\$0.00337	(\$0.00072)	-	\$0.00678	-	<b>\$0.06341</b>	\$0.08871	<b>\$0.15212</b>
	Customer Charge	\$11.35		<b>\$11.35</b>								<b>\$11.35</b>
	<u>Monday through Friday</u>											
	Off Peak	\$0.03625	\$0.00064	<b>\$0.03689</b>	\$0.00212	(\$0.00072)	-	\$0.00678	-	<b>\$0.04507</b>	\$0.07411	<b>\$0.11918</b>
	Mid Peak	\$0.05334	\$0.00064	<b>\$0.05398</b>	\$0.00337	(\$0.00072)	-	\$0.00678	-	<b>\$0.06341</b>	\$0.08871	<b>\$0.15212</b>
Rate EV	Critical Peak	\$0.09667	\$0.00064	<b>\$0.09731</b>	\$0.13615	(\$0.00072)	-	\$0.00678	-	<b>\$0.23952</b>	\$0.09208	<b>\$0.33160</b>
	<u>Saturday through Sunday and Holidays</u>											
	Off Peak	\$0.03625	\$0.00064	<b>\$0.03689</b>	\$0.00212	(\$0.00072)	-	\$0.00678	-	<b>\$0.04507</b>	\$0.07411	<b>\$0.11918</b>
	Mid Peak	\$0.05334	\$0.00064	<b>\$0.05398</b>	\$0.00337	(\$0.00072)	-	\$0.00678	-	<b>\$0.06341</b>	\$0.08871	<b>\$0.15212</b>
	<u>Luminaire Charge</u>											
	HPS 4,000	\$8.42		<b>\$8.42</b>								<b>\$8.42</b>
	HPS 9,600	\$9.73		<b>\$9.73</b>								<b>\$9.73</b>
	HPS 27,500	\$16.14		<b>\$16.14</b>								<b>\$16.14</b>
	HPS 50,000	\$19.16		<b>\$19.16</b>								<b>\$19.16</b>
	HPS 9,600 (Post Top)	\$11.41		<b>\$11.41</b>								<b>\$11.41</b>
	HPS 27,500 Flood	\$16.31		<b>\$16.31</b>								<b>\$16.31</b>
M	HPS 50,000 Flood	\$21.78		<b>\$21.78</b>								<b>\$21.78</b>
	Incandescent 1,000	\$10.79		<b>\$10.79</b>								<b>\$10.79</b>
	Mercury Vapor 4,000	\$7.47		<b>\$7.47</b>								<b>\$7.47</b>
	Mercury Vapor 8,000	\$8.39		<b>\$8.39</b>								<b>\$8.39</b>
	Mercury Vapor 22,000	\$14.99		<b>\$14.99</b>								<b>\$14.99</b>
	Mercury Vapor 63,000	\$25.32		<b>\$25.32</b>								<b>\$25.32</b>
	Mercury Vapor 22,000 Flood	\$17.15		<b>\$17.15</b>								<b>\$17.15</b>
	Mercury Vapor 63,000 Flood	\$33.21		<b>\$33.21</b>								<b>\$33.21</b>
	<u>Luminaire Charge</u>											
	30 Watt Pole Top	\$5.46		<b>\$5.46</b>								<b>\$5.46</b>
	50 Watt Pole Top	\$5.69		<b>\$5.69</b>								<b>\$5.69</b>
	130 Watt Pole Top	\$8.79		<b>\$8.79</b>								<b>\$8.79</b>
	190 Watt Pole Top	\$16.82		<b>\$16.82</b>								<b>\$16.82</b>
LED-1	30 Watt URD	\$12.72		<b>\$12.72</b>								<b>\$12.72</b>
	90 Watt Flood	\$8.65		<b>\$8.65</b>								<b>\$8.65</b>
	130 Watt Flood	\$9.94		<b>\$9.94</b>								<b>\$9.94</b>
	30 Watt Caretaker	\$4.90		<b>\$4.90</b>								<b>\$4.90</b>
	<u>Luminaire Charge</u>											
	Pole -Wood	\$9.51		<b>\$9.51</b>								<b>\$9.51</b>
	Fiberglass - Direct Embedded	\$9.92		<b>\$9.92</b>								<b>\$9.92</b>
	Fiberglass w/Foundation <25 ft	\$16.73		<b>\$16.73</b>								<b>\$16.73</b>
	Fiberglass w/Foundation >=25 ft	\$27.97		<b>\$27.97</b>								<b>\$27.97</b>
	Metal Poles - Direct Embedded	\$19.94		<b>\$19.94</b>								<b>\$19.94</b>
	Metal Poles with Foundation	\$24.05		<b>\$24.05</b>								<b>\$24.05</b>
M & LED-1	All kWh	\$0.04003	\$0.00064	<b>\$0.04067</b>	\$0.01520	(\$0.00072)	\$0.00000	\$0.00678	\$0.00000	<b>\$0.06193</b>	\$0.06426	<b>\$0.12619</b>
LED-2	All kWh	\$0.04003	\$0.00064	<b>\$0.04067</b>	\$0.01520	(\$0.00072)	\$0.00000	\$0.00678	\$0.00000	<b>\$0.06193</b>	\$0.06426	<b>\$0.12619</b>

Dated: xx xx, 2021  
Effective: May 1, 2021

Issued by: /s/Susan L. Fleck  
Susan L. Fleck  
Title: President

Authorized by NHPUC Order No xxx in Docket No DE 2xx-xxx dated xxx xx, 2021

## Rate D

### Availability

Retail Delivery Service under this rate is available for all domestic purposes in an individual private dwelling or an individual apartment and for farm purposes. If electricity is delivered through more than one meter, the charge for electricity delivered through each meter shall be computed separately under this rate.

### Character of Service

Service supplied under this rate will be single phase, 60 cycle, alternating current, normally three-wire service at a nominal voltage of 120/240 volts or three-wire 120/208 volts, whichever is available at the location.

### Rate Per Month

The rate per month will be the sum of the applicable Customer and Energy Charges subject to the adjustments in this tariff:

### Rates for Retail Delivery Service

Customer Charge	\$14.74 per month
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### Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge All kWh	5.74105
Reliability Enhancement/Vegetation Management	0.06408
Total Distribution All kWh	5.805713
Transmission Charge	2.660
Stranded Cost Charge	(0.072)
Storm Recovery Adjustment Factor	0.000

Off-Peak Use: 16 Hour Control

For all electricity separately metered and delivered between the hours of 11:00 p.m. on each day and 7:00 a.m. on the next day, the price of such electricity shall be:

Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge Off Peak Use	4.9 <del>5726</del>
Reliability Enhancement/Vegetation Management	0.0 <del>6408</del>
Total Distribution	<u>5.0214.934</u>
Transmission Charge	2.660
Stranded Cost Charge	(0.072)
Storm Recovery Adjustment Factor	0.000

If a Customer has installed an electric water heater of a type approved by the Company, electricity is delivered to such water heater is supplied only under this rate.

Off-Peak Use: 6 Hour Control

For all electricity separately metered and subject to the Company's right to limit the operation of the bottom water heating element up to 6 hours a day, the price of such electricity shall be:

Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge Off Peak Use	5.0 <del>4917</del>
Reliability Enhancement/Vegetation Management	0.0 <del>6408</del>
Total Distribution	<u>5.113025</u>
Transmission Charge	2.660
Stranded Cost Charge	(0.072)
Storm Recovery Adjustment Factor	0.000

If a Customer has installed an electric water heater of a type approved by the Company, and electricity delivered to such water heater is supplied only under this rate



## Farm Use

The availability of the Farm Use Section is limited to those locations which were served under the Farm Use Section of Domestic Rate D, N.H.P.U.C. No. 8 - Electricity immediately prior to the effective date of this rate. For such farm customers, where all electricity is supplied by the Company, the RATE PER MONTH is modified as follows:

### Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge*	5. <del>41</del> <sup>93</sup>
	<del>85</del>
Reliability Enhancement/Vegetation Management	0.0 <del>64</del> <sup>0</sup>
	<del>8</del>
Total Distribution	5. <del>48</del> <sup>33</sup>
	<del>93</del>
Transmission Service Cost Adjustment	2.660
Stranded Cost Adjustment Factor	(0.072)
Storm Recovery Adjustment Factor	0.000

\*All Regular Use kilowatt-hours in excess of the greater of the following:

- i. 500 kilowatt-hours
- ii. 100 kilowatt-hours per kilovolt-ampere of transformer capacity needed to serve the Customer

## Rate D-10 Optional Peak Load Rate

### Availability

Retail Delivery Service under this rate is available for all domestic purposes in an individual private dwelling or an individual apartment and for farm purposes to selected customers presently served under Rate D.

If electricity is delivered through more than one meter, the charge for electricity delivered through each meter shall be computed separately under this rate. The availability of this rate will be subject to the Company's ability to obtain the necessary meters and to render such service.

### Character of Service

Service supplied under this rate will be single phase, 60 cycle, alternating current, normally three-wire service at a nominal voltage of 120/240 volts or three-wire 120/208 volts, whichever is available at the location.

### Rate Per Month

The rate per month will be the sum of the applicable Customer and Energy Charges subject to the adjustments in this tariff:

### Rates for Retail Delivery Service

Customer Charge	\$14.74 per month
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### Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge On Peak	12. <del>215</del> <del>43</del>
Distribution Charge Off Peak	0.165
Reliability Enhancement/Vegetation Management	0.0 <del>64</del> <del>08</del>
<hr/>	
Total Distribution Charge On Peak	12. <del>279</del> <del>151</del>
Total Distribution Charge Off Peak	0. <del>229</del> <del>173</del>
Transmission Charge	2.269
Stranded Cost Charge	(0.072)

Storm Recovery Adjustment Factor

0.000

Peak hours will be from 8:00 a.m. to 9:00 p.m. daily on Monday through Friday excluding holidays.

### Rates for Retail Delivery Service

Customer Charge \$42~~68~~.7~~83~~ per month  
Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge On Peak	0.58 <del>20</del>
Distribution Charge Off Peak	0.172
Reliability Enhancement/Vegetation Management	0.0 <del>6408</del>
Total Distribution Charge On Peak	0. <del>646588</del>
Total Distribution Charge Off Peak	0. <del>236180</del>

Transmission Charge	2.065
Stranded Cost Charge	(0.072)

Storm Recovery Adjustment Factor	0.000
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### Demand Charges Per Kilowatt

Distribution	\$9.1 <del>04</del>
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### Distribution Energy Charges Peak Periods

Peak hours will be from 8:00 a.m. to 9:00 p.m. daily on Monday through Friday excluding holidays.

Off-Peak hours will be from 9:00 p.m. to 8:00 a.m. daily Monday through Friday, and all day on Saturdays, Sundays, and holidays.

### Demand

The Demand for each month under ordinary load conditions shall be the greatest of the following:

1. The greatest fifteen-minute peak during the peak hours which occurs during such month as measured in kilowatts,
2. 90% of the greatest fifteen-minute peak during the peak hours occurring during such month as measured in kilovolt-amperes where the Customer's kilowatt Demand exceeds 75 kilowatts, or
3. 80% of the greatest Demand as so determined above during the preceding eleven months.

Any Demands established during the eleven (11) months prior to the application of this rate shall be considered as having been established under this rate.

## General Long Hour Service Rate G-2

### Availability

Retail Delivery Service under this rate is available for all purposes except resale subject to the provisions of this section. The sale of electric vehicle charging services to a third party from an electric vehicle charging station shall not be considered resale of electricity. A Customer will take delivery service on this rate if the Company estimates that its average use will be greater than or equal to 20 kW of Demand but is less than 200 kW of Demand. If electricity is delivered through more than one meter, except at the Company's option, the charge for electricity delivered through each meter shall be computed separately under this rate. A customer may be transferred from rate G-2 at its request or at the option of the Company if the customer's twelve (12) month average monthly demand is less than 18 kW of demand for three consecutive months.

If any electricity is delivered hereunder at a given location, then all electricity delivered by the Company at such location shall be furnished hereunder, except such electricity as may be delivered under the provisions of the Limited Commercial Space Heating Rate V.

### Character of Service

Service supplied under this rate will be 60 cycle, three-phase alternating current normally at a nominal voltage of 120/208, 277/480, 2400, 4160, 4800, 7200, 13,200 and 13,800 volts. All voltages are not available in every area.

### Rate Per Month

The Rate Per Month will be the sum of the applicable Customer, Demand and Energy Charges subject to the adjustments in this tariff.

### Rates for Retail Delivery Service

Customer Charge	\$71. <del>46</del> <sup>14</sup> per month
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### Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge	0.23 <del>10</del>
Reliability Enhancement/Vegetation Management	0.0 <del>64</del> <sup>08</sup>
Total Distribution Charge	0.2 <del>95</del> <sup>38</sup>

Transmission Charge	2.553
Stranded Cost Charge	(0.072)
Storm Recovery Adjustment Factor	0.000

#### Demand Charges Per Kilowatt

Distribution	\$9.1 <del>5</del> <sup>4</sup>
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#### Demand

The Demand for each month under ordinary load conditions shall be the greatest of the following:

1. The greatest fifteen-minute peak during the peak hours which occurs during such month as measured in kilowatts,
2. 90% of the greatest fifteen-minute peak occurring during such month as measured in kilovolt-amperes where the Customer's kilowatt Demand exceeds 75 kilowatts, or
3. 80% of the greatest Demand as so determined above during the preceding eleven months.

Any Demands established during the eleven months prior to the application of this rate shall be considered as having been established under this rate.

#### Optional Determination of Demand

However, a Customer who has been served hereunder for one year or more may upon written request have the Demand for each month, beginning with the next month after such request and running for a period of not less than two consecutive months, be based upon the greatest of items a) or b) above. In such case, the Demand Charge and the Energy Charge will be increased by 20% during such period.

#### High Voltage Metering Adjustment

The Company reserves the right to determine the metering installation. Where service is metered at the Company's supply line voltage, in no case less than 2400 volts, thereby saving the Company transformer losses, a discount of 1% will be allowed from the amount determined under the preceding provisions.

### General Service Rate G-3

#### Availability

Retail Delivery Service under this rate is available for all purposes except resale. The sale of electric vehicle charging services to a third party from an electric vehicle charging station shall not be considered resale of electricity. A Customer will take delivery service on this rate if the Company estimates that its average use will be less than 20 kW of demand. If electricity is delivered through more than one meter, except at the Company's option, the charge for electricity delivered through each meter shall be computed separately under this rate.

#### Character of Service

Service supplied under this rate will be 60 cycle, alternating current either:

- a) Single-phase normally three-wire at a nominal voltage of 120/240 volts.
- b) Three-phase secondary normally at a nominal voltage of 120/208, or 277/480 volts.
- c) Three-phase primary normally at a nominal voltage of 2400, 4160, 4800, 7200, 13,200 or 13,800 volts.

All voltages are not available in every area.

#### Rate Per Month

The rate per month will be the sum of the Customer and Energy Charges subject to the adjustments in this tariff:

#### Rates for Retail Delivery Service

Customer Charge	\$16. <del>43</del> <sup>36</sup> per month
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#### Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge	5. <del>20</del> <sup>5</sup>
	<del>18</del> <sup>2</sup>
2Reliability Enhancement/Vegetation Management	0.0 <del>64</del> <sup>9</sup>
	<del>8</del>
Total Distribution Charge	5. <del>26</del> <sup>9</sup>



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	<del>190</del>
Transmission Charge	2.550
Stranded Cost Charge	(0.072)
Storm Recovery Adjustment Factor	0.000

### Character of Service

Service supplied under this rate will be single phase, 60 cycle, alternating current, normally three-wire service at a nominal voltage of 120/240 volts or three-wire 120/208 volts, whichever is available at the location.

### Rate Per Month

The rate per month will be the sum of the applicable Customer and Energy Charges subject to the adjustments in this tariff.

### Rates for Retail Delivery Service

Customer Charge \$14.74 per month

### Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge	4.6 <del>5731</del>
Reliability Enhancement/Vegetation Management	0.0 <del>6408</del>
Total Distribution Charge	4.7 <del>21639</del>
Transmission Charge	2.620
Stranded Cost Charge	(0.073)
Storm Recovery Adjustment Factor	0.000

### Terms of Agreement

A Customer served under this rate must provide the Company with one-year prior written notice before installing additional generation for its own use. This notice provision shall be waived with respect to the installation of on-site non-emergency generation from renewable energy resources. Renewable energy resources shall mean fuel cells (including natural gas powered fuel cells), and emerging power generation technologies that produce electricity from wind energy, solar energy, small-scale hydro power, ocean power, landfill gas, sustainably managed biomass, and future clean renewable technologies.

### Rates for Retail Delivery Service

Customer Charge	\$16. <del>4336</del> per month
<u>Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)</u>	
Distribution Charge	5.3 <del>5430</del>
Reliability Enhancement/Vegetation Management	0.0 <del>6408</del>
Total Distribution Charge	5.4 <del>18338</del>
Transmission Charge	2.501
Stranded Cost Charge	(0.072)
Storm Recovery Adjustment Factor	0.000

### Terms of Agreement

A Customer served under this rate must provide the Company with one-year prior written notice before installing additional on-site, non-emergency generation for its own use. This notice provision shall be waived with respect to the installation of on-site non-emergency generation from renewable energy resources. Renewable energy resources shall mean fuel cells (including natural gas powered fuel cells), and emerging power generation technologies that produce electricity from wind energy, solar energy, small-scale hydro power, ocean power, landfill gas, sustainably managed biomass, and future clean renewable technologies.

## Outdoor Lighting Service Rate M

### Availability

#### *Public Lighting*

Available for Street or Highways and areas within the public domain for customers designated as governmental entities, inclusive of the state, municipalities, or other public authorities. Installations on limited access highways, tunnels, bridges and the access and egress ramps thereto are subject to the Special Rate Conditions of this tariff.

#### *Private Lighting*

Available to private customers for outdoor lighting of areas on private property where necessary fixtures can be supported on existing poles and where such service can be supplied from existing secondary distribution facilities.

In special circumstances outlined in the pole and accessory section below, the Company will install a wooden pole.

#### *Lighting Services*

Service under this rate is for full-night service street lighting whereby the luminaire operates for the entire night time period pursuant to the Hours of Operation provision below. In addition, customers may, at their option, take advantage of part-night service in which the luminaire operates for a portion of the night pursuant to the Hours of Operation provision below. Customers may select the part-night service option at the time of lighting installation or at any time during service. Any request to select the part-time night service option must be made in writing.

### Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge	<del>4.0033-985</del>
Reliability Enhancement/Vegetation Management	<del>0.06408</del>
Total Distribution	<del>4.0673-993</del>
Transmission Charge	1.520
Stranded Cost Charge	(0.072)
Storm Recovery Adjustment Factor	0.000

No further installation or relocation of Incandescent and Mercury Vapor lights will be made after the effective date of this rate.

### Pole and Accessory Charge

An additional monthly charge enumerated below will be applied where the Company is requested to furnish a suitable wood pole for the sole purpose of supporting a luminaire. If at a future date the pole is used for any purpose approved by the Company in addition to supporting a street and/or floodlight luminaire, the pole charge will be terminated. This pole may not be more than one (1) span from the existing secondary service located along a roadway or thoroughfare, and must be reachable for mechanized equipment.

Description	Monthly Price Per Unit
<b>Overhead Service</b>	
Wood Poles	\$9. <del>51</del> <sup>47</sup>
<b>Underground Service – Non-Metallic Standard</b>	
Fiberglass – Direct Embedded	\$9. <del>92</del> <sup>81</sup>
Fiberglass with Foundation < 25 ft.	\$16. <del>73</del> <sup>65</sup>
Fiberglass with Foundation >= 25 ft.	\$27. <del>97</del> <sup>84</sup>
Metal Poles – Direct Embedded	\$19. <del>94</del> <sup>85</sup>
Metal Poles with Foundation	\$24. <del>05</del> <sup>3.94</sup>

### Other Charges

Pursuant to RSA 9-E:4, the Company provides a part-night service that, when requested by a customer, will require the replacement of the photoelectric control that will allow for the operation of the luminaire for a portion of the night. The Company shall assess the customer a Part Night Charge of \$150 for the installation of each photoelectric control that must be replaced in order for part-night service to be operational and for the removal of such photoelectric control upon the customer's request to return to full-night service. For installation or removal of each photoelectric control made during a scheduled maintenance visit or during the installation of a new outdoor lighting service, the Company shall assess the customer a Part Night Charge of \$20 for the installation or removal of each such photoelectric control. The Part Night Charge does not include the cost or fees associated with any work-zone protection, traffic control services and/or permits required to perform the customer requested change, all of which shall be the responsibility of the customer.



For Full-Night Schedule and Part-Night Schedule, the monthly distribution charge is based on the monthly cost of the fixture as provided below:

For New and Existing Installations:

Lamp Nominal Light Output	Nominal Power Rating		Monthly Fixed Luminaire Charge	Average Monthly kWh		Monthly kWh Charges		Total Distribution Charges	
				Full Night Schedule	Part-Night Schedule	Full Night Schedule	Part- Night Schedule	Full Night Schedule	Part- Night Schedule
(Lumens)	Watts	Kelvin	\$/month	kWh/ month	kWh/ month	\$/ month	\$/ month	\$/ month	\$/ month
<u>High Pressure Sodium</u>									
4,000	50	2,000	\$8.42	16	8	\$0.64	\$0.32	\$9.06	\$8.74
9,600	100	2,000	\$9.73	33	17	\$1.32	\$0.66	\$11.05	\$10.39
27,500	250	2,000	\$16.14	82	41	\$3.27	\$1.64	\$19.41	\$17.78
50,000	400	2,000	\$19.16	131	66	\$5.23	\$2.62	\$24.39	\$21.78
9,600	100	2,000	\$11.41	33	17	\$1.32	\$0.66	\$12.73	\$12.07
<u>High Pressure Sodium (HPS) Flood</u>									
27,500	250	2,000	\$16.31	82	41	\$3.27	\$1.64	\$19.58	\$17.95
50,000	400	2,000	\$21.78	131	66	\$5.23	\$2.62	\$27.01	\$24.40

For Existing Installations Only:

Lamp Nominal Light Output	Nominal Power Rating		Monthly Fixed Luminaire Charge	Average Monthly kWh		Monthly kWh Charges		Total Distribution Charges	
				Full Night Schedule	Part-Night Schedule	Full Night Schedule	Part- Night Schedule	Full Night Schedule	Part- Night Schedule
(Lumens)	Watts	Kelvin	\$/month	kWh/ month	kWh/ month	\$/ month	\$/ month	\$/ month	\$/ month
<u>Incandescent</u>									
1000	103	2,400	\$10.79	34	17	\$1.36	\$0.68	\$12.15	\$11.47
<u>Mercury Vapor (MV)</u>									
4,000	100	4,000	\$7.47	33	17	\$1.32	\$0.66	\$8.79	\$8.13
8,000	175	4,000	\$8.39	57	29	\$2.28	\$1.14	\$10.67	\$9.53
22,000	400	5,700	\$14.99	131	66	\$5.23	\$2.62	\$20.22	\$17.61
63,000	1000	4,000	\$25.32	328	164	\$13.10	\$6.55	\$38.42	\$31.87
<u>Mercury Vapor (MV) Flood</u>									
22,000	400	5,700	\$17.15	131	66	\$5.23	\$2.62	\$22.38	\$19.77
63,000	1000	4,000	\$33.21	328	164	\$13.10	\$6.55	\$46.31	\$39.76



## Outdoor Lighting Service Rate LED-1

### Availability

#### *Public Lighting*

Available for Street or Highways and areas within the public domain for customers designated as governmental entities, inclusive of the state, municipalities, or other public authorities. Installations on limited access highways, tunnels, bridges and the access and egress ramps thereto are subject to the Special Rate Conditions of this tariff.

#### *Private Lighting*

Available to private customers for outdoor lighting of areas on private property where necessary fixtures can be supported on existing poles and where such service can be supplied from existing secondary distribution facilities.

In special circumstances outlined in the pole and accessory section below, the Company will install a wooden pole.

#### *Lighting Services*

Service under this rate is for full-night service street lighting whereby the luminaire operates for the entire night time period pursuant to the Hours of Operation provision below. In addition, customers may, at their option, take advantage of part-night service in which the luminaire operates for a portion of the night pursuant to the Hours of Operation provision below. Customers may select the part-night service option at the time of lighting installation or at any time during service. Any request to select the part-time night service option must be made in writing.

### Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge	<del>4.0033</del> 985
Reliability Enhancement/Vegetation Management	0.06408
Total Distribution	<del>4.0673</del> 993
Transmission Charge	1.520
Stranded Cost Charge	(0.072)
Storm Recovery Adjustment Factor	0.000

No further installation or relocation of Incandescent and Mercury Vapor lights will be made after the effective date of this rate.



### Pole and Accessory Charge

An additional monthly charge enumerated below will be applied where the Company is requested to furnish a suitable wood pole for the sole purpose of supporting a luminaire. If at a future date the pole is used for any purpose approved by the Company in addition to supporting a street and/or floodlight luminaire, the pole charge will be terminated. This pole may not be more than one (1) span from the existing secondary service located along a roadway or thoroughfare, and must be reachable for mechanized equipment.

<b>Description</b>	<b>Monthly Price Per Unit</b>
<b>Overhead Service</b>	
Wood Poles	\$9. <del>51</del> 47
<b>Underground Service – Non-Metallic Standard</b>	
Fiberglass – Direct Embedded	\$9. <del>92</del> 81
Fiberglass with Foundation < 25 ft.	\$16. <del>73</del> 65
Fiberglass with Foundation >= 25 ft.	\$27. <del>97</del> 84
Metal Poles – Direct Embedded	\$19. <del>94</del> 85
Metal Poles with Foundation	\$24. <del>05</del> 3.94

### Other Charges

Pursuant to RSA 9-E:4, the Company provides a part-night service that, when requested by a customer, will require the replacement of the photoelectric control that will allow for the operation of the luminaire for a portion of the night. The Company shall assess the customer a Part Night Charge of \$150 for the installation of each photoelectric control that must be replaced in order for part-night service to be operational and for the removal of such photoelectric control upon the customer's request to return to full-night service. For installation or removal of each photoelectric control made during a scheduled maintenance visit or during the installation of a new outdoor lighting service, the Company shall assess the customer a Part Night Charge of \$20 for the installation or removal of each such photoelectric control. The Part Night Charge does not include the cost or fees associated with any work-zone protection, traffic control services and/or permits required to perform the customer requested change, all of which shall be the responsibility of the customer.

For Full-Night Schedule and Part-Night Schedule, the monthly distribution charge is based on the monthly cost of the fixture as provided below:

Lamp Nominal Light Output	Nominal Power Rating		Monthly Fixed Luminaire Charge	Average Monthly kWh		Monthly kWh Charges		Total Distribution Charges	
				Full Night Schedule	Part-Night Schedule	Full Night Schedule	Part- Night Schedule	Full Night Schedule	Part- Night Schedule
(Lumens)	Watts	Kelvin	\$/month	kWh/ month	kWh/ month	\$/ month	\$/ month	\$/ month	\$/ month
<u>LED Roadway/Highway</u>									
4,000	30	4,000	\$5.46	10	5	\$0.40	\$0.20	\$5.86	\$5.66
6,500	50	4,000	\$5.69	16	8	\$0.64	\$0.32	\$6.33	\$6.01
16,500	130	4,000	\$8.79	43	22	\$1.72	\$0.86	\$10.51	\$9.65
21,000	190	4,000	\$16.82	62	31	\$2.48	\$1.24	\$19.30	\$18.06
<u>LED Underground</u>									
3,000	30	3,000	\$12.72	10	5	\$0.40	\$0.20	\$13.12	\$12.92
<u>LED Flood:</u>									
10,500	90	4,000	\$8.65	30	15	\$1.20	\$0.60	\$9.85	\$9.25
16,500	130	4,000	\$9.94	43	22	\$1.72	\$0.86	\$11.66	\$10.80
<u>LED Caretaker II</u>									
4,000	30	3,000	\$4.90	10	5	\$0.40	\$0.20	\$5.30	\$5.10

#### Limitations on Availability

The availability of this rate to any Customer is contingent upon the availability to the Company of personnel and/or other resources necessary to perform the conversion of existing Fixtures.

#### Special Rate Conditions

Charges for the operation of outdoor lights may be increased if, in the Company's opinion, lights are to be installed in locations or under conditions such that estimated income will be insufficient to justify the estimated cost of construction.

#### Choice of Color Temperature

Each fixture type offered under this LED-1 tariff, except the Caretaker II and Underground

Residential, is offered with a customer choice of correlated color temperature (CCT) of either 3000 Kelvin (K) or 4000 K. The Caretaker II and Underground Residential lights are only available in 3000 K. If the customer does not select a color temperature, fixtures with a CCT of 3000 K will be provided.

### Additional Requirements

Fixtures must be provided by the Customer for installation on the Company's facilities. Fixtures shall be accepted by the Company in advance of installation and must be compatible with existing line voltage and brackets, and must require no special tools or training to install and maintain. Customers who are replacing existing fixtures with LED fixtures are responsible for the cost of removal and installation. Customers may choose to have this work completed by the Company or may opt to hire and pay a private line contractor to perform the work. Any private contractor shall have all the requisite training, certifications and insurance to safely perform the required installations, and shall be licensed by the State and accepted by the Company. Prior to commencement of work, the municipality must provide written certification of the qualifications to the Company. Contractors shall coordinate the installation work with the Company and submit a work plan subject to approval by the Company, including provisions for either returning removed fixtures to the Company or otherwise disposing of them as approved by the Company. The Customer shall bear all expenses related to the use of such labor, including any expenses arising from damage to the Company's electrical system caused by the contractor's actions.

### Monthly Rates:

The energy charges for each luminaire will be determined by multiplying the energy charges per kilowatt-hour by the average monthly kilowatt-hours. The Customer is responsible for providing the list of fixtures and wattages to allow the Company to calculate the kWh to be billed. The kWh will be calculated based on the 2020 Farmer's Almanac hours of daylight.

### Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge per kWh	<del>4.0033.985</del>
Reliability Enhancement/Vegetation Management	<del>0.06408</del>
Total Distribution	<del>4.0673.993</del>
Transmission Charge	1.520
Stranded Cost Charge	(0.072)
Storm Recovery Adjustment Factor	0.000

For the alternative schedule, the monthly kWh shall be determined as set forth under Use of Advanced Controls.

### Failure of Lights to Burn

Should any light fail to burn for the full period provided above, a deduction will be made from the calculated monthly kWh of such light, upon presentation of a claim from the Customer. The provisions of this paragraph do not apply when failure to burn is due to an act of God, or an act or order of any Public Authority or accidental or malicious breakage, provided, however, the necessary repairs are made with reasonable dispatch upon notification by the Customer.

Use of Advanced Controls

Where lighting controls that meet the current ANSI C12.20 standard have been installed that allow for variation from the Company's outdoor lighting hours schedule under Full-Night Schedule or Part-Night Schedule, the Customer must provide verification of such installation to the Company and a schedule indicating the expected average operating wattage of lights subject to the Customer's control and operation. Upon installation and at any time thereafter, the Customer must also provide the Company access, either directly or indirectly, to the data from the Customer's control system in order for the Company to verify the measured energy use of the lighting systems and modify the billed usage as appropriate on a prospective basis. The schedule of average operating wattage ratings may be revised once per year at the request of the Customer. However, it is the Customer's responsibility to immediately notify the Company of any planned or unplanned changes to its scheduled usage to allow for billing adjustments as may be needed.

The charge for the monthly kilowatt-hours shall be determined on the basis of the average operating wattage of the light sources resulting from installed control adjustments established at the beginning of the billing period multiplied by the average monthly hours of the outdoor lighting hours schedule. The wattage ratings shall allow for the billing of kilowatt-hours according to the schedule submitted by the Customer to the Company and reflect any adjustments from the lighting control system including, but not limited to, fixture trimming, dimming, brightening, variable dimming, and multiple hourly schedules.

Pole and Accessory Charge

An additional monthly charge enumerated below will be applied where the Company is requested to furnish a suitable wood pole for the sole purpose of supporting a luminaire. If at a future date the pole is used for any purpose approved by the Company in addition to supporting a street and/or floodlight luminaire, the pole charge will be terminated. This pole may not be more than one (1) span from the existing secondary service located along a roadway or thoroughfare, and must be reachable for mechanized equipment.

<b>Description</b>	<b>Monthly Price Per Unit</b>
<b>Overhead Service</b>	
Wood Poles	\$9. <del>51</del> 47
<b>Underground Service – Non-Metallic Standard</b>	
Fiberglass – Direct Embedded	\$9. <del>92</del> 81
Fiberglass with Foundation < 25 ft.	\$16. <del>67</del> 35
Fiberglass with Foundation >= 25 ft.	\$27. <del>97</del> 84



Metal Poles – Direct Embedded	\$19. <del>94</del> <u>85</u>
Metal Poles with Foundation	\$24. <del>05</del> <u>3.94</u>

## Rate EV Plug In Electric Vehicle D-12

### Availability

Retail Delivery Service under this rate is available for uses of a customer taking service under Rate D as a separately metered service. By choosing to participate in this Plug In Electric Vehicle rate, the Customer agrees to pay the following charges for a minimum of two years. The charging station shall be connected by means of an approved circuit to a separate electric vehicle charging meter. The rates for energy (kWh) based charges are seasonal with a winter period from November 1 to April 30 and a summer period from May 1 to October 31.

### Character of Service

Service supplied under this rate will be single phase, 60 cycle, alternating current, normally three-wire service at a nominal voltage of 120/240 volts or three-wire 120/208 volts, whichever is available at the location.

### Rates per Month

The rate per month will be the sum of the applicable Customer and Energy Charges subject to the adjustments in this tariff:

Rates for Retail Delivery Service Effective ~~November 1, 2020 through April 30, 2021~~ May 1, 2021 through October 31, 2021

Customer Charge	\$11.35 per month
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### Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge Off Peak	3.6254.196
Distribution Charge Mid Peak	5.3346.289
Distribution Charge Critical Peak	9.6678.955
Reliability Enhancement/Vegetation Management	0.06408
<hr/>	
Total Distribution Charge Off Peak	3.6894.204
Total Distribution Charge Mid Peak	5.3986.297
Total Distribution Charge Critical Peak	9.7318.963
Transmission Charge Off Peak	0.212
Transmission Charge Mid Peak	0.337
Transmission Charge Critical Peak	13.615
Energy Service Charge Off Peak	7.411
Energy Service Charge Mid Peak	8.871
Energy Service Charge Critical Peak	9.208
Stranded Cost Adjustment Factor	(0.072)
Storm Recovery Adjustment Factor	0.000

Off peak hours will be from 12AM to 8AM and 8PM to 12AM daily.

Mid peak hours will be from 8AM to 3PM daily Monday through Friday, except holidays.

Mid peak hours will be from 8AM to 8PM Saturday, Sunday and holidays.

Critical peak hours will be from 3PM to 8PM daily Monday through Friday, except holidays.

### Control Credits

The Company or Tesla will take control of and dispatch the Powerwall 2 battery equipment during predicted peak events. Customers who lease the Powerwall 2 battery equipment from the Company will be compensated in accordance with the Alternative Net Metering Tariff adopted by the Commission in Order No. 26,029 dated June 23, 2017, as described in Section 51 of this tariff, when the Company dispatches the Powerwall 2 battery equipment for predicted peak events.

### Rates per Month

The rate per month will be the sum of the applicable Customer and Energy Charges subject to the adjustments in this tariff:

Rates for Retail Delivery Service Effective ~~November 1, 2020 through April 30, 2021~~ May 1, 2021, through October 31, 2021

Customer Charge	\$14.74 per month
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### Energy Charges Per Kilowatt-Hour (cents per kilowatt-hour)

Distribution Charge Off Peak	<del>3.62</del> 54.196
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Distribution Charge Mid Peak	<del>5.33</del> 46.289
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Distribution Charge Critical Peak	<del>9.66</del> 78.955
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Reliability Enhancement/Vegetation Management	0.06408
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Total Distribution Charge Off Peak	<del>3.68</del> 94.204
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Total Distribution Charge Mid Peak	<del>5.39</del> 86.297
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Total Distribution Charge Critical Peak	<del>9.73</del> 18.963
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Transmission Charge Off Peak	0.212
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Transmission Charge Mid Peak	0.337
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Transmission Charge Critical Peak	13.615
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Energy Service Charge Off Peak	7.411
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Energy Service Charge Mid Peak	8.871
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Energy Service Charge Critical Peak	9.208
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Stranded Cost Adjustment Factor	(0.072)
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Storm Recovery Adjustment Factor	0.000
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Off peak hours will be from 12AM to 8AM and 8PM to 12AM daily.

Mid peak hours will be from 8AM to 3PM daily Monday through Friday, except holidays.

Mid peak hours will be from 8AM to 8PM Saturday, Sunday and holidays.

Critical peak hours will be from 3PM to 8PM daily Monday through Friday, except holidays.

NHPUC No. 21 - ELECTRICITY  
LIBERTY UTILITIES

Second Revised Page 126  
Superseding First Revised Page 126  
Summary of Rates

~~RATES EFFECTIVE FEBRUARY 1, 2021~~  
~~FOR USAGE ON AND AFTER FEBRUARY 1, 2021~~

Rate	Blocks	Distribution Charge	REP/ VMP	Net Distribution Charge	Transmission Charge	Storm Stranded Cost Charge	Recovery Adjustment Factor	System Benefits Charge	Electricity Consumption Tax	Total Delivery Service	Energy Service	Total Rate
D	Customer Charge	\$ 14.74		14.74						14.74		\$ 14.74
	All kWh	<del>\$ -0.05705</del>	<del>-0.00008</del>	<del>-0.05713</del>	0.02660	(0.00072)	-	0.00678	-	<del>-0.08979</del>	0.06426	<del>\$ -0.15405</del>
Off Peak Water Heating Use 16 Hour Control <sup>1</sup>	All kWh	<del>\$ -0.04926</del>	<del>-0.00008</del>	<del>-0.04934</del>	0.02660	(0.00072)	-	0.00678	-	<del>-0.08200</del>	0.06426	<del>\$ -0.14626</del>
Off Peak Water Heating Use 6 Hour Control <sup>1</sup>	All kWh	<del>\$ -0.05017</del>	<del>-0.00008</del>	<del>-0.05025</del>	0.02660	(0.00072)	-	0.00678	-	<del>-0.08291</del>	0.06426	<del>\$ -0.14717</del>
Farm <sup>1</sup>	All kWh	<del>\$ -0.05385</del>	<del>-0.00008</del>	<del>-0.05393</del>	0.02660	(0.00072)	-	0.00678	-	<del>-0.08659</del>	0.06426	<del>\$ -0.15085</del>
D-10	Customer Charge	\$ 14.74		14.74						14.74		\$ 14.74
	On Peak kWh	<del>\$ -0.12143</del>	<del>-0.00008</del>	<del>-0.12151</del>	0.02269	(0.00072)	-	0.00678	-	<del>-0.15026</del>	0.06426	<del>\$ -0.21452</del>
	Off Peak kWh	<del>\$ -0.00165</del>	<del>-0.00008</del>	<del>-0.00173</del>	0.02269	(0.00072)	-	0.00678	-	<del>-0.03048</del>	0.06426	<del>\$ -0.09474</del>
G-1	Customer Charge	<del>\$ -426.78</del>		<del>-426.78</del>						<del>-426.78</del>		<del>\$ -426.78</del>
	Demand Charge	<del>\$ -9.06</del>		<del>-9.06</del>						<del>-9.06</del>		<del>\$ -9.06</del>
	On Peak kWh	<del>\$ -0.00580</del>	<del>-0.00008</del>	<del>-0.00588</del>	0.02065	(0.00072)	-	0.00678	-	<del>-0.03259</del>		
									Effective 2/1/21, usage on or after		0.08245	<del>\$ -0.11504</del>
									Effective 3/1/21, usage on or after		0.07249	<del>\$ -0.10508</del>
									Effective 4/1/21, usage on or after		0.06449	<del>\$ -0.09708</del>
									Effective 5/1/21, usage on or after		0.05979	<del>\$ -0.09238</del>
									Effective 6/1/21, usage on or after		0.05555	<del>\$ -0.08814</del>
									Effective 7/1/21, usage on or after		0.05906	<del>\$ -0.09165</del>
	Off Peak kWh	<del>\$ -0.00172</del>	<del>-0.00008</del>	<del>-0.00180</del>	0.02065	(0.00072)	-	0.00678	-	<del>-0.02851</del>		
									Effective 2/1/21, usage on or after		0.08245	<del>\$ -0.11096</del>
									Effective 3/1/21, usage on or after		0.07249	<del>\$ -0.10100</del>
									Effective 4/1/21, usage on or after		0.06449	<del>\$ -0.09300</del>
									Effective 5/1/21, usage on or after		0.05979	<del>\$ -0.08830</del>
									Effective 6/1/21, usage on or after		0.05555	<del>\$ -0.08406</del>
									Effective 7/1/21, usage on or after		0.05906	<del>\$ -0.08757</del>
G-2	Customer Charge	<del>\$ -71.14</del>		<del>-71.14</del>						<del>-71.14</del>		<del>\$ -71.14</del>
	Demand Charge	<del>\$ -9.11</del>		<del>-9.11</del>						<del>-9.11</del>		<del>\$ -9.11</del>
	All kWh	<del>\$ -0.00230</del>	<del>-0.00008</del>	<del>-0.00238</del>	0.02553	(0.00072)	-	0.00678	-	<del>-0.03397</del>		
									Effective 2/1/21, usage on or after		0.08245	<del>\$ -0.11642</del>
									Effective 3/1/21, usage on or after		0.07249	<del>\$ -0.10646</del>
									Effective 4/1/21, usage on or after		0.06449	<del>\$ -0.09846</del>
									Effective 5/1/21, usage on or after		0.05979	<del>\$ -0.09376</del>
G-3	Customer Charge	<del>\$ -16.36</del>		<del>-16.36</del>						<del>-16.36</del>		<del>\$ -16.36</del>
	All kWh	<del>\$ -0.05182</del>	<del>-0.00008</del>	<del>-0.05190</del>	0.02550	(0.00072)	-	0.00678	-	<del>-0.08346</del>	0.06426	<del>\$ -0.14772</del>
									Effective 2/1/21, usage on or after		0.08245	<del>\$ -0.11642</del>
T	Customer Charge	\$ 14.74		14.74						14.74		\$ 14.74
	All kWh	<del>\$ -0.04631</del>	<del>-0.00008</del>	<del>-0.04639</del>	0.02620	(0.00073)	-	0.00678	-	<del>-0.07864</del>	0.06426	<del>\$ -0.14290</del>
V	Minimum Charge	<del>\$ -16.36</del>		<del>-16.36</del>						<del>-16.36</del>		<del>\$ -16.36</del>
	All kWh	<del>\$ -0.05330</del>	<del>-0.00008</del>	<del>-0.05338</del>	0.02501	(0.00072)	-	0.00678	-	<del>-0.08445</del>	0.06426	<del>\$ -0.14871</del>

<sup>1</sup> Rate is a subset of Domestic Rate D

Dated: ~~January 13, 2021~~  
Effective: ~~February 1, 2021~~

Issued by: /s/Susan L. Fleck  
Susan L. Fleck  
Title: President

Authorized by NHPUC Order No. 26,431 in Docket No. DE 20-053, dated December 14, 2020

NHPUC No 21 - ELECTRICITY  
LIBERTY UTILITIES

Third Revised Page 127  
Superseding Second Revised Page 127  
Summary of Rates

RATES EFFECTIVE FEBRUARY 1, 2021  
FOR USAGE ON AND AFTER FEBRUARY 1, 2021

Rate	Blocks	Distribution Charge	REP/ VMP	Net Distribution Charge	Transmission Charge	Stranded Cost Charge	Storm Recovery Adjustment Factor	System Benefits Charge	Electricity Consumption Tax	Total Delivery Service	Energy Service	Total Rate
	Customer Charge	\$14.74		\$14.74								\$14.74
	<u>Monday through Friday</u>											
	Off Peak	\$0.04196	\$0.00008	\$0.04204	\$0.00212	(\$0.00072)	-	\$0.00678	-	\$0.05022	\$0.07411	\$0.12433
	Mid Peak	\$0.06289	\$0.00008	\$0.06297	\$0.00337	(\$0.00072)	-	\$0.00678	-	\$0.07240	\$0.08871	\$0.16111
D-11	Critical Peak	\$0.08955	\$0.00008	\$0.08963	\$0.13615	(\$0.00072)	-	\$0.00678	-	\$0.23184	\$0.09208	\$0.32392
	<u>Saturday through Sunday and Holidays</u>											
	Off Peak	\$0.04196	\$0.00008	\$0.04204	\$0.00212	(\$0.00072)	-	\$0.00678	-	\$0.05022	\$0.07411	\$0.12433
	Mid Peak	\$0.06289	\$0.00008	\$0.06297	\$0.00337	(\$0.00072)	-	\$0.00678	-	\$0.07240	\$0.08871	\$0.16111
	Customer Charge	\$11.35		\$11.35								\$11.35
	<u>Monday through Friday</u>											
	Off Peak	\$0.04196	\$0.00008	\$0.04204	\$0.00212	(\$0.00072)	-	\$0.00678	-	\$0.05022	\$0.07411	\$0.12433
	Mid Peak	\$0.06289	\$0.00008	\$0.06297	\$0.00337	(\$0.00072)	-	\$0.00678	-	\$0.07240	\$0.08871	\$0.16111
Rate EV	Critical Peak	\$0.08955	\$0.00008	\$0.08963	\$0.13615	(\$0.00072)	-	\$0.00678	-	\$0.23184	\$0.09208	\$0.32392
	<u>Saturday through Sunday and Holidays</u>											
	Off Peak	\$0.04196	\$0.00008	\$0.04204	\$0.00212	(\$0.00072)	-	\$0.00678	-	\$0.05022	\$0.07411	\$0.12433
	Mid Peak	\$0.06289	\$0.00008	\$0.06297	\$0.00337	(\$0.00072)	-	\$0.00678	-	\$0.07240	\$0.08871	\$0.16111
	<u>Luminaire Charge</u>											
	HPS 4,000	\$8.39		\$8.39								\$8.39
	HPS 9,600	\$9.69		\$9.69								\$9.69
	HPS 27,500	\$16.07		\$16.07								\$16.07
	HPS 50,000	\$19.98		\$19.98								\$19.98
	HPS 9,600 (Post Top)	\$11.36		\$11.36								\$11.36
	HPS 27,500 Flood	\$16.24		\$16.24								\$16.24
M	HPS 50,000 Flood	\$21.69		\$21.69								\$21.69
	Incandescent 1,000	\$10.75		\$10.75								\$10.75
	Mercury Vapor 4,000	\$7.44		\$7.44								\$7.44
	Mercury Vapor 8,000	\$8.36		\$8.36								\$8.36
	Mercury Vapor 22,000	\$14.93		\$14.93								\$14.93
	Mercury Vapor 63,000	\$25.21		\$25.21								\$25.21
	Mercury Vapor 22,000 Flood	\$17.08		\$17.08								\$17.08
	Mercury Vapor 63,000 Flood	\$33.06		\$33.06								\$33.06
	<u>Luminaire Charge</u>											
	30 Watt Pole Top	\$5.44		\$5.44								\$5.44
	50 Watt Pole Top	\$5.67		\$5.67								\$5.67
	130 Watt Pole Top	\$8.75		\$8.75								\$8.75
	190 Watt Pole Top	\$16.75		\$16.75								\$16.75
LED-1	30 Watt URD	\$12.67		\$12.67								\$12.67
	90 Watt Flood	\$8.62		\$8.62								\$8.62
	130 Watt Flood	\$9.90		\$9.90								\$9.90
	30 Watt Caretaker	\$4.88		\$4.88								\$4.88
	<u>Pole -Wood</u>											
	Fiberglass - Direct Embedded	\$9.81		\$9.81								\$9.81
	Fiberglass w/Foundation <25 ft	\$16.65		\$16.65								\$16.65
	Fiberglass w/Foundation >=25 ft	\$27.84		\$27.84								\$27.84
	Metal Poles - Direct Embedded	\$19.85		\$19.85								\$19.85
	Metal Poles with Foundation	\$23.94		\$23.94								\$23.94
M & LED-1	All kWh	\$0.03985	\$0.00008	\$0.03993	\$0.01520	(\$0.00072)	\$0.00000	\$0.00678	\$0.00000	\$0.06119	\$0.06426	\$0.12545
LED-2	All kWh	\$0.03985	\$0.00008	\$0.03993	\$0.01520	(\$0.00072)	\$0.00000	\$0.00678	\$0.00000	\$0.06119	\$0.06426	\$0.12545

Dated: January 13, 2021  
Effective: February 1, 2021

Issued by: /s/Susan L. Fleck  
Susan L. Fleck  
Title: President

Authorized by NHPUC Order No 26,431 in Docket No DE 20-053, dated December 14, 2020