



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

Docket No. DE 20-\_\_\_\_\_

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

Report for Calendar Year 2019

March 13, 2020

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1 **I. INTRODUCTION**

2 Liberty Utilities (Granite State Electric) Corp. (“Liberty” or the “Company”) hereby  
3 submits the results of the Reliability Enhancement Plan (“REP”) and Vegetation  
4 Management Plan (“VMP”) for the calendar year 2019 (“CY2019”). These results for  
5 the CY2019 Plan are submitted consistent with the requirements in Attachment F to the  
6 Settlement Agreement in Docket No. DE 13-063 (the “Settlement Agreement”) that was  
7 approved by Commission Order No. 25,638 (March 17, 2014), as amended by the  
8 Settlement Agreement in Docket No. DE 16-383 that was approved by Commission  
9 Order No. 26,005 (April 12, 2017). For ease of reference, a copy of Attachment F is  
10 included as Appendix 8 to this report. This report contains the following information:

- 11 1. A comparison of actual to budgeted spending on operating and maintenance  
12 (“O&M”) activities related to the VMP in CY2019. Appendix 1, line 12, column  
13 (b), shows that total actual O&M spending that occurred during 2019 was  
14 \$2,096,528. As shown in column (b), the CY2019 O&M expenses, after taking  
15 into account credits for amounts from Consolidated Communications  
16 (“Consolidated”) of \$495,381, totaled \$1,601,147, or \$210,472 less than the  
17 budgeted amount of \$1,827,000.
- 18 2. A comparison of actual investment to budgeted spending on capital projects for  
19 REP in CY2019. Appendix 2, line 7, column (d) shows that the total capital  
20 investment recorded on Granite State’s books in CY2019 was \$1,837,934<sup>1</sup>.

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1 This investment includes \$625,729 associated with CY2018 capital projects that was not booked to plant until 2019 and is being included in the CY2019 rate adjustment.

- 1           3.    A request to recover a total of \$1,601,147 of O&M costs, of which \$101,147  
2                    represents the CY2019 incremental O&M spending above the \$1,500,000 base  
3                    amount already in rates. The recovery of costs calculation is provided for in the  
4                    joint testimony of David Simek and Adam Hall.
- 5           4.    A request to recover \$210,503 of revenue associated with a total of \$1,837,934 in  
6                    capital investment, split between two program years, CY2018 carryover and  
7                    CY2019; and
- 8           5.    A summary of reliability performance for CY2019.

9           The Company is submitting the joint testimony of Joel Rivera and Heather Green, which  
10           provides further information regarding the Company's actual O&M cost and capital  
11           investment made during CY2019. In addition, the joint testimony of David Simek and  
12           Adam Hall addresses the Company's request for a net increase in distribution rates  
13           associated with the REP/VMP Adjustment Provision and the REP Capital Investment  
14           Allowance described above, and includes typical bill impacts.

15           **Section 1: CY2019 O&M Budget vs. Actual O&M Expenses for VMP**

16           The proposed operating and maintenance ("O&M") budget for VMP activities for  
17           CY2019 is shown in Appendix 1, Line 12, Column (a). Liberty initially proposed a  
18           budget of \$2,307,000 (or \$1,827,000 net after Consolidated credits). The final budget  
19           was reduced at Staff's request. As shown on Appendix 1, line 14, column (a), those  
20           estimated reimbursements were excluded from the total amount of VMP O&M expenses  
21           to be recovered, resulting in an adjusted total VMP O&M expense budget of \$1,601,147.

1 The Company is invoicing Consolidated \$495,381 (Appendix 1, Line 13 column (b)) for  
2 CY2018 and has included that amount in calculating the REP/VMP Adjustment Factor.

3 As shown in Appendix 1, line 14, column (b), the Company's actual total spending level  
4 for CY2019 was \$1,601,147 for O&M activities related to the VMP, or \$210,472 less  
5 than the filed budgeted amount of \$1,827,000. Budget variances related to the total  
6 CY2019 VMP O&M spending are described below. In addition to Appendix 1, which  
7 shows total O&M expenses, Appendix 5 shows the actual VMP O&M expenses by  
8 month, while Appendix 4 contains the work plan of completed VMP O&M activities by  
9 feeder.

10 The Company did not complete all of the vegetation management work contained in its  
11 CY2019 plan due to the delay in receiving a railroad right-of-way permit for the 8L1 and  
12 disagreement in pricing on a portion of 40L3 feeders in Charlestown. Some of the  
13 spending variances are described below:

14 The Company spent \$7,494 more on work planning than anticipated. The Company  
15 brought in an additional work planner for a few weeks to catch us up on audits and we  
16 also implemented a new software program to manage the workflow process.

17 Spot tree trimming was under spent \$1,434 due to lower than anticipated volume of  
18 electric service orders and customer calls.

19 The trouble and restoration budget is for unplanned work based on actual occurrence.  
20 Spending exceeded the budget by \$1,903 due to an increase in unplanned non-storm  
21 related trouble call volume and support of the overhead line department.

1 The Company spent \$18,363 less on planned cycle pruning due to the 8L1 permitting  
2 issue and the disagreement of adjusted pricing on the 40L3. Portions of the 40L3 were  
3 completed as a double circuit and new construction. The balance of work was rebid at a  
4 price that was higher than expected and therefore moved to 2020 cycle work.

5 The Company spent \$76,861 less than anticipated for traffic control. The areas the  
6 Company trimmed in 2019 required less detail than would be the case if the Company  
7 were trimming in the more urban areas.

8 The Company spent \$18,703 more than budgeted on hazard tree removals. The  
9 Company has not tackled the 2016, 2017, and 2018 tree removals and, as such, this  
10 budgeted item came in very close to the budget.

11 Interim trimming is generally unplanned work. We underspent by \$22,211.

12 Tree planting came in around budget at \$4,500.

13 Sub-Transmission Right of Way sideline work was underspent by \$119,203. To  
14 accommodate the request of Staff to reduce the budget, the Company only trimmed half  
15 of the 1303-1304 subtransmission line in 2019 and pushed the other half of the trimming  
16 to 2020. The plan to trim the remaining of the 2376W has been pushed to 2020 due to an  
17 abutter not providing permission to work on their property. The Company is working  
18 through attorneys and survey engineers to receive the proper guidance on property lines  
19 to be able to trim in 2020.

1       **Section 2: CY2019 Capital Budget vs. Actual Capital Investment for REP**

2       The proposed capital investment budget for REP activities for 2019 is shown in  
3       Appendix 2, Line 6, Column (b). For the calendar year 2019, Liberty proposed to spend  
4       \$1,600,000 on capital investments related to REP activities, including \$100,000 related to  
5       CY2018 carryover work (Appendix 2, line 5, column (b)). As discussed with  
6       Commission Staff, the capital budget included installation of single-phase fuse savers at  
7       four locations and replacement of 3.8 miles of bare primary conductors. Details of the  
8       REP capital investment projects and costs are included in Appendix 3.

9       The budget was targeted towards carryover from 2018 and the re-conductoring of 3.8  
10      miles of bare mainline primary conductor with spacer cable in tree outage prone areas  
11      where it is too costly to rely on vegetation management practices alone to mitigate feeder  
12      lockouts. The application of spacer cable, a covered conductor resistant to tree related  
13      outages, significantly improves mainline circuit performance during windy and stormy  
14      conditions as well as affords protection against incidental tree-conductor contact at the  
15      end of the trim cycle and contact resulting from branches falling from above or outside  
16      the trim zone.

17      In Appendix 2, the Company provides the carryover capital investment from 2018 of  
18      \$625,729, as shown in Appendix 2, line 5, column (d). There are three projects that make  
19      up the carryover, but the largest piece is attributable to the Bare Conductor Replacement  
20      Project 12L2 - Route 12 Walpole. The project was delayed due to issues with  
21      Consolidated pole sets, described in the 2018 REP/VMP Report filed in Docket No. DE

1 19-051. As such, the project did not go in service until 2019, thus the Company did not  
2 request cost recovery in its 2018 reconciliation filing.

3 As shown on line 4, column (c) of Appendix 2, the Company's total spending for  
4 CY2019 was \$1,212,204 for 2019 capital activities related to REP, or \$287,796 less than  
5 the filed budgeted amount for those projects of \$1,500,000.

6 Additional details of the variance in each of the CY2019 REP projects are provided  
7 below:

8 Single Phase Reclosing Applications: As shown in Appendix 2, line 3, column (c),  
9 CY2019 capital expenditures incurred for single phase reclosing installations amounted  
10 to \$0, or \$50,000 less than the proposed budget of \$50,000. The Company decided it was  
11 best to postpone this project to give adequate time to identify safety procedures that  
12 needed to be included in the Company's Clearance and Control Procedures with regards  
13 to "fuse saving" techniques and "non-reclose" assurance. These installations are planned  
14 for 2020. As shown in Appendix 3, lines 7 through 10, two fuse savers at Ledge Rd  
15 Pelham will be installed instead of Sherburne Rd Pelham and Ball Rd Acworth.

16 Bare Conductor Replacement: As shown in Appendix 2, line 1, column (c), CY2019  
17 capital expenditures incurred for Bare Conductor Replacement amounted to \$1,212,204,  
18 or \$237,796 less than the proposed target of \$1,450,000.

19 The reconductoring job for 7L2 Shaker Hill Road, Enfield, was budgeted for \$725,000.  
20 The total spend for the job in 2019 was \$516,399. This job was originally designed to  
21 install tree resistant conductors on cross arms rather than in a spacer configuration, and



1 was planned for Liberty Electric Operations to perform the installation. The notification  
2 to Consolidated regarding pole sets necessary for the project was sent in February 2019.  
3 Per the Intercompany Operating Procedure agreement with Consolidated, Liberty cannot  
4 proceed with setting poles until 90 days has passed without Consolidated accepting the  
5 work. Consolidated had until May to respond, but the Company did not receive a  
6 response for them to complete the work by the end of May 2019. In June 2019, given  
7 constraints with internal resources from a heavy work load, Liberty hired JCR to  
8 complete setting poles. Once the poles were set, our internal crews worked through  
9 August and September to install the conductors and associated plant. In October 2019,  
10 about 25% of the job had been completed but further constraints with internal resources  
11 placed the required in-service date at risk. In order to complete this job by the end of  
12 2019, Liberty proceeded with a bid process to outsource the installation. The request for  
13 proposal (RFP) went to four potential bidders in October, but only one responded with a  
14 bid as they were the only contractor able to complete the job by the end of 2019. The  
15 other potential bidders declined to submit a proposal due to not being able to meet the  
16 December 31, 2019, required in-service date. Due to the late bid and completion of the  
17 job, there were still invoices for costs associated with the job, such as removals that will  
18 be part of the 2020 reconciliation, and that amount to approximately \$466,000. The  
19 Company compared similar jobs to determine if there was a premium paid to complete  
20 the job in a short turnaround, and in that review, it was found the price per foot quoted  
21 was comparable to like jobs in 2019. The total project cost including spending in 2019  
22 and carryover from 2020 is estimated at \$982,000. The original estimate is based on a  
23 cost per foot calculated using historical costs for previous similar projects. The bids and

1 actual costs came in higher than the average used to estimate the job. This amount is  
2 expected to be 35% over the budgeted amount given the resource constraints mentioned  
3 above and anticipated bid prices being higher than expected which will result in a higher  
4 than forecasted investment.

5 The reconductoring job for 40L3 Sullivan Street was budgeted for \$725,000. The total  
6 spend for the job in 2019 was \$695,805, with carryover of approximately \$160,000 to be  
7 recovered in the 2020 reconciliation for invoices and burdens not yet applied for  
8 December 2019. The total project cost including spending in 2019 and carryover from  
9 2020 is estimated at \$857,000. This amount is expected to be 18% over the budgeted  
10 amount given anticipated bid prices being higher than expected, which will result in a  
11 higher than forecasted investment.

### 12 **Section 3: Reliability Results – Calendar Year 2019**

13 Consistent with Attachment F, Section VII.b, of the Settlement Agreement, reliability  
14 metrics for CY2019 are presented in the table below based on both the PUC Standard<sup>2</sup>  
15 for excluding major weather events and the IEEE Standard 1366<sup>3</sup> method for excluding  
16 major event days. The metrics presented also exclude transmission supply outages,  
17 planned or notified outages, and all other applicable exclusions<sup>4</sup>. The metrics include  
18 customers interrupted (“CI”), customer minutes interrupted (“CMI”), system average

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2 PUC Major Storm: [(CI >= 15 % of Customers Served and 30 concurrent events) or (45 concurrent events)],  
Using PUC criteria, six days were excluded in Calendar Year 2019: January 9, October 16-18 and October 31 –  
November 1.

3 IEEE Major Event Days: Using IEEE criteria, no days were excluded in Calendar Year 2019.

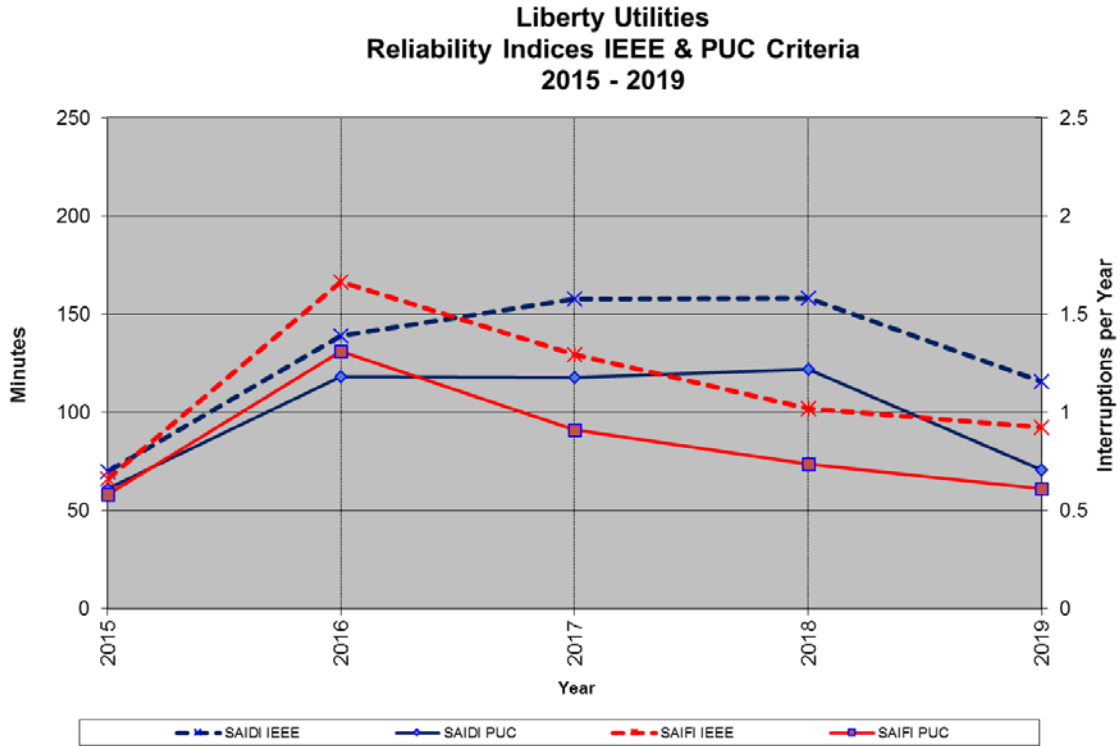
4 Events that are excluded are those involving loss of supply from another utility, customer-owned facilities, fire  
or police emergencies, load shedding, planned maintenance, events whose duration was 5 minutes or less and/or  
events which involve only one customer.

1 interruption frequency index (“SAIFI”), system average interruption duration index  
2 (“SAIDI”), customer average interruption duration index (CAIDI), and customers  
3 interrupted per interruption index (CIII).

No Exclusions								
Year	Events	Customers Interrupted	Customer Minutes Interrupted	Customers Served	SAIFI	SAIDI	CAIDI	CIII
2019	650	41,337	5,178,620	44,784	0.9236	115.689	125.28	63.60
Excludes Only IEEE Major Events								
Year	Events	Customers Interrupted	Customer Minutes Interrupted	Customers Served	SAIFI	SAIDI	CAIDI	CIII
2019	650	41,337	5,178,620	44,784	0.9236	115.689	125.28	63.60
Excludes Only PUC Major Events								
Year	Events	Customers Interrupted	Customer Minutes Interrupted	Customers Served	SAIFI	SAIDI	CAIDI	CIII
2019	485	31,467	3,522,934	44,784	0.7031	78.757	111.96	64.88
Excludes Only Loss of Supply by Other Utility or Transmission Outage								
Year	Events	Customers Interrupted	Customer Minutes Interrupted	Customers Served	SAIFI	SAIDI	CAIDI	CIII
2019	650	41,337	5,178,620	44,784	0.9236	115.689	125.28	63.60
Excludes Only Planned Maintenance								
Year	Events	Customers Interrupted	Customer Minutes Interrupted	Customers Served	SAIFI	SAIDI	CAIDI	CIII
2019	589	40,520	5,141,462	44,784	0.9053	114.861	126.89	68.79
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
2019	515	37,139	4,817,005	44,784	0.8298	107.6070	129.70	72.11
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
2019	350	27,269	3,161,319	44,784	0.6094	70.675	115.93	77.91

4

1 The historical reliability performance for the Company for the time period from 2015–  
2 2019 is outlined in the chart below. This chart displays annual SAIDI and SAIFI  
3 performance using IEEE-1366 and PUC criteria.

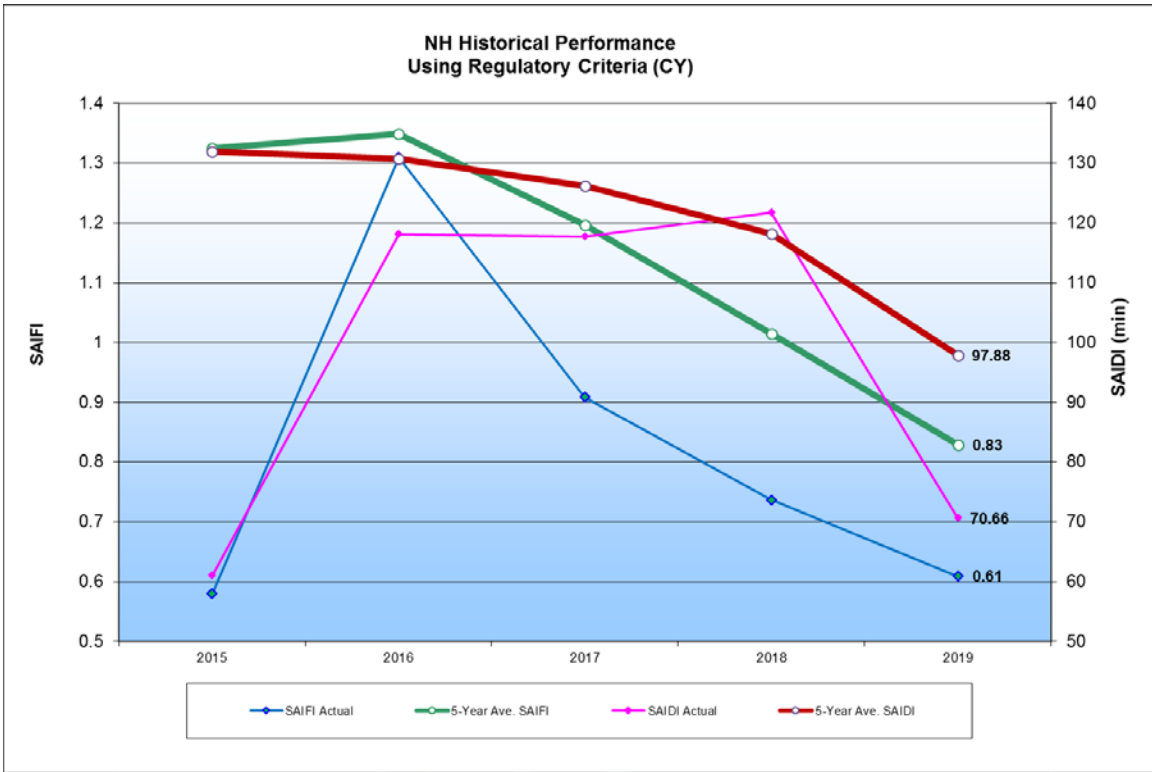


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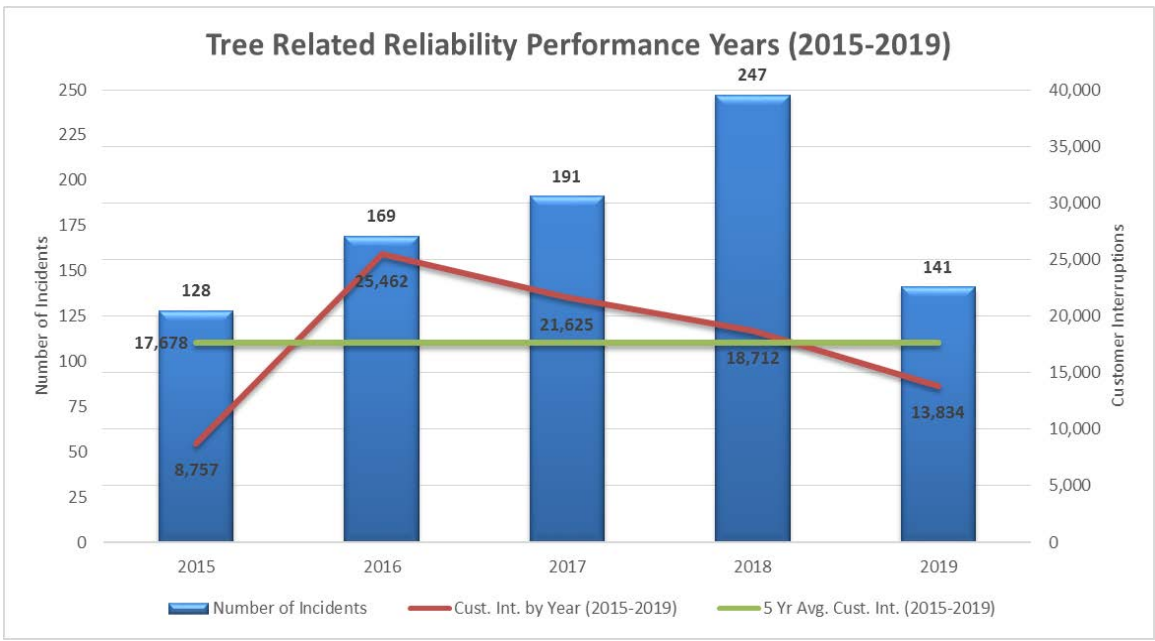
5 In terms of both SAIDI and SAIFI, the reliability performance for the Company in 2019  
6 (based on IEEE-1366) was the second best performance in the last five years. The SAIDI  
7 performance of 115.64 minutes in 2019 is lower than the five-year average of 128  
8 minutes. The SAIFI performance of 0.923 is lower than the five-year average of 1.11  
9 minutes.

10 In 2019, there were no events that met the IEEE-1366 criteria for a Major Event Day.

1 As shown on the NH Historical Performance chart below (based on PUC criteria), the  
2 SAIFI performance of 0.61 and the SAIDI performance of 70.66 for CY2019 continue on  
3 an improving, downward trend, with the 2019 SAIFI and SAIDI results being the second  
4 best in twenty years. Only calendar year 2015 resulted in a lower SAIFI and SAIDI  
5 performance. In summary, the Company met its SAIFI and SAIDI targets of 1.01 and  
6 118.17 minutes, respectively, which are based on a five-year rolling average and are  
7 shown in Appendix 7 and the table below. The Company has met its SAIDI and SAIFI  
8 targets for five consecutive years (2014-2019). Liberty expects this overall positive  
9 performance in SAIFI and SAIDI to continue as further positive impacts from our  
10 reliability and vegetation management initiatives are experienced.



1 The tree related reliability performance for the Company was reviewed using NH PUC  
2 criteria. The chart below displays the number of tree related incidents per year and the  
3 number of customers interrupted from tree related incidents from 2015 to 2019. For  
4 comparison the five-year average of number of customers interrupted from tree related  
5 incidents is also shown.



6  
7 The chart above shows a declining trend in the number of customers interrupted from  
8 2016 through 2019 even though the number of tree related events increased from 2015  
9 through 2018. Liberty has reviewed Unitil’s Reliability Enhancement Program and  
10 Vegetation Management Program Annual Report and agrees with Unitil that these results  
11 indicate that, “While tree related outages are still occurring, they are occurring in areas

1 that do not affect the largest amount of people, and events on the mainline, where most  
2 people are affected, are decreasing”<sup>5</sup>.

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5 Unitil Energy Systems, Inc. Reliability Program Vegetation Management Program Annual Report 2018, Page 14-15.

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