

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

Docket No. DE 21-XXX

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty
Calendar Year 2022 Vegetation Management Program (VMP) Plan

**DIRECT TESTIMONY
OF
CHRISTOPER STEELE, HEATHER GREEN,
AND
HEATHER M. TEBBETTS**

November 15, 2021



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1 **I. INTRODUCTION AND BACKGROUND**

2 **Q. Mr. Steele, would you please state your full name and business address?**

3 A. My name is Christopher Steele and my business address is 15 Buttrick Road,
4 Londonderry, New Hampshire.

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

6 A. I am employed by Liberty Utilities Service Corp. (“LUSC”) as the Senior Director of
7 Electric Operations. In that capacity I am responsible for the safe and reliable operation,
8 design, and maintenance of the electric system for Liberty Utilities.

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

10 A. I received my Bachelor of Science in Electrical Engineering in 2002 from the University
11 of South Florida. I received my Master of Business Administration (MBA) with a
12 concentration in Corporate Finance & Strategic Management from the University of
13 Tampa in 2007. I am a Registered Professional Engineer in the State of Florida and
14 recognized as a “Senior” Engineer within the Institute of Electrical & Electronics
15 Engineers (IEEE).

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

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

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

20 A. I am employed by LUSC as the Program Manager of Inspections and Vegetation. In that
21 capacity I support Liberty’s Electric Operations and I plan, budget, and manage Liberty’s

1 vegetation management programs, vendor performance, and storm and regulatory support
2 on the distribution and sub-transmission assets.

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

4 A. I graduated from Purdue University in 1994 with a Bachelor of Science in Forestry with
5 an Urban Option.

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

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

12 I have been active in professional organizations. I recently completed the Board of
13 Directors' Presidential tract for the New England Chapter of the International Society of
14 Arboriculture. I also held a variety of positions on the Illinois Arborist Association
15 Board of Directors, including President. I am a current member of the New Hampshire
16 Community Forestry Advisor Committee.

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

19 A. Yes, I recently testified before the Commission in the Company's Reliability
20 Enhancement Program and Vegetation Management Program ("REP/VMP")
21 reconciliation docket, Docket No. DE 20-036.

1 **Q. Ms. Tebbetts, would you please state your full name and business address?**

2 A. My name is Heather Tebbetts and my business address is 9 Lowell Road, Salem, New
3 Hampshire.

4 **Q. Ms. Tebbetts, please describe your educational background and training.**

5 A. I graduated from Franklin Pierce University in 2004 with a Bachelor of Science degree in
6 Finance. I received a Master of Business Administration from Southern New Hampshire
7 University in 2007.

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

9 A. I joined LUSC in October 2014. Prior to my employment at LUSC, I was employed by
10 Public Service Company of New Hampshire (“PSNH”) as a Senior Analyst in NH
11 Revenue Requirements from 2010 to 2014. Prior to my position in NH Revenue
12 Requirements, I was a Staff Accountant in PSNH’s Property Tax group from 2007 to
13 2010 and a Customer Service Representative III in PSNH’s Customer Service
14 Department from 2004 to 2007.

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

16 A. Yes, I have testified on numerous occasions before the Commission.

17 **II. PURPOSE OF TESTIMONY**

18 **Q. What is the purpose or your testimony?**

19 A. The purpose of our testimony is to submit the Company’s proposed Vegetation
20 Management Program (“VMP”) Plan for the calendar year 2022 (“CY 2022 Plan”). This
21 CY 2022 Plan is filed consistent with the requirements in Attachment F to the Settlement

1 Agreement in Docket No. DE 13-063 that was approved by the Commission in Order No.
2 25,638 (March 17, 2014), as amended by the Settlement Agreement in Docket No. DE
3 19-064 that was approved by the Commission in Order No. 26,376 (June 30, 2020). For
4 convenience, a copy of the VMP document from DE 13-063 is included as Appendix 3
5 and the definitions are included as Appendix 4.

6 **III. PROGRAM HISTORY**

7 **Q. Please provide the history of Liberty's current VMP program.**

8 A. Since 2007, the Company has continued its Vegetation Management and Reliability
9 Enhancement Programs at agreed spending levels subject to annual Commission
10 approval. See Order No. 24,777 (July 12, 2007) (approving the Settlement Agreement in
11 Docket No. DG 06-107), as amended by Order No. 25,638 (March 17, 2014) (approving
12 the Settlement Agreement in Docket No. DE 13-063), as further amended by Order No.
13 26,005 (April 12, 2017) (approving the Settlement Agreement in Docket No. DE 16-383).
14 In general, the VMP includes categories of O&M spending targeted to maintain and
15 improve reliability and performance of the Company's systems. The program is
16 premised on the understanding that a certain level of annual spending on O&M activities
17 is necessary to maintain the safety and reliability of the Company's electric distribution
18 system. The most recent Settlement Agreement in Docket No. DE 19-064 provided for
19 an increase to the amount of VMP O&M spending to be included in base rates to
20 \$2,200,000, beginning with 2020, with an approved cap of an additional 10 percent. The
21 VMP activities consist of Planned Cycle Trimming Interim, Spot, and Trouble Tree

1 Trimming, Work Planning, Traffic Detail, Tree Removal, Tree Planting, and Right of
2 Way work for the floor and sides of the corridors.

3 **Q. What are the corridor specifications currently under Puc 307.10?**

4 A. The current corridor clearance requirements are 10 feet below the conductors, 8 feet to
5 each side of the nearest conductor, and 15 feet above the conductors, at the time of
6 clearing. In rural areas we seek to obtain the clearance of all capable tree seedlings and
7 lower branches of established trees to minimize future work. In urban areas, where work
8 can be more customer-sensitive, we still seek the same clearance of the rural areas but
9 allow a reduced clearance to address concerns and sensitivities of the adjacent landowner
10 where needed or requested. Thus, in urban areas we leave lower branches under the
11 communication wires, often referred to as a “shelf,” when requested or if previously
12 established. We still seek to remove young capable trees in this zone. However, in urban
13 areas, if requested, we may trim the top of that capable brush to leave a requested
14 screening. The result is the acceptable specification for work in an urban setting as
15 depicted in the attachment.

16 **Q. Please explain the funding levels that came about from Docket No. DE 19-064.**

17 A. A request of approximately \$450,000 for additional tree removals was made in the recent
18 rate case in addition to the previously budgeted annual level. In order to meet an
19 anticipated annual cost for tree removals, the Company also made a request for an
20 additional \$400,000 annually for four years to provide funding to properly clear the
21 rights-of-way. However, that amount was not included in the DE 19-064 Settlement

1 Agreement, which provided a \$2,200,000 annual VMP budget with allowance of 10%
2 overage, or an annual spending cap of \$2,420,000.

3 **Q. What has changed since the signing of that agreement?**

4 A. In 2019, the Company was notified by Consolidated Communications that it would no
5 longer participate in the shared vegetation maintenance costs, as it was contractually
6 allowed to do, effective in January 2020, meaning a loss of the Consolidated
7 Communication payments applied to the vegetation management program. These
8 anticipated credits were included in the VMP budget computations for 2020 and 2021
9 during the Docket No. DE 19-064 proceeding. The loss of the Consolidated amounts
10 reduced funding of \$838,000 for 2020. In order to meet the unexpected deficiency of
11 credits in 2020, the Company deferred 30 miles of planned cycle trimming and most tree
12 removals in 2020.

13 Additionally, the cost of performing the work has increased and the workforce is less
14 available. The Company will provide further information below on these issues.

15 **Q. Is the current funding adequate to fully fund a four-year cycle?**

16 A. No. The current maximum allowance of \$2,420,000 does not fully fund Liberty's
17 required four-year trim cycle nor its ability to meet Puc 307.10's requirement to increase
18 side clearance from six-feet to eight-foot. The Company has presented a budget in this
19 filing consistent with the requirements to meet the mandated four-year cycle per the
20 Settlement Agreement and the side clearance requirements of Puc 307.10. The

1 Company's funding requirement to meet a four-year trim cycle is \$5,471,624 for CY
2 2022.

3 The Company continues to believe that a four-year trimming cycle is desirable in New
4 Hampshire. However, the Company also recognizes that maintaining a four-year
5 trimming cycle is currently cost prohibitive to its customers given current economic
6 conditions.

7 **IV. CONTINUOUSLY INCREASING VEGETATION MANAGEMENT COSTS**

8 **Q. What are the primary factors for increased vegetation management costs?**

9 A. There are many factors which contribute to the increase in required funding for the
10 Company to continue to provide safe and reliable electricity to its customers. The first
11 driver is the loss of payments from Consolidated Communications for joint pole
12 ownership vegetation management, as described above. This loss represents
13 approximately 20–24% of the total VMP budget and results in either an overall project
14 reduction, or increased costs to do business of about 20%.

15 The second driver is the deferred work. In order to meet the unexpected deficiency of
16 Consolidated Communications payments, in 2020 the Company deferred 30 miles of
17 planned cycle trimming and the majority of tree removals. In 2021 the Company
18 deferred an additional 74 miles to 2022 as a result of the VM contract issues and
19 subsequent workforce issues in 2021.

20 The third driver is workforce issues and the increased cost to do the work. The tree care
21 industry, as with many other trades, continues to experience a shift and loss of workforce

1 in general. The effect of the COVID-19 pandemic has added to this already struggling
2 workforce. The alternate choices for employment are pulling many out of the industry,
3 relocating some to higher paying locations, or to work for other firms in other trades or
4 sectors that provide more stability, value, and stronger relationships with companies and
5 other parties with which they interact. As a result, the cost of retaining a workforce has
6 been increasing. Liberty had been shielded from this industry trend in recent years
7 because of multi-year contracts that were in place but have since expired.

8 The Company was experiencing loss of crews prior to the pandemic. In 2018, the
9 contractor was able to keep ten crews on property. In 2020, we had seven or eight crews
10 on property, with losses of long-time crews occurring. Currently in 2021 the contractor
11 has difficulty keeping six crews on property. Liberty's VM contractor was not able to
12 establish a consistent local crew and had a rotation of crews when on property that
13 generally did not exceed three crews at a time. Workforce retention for tree crews and
14 the quality work is a frequent topic of discussion and concern at many utilities. It
15 continues to be the theme in various presentations by industry groups.

16 A systemic issue within the VM industry is the inability for tree contractors to take on
17 new clients to help fill voids of need when inquiries were made of others. The workforce
18 issue is limited to New Hampshire, New England, or East Coast phenomenon. It is
19 nation-wide. Potential applicants are not responding to job opportunities as currently
20 posted – regardless of reputation of company, scope of work, location, and pay.

1 The fourth cost driver is the quantity of tree removals, which continues to be a significant
2 cost driver as seen in previous years. We have three types of removals: Fall-In, Grow-
3 In/Corridor Creation, and Make Safe.

4 Prior to implementation of Puc 307.10, most of the tree removals were Fall-In risks.
5 These trees had a separate budget line item. The corridor was fairly established, and unit
6 price trees started at 9” Diameter at Breast Height (DBH) (diameter of a tree at four and
7 half feet from ground). After the Commission changed the corridor through Puc 307.10,
8 Liberty was required to expand its side clearance from six to eight feet, so the quantity of
9 Grow-In/Corridor Creation trees was well beyond the quantity and scope that could be
10 achieved with the allocated funds. The result of this to Liberty and its customers is the
11 inability to achieve the 8’corridor given current funding.

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

16 **Q. What is the best way to achieve the requirements of Puc 307.10?**

17 A. The requirement to remove, rather than prune or allowing the trees to remain in the
18 corridor, is governed by Puc 307.10(c) and the ANSI A300 Part 1 standards. Because of
19 the location of these trees within the eight-foot clearance area, pruning is not viable and
20 removal is the appropriate work tool. These tree and limb removals align Puc 307.10,

1 with best practices in the industry, follow professional standards of arboriculture,
2 reliability concerns, and are cost effective.

3 **Q. Please describe any rules that have increased the cost of vegetation management.**

4 A. The ANSI Z133-2017 standard created additional situations that require the System
5 Operator, the utility, to clear trees in a certain area, increasing our Make Safe removal
6 costs. This standard also exposed the Company to higher costs of otherwise private tree
7 removal and “Make Safe” situations.

8 Previously, if Liberty’s scope of work did not require the tree work, we would assist a
9 private tree contractor in making the situation safe for them to perform the work.

10 Changes in the language of the ANSI Z133-2017, Safety Requirements for Arboricultural
11 Operations, now limit some tree work such that it can only be performed by the utility.

12 Under these new standards, if a property owner engaged a trained and skilled private tree
13 care company to perform tree work within close proximity to the wires that was not
14 otherwise required by the utility, there are situations in which that contractor could not
15 perform the work. To say it another way, a contractor qualified to work for a utility and
16 also works in the residential sector has two different abilities of work pursuant to the
17 ANSI standards. If hired by the utility, they have one chart to abide by and can perform
18 the work. When hired by a residential customer, they have another chart to abide by and
19 may not be able to perform the work. There are situations where the tree work can only
20 be performed by a contractor hired by the utility. We have already experienced impacts
21 from this change and anticipate it will increase the costs of tree work.

1 **Q. Does the increase in Tree Trimming Costs and less miles trimmed lead to any other**
2 **subsequent events?**

3 A. Yes. As we are reducing the number of trees that we are actively removing, we are
4 leaving behind more trees that require our assistance to the tree owner in managing them
5 safely. These additional costs will be seen in future customer requests or Spot Tree
6 Trimming in the budget.

7 The increase in the number of trees identified for removal has almost doubled the annual
8 cost of removal through the work planning process. This increased number of trees to be
9 removed will also significantly increase traffic control costs.

10 The fifth cost driver, similar to last year, is traffic control. The cost of traffic control is
11 directly related to how many tree crews are performing various planned and unplanned
12 maintenance activities and in which municipalities those crews are working. Liberty's
13 Salem district towns of Salem, Pelham, Windham, and Derry continue to require police
14 details and at times require multiple units. Walpole has also recently added additional
15 police traffic control requirements. With the increased mileage needed to be performed
16 in 2022, we will have correlating traffic control needs. It is important to note that this
17 workforce is also suffering workforce issues and has difficulties in meeting supply.
18 These supply issues can impact our abilities and plans.

19 The sixth cost driver is the cost of Right of Way (ROW) maintenance. Going through the
20 second four-year cycle allowed the Company to adjust the scope of work to obtain
21 improved corridor maintenance, improved site line, and reduced vegetation contact

1 potential. The Company is now able to mow the supply ROW lines to provide the much-
2 needed site line visibility. This activity also prepares the corridors for Integrated
3 Vegetation Management (IVM) of a variety of sustainable and cost-effective techniques
4 as we move through the upcoming cycles of work. The 2022 budget includes plans to
5 reinstate the selective herbicide treatment that National Grid previously incorporated into
6 the VM program prior to Liberty ownership of the Company. Selective herbicide
7 applications will be one of many necessary methods of addressing the ROW in the future.

8 The 2022 budget does not have mowing or sideline work for the ROW. We had adjusted
9 most of the 2022 and 2023 ROW clearing and side work to be performed in the CY2021
10 to accommodate workforce availability and needs. Additionally, much of the Salem area
11 ROWs were mowed as part of the 2020 ROW maintenance and preparation of the 115KV
12 supply line. The result is that we have a small budget for spot or emergency work to
13 perform along the ROWs in 2022. The majority of budget allocation is for an herbicide
14 and IVM programing.

15 **V. LOSS OF CONTRACTOR IN CY 2021**

16 **Q. Was the Company able to procure services for vegetation management at the**
17 **approved funding level for the second four-year trim cycle?**

18 A. Yes. In 2020, the Company went to bid for its current four-year cycle and this contract
19 was awarded to Clearway Industries. The Company thus moved forward in 2021, the
20 start of the second four-year cycle, with Clearway. Clearway pricing was favorable and
21 allowed the Company to continue to trim trees within the allocated and set \$2,420,000.
22 Clearway was new to the Company's system but performed positively with work

1 assigned to them in 2020. As their per-mile costs came in under the current costs, the
2 Company was able to continue with the four-year plan. Unfortunately, Clearway
3 defaulted on the contract with the Company in March 2021. Clearway simply walked off
4 the job, citing the inability to meet payroll, leaving the Company without a contractor.

5 **Q. What did the Company do to mitigate the effects of Clearway leaving the property?**

6 A. To mitigate the impacts of Clearway Industries leaving, Asplundh and Davey Tree were
7 contracted to complete the year's trimming requirements.

8 **Q. Please explain where the Company is as of the date of this filing with its trim cycle.**

9 A. The Company moved forward with the next lowest bid, Asplundh, which is above the
10 \$2,420,000 recovery allocation. (All bids except Clearway's came in at 36–52% higher
11 costs than the 2019 cost experience.) Asplundh's transition took time in pulling
12 resources back from areas of reallocation. Some crews and resources were no longer
13 available, retired, out of workforce, or out of area, and Asplundh charged an additional
14 6.25% to reallocate the resources and to come to contractual agreements. Asplundh and
15 Davey are only expected to accomplish the trimming of 90 miles of the Company's
16 planned mileage of approximately 234 miles.

17 Although the local Asplundh crews have transitioned back onto the property and are
18 performing work successfully, Asplundh continues to have difficulty in meeting their
19 contractual obligations related to workforce in the Northeast, so they had difficulty
20 providing additional crews. Fortunately, an opportunity to use non-local Asplundh crews
21 for capital work arose and, once that work was completed, the Company utilized them to

1 perform maintenance trimming. However, the non-local crews were inefficient and
2 ineffective and were released.

3 The Company was able to secure local specialized off-road crews to complete trimming
4 of our off-road supply lines. Additional work was moved forward from future years to
5 this year to accommodate workforce availability and needs.

6 The Company continues to look toward various mechanical options of vegetation
7 management control. As stated above, the Company was able to use machines on the
8 ROW supply line for the mowing and were able to provide quality, compliant work in a
9 short amount of time, allowing for more work to be done.

10 Davey: Chippers, a Davey Company, was the other bidder in 2020. Although they were
11 the highest bidder, Davey submitted competitive prices for the balance of the 2021 miles
12 that were not expected to be completed. They committed to completing up to 30 miles of
13 the remaining 2021 miles. They are currently transitioning onto the property to perform
14 additional work as workforce allows.

15 During the transition in CY2021, Davey also filled in for many emergency and storm
16 related needs. Davey has a separate emergency Storm Response contractual agreement
17 with the Company.

18 **Q. When did Davey start to trim for Liberty and how many miles have they trimmed?**

19 A. Although the Company was in negotiations with Davey for a storm agreement starting in
20 February 2021, and maintenance miles discussion started back in June 2021, Davey was
21 not able to get on the property until November 15, 2021.

1 **VI. CY 2022 PLAN**

2 **Q. What is the Company proposing for costs in 2022 to achieve its trimming needs?**

3 A. The O&M costs for VMP activities in 2022 is shown in Appendix 1. As stated above, the
4 costs include accommodations for the loss of monetary contribution from Consolidated
5 Communications, the increased costs of workforce, the lack of workforce, the current
6 costs to perform the vegetation management work and meet a four-year cycle. For
7 calendar year 2022, Liberty identifies a cost of \$5,471,624 on O&M expenses related to
8 the activities (Appendix 1, column c, line 17) to continue with a four-year cycle and catch
9 up on 2020 and 2021 deferred miles for a total of 276 miles. However, the Company is
10 committed to spending a total of \$3,069,639, of which \$2,420,000 will come from rates
11 and the additional \$649,639 will come from earnings and expects to take the increased
12 costs and funding issue up during its next rate case. This will allow the Company to
13 complete 162 miles of trimming in 2022.

14 **Q. Please provide the cost per mile.**

15 A. The approximate cost per mile for 2022 is \$15,370 ($\$5,471,624 / 356$) because of the
16 economies of scale when trimming 356 miles versus 153. However, given the approved
17 allotment of funds in the Settlement Agreement, the Company is only able to recover for
18 approximately 153 miles which increases the per mile cost because those economies of
19 scale are not possible.

20 **Q. Did the Company have other matters for 2022?**

21 A. Yes. The Company has also included the following items in Appendix 1:

- 1 • Spot tree trimming/removals: \$15,000, single trees found that may need removal or
2 trimming outside of planned cycle trimming;
- 3 • Herbicide treatment: \$69,210, most of the supply lines have been mowed so the
4 Company is treating these sub-transmission areas with herbicide for efficient
5 maintenance of the corridor;
- 6 • Pollinator program: \$5,000, planting vegetation that does not conflict with
7 conductors whereby pollinators such as butterflies and bees pollinate low-growing
8 flowering plants so other types of vegetation is unable to grow in the area;
- 9 • Biodiversity: \$19,840 participate in the biodiversity identification program that
10 other Liberty regions are also participating;

11 The Company has also included the following item in line 7 of Appendix 1, Planned
12 Cycle Trimming:

- 13 • Ai-Dash: The company has entered into a Pilot program to investigate the value of
14 Satellite imagery and artificial intelligence to assist in identifying condition of the
15 system as it related to vegetation and consider Condition Based Management
16 viability. The total cost is \$15,000.

17 **VII. CONCLUSION**

18 **Q. Please provide a summary of your testimony.**

19 A. Liberty requests that a budget be agreed upon as presented at \$3,069,639. Liberty
20 believes that implementation of the vegetation management programs described here,
21 particularly including funding at the level exceeding the existing O&M budget, is

1 necessary to ensure that Liberty remains on its current path targeted to maintaining and
2 continually improving reliability performance, perform industry best practices, and
3 compliance with Puc 307.10. These programs have contributed to actual performance
4 improvements seen in recent years, and Liberty is committed to sustaining that
5 improvement. Liberty's full program costs should be recognized by the Commission as
6 recoverable in future discussions.

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

8 A. Yes.

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