STATE OF NEW HAMPSHIRE
BEFORE THE
PUBLIC UTILITIES COMMISSION

Docket No. DE 23-039

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty
Distribution Service Rate Case
Vegetation Management Program

DIRECT TESTIMONY

OF

HEATHER GREEN

AND

J. M. SPARKMAN, JR.

May 5, 2023

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I. INTRODUCTION

Ms. Green

Q. Ms. Green, please state your full name and business address.

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

Q. On whose behalf are you submitting this testimony?

A. I am employed by Liberty Utilities Service Corp. ("LUSC") as the Manager of Vegetation Management. LUSC provides services to Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty ("Liberty" or the "Company"). I submit this testimony on behalf of Liberty.

Q. Please describe your educational and professional background.

A. I graduated from Purdue University in 1994 with a Bachelor of Science degree in Forestry with an Urban Option. I joined LUSC in April 2018. Prior to joining LUSC, I worked for the State of New Hampshire's Division of Forests and Lands as a Community Forest Specialist. I also have extensive experience working as a municipal forester and contract arborist. As the Village Forester for Oak Lawn, Illinois, I led the management of the young urban forestry program including planting, pruning, and removing trees while also educating the public, staff, and elected officials.

Q. Please describe your duties at Liberty.

A. I support Liberty's Electric Operations by planning, budgeting, auditing work in progress, completed work and managing the inspection and vegetation management programs,

vendor performance, and storm and regulatory support on the Company's distribution and sub-transmission assets.

Q. Have you previously testified in regulatory proceedings before this Commission?

A. Yes, I previously testified before the Commission in support of the Company's Vegetation Management Program in Docket Nos. DE 19-051, DE 20-036, DE 21-049, DE 21-138, DE 22-024, and DE 23-031. I also submitted written testimony in support of the Company's rate case in Docket No. DE 19-064 with respect to the Company's vegetation management practices.

Mr. Sparkman

Q. Mr. Sparkman, please state your full name, company, and business address.

A. My full name is J. M. Sparkman, Jr. and I am employed by Lakeside Environmental Consultants, LLC d/b/a ECI ("ECI") as Manager, Consulting Services. My business address is 12324 Hampton Way Drive, Suite 101, Wake Forest, North Carolina.

Q. Please describe your educational and professional background.

A. I received a Bachelor of Science degree in Forestry from Virginia Polytechnic Institute and State University. Prior to joining ECI in 2010 as a Senior Project Manager, I was employed by Florida Power & Light Company in its Vegetation Management Business Unit from 1991 to August 2010 in several positions of increasing responsibility leading to Regional Lead. I was promoted to my current position at ECI in December 2012. My curriculum vitae is provided in Attachment HG-1.

Q. Mr. Sparkman, what is your role in this docket?

A. My role is to provide technical assistance with vegetation management best practices in the industry and to provide support for how Liberty's VMP plan has been executed historically.

Q. Have you previously testified in regulatory proceedings before this Commission?

A. No.

II. PURPOSE OF TESTIMONY AND EXECUTIVE SUMMARY

Q. What is the purpose of your joint testimony?

A. Our testimony will describe Liberty's current distribution vegetation management program ("VMP"). The current VMP focuses on maintaining the Company's existing rights-of-way identifying high-risk trees and removing these high-risk trees. Our joint testimony will describe some of the challenges experienced by the Company in meeting the objectives of its VMP. Finally, our joint testimony will propose modifications to the current VMP, primarily including a move to a 5-year cycle and a recommended increase to the amount of vegetation management costs collected in base rates.

Q. How is your joint testimony organized?

A. There are three substantive sections to our testimony. Section III provides an overview of the Company's existing VMP. Section IV describes the challenges facing the Company's VMP. Finally, Section V describes the Company's proposal for the VMP going forward to address these challenges.

III. CURRENT VEGETATION MANAGEMENT PROGRAM

Q. What is the Company's philosophy toward vegetation management?

A. Liberty's philosophy is that a robust VMP will result in safety, reliability, and rate benefits.

As an electric distribution Company, Liberty has an obligation to provide safe and reliable power. With respect to reliability, vegetation management has the greatest impact. As referenced by Company witness Strabone in his testimony, 42% of outages on the Liberty distribution system are tree related. This is more than twice the percentage of outages associated with the next (number two) outage cause. As a result, the Company has a VMP that strives to enhance reliability through the most effective and efficient vegetation management methods, systems, and processes available and achievable while also balancing costs to customers.

Tree-related outages also result in safety concerns for the general public, contractors, and Liberty employees because downed trees and growing vegetation can impact wires.

Finally, a robust, proactive VMP is directly correlates with lower rates in the long run. Planned tree removal is more efficient and less costly than restoration work required after a tree falls. A prudent VMP avoids the replacement of larger priced assets, traffic control, tree crews, line crews, and overtime. Taking a proactive approach to prune or remove trees and other vegetation that may cause problems before service is affected improves customer service and results in more affordable rates.

Q. Please provide an overview of the current vegetation management program.

A. Since 2007, the Company has followed the Vegetation Management and Reliability Enhancement Programs approved in Order No. 24,777 (July 12, 2007) (as amended).[1] The most recent amendment included approval for recovery of $2,200,000 through base rates, with the ability to request an additional ten percent resulting in a cap of $2,420,000.[2]

To deliver safe and reliable electric service while also balancing costs to customers, the Company's VMP implements industry best management practices for vegetation management and also complies with the requirements of Puc 307.10, including ANSI A300 standards.

Q. Does the Company's VMP include planned and unplanned tree work?

A. Yes. Meeting the Company's safety and reliability objectives requires annual spending on Operation and Maintenance ("O&M") activities through both planned and unplanned work. The planned work includes preventative cycle pruning and mowing (also referred to as "flat cutting" or "brush cutting") of 870 roadside miles and 60 off-road supply miles. Tasks related to this planned work include a review of field conditions, writeup of prescriptive work orders, obtaining any necessary permissions and permits from landowners and local governments and agencies, performing tree crew work, performing

[1] Order No. 24,777 was amended by Order Nos. 25,638 (March 17, 2014), 26,005 (April 12, 2017), and Order No. 26,376 (June 30, 2020).

[2] Order No. 26,376 at 13 (approving a settlement agreement including an increase in VMP cost recovery through base rates).

traffic control work, auditing and documenting these activities, and associated administrative work supporting these activities. Planned work also includes tree removals for grow-in and fall-in risk.

The unplanned work is work that occurs off-cycle. This off-cycle work can be identified by customers, Liberty, or contractors. If the identified work is determined to be necessary, it is addressed prior to the next cycle to ensure safety and reliability. Tasks related to unplanned work include customer calls, make-safe assistance, spot tree trimming, interim trim, and trouble work.

The VMP budget does not include the costs related to major storm events or new construction work. Funding for major storm response is generally deferred for review and recovery through the Company's major storm fund, and the costs of trimming for new construction is charged to the specific capital project.

Consolidated Communications used to contribute toward the costs of this work under the terms of legacy joint ownership maintenance agreements.

Attachment HG-2 provides Liberty's most recent report on the VMP as submitted to the Commission on November 15, 2022.

Q. Describe who performs Liberty's vegetation management work.

A. The Company uses contract crews to perform its VMP work. The coordinated efforts of one internal staff member and contracted arborist staff monitor the condition of the Company's rights-of-way and apply various vegetation control practices to reduce,

manage, or eliminate incompatible growth. External contractors perform work in the field for both planned and unplanned work as well as supplemental administrative support and field review.

Q. How does Liberty source its external vegetation management crews?

A. In the past, the Company's VMP was based on one-year contracts with a primary vendor to provide the bulk of the vegetation work. In 2017, the Company transitioned to multi-year contracts. The Company moved to multi-year contracts to better insulate the Company from economic changes and lock in competitive pricing, to increase stability for crews, and to create greater certainty for budgeting forecasts, which all serve to increase rate stability. The Company currently has two multi-year contracts in place, which were obtained through a Request for Proposal ("RFP") process.

While the Company still finds multi-year contracts beneficial, current industry conditions are impacting the ability to conduct successful RFPs for long term contracts. Tree care contractors are not responding to multi-year RFPs or small project RFPs due to the sharp price increases resulting from labor shortages, equipment maintenance availability, and general inflation. To address this, the Company is preparing future multi-year RFPs that include an escalation factor outside of the normal inflationary clauses common to multi-year RFPs. This escalation factor is designed to address the increase in costs the contractors are facing. Additionally, a fuel adjustment clause will be added to account for large swings in fuel prices to limit contingencies for fuel escalation in contractor bid prices.

Q. How does Liberty ensure that contractors perform vegetation management work safely?

A. The Company onboards all new contractors and new employees of contractors. This onboarding includes a review of all aspects of Liberty's safety programs and requirements and of contractor compliance with OSHA 1910.269, in addition to grades in ISNET. The Company also offers mandatory annual safety reviews.[3]

Q. What is the source of the current clearance requirements for the corridors through which Liberty's lines travel?

A. The current minimum requirements are contained in Commission rule Puc 307.10.

Q. Please describe the requirements of Puc 307.10.

A. Puc 307.10, titled "Tree Pruning Standards" contains requirements for vegetation management, as follows:

> (a) With the land-owner's consent, utilities shall prune trees adjacent to all distribution circuits to the following minimum clearances on no more than a 5-year cycle:
>
> (1) 10 feet below the conductors;
>
> (2) 8 feet to the side of the nearest conductor; and
>
> (3) 15 feet above the conductors, at time of pruning.
>
> (b) Utilities shall implement measures such as mid-cycle reviews to identify and mitigate elevated risk from tree exposure on circuits or sections of circuits that are significantly and/or continually experiencing tree-related interruptions, where it is practical to do so.

[3] Per OSHA 1910.269(a)(3), the host company is required to share information with the contractor company and vice versa. This requirement is also stated in the Management of Contractors document (Section 5).

> (c) Utilities shall not be required to prune to the clearance standards specified in (a) of this section where:
>
> (1) The land-owner has refused or restricted permission to prune;
>
> (2) A municipality or other local governing body, by ordinance or other official means, has refused or restricted permission to prune; or
>
> (3) Pruning to the standards specified in subpart (a) above would be detrimental to the health of the tree, in which the utility shall adhere to the guidelines provided in ANSI A300 Part 1– 2008 Edition, available as noted in Appendix B.

Please see Attachment HG-3 for diagrams depicting the above clearance specifications. In rural areas, the Company seeks to obtain the clearance of all capable tree seedlings and of lower branches of established trees to minimize future work. In urban areas, work can be more customer-sensitive (i.e., landowners may object to the preferred scope of work). As a result, while the Company seeks the same clearance for urban areas as the rural areas, a smaller corridor may be necessary to accommodate landowner requests consistent with Puc 307.10(c). For example, the Company may leave lower branches under the communication wires, often referred to as a "shelf," or may top trim brush to leave a requested screen. The result is the acceptable specification for work in an urban setting depicted in Attachment HG-3.

Q. Please describe how the Company views the maintained and unmaintained areas for tree removals.

A. The diagram in Attachment HG-3 shows where trees may be growing in the zone that could affect distribution system assets if they are not removed. Pruning of the trees, rather than removing them, may create issues including undesirable aesthetics, tree

instability, decline in tree health, and/or premature death of the tree. These issues can result in increased costs as compared to the costs of removing the tree in the zone shown in Attachment HG-3.

Q. Beyond routine vegetation management pruning, what other activities does the Company engage in to ensure system reliability?

A. The Company's VMP also includes planned tree removals. These tree removals are crucial to minimizing future reliability risks and can also lower future costs.

Q. When does the Company engage in tree removal instead of pruning?

A. Tree removals are necessary when pruning a tree will violate the recommendation of ANSI A-300 Part 1, when the tree has been determined to have a defect that may pose an imminent failure, or when removal may be more economical than pruning. Routine tree removal reduces future tree density and lowers future costs.

Liberty removes trees for clearance or grow-in risk in to create the 8-foot conductor clearance at the time of pruning as required by Puc 307, which is a shift from Liberty's the historical corridor of 6 feet or less. It also includes those trees outside of the corridor that are classified as having a high "fall in" risk as such trees exhibit a higher probability and consequence of failure into the corridor.

The Company's VMP includes tree removals in response to customer requests and customer safety as well as removal of risk trees along services and along secondary and primary lines. Additionally, proactive tree removal to address risk trees causing or about to cause interruptions and outages is addressed through responses to calls, findings in the

field, or reports from those who conduct feeder sweeps. Finally, as part of line extension or new line installation for new construction, the Company performs vegetation management work to establish the corridor and address high-risk fall-in trees for those new services and performs make-safe removal to make the system or site safe for a private contractor to perform their work.

Q. Do you keep an inventory of the trees that need to be removed?

A. Yes. The Company has an inventory of some, although not all, of the highest-risk trees that need to be removed to clear the 8-foot corridor (grow-in) and all fall-in risks. The Company is able to locate, log, and address a thorough inventory of clearance trees through the use of trained work planners and the work management system, called Terra Spectrum, Field Note. This check and balance allow the Company to identify and eliminate future work, especially along the corridor edge. For example, a tree growing out of the ground just outside the corridor, but heading straight toward the energized lines, might not be easily identified and removed by a tree crew, as they are not trained to identify such trees. However, when circuit is work planned, or pre-screened by the work planners, those trees can be appropriately marked for removal. This reduces future work of removals or unnecessary pruning. The Company also has a "permission" person on the tree crew staff who has the positive personality, assertiveness, and mindfulness to obtain permission from customers to flat cut or remove trees that have been previously topped or damaged by the cycle Liberty strives to achieve.

Q. Explain why removals for risk are necessary.

A. Removal are risk trees is necessary because such removals have a significant impact on reliability and help avoid future restoration costs if the risk tree was not removed. It is thus a necessity that Liberty removes trees for potential risk to its assets. Liberty has incorporated the industry best practice of using consulting utility arborists to closely evaluate the trees along the corridor. These arborists are assigned the task of finding and marking the highest risk trees. It is expected in the future, as seen in the past few years, that there will be an increase in removals from this activity. Removals for fall-in risk are important because the fall-in risk cannot be mitigated by pruning. The larger the tree, often the more impact on the system. For example, a fall-in tree can result in broken poles or damaged transformers.

Further risks to the trees are Gypsy Moth, Emerald Ash Borer, old age, past storm damage, and a variety of other natural pests and pathogens causing decline and death among the tree canopy. The Company is seeing a higher volume of trees dying and failing on the system from natural and cultural causes. Merely pruning these trees, as opposed to removing them, creates more risk to the assets and these issues are not diminishing.

Trees whose lead and canopy are to the side of the corridor can be managed with minimal directional pruning. Trees whose lead is below and inside the corridor will have a constant energy to grow toward the conductors. Where sound directional pruning cannot

be achieved, there will be both future work and risk of grown in, but also increased decay and increased poor structure/poor structural stability giving rise to a higher risk to fail.

Q. Is customer service an important part of vegetation management?

A. Yes, it is one of the most important parts of the vegetation management program. To provide the best customer service, the Company needs to perform some tree work to assist customers with the safe removal of their trees. While the Company removes trees to meet system goals and needs, providing the customer with aesthetically pleasing landscapes is a result of sound utility vegetation management practices. There are cases when a customer requests tree removal that is outside the scope of safety or scope of work; the Company will not perform that work. However, there are other cases where it is reasonable and in the best interest to perform the requested removal.

Further, setting and meeting customer expectations directly correlates with future consent to perform planned reliability-based vegetation work. Many restrictions or refusals are related to a lack of understanding of the current need and/or where past expectations were not met or clarified.

Q. Summarize the amounts spent for the Company's vegetation management program for the past five years, the miles trimmed for each of those years, and the total cost per mile line for each of the five years.

A. Please see Table 1 for the historical spending.

***Table 1**. Historical VMP Spending by Year*

Summary of Annual Spending

Incremental VMP and REP O&M Spend

	Actual CY 2018	Actual CY 2019	Actual CY 2020	Actual CY 2021	Actual CY 2022
Actual VMP	$ 2,422,443	$ 2,096,528	$ 2,461,057	$ 1,870,813	$ 3,229,291
Annual Program Budget	$ 2,157,086	$ 2,307,000	$ 2,200,000	$ 2,420,000	$ 2,420,000
Amount Subject to Recovery	$ 2,422,443	$ 2,096,528	$ 2,420,000	$ (549,187)	$ 2,420,000
VMP and REP Base Spending Level	$ 1,500,000	$ 1,500,000	$ 1,850,000	$ 2,420,000	$ 2,420,000
Total Revenue Requirement	$ 922,443	$ 596,528	$ 570,000	$ -	$ -
Less Reimbursements from Consolidated	$ (478,142)	$ (495,381)	-	-	-
Total Incremental Revenue Requirement	$ 444,301	$ 101,147	$ 570,000	-	-
Total O&M Recovery	$ 1,944,301	$ 1,601,147	$ 2,420,000	$ (549,187)	$ 2,420,000
Miles Trimmed	$ 220	$ 222	$ 194	$ 84	$ 162
Cost per Mile w/o Consolidated	$ 11,034	$ 9,425	$ 12,678	$ 22,288	$ 19,884
Cost per Mile w/Consolidated	$ 8,856	$ 7,198	N/A	N/A	N/A

IV. CHALLENGES FACING THE VEGETATION MANAGEMENT PROGRAM

Q. Please provide a summary of the challenges that the Company is facing with respect to the existing VMP.

A. Liberty is challenged to meet its commitment to maintaining its VMP on a four-year trim cycle within the currently allowed fixed budget. The Company has experienced increased costs of its VMP as fuel costs, labor costs, and traffic control requirements and costs have all been increasing, allowing fewer trimming activities to occur within the fixed budget. This has been exacerbated by the loss of the Consolidated Communications' contribution to trimming costs.

Q. Explain why the expense to maintain a clear corridor has increased.

A. The cost to maintain the corridor has increased for several reasons. First, as discussed above, all VMP costs have increased due to labor shortages and inflation. Second, in 2014 the Commission adopted Puc 307.10 and its corridor requirements that were wider than what Liberty had maintained before 2014. Puc 307.10 mandated an 8-foot-wide

corridor, 2 feet wider than Liberty had previously maintained before.[4] Compliance with Puc 307.10 requires Liberty to expand its existing corridor by 4 feet (two feet on each side of the conductors to increase the clearance from 6 to 8 feet). Given Liberty's four-year trim cycle, this means that Liberty must expand over 200 miles of its corridor every year for four years. And where Liberty's existing corridor did not meet the previous 6-foot clearance requirement, the Company will need to increase the corridor by more than 2 feet of the outside conductors. This is well beyond the scope of work necessary to maintain a corridor and is substantially more expensive as it requires cutting many more and larger trees.

Q. Does pruning trees rather than removing them create negative implications for the program?

A. Yes. Without additional funding and due to the increased cost of tree removal, the Company must rely on only the lower-cost pruning method to meet the requirements of Puc 307.10. However, pruning is a short-sighted solution that is not professionally appropriate or aesthetically desired.

Pruning a tree to limit costs may help meet the requirements of Puc 307.10 but can lead to higher long-term costs because the same tree will need to be removed in the future when it is larger and more expensive to remove. And pruning in lieu of tree removal can impact the health or structure of a tree. When a tree's health or structure is impacted, it is

[4] The other electric utilities in New Hampshire had traditionally maintained an 8-foot corridor, which is likely why the rule chose this distance and is why the new rule did not materially impact them.

best industry practice to remove the whole tree. Pruning increases the number of these trees that must be remove, which will again happen in the future when they are larger and more expensive to remove. An exception is where pruning is performed on customer request or refusal to remove the tree. In these instances, there is no choice but to prune the tree. However, if the customer is not limiting the work, Liberty should be afforded adequate funding to be able to follow industry best practices. Otherwise, Liberty will be compelled to prune trees to the point of damage in health and/or structure, at which time a more expensive removal will be required.

Q. Does pruning trees that should otherwise be removed also increase risk and liability?

A. Yes. Pruning instead of removing will create future risk and liability with respect to the Company's distribution system assets or other potential targets on private property. Vegetation management practices that focus on short term costs before best practices create situations of poor customer relations because these pruning practices can lead to damage to a customer's trees or cause the trees to become unsightly. This will also increase the likelihood that customers will not grant permission for future cycle pruning.

Q. Are there increased costs associated with delayed tree removal?

A. Yes. As mentioned above, when trees grow, the costs of their future removal increase exponentially. For example, removing small 5- to 8-inch trees found in or at the edge of the corridor are good investments as they eliminate future work at minimal operational and aesthetic costs. Removal of these small trees also provides for better current and

future customer relations. Removal of these 5 to 8" diameter trees represents an approximate annual cost of $114,200. However, if the tree is of good health and it is over-pruned to achieve the clearance, the result could be significantly unstable and poorly attached sprouts with growth that will require more pruning work in the future, which can further increase future costs and damage the tree causing increased future costs.

Since the Company has not had sufficient funding to meet this clearance, Liberty is not in compliance with Puc 307.10. The Company has a backlog of marked trees that it has not been removing due to limited funding and has thus deferred those removals. The Company has not even been able to identify all trees that need to be removed for the full 8 foot corridor clearance. Deferring removals for the future results in higher costs to the program, therefore the Company is requesting additional funding to eliminate the deferral backlog.

Q. Please provide a detailed overview of the Company's challenges with its vegetation management contractors.

A. As detailed in Docket No. DE 21-138, in the Direct Testimony of C. Steele, H. Green, and Heather Tebbetts, in 2021, a four-year contract was awarded to ClearWay, the only bidder that appeared to be able to meet the budget for a 4-year cycle designated in the 2019 Rate Case. However, that contractor defaulted three months into the first year of the contract, citing the inability to pay contractor employees and financial issues arising from other contracts.

Liberty revisited the prior RFP responses and awarded the contract to the next lowest bidder, Asplundh, which happened to be the incumbent contractor that just completed its four-year contract with Liberty. However, Asplundh returned with reduced crews and increased costs. To fill in the gaps in the vegetation management schedule associated with these reduced crews, Liberty had to work with additional vendors. This further raised the costs of the Company's vegetation management from approximately $12,000/mile to $22,000/mile and allowed the Company to complete only 84 miles in 2021 and stay under the fixed budget. As a result, Liberty has had to defer 243 miles in the current four-year cycle (including 2023 expected trim miles).

In 2022, Liberty released mini bids for cycle work in the Salem service area and the 115 kV maintenance corridor. The Company also worked to incorporate dedicated mechanized equipment, a mechanical mower, and a Jarraff All-Terrain Tree Trimmer as well as additional local crews to collectively function as workforce multipliers in the Salem area in an effort to stabilize resources and costs moving forward.

The Company is now fully staffed with full-time Vegetation Management tree crews and expects that in 2023 approximately 165 miles will be trimmed, which is well short of the mileage required for a 4-year cycle but will allow the Company to be in line with a 5-year trim cycle.

V. LIBERTY'S VEGETATION MANAGEMENT PROGRAM GOING FORWARD

Q. Explain the Company's proposal to modify its vegetation management plan.

A. The Company is recommending that beginning in 2024, the 4-year cycle be changed to a 5-year cycle and the amount included in base rates be based upon the forecasted vegetation management budget to meet that 5-year cycle, to establish and maintain the 8-foot corridor, and to allow the Company to eliminate the inventory of trees for which removals have been deferred and other additional funding needs. The Company is also requesting full reconciliation of the cost to execute the VMP against the amount in the Rate Years.

Q. Please explain the VMP funding level included in the Company's Multi-Year Rate Plan.

A. The Company included $4.1 million in Rate Year 1, $4.3 million in Rate Year 2, and $4.6 million in Rate Year 3 related to the vegetation management program. This level of funding supports a 5-year scheduled maintenance trimming cycle as well as funding for risk trees and activities to support a well-balanced vegetation management program. The Company will prepare an annual reconciliation report detailing the expenditures related to vegetation management along with supporting documentation. The variances in spending will be fully reconciled for certain identified programs within the VMP as part of the Revenue Adjustment Charge ("RAC") in the Electric Reconciliation Adjustment Mechanism ("ERAM"), as discussed in other testimonies in this docket. Each annual reconciliation filing will include a calculation of the variances from the amount included

in base rates, which will be recovered or refunded the following year through the RAC. There will be no limit on the reconciliation of the VMP.

Table 2 below is a summary of the costs the Company is requesting to maintain a robust VMP. A complete budget can be found in Attachment HG-4.

Table 2. *Annual Forecasted VMP Spending*

	RY 1	RY 2	RY 3
Total VMP O&M Expenses	$ 4,050,563	$ 4,292,202	$ 4,559,578
Cost Per Mile @175 miles	$ 23,146	$ 24,527	$ 26,055

Q. Why is the Company recommending a significant increase in funding for the VMP?

A. In DE 19-064, the Settlement Agreement provided for recovery of up to $2,420,000. Expenses that exceeded the agreed amount would not be recovered. Any underspending would be reconciled each year and either carried into the next program year or returned to customers. Except for 2021 when the contractor defaulted, Liberty has spent more than $2,420,000 each year, as illustrated in Table 1 above.

The proposed VMP budget is necessary to align with current market costs. There are a limited number of contractors for which multiple companies compete. This competition, combined with a shortage in the labor market, results in a market price that is significantly higher than the costs approved in Docket No. DE 19-064. In addition, Liberty no longer receives contribution from Consolidated Communications (through a joint pole ownership agreement) and the cost of traffic control is increasing annually.

Q. What factors caused the increased vegetation management costs?

A. Several factors that contributed to the increase in required funding for the Company to continue to meet its VMP targets and continue to provide safe and reliable service. The first is the loss of payments from Consolidated Communications. This loss represents approximately 20% of the overall pruning costs and 50% of the tree removal costs and results in either a 20% reduction in the work to be performed or increased costs of about 20% to complete the work.

The second factor is the deferred work referenced above. To meet the unexpected loss of Consolidated Communications payments, in 2020 the Company deferred 30 miles of planned cycle trimming and the majority of tree removals. The Company deferred an additional 74 miles to 2022 as a result of the vegetation management contract issues and subsequent workforce issues in 2021. And in 2022, an additional 139 miles were deferred, for a total of 243 deferred miles.

The third factor is the workforce issues and the increased cost to do the work as discussed in Section IV. The tree care industry continues to experience a shift and loss of workforce in general, amplified by the effects of the COVID-19 pandemic. Alternate choices for employment are driving the tree care workforce to higher paying locations, or other firms in other trades or sectors (i.e., out of the tree care industry). As a result, the cost of retaining a workforce has been increasing. Liberty was shielded from this industry trend in recent years because of multi-year contracts, but such contracts have since expired.

In 2018, the contractor was able to keep ten crews on property. In 2020, there were seven or eight crews on property, with losses of long-time crews occurring. In 2021, the contractor had difficulty keeping six crews on property. Liberty's vegetation management contractor was not able to establish a consistent local crew and had a rotation of crews when on property that generally did not exceed three crews at a time. Workforce retention for tree crews and quality work is a frequent topic of discussion and concern at many utilities. It continues to be the theme in various presentations by industry groups.

The workforce issue is not a phenomenon limited to a New Hampshire, New England, or the East Coast. It is nationwide. Potential applicants are not responding to job opportunities as currently posted – regardless of the reputation of the company, scope of work, location, and pay.

The fourth cost driver is the increased quantity of needed tree removals. There are three types of removals: Fall-In, Grow In/Corridor Creation, and Make Safe. Before the implementation of Puc 307.10, most of the tree removals were Fall-In risks. The corridor was fairly established, and the unit price trees (those that were too large to be part of the "trimming" price) started at 9" Diameter at Breast Height ("DBH") (diameter of a tree at four and half feet from ground). When the Commission changed the corridor through Puc 307.10 and Liberty had to expand its side clearance from six to eight feet, the quantity of these larger, more expensive trees that needed to be cut was well beyond the

quantity and scope that could be achieved with the allocated funds. The result is the inability to achieve the 8-foot corridor under current funding.

The last significant driver is the increased cost of third-party traffic control for both the private sector and the government sector (police). This industry is not shielded from the workforce issues mentioned above. It is also influenced by communities implementing new ordinances (or interpreting existing ordinances differently) so that Liberty is required to have more expensive police personnel provide the traffic control. The increase is seen both in cost per hour and in the number of locations requiring police for traffic control. For example, Walpole Police has adjusted their definitions of when a traffic detail is required. In 2017, the traffic detail charges were $38,000, while in 2022, the traffic detail charges were approximately $500,000.

Q. Are there any other rules that have increased the cost of vegetation management?

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

Previously, if Liberty's scope of work did not require the tree work, the Company would assist a private tree contractor in making the situation safe for them to perform the work. Changes in the language of the ANSI Z133-2017, Safety Requirements for Arboricultural Operations, now limit some tree work such that it can only be performed by the utility.

Under these new standards, if a property owner engaged a trained and skilled private tree care company to perform tree work within close proximity to the wires that were not otherwise required by the utility, there are situations in which that contractor could not perform the work. To say it another way, a contractor qualified to work for a utility and also works in the residential sector has two different abilities of work pursuant to the ANSI standards. If hired by the utility, they have one chart to abide by and can perform the work. When hired by a residential customer, they have another chart to abide by and may not be able to perform the work. There are situations where the tree work can only be performed by a contractor hired by the utility. Liberty has already experienced impacts from this change and anticipates it will increase the costs of tree work and has allocated $20,000 of the budget for these costs. The costs are unplanned and dependent on the volume and scope of the customer request.

Q. Why is the Company proposing to move from a 4-year to a 5-year cycle?

A. Due to the contractor issues and the revenue shortfall, the Company currently has 243 miles that are deferred. While the Company's contractor is now fully staffed, the 165-mile annual trim will not address this backlog. And the current level of approved spending is not adequate to maintain even a 5-year cycle. Maintaining a 4-year cycle would require an even larger increase to the VMP budget than what the Company is proposing. Therefore, the Company believes moving to a 5-year cycle is a prudent decision as it will balance the affordability for our customers while adequately addressing reliability and safety issues.

Q. Explain in detail the funding level to support the management of high-risk trees.

A. The Company's MYRP for VMP includes approximately $476,000 per year to remove the backlog of high-risk trees, as these trees are classified as Grow-In (Corridor Establishment), Fall-in (Enhanced Risk Tree Removal or Storm Hardening), Make Safe (Customer Assisted Work), and Removal/Replacement (Landscape planted trees).

The Company has included approximately $147,000 per year to remove the underlying brush that includes small trees with a 5" to 8" diameter because once this area of vegetation is removed, the annual upkeep will be a minimum cost. The Company believes this level of funding is adequate to address and eliminate the inventory of trees for which removals have been deferred.

Q. Are there other initiatives the Company wants to undertake?

A. Yes, the Company maintains off-road distribution/supply lines in the communities of Lebanon, Hanover, Enfield, and Salem. Transmission corridors (often leased rights-of-way) convert terrestrial forest habitat to low-growing shrub/scrub/grassland habitat that is conducive to the safe and reliable transmission of energy. Periodic Utility Vegetation Management ("UVM") is required to maintain vegetation in a state that promotes safe and reliable transmission and distribution for our customers. UVM seeks to establish and conserve early successional grassland habitat which has benefits beyond regulatory compliance. As a subpart of the UVM, the Company is also looking to return to Integrated Vegetation Management ("IVM") which simultaneously maintains infrastructure security and benefits wildlife conservation initiatives, including pollinator

habitat. Currently, the Company performs vegetation management using only mechanical means which promotes invasive woody material, thereby hampering visibility and movement along the corridor. Implementing IVM can discourage the aggressive, invasive woody material as well as invasive brush. By encouraging native local shrubby habitats and pollinator habitats, it will require fewer resources in the future to keep the corridor safe and reliable while promoting natural and healthy wildlife and pollinator habitats.

To accomplish the IVM, the Company wants to

- Support selective herbicide use;
- Support biodiversity focus and incorporation;
- Support pollinator and wildlife habitat incorporation;
- Support educational programs; and
- Support movement into the roadside land management program where possible – this includes adding a resource to educate customers about the types of vegetation to plant near the roadside where the lines reside for long-term partnership and cooperation between the Company and the customer.

The total cost for the IVM includes the items in the following table:

Table 3. *IVM Forecasted Costs*

			Escalator	Rate Year 1	Rate Year 2	Rate Year 3
Vegetation Management		5 Yr				
# Miles	165.09	175.00		175.00	175.00	175.00
IVM/ Herbicide in ROW	$69,210	$69,210	Specific	$175	$32,500	$5,000
Polinator Education/Habitat	$5,000	$5,000	5%	$64,605	$5,381	$5,650
Monarch Butterfly Conservation	$20,000	$20,000	5%	$5,125	$21,525	$22,601
Sub-Transmission Right of Way Clearing	$0	$80,000	5%	$20,500	$86,100	$90,405
Total VMP O&M Expenses	$94,210	$174,210		$82,000	$145,506	$123,657

Q. What other programs are funded in the VMP in the MYRP term?

A. Liberty has included funding to engage an outside expert to review the current vegetation management program and provide recommendations on improving the efficiency and effectiveness of the program.

Liberty would conduct this assessment in the first and second quarters of 2025 and utilize its results in the next rate case. Attachment HG-4 provides the scope of the services to be provided in support of this effort. At a high level, the assessment would include the following:

- A review of the customer relations practices and process for responding to customer inquiries and methods to improve communication and expectations.
- Review of current contract methodologies. Define pros and cons of different bid methodologies (cost plus vs. units) and how they relate to different types of crews (schedule cut/service orders/mowing/spraying).
- Recommendations for the most efficient crew and equipment makeup of the projected workforce.

- Recommendation of member engagement ROW programs to consider (Customer maintain ROW program, replace a tree program, social media member education).
- Organization and management practice recommendations including appropriate staffing levels.
- Review of current vegetation management program metrics.
- Overall efficiency of the current program (tree pruning and removal, brush control methods, etc.).
- Effectiveness of the current approach to planning, scheduling, and completing maintenance.
- General field performance of the existing tree crews from the standpoint of industry best practices, productivity, and effectiveness.
- General tree and vegetation conditions in relation to clearance guidelines and the ability of the system to perform under these clearances.
- Review of the current vegetation management budget and recommendations for cost savings.
- Detailed review of the data collection and record-keeping systems.
- Audit recommendations to ensure work quality and contract compliance.
- Program organizational structure including contractor crew size and makeup and appropriate supervision levels.
- Customer contact and public relations practices.
- Identification of opportunities to reduce the vegetation workload in future cycles.

- Benchmarking of cost, tree-related outages, and production based on available data from Liberty.
- Opportunities for reliability improvement.
- Suggested specification modifications to drive efficiencies and effectiveness.
- Methods for control of brush including IVM enhancements.
- Work scheduling recommendations to maximize reliability improvements.
- Evaluation of productivity and work quality.
- Post-outage investigation program recommendations.
- Appropriateness of existing cycle(s) based on field observations and system reliability with recommendations for modification where appropriate.

Q. Is the funding level included in the MYRP the same as the budget provided in the November 15, 2022, report on CY2023 VMP?

A. No. Since the November 2022 filing, Liberty has received updated costs from its contractors which included inflationary impacts. The revised plan includes a more robust and effective program aimed at minimizing costs in the long run.

Q. Explain the escalation factors

A. The budget includes an annual 5% inflation factor. For a few line items, some volume and industry trend factors have replaced the 5% inflation factor.

For example, the unplanned Spot, Trouble, and Interim work is expected to see higher volumes because of the volume of deferred work and added growth between cycles. This

is hard to project, as it is based on field conditions, field findings, and customer calls. A 2% volume factor has been added for these line items.

The planned cycle work and Sub-Transmission Right of Way Clearing are expected to see a higher escalator factor of 10% to 12% for labor costs alone. Additionally, as there is additional growth of vegetation that is now closer proximity to the conductor, the volume of debris has also likely increased. Therefore, the previously provided bids are not comparable in either amount of time to meet scope of work, the cost per hour for labor to manage to scope of work, the equipment maintenance, or the debris management.

And lastly, the IVM/Herbicide in the ROW plan is varied from year to year and it is identified specifically.

VI. CONCLUSION

Q. Please summarize the total costs associated with a robust vegetation management program.

A. The funding level included in the MYRP supports a 5-year planned trim cycle in compliance with the requirements of Puc 307.10, including ANSI A300 standards. The Company's VMP implements industry best management practices for vegetation management and supports maintaining and continually improving reliability performance, performing industry best practices, and providing good customer service. The annual reconciliation process allows for the review of all costs incurred by the Company in support of the VMP and allows the Company to focus on achieving the work identified in the MYRP.

Q. Does the Company believe that the proposal, as outlined in this testimony, will allow Liberty to continue to provide safe and reliable service?

A. Yes.

Q. Does this conclude your pre-filed direct testimony?

A. Yes.

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