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

Docket No. DE 17-_____

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

Report of Calendar Year 2016

# DIRECT TESTIMONY

**OF**

**CHRISTIAN BROUILLARD**

**AND**

**JEFFREY CARNEY**

March 15, 2017

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## I. INTRODUCTION AND QUALIFICATIONS

### Christian Brouillard

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

A. My name is Christian P. Brouillard and my business address is 15 Buttrick Rd., Londonderry, New Hampshire.

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

A. I am employed as the Director of Engineering by Liberty Utilities Service Corp., which provides services to Liberty Utilities (Granite State Electric) Corp. ("Granite State" or the "Company"). In my capacity as Director of Engineering, I am responsible for delivery system planning and capital investments, engineering and design, and maps and records integrity for the Company's electric and gas businesses in New Hampshire.

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

A. I graduated from the University of New Hampshire in 1982, earning a bachelor's degree in electrical engineering. I also completed the Public Utility Executive course, sponsored by the University of Idaho. I am a registered professional engineer in the states of New Hampshire and Massachusetts and a certified Project Management Professional.

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

A. In 1982, I began my engineering career as an associate engineer with Massachusetts Electric Company, a subsidiary of National Grid USA ("National Grid") and a former affiliate of Granite State, in North Andover, Massachusetts. From 1982 to 1992, I held positions of progressive responsibility in the distribution engineering, planning,

protection, and executive support functions. In 1993, I was promoted to Manager of District Engineering and held various engineering and management positions since that time, including Manager of Asset Strategy. In 2005, I became Manager of Work Planning and was responsible for developing Granite State's capital construction plans. In 2008, I was promoted to Director, Investment Planning for National Grid's electric distribution system in both New England and New York. In 2011, I assumed my current role as Director of Engineering for Liberty Utilities Service Corp. In January 2015, I assumed transitional responsibility for Electric Operations, Gas Production, Control and Dispatch Center, and Compliance Quality and Emergency Management. I am currently responsible for Electric and Gas Engineering and Compliance Quality and Emergency Management.

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

A. Yes, I have previously testified before the Commission on a variety of topics including the Company's Reliability Enhancement Program, its Least Cost Integrated Resource Plan, and the Company's distribution rate proceeding, Docket No. DE 16-383, currently before the Commission.

**Jeffrey Carney**

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

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

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

A. I am employed by Liberty Utilities Service Corp. as the Program Manager of Inspections and Vegetation. In that capacity I support Electric Operations and plan, budget, and manage Granite State's inspection and vegetation management programs, vendor performance, storm support, and regulatory support on the distribution and sub transmission assets.

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

A. I graduated from Paul Smith's College of Arts and Sciences in Paul Smiths, New York, in 1976. I received an associate's degree in Applied Science in Forestry and Land Surveying.

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

A. I joined Liberty Utilities Service Corp. on April 1, 2012, when I assumed the transitional responsibility as Vegetation Supervisor for the National Grid FY 2013 Vegetation Management Program. Prior to that, I served as the System Arborist for National Grid Service Company from 2007 to 2012. I was the Transmission and Distribution Forester for Granite State and New England Power Company's territory in New Hampshire and Vermont from 1989 to 2005. From 2005 to 2007, I was the New England North Lead Arborist and oversaw New England North Arborists responsible for developing forestry strategy and delivery the work plan. During that time, I simultaneously served as the Company's District Arborist in New Hampshire. From 1979 to 1989, I was a self-employed Consulting Forester.

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

A. Yes. I have previously testified before this Commission on vegetation management issues.

## II. PURPOSE OF TESTIMONY

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

A. This testimony provides the Commission with background information regarding the Reliability Enhancement Program ("REP") and Vegetation Management Program ("VMP") that Granite State implemented during Calendar Year 2016 and as described in the Company's accompanying Calendar Year 2016 Reliability Enhancement Program and Vegetation Management Program Report dated March 15, 2017 (the "CY 2016 REP/VMP Report") submitted with this filing. Additionally, this testimony provides support for the Company's request to refund $76,104 for 2016, which represents the amount of expense below the Base Plan operating and maintenance ("O&M") amount of $1,360,000 that was authorized by the Settlement Agreement in Docket No. DE 13-063 (the "Settlement Plan") that was approved by the Commission in Order No. 25,638 (March 17, 2014). The Company seeks to recover the revenue requirement of $120,019, the amount associated with a total of $849,390 in capital investment, broken down between two program years CY 2015 and CY 2016. The total carryover from CY 2015 was $97,621, as discussed in the CY 2016 REP/VMP Report. The Company is requesting an incremental revenue requirement of $120,019 associated with the 2016 REP capital expenditures. Information regarding the calculation of the REP/VMP Adjustment

Provision and the REP Capital Investment Allowance, and the associated rate impacts is set forth in the testimony of Heather Tebbetts, which is a part of this filing.

## III. OVERVIEW OF REP AND VMP

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

A. As part of the Settlement Plan, the Company agreed to continue with its Vegetation Management and Reliability Enhancement Programs at agreed upon spending levels, subject to annual Commission approval. In general, the REP and VMP include categories of both capital (REP) and O&M (VMP) spending targeted to improve reliability performance. The REP and VMP are premised on the understanding that a certain amount of annual spending on both capital and O&M activities is necessary to maintain the safety and reliability of the Company's electric distribution system. The Settlement Plan assumed that a base amount of $1,360,000 would be spent on O&M activities associated with the VMP during a fiscal year. In addition, the REP program includes a targeted budget of $1,000,000 for REP capital investments for each calendar year.

**Q. Please describe what types of activities are included in the REP and VMP.**

A. The Company budgeted capital funds to install nine single phase recloser schemes and 12 trip savers in radial applications. A significant portion of this budget was also targeted towards the re-conductoring of two miles of bare mainline primary conductor with spacer cable. These projects are identified in Appendices 2 and 3 of the CY 2016 REP/VMP Report which accompanies this testimony. The vegetation management activities

consisted of Planned Cycle Trimming, and Interim, Spot, and Trouble Tree Trimming, identified in Appendices 4 and 5 of the CY 2016 REP/VMP Report.

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

A. Each year, the Company develops an Annual Work Plan that is designed to achieve the overriding performance objectives of the business (safety, reliability, efficiency, customer satisfaction, and environmental responsibility). At the outset, the Company compiles a draft work plan that consists of proposed spending for asset replacement and system capacity and performance initiatives, individual capital projects and work activities required to comply with franchise or tariff requirements such as pole relocations, response to damage/failure, and new business construction. Each potential project specified within the plan includes a business category/justification for the project and estimated costs. The Company then prioritizes the projects based on the relative risk or opportunity associated with each project proposal to facilitate the selection of appropriate projects to be included in the Annual Work Plan. All of the proposed projects then undergo review and are prioritized to achieve an optimized portfolio of projects considering the reliability performance data compared to the reliability improvements targeted by the various programs and the deliverability of the various programs within the fiscal year. The process is designed to ensure the Company arrives at a budget that is the optimal balance in terms of selecting the investments necessary to maintain and improve

the performance of the system, while also ensuring a cost-effective use of the Company's available resources.

**Q. Please explain how capital improvements in the REP/VMP Plan relate to the other capital investments made by the Company to its system.**

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

**Q. Please summarize the Company's actual results for the CY 2016 REP/VMP Report and the level of recovery the Company is requesting.**

A. For CY 2016, the Company is required to make a reconciliation filing with the Commission for both its REP and VMP detailing the actual amounts associated with REP and VMP activities during the period as compared with budgeted amounts. For the calendar year 2016, Liberty initially proposed to spend $1,948,000, which included $350,000 that Liberty would bill to FairPoint for its share of the planned vegetation maintenance work. Since the Company did not get approval to convert to a four year cycle in CY 2016, the Enfield 7L2 feeder was deferred to CY 2017, reducing the CY 2016 anticipated spend by $250,000. The adjusted CY 2016 anticipated spend is $1,698,000 for O&M expenses related to VMP activities. The VMP O&M spending included $350,000 that Liberty would bill to FairPoint for its share of the planned vegetation maintenance work, resulting in an adjusted total of VMP O&M expenses of

$1,348,000. The Company's actual total spending for CY 2016 was $1,541,561 for O&M activities related to the VMP plus a carryover of $92,335 from 2015, for a total spending level of $1,633,896. After subtracting the FairPoint credits, the net spending is $1,283,896, or $64,104 less than the filed budgeted amount of $1,348,000. In summary, with the exception of Enfield 7L2 feeder as described in the report, the Company completed all of the vegetation management work contained in its CY 2016 plan at a cost that was roughly within the parameters of what was anticipated.

## IV. CALENDAR YEAR 2016 REP AND VMP IMPLEMENTATION

**Q. Please explain why the Company's actual O&M spending for CY 2016 varied from the Company's original budget.**

A. As described in the CY 2016 REP/VMP Report, the Company completed all of the vegetation management work contained in its CY 2016 plan. The spending variances are the result of the following factors:

The Company spent $91,575 more on work planning than anticipated. The work planning spend includes $38,933 of CY 2015 cost paid in CY 2016. Based on the original plan to complete 216 miles, additional work planners were necessary to complete the CY 2016 work planning.

The Trouble and Restoration budget is for unplanned work based on actual occurrence. Spend exceeded budget by $27,767 due to an increase in unplanned non-storm related trouble call volume.

The actual cycle pruning spend includes $53,402 of the CY 2015 costs paid in CY 2016.

The Company spent significantly less than anticipated for traffic control because the 7L2 feeder was deferred and the Town of Pelham relaxed its traffic control requirement to only roads with a double yellow line in the center.

The Company spent significantly more on hazard tree removals because additional risk trees with higher probability of failure resulting in a negative reliability impact were identified during the work planning process. The removals that were completed were the highest risk ranked trees with the highest potential to impact a large number of customers. These removals are generally larger mature trees which are more costly to remove.

The Company spent more than anticipated on clearing right-of-way floor. The budget was based on an estimate from the contractor, which was insufficient to complete the planned work.

**Q. Please explain why the Company's actual Capital spending for CY 2016 varied from the Company's original budget.**

A. As shown in Appendix 2 of the CY 2016 REP/VMP Report, the Company provides the actual capital investment for 2015 and 2016. The Company's actual total carryover from CY 2015 was $97,621 (Appendix 2, line 5, column (d)) for capital activities related to the REP, or $2,379 less than the filed budgeted amount of $100,000. As shown in Appendix 2, line 5, column c, of the CY 2016 REP/VMP Report, the Company's total spending

level for CY 2016 was $751,769 for capital activities related to REP, or $698,231 less than the filed budgeted amount $1,450,000. Key factors for budget variances are described in the REP/VMP Report for CY 2016. In summary, the variance in the Bare Conductor Replacement Program was driven primarily by bid prices being much lower than expected, which resulted in a lower than forecasted investment. In addition, estimates for the replacement of bare conductor were not adjusted until recently after Liberty gathered 4 years' worth of financial data.

**Q. Please summarize the reliability results shown in the CY 2016 REP/VMP Report.**

A. Metrics for CY 2016 are presented in the table below based on both the PUC Standard for excluding major weather events and the IEEE Standard 1366 method for excluding major event days. In addition, metrics are presented excluding transmission supply outages, planned or notified outages, and all other applicable exclusions. The metrics include customers interrupted ("CI"), customer minutes interrupted ("CMI"), system average interruption frequency index ("SAIFI"), system average interruption duration index ("SAIDI"), customer average interruption duration index ("CAIDI"), and customers interrupted per interruption index ("CIII").

As shown on page 10 of the CY 2016 REP/VMP Report, the SAIFI performance of 1.31 for CY 2016 continues to track on an improving, downward trend, with the 2016 performance slightly better than that of 2013 and 2014. Calendar year 2015 was an exceptionally favorable year and the Company would not expect to consistently achieve that level of performance. The 118 minutes for SAIDI also reflects a similar performance improvement as compared to 2013 and 2014. For 2016, there were a number of one-off

events that drove our SAIDI performance. A total of seven feeder outages were due to issues with automatic transfer schemes at substations. These made up 13% of our SAIDI and 20% of our SAIFI performance indices. The top three events for CY 2016 made up 14% of our SAIDI and 8% of our SAIFI performance indices. The top two events were due to pole hits from motor vehicle accidents. Mitigation measures, both inside and outside of the REP, were implemented in 2016 to improve our reliability performance, specifically addressing issues to automatic transfer schemes at substations and reconfiguring areas of feeder 13L2 to limit risk of a feeder lockout. Every automatic transfer scheme was tested, and where necessary, maintained, to ensure proper operation. Other reliability improvement measures include addressing pockets of poor performance and underperforming feeders.

In summary, the Company met its SAIFI and SAIDI targets of 1.33 and 131.02 minutes respectively, which are based on a 5-year rolling average and are shown on Appendix 7. Some level of variability is to be expected in the year to year metrics, typically rooted in weather pattern changes. We expect this overall positive performance in SAIFI and SAIDI to continue as we experience further positive impact from our reliability initiatives.

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

A. Yes. As described in this filing, the expenditures were reasonable because these expenditures were made for programs that are specifically referenced in the Settlement Plan and were necessary to achieve continued improvement in the Company's system

reliability. The work undertaken for vegetation management, single phase recloser and trip-saver installations, and bare conductor replacement was incurred for the explicit purpose of improving system reliability and is consistent with the intent of the Secretarial Letter. These expenditures are expected to generate real customer benefits in the form of improved reliability performance. As such, the Commission should approve recovery of these expenditures and permit the requested rate adjustments to become effective for usage on and after May 1, 2017.

## V. CONCLUSION

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

A. Yes, it does.