



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

Docket No. DE 16-XXX

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities  
Calendar Year 2015 Reliability Enhancement Plan and Vegetation  
Management Plan Report and Reconciliation Filing

**DIRECT TESTIMONY  
OF  
CHRISTIAN BROUILLARD  
AND  
JEFFREY CARNEY**

March 15, 2016

1 **I. INTRODUCTION AND QUALIFICATIONS**

2 **Christian Brouillard**

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

4 A. My name is Christian P. Brouillard and my business address is 15 Buttrick Road,  
5 Londonderry, NH 03053.

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

7 A. I am employed as the Director of Engineering by Liberty Utilities Service Corp. In my  
8 capacity as Director of Engineering, I am responsible for delivery system planning and  
9 capital investments, engineering and design, and maps and records integrity for Liberty  
10 Utilities (Energy North Natural Gas) Corp. and Liberty Utilities (Granite State Electric)  
11 Corp. (“Granite State” or “the Company”).

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

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

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

19 A. In 1982, I began my engineering career as an associate engineer with Massachusetts  
20 Electric Company, a subsidiary of National Grid USA (“National Grid”) and a former  
21 affiliate of Granite State, in North Andover, Massachusetts. From 1982 to 1992, I held

1 positions of progressive responsibility in the distribution engineering, planning,  
2 protection, and executive support functions. In 1993, I was promoted to Manager of  
3 District Engineering and held various engineering and management positions since that  
4 time, including Manager of Asset Strategy. In 2005, I became Manager of Work  
5 Planning and was responsible for developing Granite State's capital construction plans.  
6 In 2008, I was promoted to Director, Investment Planning for the Company's electric  
7 distribution system in both New England and New York for National Grid. In 2011, I  
8 assumed my current role as Director of Engineering for Liberty Energy NH. In January  
9 2015, I assumed transitional responsibility for Electric Operations, Gas Production,  
10 Control and Dispatch Center, and Compliance Quality and Emergency Management. I  
11 am currently responsible for Electric and Gas Engineering, Gas Production, Control and  
12 Dispatch Center, and Compliance Quality and Emergency Management

13 **Q. Have you previously testified before the New Hampshire Public Utilities**  
14 **Commission?**

15 A. Yes, I have previously testified before the Commission on the Company's Reliability  
16 Enhancement Program and Integrated Resource Plan.

17 **Jeffrey Carney**

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

19 A. My name is Jeffrey Carney, and my business address is 407 Miracle Mile, Lebanon, New  
20 Hampshire 03766.

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

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

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

8 A. I graduated from Paul Smith's College of Arts and Sciences in Paul Smiths, New York in  
9 1976. I received an associate's degree in Applied Science in Forestry and Land  
10 Surveying.

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

12 A. I joined Liberty on April 1, 2012, when I assumed the transitional responsibility as  
13 Vegetation Supervisor for the National Grid FY13 Vegetation Management Program.  
14 Prior to that, I served as the System Arborist for National Grid Service Company from  
15 2007 to 2012. I was the Transmission and Distribution Forester for Granite State and  
16 New England Power Company's territory in New Hampshire and Vermont from 1989 to  
17 2005. From 2005 to 2007, I was the New England North Lead Arborist and oversaw  
18 New England North Arborists responsible for developing forestry strategy and delivery  
19 the work plan. During that time, I simultaneously served as the Company's District  
20 Arborist in New Hampshire. From 1979 to 1989, I was a self-employed Consulting  
21 Forester.

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

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

4 **II. PURPOSE OF TESTIMONY**

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

6 A. First, this testimony provides the Commission with background information regarding the  
7 Reliability Enhancement Program (“REP”) and the Vegetation Management Program  
8 (“VMP”) that Granite State implemented during Calendar Year 2015 as described in the  
9 Calendar Year 2015 Reliability Enhancement Plan and Vegetation Management Plan  
10 Report, dated March 15, 2016 (the “CY 2015 REP/VMP Report”), submitted with this  
11 filing. Second, this testimony provides support for the Company’s request to recover  
12 \$346,184 in expenses above the Base Plan operating and maintenance (“O&M”) amount  
13 of \$1,360,000 that was authorized by the Settlement Agreement in Docket No. DE 13-  
14 063 (the “Settlement Agreement”) and approved by Order No. 25,638 at 12 (March 17,  
15 2014). Third, the Company seeks to recover the revenue requirement associated with a  
16 total of \$1,321,456 in capital investment, broken down between program years CY 2014  
17 and CY 2015. The total carryover from CY 2014 was \$269,663, as discussed in the CY  
18 2015 REP/VMP Report and in the pre-filed direct testimony of Heather Tebbetts. The  
19 Company is requesting an incremental revenue requirement of \$279,097 to recoup the  
20 2015 REP capital expenditures. Finally, this filing provides information regarding the  
21 calculation of the REP/VMP Adjustment Provision and the REP Capital Investment  
22 Allowance and the associated rate impacts, as set forth in the testimony of Heather

1 Tebbetts, which is a part of this filing. The Company requests that the new O&M amount  
2 apply to usage on and after May 1, 2016.

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

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

5 A. As part of the Settlement Agreement, the Company agreed to continue with its  
6 Vegetation Management and Reliability Enhancement Programs at agreed upon levels,  
7 subject to annual Commission approval. In general, the REP and VMP include both  
8 capital (REP) and O&M (VMP) spending targeted to improve reliability. The REP and  
9 VMP are premised on the understanding that a certain amount of annual spending on both  
10 capital and O&M activities is necessary to maintain the safety and reliability of the  
11 Company's electric distribution system. The Settlement Agreement assumed that a base  
12 amount of \$1,360,000 would be spent on O&M activities associated with the VMP  
13 during each fiscal year. The Settlement Agreement also contemplated that the Company  
14 would target a budget of \$1,000,000 for REP capital investments for each fiscal year. To  
15 the extent the Company spends less than the base O&M budget on VMP activities in a  
16 given fiscal year, the difference is credited to customers either through a refund  
17 commencing on May 1 or a credit to the following year's VMP O&M budget.

18 **Q. Please describe what types of activities were performed under the REP and VMP in**  
19 **2015.**

20 A. The Company budgeted capital funds to install nine single phase recloser schemes, 18  
21 trip savers in radial applications, and to replace 2.2 miles of bare mainline primary  
22 conductor with spacer cable. These projects are identified in Appendices 2 and 3 of the

1 CY 2015 REP/VMP Report. The VM activities consisted of Planned Cycle Trimming,  
2 and Interim, Spot, and Trouble Tree Trimming, identified in Appendices 1, 4 and 5 of the  
3 CY 2015 REP/VMP Report.

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

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

1 the investments necessary to maintain and improve the performance of the system, while  
2 also ensuring a cost-effective use of the Company's available resources.

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

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

10 **IV. CALENDAR YEAR 2015 REP AND VMP IMPLEMENTATION**

11 **Q. Please explain how the Company's actual O&M spending for CY 2015 varied from**  
12 **the Company's original budget.**

13 A. As described in the CY 2015 REP/VMP Report, the Company completed all of the  
14 vegetation management work contained in its CY 2015 plan. Overall, actual expenses  
15 recorded in CY 2015 for VMP O&M activities, including \$273,674 associated with CY  
16 2014 VMP activities, amounted to \$1,994,184 or \$421,902 more than the proposed  
17 budget of \$1,572,282. The spending variances are explained in Appendix 1 of the  
18 REM/VMP Report.

1 **Q. Please explain how the Company’s actual capital spending for CY 2015 varied from**  
2 **the Company’s original budget.**

3 A. As shown in Appendix 2 of the CY 2015 REP/VMP Report, the Company provides the  
4 actual capital investment for 2014 and 2015. The Company’s actual total carryover from  
5 CY 2014 was \$269,663 (Appendix 2, line 5, column (d)) for capital activities related to  
6 the REP, or \$169,663 more than the filed budgeted amount of \$100,000. As shown in  
7 Appendix 2, line 4, column c, of the CY 2015 REP/VMP Report, the Company’s total  
8 spending level for CY 2015 was \$1,051,792 for capital activities related to REP, or  
9 \$88,208 less than the filed budgeted amount \$1,140,000 for CY 2015 capital projects.  
10 Key factors for budget variances are described in Section 2 of the REP/VMP Report for  
11 CY 2014.

12 **Q. Please summarize the reliability results shown in the CY 2015 REP/VMP Report.**

13 A. Metrics for CY 2015 presented on page 9 of the CY 2015 REP/VMP Report are based on  
14 Commission Standards for excluding major weather events and on the IEEE Standard  
15 1366 method for excluding major event days. The metrics also exclude transmission  
16 supply outages, planned or notified outages, and all other applicable exclusions. The  
17 metrics include customers interrupted (“CI”), customer minutes interrupted (“CMI”),  
18 system average interruption frequency index (“SAIFI”), system average interruption  
19 duration index (“SAIDI”), customer average interruption duration index (CAIDI), and  
20 customers interrupted per interruption index (CIII).

21 As shown in Section 3 of the CY 2015 REM/VMP Report, the SAIFI performance of  
22 0.58 for CY 2015 continues on an improving, downward trend, with the 2015

1 performance significantly better than that of 2014. Similar to the SAIFI trend, the 61.05  
2 minutes for SAIDI reflects a significant improvement in SAIDI indices over the past few  
3 years. For 2015, there were very few non-recurring events greater than 5 minutes in  
4 duration that drove our improvement in SAIDI performance. The top 3 events made up  
5 24% of our SAIDI performance indices. Mitigation measures, both inside and outside of  
6 the REP, were also implemented in 2015 to further improve our SAIDI performance,  
7 specifically addressing the drivers to SAIDI performance in 2015. The measures  
8 included addressing pockets of poor performance and underperforming feeders.

9 In summary, the Company met its SAIFI and SAIDI targets of 1.56 and 158.10 minutes,  
10 respectively, which are based on a 5-year rolling average and are shown on Appendix 7.  
11 2015 was the best reliability year since the Company began tracking reliability  
12 performance some twenty years ago. However, it is worth noting that in general, electric  
13 delivery system reliability performance in the New England region, as well as nationally,  
14 was favorable in 2015. Some level of variability is to be expected in the year to year  
15 metrics, typically rooted in weather pattern changes. We expect this overall positive  
16 performance in SAIFI and SAIDI to continue, albeit at more historical levels, as we  
17 experience further positive impact from our reliability initiatives.

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

20 A. Yes. As described in this filing, the expenditures were reasonable because they were  
21 made for programs that are specifically referenced in the Settlement Agreement as  
22 necessary to achieve continued improvement in the Company's system reliability. The

1 work undertaken for vegetation management, single phase recloser and trip-saver  
2 installations, bare conductor replacement, and underperforming area mitigation was  
3 incurred for the explicit purpose of improving system reliability and is consistent with the  
4 intent of the Settlement Agreement. These expenditures are expected to generate real  
5 customer benefits in the form of improved reliability performance. The Company  
6 requests that the Commission approve recovery of these expenditures and permit the  
7 requested rate adjustments to become effective for usage on and after May 1, 2016.

8 **V. CONCLUSION**

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

10 **A.** Yes, it does.

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