



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

Docket No. DE 19-064

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

**DIRECT TESTIMONY**

**OF**

**PHILIP E. GREENE**

April 30, 2019

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## ATTACHMENTS

<b>Attachment</b>	<b>Title</b>
PEG-1	Lead-Lag Study Calculations

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1 **I. INTRODUCTION AND QUALIFICATIONS**

2 **Q. Please state your full name and business address.**

3 A. My name is Philip E. Greene. My business address is 15 Buttrick Road, Londonderry,  
4 New Hampshire.

5 **Q. Please state by whom you are employed and your position.**

6 A. I am a Senior Financial Regulatory Analyst for Liberty Utilities Service Corp.  
7 (“Liberty”), which provides service to Liberty Utilities (Granite State Electric) Corp.  
8 d/b/a Liberty Utilities (“Granite State” or the “Company”). My responsibilities include  
9 roles in Financial Planning and Analysis budgeting, financial reporting, capital planning  
10 support, and rate case revenue requirement support.

11 **Q. Please describe your educational background and training.**

12 A. I graduated from the University of Massachusetts, Dartmouth, in 2001 with a Bachelor of  
13 Science in Accounting.

14 **Q. What is your professional background?**

15 A. I joined Liberty Utilities as a Senior Financial Regulatory Analyst in November 2017.  
16 Prior to my employment at Liberty Utilities I was employed by American Tower  
17 Corporation as a Program Manager in Strategic Real Estate from 2016 to 2017, with  
18 primary role of developing programs around tenant terminations and asset divestitures.  
19 Prior to my position in Strategic Real Estate I was a Project Manager in Mergers &  
20 Acquisitions for American Tower from 2008 to 2016, responsibilities included financial  
21 and non-financial evaluation of opportunities to acquire tower and other revenue

1 generating assets and project managing pre-acquisition diligence, closing, and integration  
2 activities. Prior to 2008 I held positions as Site Financial Supervisor and Site Financial  
3 Analyst in Land Management, also with American Tower Corporation. Prior to Joining  
4 American Tower Corporation I held positions as Senior Staff Accountant and Staff  
5 Accountant with the Accounting Firm Bonanno, Savino & Davies, P.C. located in  
6 Needham, Massachusetts, from 2001 to 2004.

7 **Q. Have you previously testified in regulatory proceedings before the New Hampshire**  
8 **Public Utilities Commission (the “Commission”)?**

9 A. No.

10 **II. PURPOSE AND OVERVIEW OF TESTIMONY**

11 **Q. What is the purpose of your testimony?**

12 A. The purpose of my testimony is to explain the Company’s lead-lag study, which is used  
13 to determine the cash working capital (CWC) requirement. My analysis is supported by  
14 the data presented in Attachment PEG-1.

15 **Q. Please define the term “cash working capital” as a rate base component.**

16 A. The term “cash working capital” refers to the net funds required by the Company to pay  
17 for goods and services between the time of the cash outlay by the Company for such  
18 goods and services and the time revenues are recovered from customers. For the  
19 Company, the cost of goods and services includes labor expenses, non-labor operations,  
20 and maintenance (“O&M”) expenses, including federal taxes, local taxes, and payroll-  
21 related taxes.

1 **Q. How did you derive the cash working capital requirement?**

2 A. The CWC requirement was determined using the results of a lead-lag study, which  
3 compares the net difference between the revenue lag and the expense lag. The revenue  
4 lag represents the number of days between the time customers receive their service and  
5 the time customer payments are made available to the Company. The longer the revenue  
6 lag, the more cash the Company needs to fund its day-to-day operations. The expense lag  
7 represents the number of days between the time the Company receives goods and  
8 services used to provide service, and the time payments are made for those goods and  
9 services. The longer the expense lag, the less cash the Company needs to fund its day-to-  
10 day operations. Together, the revenue lag and expense lag are used to measure the net  
11 lead/lag to determine the CWC requirement, which becomes a component of the  
12 Company's rate base.

13 **Q. Are the results of your lead-lag study an accurate calculation of the Company's**  
14 **CWC requirement?**

15 A. Yes. The study provides an accurate assessment of the Company's actual CWC needs  
16 during the rate case test year.

17 **III. LEAD-LAG STUDY APPROACH**

18 **Q. Please summarize the results and the approach of the lead-lag study you conducted.**

19 A. The lead-lag study shows a net lag of 25.53 days for the rate case test year January 1  
20 through December 31, 2018. The CWC calculation is based on the result of the lead-lag

1 study, which is then applied to the rate case test year amounts for O&M expenses and  
2 taxes.

3 **Q. How did you develop the net lead/lag days in your study?**

4 A. The revenue lag is measured from the time service is provided to customers until the time  
5 payment is received from customers. Expense lags are measured from the time a service  
6 is provided to the Company until payment is made by the Company for that service.  
7 These lags are measured in days, converted to dollar-days, and summarized for each  
8 element in the lead-lag study. The difference between the revenue lag and the expense  
9 lag determines if there is a net revenue lag (revenue lag days are greater than the expense  
10 lag days for a component) or a net expense lead (revenue lag days are less than the  
11 expense lag days for a component).

12 **Q. Please describe the results of your lead-lag study.**

13 A. The results show the total number of revenue lag days and expense lag days for the  
14 Company during the CWC test year. The net difference between the computed revenue  
15 lag days and expense lag days was then multiplied by the average daily revenue  
16 requirements of the system to produce the net cash working capital required by the  
17 Company.

18 **IV. REVENUE LAG**

19 **Q. Please describe the components of the revenue lag.**

20 A. Revenue lag consists of three components: (1) the service lag; (2) the billing lag; and (3)  
21 the collection lag. The total number of days produced by the three components



1 represents the amount of time between providing utility service to customers and the  
2 receipt of the related revenues for such service. Together, these revenue lag components  
3 comprise the total revenue lag days.

4 **Q. What is the service lag?**

5 A. The service lag represents the midpoint of the service period, *i.e.*, the time between the  
6 start of the billing month and the end of the billing month. My approach is to rely on the  
7 midpoint of the service period, which assumes that service will be provided evenly over  
8 the service period.

9 **Q. What is the billing lag?**

10 A. The billing lag is the time between the bill generation date and the date bills are sent to  
11 customers. The billing lag begins the day the bill is generated and ends with the  
12 recording and mailing of the customer bill. This lag includes the process for review and  
13 validation of usage and billing.

14 **Q. What is the collection lag?**

15 A. Collection lag reflects the time between recording and bill mailing for the services  
16 rendered and the receipt of payment from customers for the revenues billed. The  
17 collection lag was determined by the accounts receivable turnover ratio method. This is  
18 calculated by taking the average accounts receivable balance divided by the average daily  
19 revenues for the test year.

1 **Q. What is the total revenue lag component for the lead-lag calculation?**

2 A. Each of these revenue lag components was totaled to arrive at the total revenue lag of  
3 60.37 days, as shown on Attachment PEG-1, Page 2.

4 **V. EXPENSE LAG**

5 **A. Operation and Maintenance Expenses**

6 **Q. How did you determine the expense lag days for O&M expenses?**

7 A. I separated total system expenses into three groups: (1) regular payroll costs; (2) annual  
8 performance bonus payroll costs; and (3) third-party O&M expenses. I measured the  
9 expense lag days for each of these groups independently. A summary of the O&M  
10 expense lag is shown on Attachment PEG-1, Page 8.

11 **Q. How were the lag days for the payroll expenses determined?**

12 A. I based the expense lag days for payroll on the Company's wage payment process, which  
13 pays employees on a bi-weekly basis or weekly basis. I calculated the expense lag days  
14 for payroll costs by determining the average days of service being paid and adding the  
15 midpoint of the service period to the number of days between the end of each service  
16 period and the date of payment to employees. This calculation produces the number of  
17 total days between the middle of the period for which employees' wages are recorded and  
18 the date on which payments are disbursed. These calculations were based on actual  
19 historical Company data for the CWC test year. Holidays are also based on actual  
20 historical data for the CWC test year.

1 **Q. Did you make any adjustment to the payroll lag days in your lead-lag study?**

2 A. Yes. I made an adjustment for vacation pay, which recognizes that vacation pay is  
3 earned before it is actually taken. The vacation pay adjustment is calculated based on the  
4 average payroll lag days and the midpoint of the days in the year.

5 **Q. How were the lag days for the annual performance bonus determined?**

6 A. The Company's annual performance bonus is paid annually in April for the preceding  
7 calendar year. The lag days were determined based on the midpoint of the performance  
8 period and the date bonuses were paid.

9 **Q. How were the lag days determined for third-party O&M expenses?**

10 A. I based the measure of expense lag days for the expenses in this group on a sampling of  
11 these expenses for the test year. I then identified the sample invoices that were greater  
12 than \$50,000 and reviewed the invoice to determine the service period. For this sample  
13 the mid-point of the service period and the payment date were used to calculate the  
14 expense lag for third-party O&M expenses. For all other invoices greater than \$50,000  
15 not included in the sample, the invoice date and payment date were used to determine the  
16 expense lag number of days for non-payroll related O&M expenses. Since the sample  
17 included only invoices greater than \$50,000, and since in most cases the service period is  
18 expected to precede the invoice date, the results of expense lag on third party O&M  
19 expense lag can be considered conservative.

1           **B. Federal Income Tax Expense**

2   **Q.    What are the lag days determined for federal income taxes?**

3    A.    The lag days for federal income taxes were calculated using the calendar year as the  
4           service period because the income taxes would be earned throughout the year. The  
5           midpoint of the service period would be July 2. Payment of estimated tax for the year is  
6           made quarterly on April 15, June 15, September 15, and December 15.

7   **Q.    What taxes are included in the taxes other than income taxes?**

8    A.    This group of taxes consists of payroll-related taxes (FICA, federal unemployment, and  
9           state unemployment) and property taxes.

10   **Q.    How were the lag days calculated for each of those taxes?**

11   A.    The payment lags for FICA taxes were calculated from the pay period end date to the  
12           respective payment dates of the taxes. Federal unemployment taxes are paid after the end  
13           of each quarter based on that quarter's wages up to the annual limit. State unemployment  
14           taxes were calculated from the pay period end date to the respective payment dates of the  
15           taxes. The payment lag for property taxes was calculated from the midpoint of the period  
16           for which the tax was assessed to the payment date.

17           **C. Non-Cash Items**

18   **Q.    Please explain why you excluded non-cash items from your lead-lag study.**

19    A.    This study uses the cash method and therefore excludes non-cash items. As such, non-  
20           cash items, including depreciation, amortization, deferred income taxes, and return

1 (including return on equity, and interest on long-term debt), have not been included in my  
2 lead-lag study.

3 **VI. CONCLUSION**

4 **Q. What were the results of the lead-lag study?**

5 A. The CWC requirement for the Company is based on a net lag of 25.53 days for the rate  
6 case test year January 1 through December 31, 2018.

7 **Q. Are the results of this lead-lag study reasonable?**

8 A. Yes, the results of the lead-lag study reflect the Company's practices, and are fair and  
9 reasonable. In addition, the methods used in the study are consistent with studies  
10 performed in other jurisdictions. The resulting CWC requirement should properly be  
11 included in the Company's rate base.

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

13 A. Yes, it does.

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