

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
Lead/Lag and Cash Working Capital

DIRECT TESTIMONY

OF

TODD J. SCHAVRIEN

May 5, 2023



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LIST OF ATTACHMENTS

ATTACHMENT TJS-1	LEAD/LAG STUDY
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1 **I. INTRODUCTION**

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

3 A. My name is Todd J. Schavrien. My business address is 9750 Washburn Road, Downey,
4 California.

5 **Q. On whose behalf are you submitting this testimony?**

6 A. I am submitting testimony on behalf of Liberty Utilities (Granite State Electric) Corp.
7 d/b/a Liberty (“Liberty” or “the Company”).

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

9 A. I joined Liberty Utilities Service Corp. (“LUSC”) in October 2022. Prior to joining
10 LUSC, I held various positions with increasing responsibility at San Diego Gas &
11 Electric (SDG&E) from 2018 to 2022. My last position with SDG&E was as a regulatory
12 case administrator, where I organized corporate-wide case teams and directly managed
13 their participation in regulatory proceedings before state and federal commissions. I hold
14 a Bachelor of Arts in Interdisciplinary Studies from the University of Missouri and a
15 Master of Business Administration from William Woods University.

16 **Q. Please describe your duties at LUSC.**

17 A. I am employed by LUSC as an Analyst III for Regulatory Projects. LUSC provides local
18 utility management, shared services, and support to Liberty and the other regulated water,
19 wastewater, natural gas, and electric utilities commonly owned and operated by Liberty
20 Utilities as affiliates of the Company. In my position, I am responsible for providing
21 rate-related services to the Company.

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

2 A. I have not previously testified before this Commission.

3 **II. PURPOSE OF TESTIMONY AND EXECUTIVE SUMMARY**

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

5 A. The purpose of my testimony is to explain the Company's lead/lag study, which is used
6 to determine the cash working capital ("CWC") requirements of Liberty for its delivery
7 services. The Company has calculated the cash working capital for the test year ended
8 December 31, 2022, to be \$1,871,506. The cash working capital for Rate Year 1 through
9 Rate Year 3 are identified in the testimony of Company Witnesses Dane and Jardin as
10 part of the revenue requirement calculation.

11 **Q. Are you sponsoring any required schedules or Exhibits?**

12 A. Yes, the analysis supporting the Company's CWC is presented in Attachment TJS-1.

13 **III. CASH WORKING CAPITAL**

14 **Q. Please define the term "cash working capital" as presented in the context of utility**
15 **ratemaking.**

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. Explain how the cash working capital requirement was derived.**

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 the Company makes payments for those
9 goods and services. The longer the expense lag, the less cash the Company needs to fund
10 its day-to-day operations. Together, the revenue lag and expense lag are used to measure
11 the net lead/lag to determine the CWC requirement, which becomes a component of the
12 Company's rate base.

13 **Q. Are the results of the lead/lag study an accurate calculation of the Company's CWC**
14 **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 **IV. LEAD/LAG STUDY APPROACH**

18 **Q. Please explain how the net lead/lag days were developed in the Company's study.**

19 A. The revenue lag is measured from the time service is provided to customers until the time
20 payment is received from customers. Expense lags are measured from the time a service
21 is provided to the Company until payment is made by the Company for that service.

1 These lags are measured in days, converted to dollar-days, and summarized for each
2 element in the lead/lag study. The difference between the revenue lag and the expense
3 lag determines if there is a net revenue lag (revenue lag days are greater than the expense
4 lag days for a component) or a net expense lead (revenue lag days are less than the
5 expense lag days for a component). The lead/lag study starts with revenues and expenses
6 recorded on the Company's books in the test year as the basis for the analysis. O&M
7 expenses for several types of expenses were used to calculate the lag or lead days. Once
8 the net lag days are established on a per-book basis, they are applied to the test year pro-
9 forma revenue requirements to determine the dollar-days of cash working capital. The
10 net dollar days of revenues less expenses are then divided by 365 to determine the
11 average daily cash working capital amounts to determine cash working capital.

12 **Q. Please describe the results of the 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 The lead/lag study shows a net lag of 24.61 days for the test year January 1 through
19 December 31, 2022. The CWC calculation is based on the result of the lead/lag study,
20 which is then applied to the rate case pro forma test year amounts for O&M expenses and
21 taxes.

1 **V. REVENUE LAG**

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

3 A. Revenue lag consists of three components: (1) the service lag; (2) the billing lag; and (3)
4 the collection lag. The total number of days produced by the three components
5 represents the amount of time between providing utility service to customers and the
6 receipt of the related revenues for such service. Together, these revenue lag components
7 comprise the total revenue lag days.

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

9 A. The service lag represents the midpoint of the service period, i.e., the time between the
10 start of the billing month and the end of the billing month. The Company's approach is
11 to rely on the midpoint of the service period, which assumes that service will be provided
12 evenly over the service period.

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

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

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

19 A. Collection lag reflects the time between recording and bill mailing for the services
20 rendered and the receipt of payment from customers for the revenues billed. The
21 collection lag was determined by the accounts receivable turnover ratio method. This is

1 calculated by taking the average accounts receivable balance divided by the average daily
2 revenues for the test year.

3 **Q. What is the total revenue lag component for the lead/lag calculation?**

4 A. Each of these revenue lag components was totaled to arrive at the total revenue lag of
5 57.28 days, as shown in Attachment TJS-1, Page 2.

6 **VI. EXPENSE LAG**

7 **A. Operation and Maintenance Expense**

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

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

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

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

1 on actual historical Company data for the CWC test year. Holidays are also based on
2 actual historical data for the CWC test year.

3 **Q. Were any adjustments made to the payroll lag days in the lead/lag study?**

4 A. Yes. An adjustment was made for vacation pay, which recognizes that vacation pay is
5 earned before it is taken. The vacation pay adjustment is calculated based on the average
6 payroll lag days and the midpoint of the days in the year.

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

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

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

12 A. The measure of expense lag days for the expenses in this group was based on a sampling
13 of these expenses for the test year. Invoices that were greater than \$50,000 were
14 identified and the invoice was reviewed to determine the service period. For these
15 invoices, the mid-point of the service period and the payment date were used to calculate
16 the expense lag for third-party O&M expenses. For all other invoices less than \$50,000,
17 the invoice date and payment date were used to determine the expense lag number of
18 days for non-payroll-related O&M expenses.

19 Due to the large volume of invoices, a sampling of invoices was used to estimate the
20 payment lag. The sampling method used was a random sequential sample of the

1 population using three strata. The population was sorted by dollar amounts, and the
2 following strata were used to generate the sample:

- 3 • Stratum 1: Every third invoice greater than \$20,000;
- 4 • Stratum 2: Every twenty-fifth invoice between \$1,500 and \$20,000; and
- 5 • Stratum 3: Every one-hundred and fiftieth invoice under \$1,500.

6 The resulting sample, which accounted for 19.2% of the dollars in the population,
7 indicated a lag of 37.16 days.

8 **B. Federal Income Tax Expense**

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

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

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

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

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

18 A. The payment lags for FICA taxes were calculated from the pay period end date to the
19 respective payment dates of the taxes. Federal unemployment taxes are paid after the end
20 of each quarter based on that quarter's wages up to the annual limit. State unemployment

1 taxes were calculated from the pay period end date to the respective payment dates of the
2 taxes. The payment lag for property taxes was calculated from the midpoint of the period
3 for which the tax was assessed to the payment date.

4 **C. Non-Cash Items**

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

6 A. This study uses the cash method and therefore excludes non-cash items. As such, non-
7 cash items, including depreciation, amortization, deferred income taxes, and return
8 (including return on equity, and interest on long-term debt), have not been included in my
9 lead/lag study.

10 **VII. CONCLUSION**

11 **Q. What were the results of the lead/lag study?**

12 A. The CWC requirement for the Company is based on a net lag of 24.61 days for the rate
13 case test year January 1 through December 31, 2022.

14 **Q. Are the results of this lead/lag study reasonable?**

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

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

20 A. Yes.

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