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July 25, 2023

Michael J. Sheehan
Director, Legal Services
Liberty Utilities Corp.
15 Buttrick Road
Londonderry, NH 03053

**Re: Docket No. DE 23-039
Liberty Utilities Corp. d/b/a Liberty
Change in Distribution Rates
Dartmouth College Data Requests—Set 1**

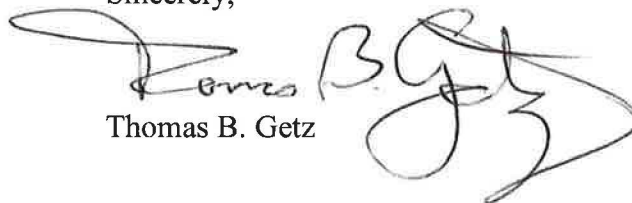
Dear Attorney Sheehan:

Pursuant to the New Hampshire Public Utilities Commission’s (“PUC” or “Commission”) Prehearing Order of June 30, 2023, and Procedural Order of July 24, 2023, Trustees of Dartmouth College serve the enclosed Set 1 Data Requests. Please provide responses in the same manner and consistent with the same set of instructions as set forth in the Department of Energy’s Data Requests.

The Data Requests are provided electronically only consistent with the Commission’s March 17, 2020 suspension of the requirement to file paper copies. Copies have also been provided electronically to the full docket service list.

If you have any questions, please do not hesitate to contact me.

Sincerely,


Thomas B. Getz

**STATE OF NEW HAMPSHIRE
PUBLIC UTILITIES COMMISSION**

DOCKET NO. DE 23-039

**LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP. D/B/A LIBERTY
REQUEST FOR CHANGE IN DISTRIBUTION RATES**

DARTMOUTH COLLEGE DATA REQUESTS—SET 1

DAR 1-1. Mr. Proudman’s Direct Testimony, on page 10, lines 14-16, states the Company’s updated time of use ("TOU") rates “will give customers the ability to lower their rates when they change their usage patterns [to] facilitate further customer investments in DERs and decarbonization while also lowering bills.”

- a. Please explain how the Company’s rate design proposal gives G-1 customers the ability to lower their electricity costs if they change their usage patterns.
- b. Please explain how the Company’s rate design proposal facilitates G-1 customers investing in DERs and decarbonization measures and, more specifically, what DERs and decarbonization measures are facilitated.

DAR 1-2. In Microsoft Excel format, please provide the 8,760 hourly load data for each Liberty distribution substation during calendar year 2022.

DAR 1-3. In Microsoft Excel format, please provide the timestamp of the annual peak demand hour for each Liberty distribution substation during calendar years 2019, 2020 and 2021. The timestamp should identify the date, hour ending (prevailing time), and average demand during the distribution substation’s annual coincident peak demand hour.

DAR 1-4. In Microsoft Excel format, please provide an 8,760-hour dataset of the Company’s Regional Network Service hourly loads for its New Hampshire electric service territory for calendar years 2019, 2020, 2021 and 2022.

DAR 1-5. Referring to Ms. Bartos’ Direct Testimony, on page 4, line 1-2, please provide the following information, data sets, and analyses. Where data sets or analyses are requested, please provide these in excel format with formulas intact, including linkages to any other data or information used in the analyses. Please provide:

- a. Historical system peak for the years 2000 to the present.
- b. Normalized peak for the years 2000 to the present.
- c. Customer count data for the years 2000 to the present.

DAR 1-6. Please confirm whether the marginal cost of service study included a probability of peak analysis to validate that Liberty’s proposed peak hours (3 P.M. to 8 P.M. on all non-holiday weekdays) and mid-peak hours (8 A.M. to 3 P.M. on all non-holiday weekdays) for small commercial and residential customers accurately reflect current load profiles on the Company’s distribution system.

DAR 1-7. Please explain how Liberty’s proposal to continue using a billing demand ratchet for G-1 customers’ distribution demand charges aligns with the Commission’s rate design policy and precedent to apply the concepts of marginal cost ratemaking principles. [By demand ratchet, we mean that a customer’s billed demand for each month under ordinary load conditions shall be the greatest of the following: 1) the greatest fifteen-minute peak during the peak hours which occurs during such month as measured in kilowatts; 2) 90% of the greatest fifteen-minute peak during the peak hours occurring during such month as measured in kilovolt-amperes; or 3) 80% of the customer’s greatest demand as so determined above during the preceding eleven months.]

DAR 1-8. Does a residential or small commercial customer’s monthly kilowatt-hour consumption dictate growth-related distribution plant addition needs for Liberty’s distribution system? If so, please explain how.

DAR 1-9. Does the specific end use to which a customer puts electricity, as opposed to a customer’s use of the same electricity irrespective of end use have any differentiating impact on determining the need for Liberty to make investments in growth-related distribution plant?

DAR 1-10. Does a kilowatt of grid demand used to charge an electric vehicle have a greater, the same, or lesser impact on driving growth-related distribution plant investment compared to a kilowatt of grid demand during the same hour and at the same location used to power some other electric equipment, such as heating, ventilation, and air conditioning (“HVAC”) systems or customer appliances? Please explain your answer.

DAR 1-11. Please specify the year in which Liberty or its predecessor last modified the definition of its on-peak hours for the Company’s G-1 rate class.

DAR 1-12. Referring to Mr. Tillman’s Direct Testimony, on page 4, lines 5-6, please explain why Liberty’s plan to consolidate Liberty’s TOU rate models into a single consolidated methodology for modeling TOU rates across the Company does not include changing the on-peak period for G-1 customers to include the hours of 3 P.M. to 8 P.M. on non-holiday weekdays, as the Company has proposed for its small commercial and residential TOU rate classes.

DAR 1-13. Please explain the Company’s rationale for maintaining a demand ratchet for G-1 customers’ distribution demand charges, while not implementing a similar demand ratchet for the proposed TOU rate classes for residential and small commercial customers. [By demand ratchet, we mean that a customer’s billed demand for each month under ordinary load conditions shall be the greatest of the following: 1) the greatest fifteen-minute peak during the peak hours which occurs during such month as measured in kilowatts; 2) 90% of the greatest fifteen-minute peak during the peak hours occurring during such month as measured in kilovolt-amperes; or 3) 80% of the customer’s greatest demand as so determined above during the preceding eleven months.]

DAR 1-14. Referring to Mr. Tillman’s Direct Testimony, on page 5, lines 4-5, please explain whether Liberty met with its G-1 customers to solicit feedback on its current rate design as part of the Company’s effort to review and modernize its retail rates in New Hampshire. If so, please

identify the customers with whom Liberty met to solicit such feedback and provide any and all materials, including notes taken or reports prepared as a result of any such meetings.

DAR 1-15. Referring to Mr. Tillman's Direct Testimony, on page 4, Lines 15-16, please explain how continuing to assess G-1 customers transmission charges using a per kilowatt-hour charge supports Liberty's rate modernization strategy to connect the price signals more directly to the underlying costs of providing service.

DAR 1-16. Referring to Mr. Tillman's Direct Testimony, on page 4, Lines 15-16, please explain how Liberty's proposal to use a per kilowatt-hour rate to assess distribution charges to residential and small commercial TOU customers supports Liberty's rate modernization strategy to connect the price signals more directly to the underlying costs of providing service.

DAR 1-17. Referring to Mr. Tillman's Direct Testimony, on page 4, Lines 15-16, please explain how Liberty's proposal to continue assessing G-1 customers distribution demand charges that have no seasonal rate differentiation supports Liberty's rate modernization strategy to connect the price signals more directly to the underlying costs of providing service.

DAR 1-18. Referring to Mr. Tillman's Direct Testimony, on page 4, Lines 17-18, please explain how maintaining a billing demand ratchet for G-1 customers is a modernized, effective rate structure that incentivizes efficient customer behavior and creates downward pressure on prices.

DAR 1-19. Referring to Mr. Tillman's Direct Testimony, on page 4, Lines 19-20, please explain the choice of pricing products that Liberty offers to its G-1 customers and provide a list of all such pricing products offered.

DAR 1-20. Please identify and provide copies of any analyses Liberty has conducted evaluating how the Company's current rate design affects G-1 customers' ability to reduce grid demand during coincident peak periods through active load management or the adoption of energy storage.

DAR 1-21. Referring to Mr. Tillman's Direct Testimony, on page 17, line 7, please provide copies of any analyses Liberty has conducted that confirm capacity-related investments in primary distribution plant are being driven by peak demand that is occurring between 8 A.M. and 3 P.M. on non-holiday weekdays.

DAR 1-22. Does Liberty's recent billing system upgrade enable the Company to implement an automated billing solution to charge G-1 customers a monthly transmission demand charge based on the ratio of the customer's average 60-minute grid demand during Liberty's monthly peak load hour to total Liberty load that same hour, measured across the Company's New Hampshire service territory? If not:

- a. What is the monthly cost per customer to manually bill customers under such a rate design?
- b. What is the implementation lead time and cost for Liberty to implement this capability in its billing system?

DAR 1-23. Referring to Mr. Therrien's Direct Testimony, on page 9, lines 16-19, please explain why the Company has prioritized rate continuity considerations versus efficiency and equity in determining the appropriate level of demand charges for its G-1 and G-2 customers.

DAR 1-24. Please explain how Liberty's proposal to assess transmission charges to G-1 customers using a unit-based rate per kilowatt-hour is an efficient rate structure.

DAR 1-25. Please explain how Liberty's proposal to continue assessing distribution demand charges to G-1 customers without seasonal rate differentiation is an efficient rate structure.

DAR 1-26. Please explain how Liberty's proposed continued use of a billing demand ratchet for G-1 customers supports rate simplicity. [By demand ratchet, we mean that a customer's billed demand for each month under ordinary load conditions shall be the greatest of the following: 1) the greatest fifteen-minute peak during the peak hours which occurs during such month as measured in kilowatts; 2) 90% of the greatest fifteen-minute peak during the peak hours occurring during such month as measured in kilovolt-amperes; or 3) 80% of the customer's greatest demand as so determined above during the preceding eleven months.] Please provide the results of any surveys or interviews with Liberty customers or customers of any other electric utility that you or Concentric Energy Advisors have that show customers believe demand ratchets simplify utility rates.