STATE OF NEW HAMPSHIRE
BEFORE THE
PUBLIC UTILITIES COMMISSION

Docket No. DE 20-XXX

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities
Annual Retail Rate Filing

DIRECT TESTIMONY

OF

JOHN D. WARSHAW

March 27, 2020

THIS PAGE INTENTIONALLY LEFT BLANK

I. INTRODUCTION AND QUALIFICATIONS

Q. Please state your full name and business address.

A. My name is John D. Warshaw, and my business address is 15 Buttrick Road, Londonderry, New Hampshire.

Q. By whom are you employed and in what capacity?

A. I am the Manager, Electric Supply for Liberty Utilities Service Corp., which provides services to Liberty Utilities (Granite State Electric) Corp. ("Granite State" or "the Company"). I oversee the procurement of power for Energy Service for Granite State as well as the procurement of renewable energy certificates ("RECs"). I am also responsible for monitoring costs and activities relative to transmission service provided to the Company.

Q. Please describe your educational background.

A. I graduated from the State University of New York Maritime College in 1977 with a Bachelor of Science in Nuclear Science. I received a Master's in Business Administration from Northeastern University in 1986. In 1992, I earned a Master of Arts in Energy and Environmental Management from Boston University.

Q. What is your professional background?

A. In November of 2011, I joined the Company as Manager, Electric Supply. Prior to my employment at Liberty Utilities Service Corp., I was employed by National Grid USA Service Company ("National Grid") as a Principal Analyst in Energy Supply – New England from 2000 to 2010. In that position I conducted a number of solicitations for

wholesale power to meet the needs of National Grid's New England distribution companies. I also administered both short-term and long-term power purchase agreements for National Grid's New England distribution companies. Prior to my employment at National Grid, I was employed at COM/Energy (now NSTAR) from 1992 to 2000. From 1992 to 1997, I was a Rate Analyst in Regulatory Affairs at COM/Energy responsible for supporting state and federal rate filings. In 1997, I transferred to COM/Electric to work in Power Supply Administration.

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

A. Yes. I most recently provided written and oral testimony before the Commission in Docket No. DE 19-059 on December 18, 2019.

Q. Have you testified before any other state regulatory agencies?

A. Yes. I have testified before both the Massachusetts Department of Public Utilities and the Rhode Island Public Utilities Commission regarding electric supply and renewable portfolio procurement activities.

II. PURPOSE OF TESTIMONY

Q. What is the purpose of your testimony?

A. My testimony addresses the estimated 2020 transmission expenses for Granite State. First, I will summarize the various transmission services provided to Granite State and describe how Granite State pays for such services. Second, I will provide testimony supporting the forecast of transmission expenses that Granite State expects to incur in

2020. As described more fully in Section IV of my testimony, the Company forecasts an increase of $1,055,238 in prospective transmission expenses for calendar year 2020 as compared to the forecast provided for calendar year 2019 in Docket No. DE 19-062.

III. SUMMARY OF TRANSMISSION SERVICES PROVIDED TO GRANITE STATE

Q. Please summarize what transmission services Granite State receives from ISO New England Inc. (the "ISO" or "ISO-NE") under rate schedules approved by the Federal Energy Regulatory Commission ("FERC").

A. Granite State receives transmission services under the ISO New England Inc. Transmission, Markets and Services Tariff ("ISO Tariff") as follows:

1. Section II (Schedules 1, 2, 9 and 16) of the ISO Tariff provides for Regional Network Service ("RNS");
2. Section IV.A – ISO Funding Mechanisms provides for the recovery of ISO's Administrative Services; and
3. Section II, Schedule 21 of the ISO Tariff provides for Local Network Service ("LNS") from the New England Power Company ("NEP").

Q. Please describe further the types of transmission services that are billed to Granite State under the ISO Tariff.

A. New England's transmission rates utilize a highway/local pricing structure. That is, Granite State receives regional transmission service over "highway" transmission facilities under Section II of the ISO Tariff (also known as RNS), and receives local transmission service over local transmission facilities under Schedule 21 of the ISO

Tariff (also known as LNS). Additionally, a number of administrative services are provided by ISO-NE under Section IV.A of the ISO Tariff.

A. Explanation of ISO Tariff Services, Rates & Charges

Q. Please explain the services provided to Granite State under the ISO Tariff.

A. Section II of the ISO Tariff provides access over New England's looped transmission facilities, more commonly known as Pool Transmission Facilities ("PTF") or bulk transmission facilities. In addition, the ISO Tariff provides for Ancillary Services (Black Start, Reactive Power, and Scheduling, System Control and Dispatch Services) as described more fully later in this testimony.

Q. How are the costs for RNS recovered?

A. The ISO Tariff RNS Rate ("RNS Rate") (Section II - Schedule 9 of the ISO Tariff) recovers the RNS costs, and is determined annually based on an aggregation of the transmission revenue requirements of each of the Participating Transmission Owners ("PTO") in New England, calculated in accordance with a FERC-approved formula in a single, "postage stamp" rate in New England. Granite State is currently participating in FERC Docket EL 16-19-002 to investigate the reasonableness of the formula rate protocols used to develop both RNS and LNS rates. A number of parties in that docket had reached a settlement that was filed with FERC on August 17, 2018. The settlement was opposed by a number of parties and was rejected by FERC. While the docket was assigned to a FERC judge for the purpose of hearings and creating a procedural schedule, the schedule has been suspended pending updates from the parties to determine re-

establishing a procedural schedule. Any refunds that may result from that investigation will be included in the applicable retail rate filing for transmission service.

Q. Please describe the ISO-NE System Restoration and Planning Service, Reactive Supply and Voltage Control, and Scheduling, System Control, and Dispatch Services that are included in the ISO Tariff.

A. ISO-NE System Restoration and Planning Service (Section II - Schedule 16 of the ISO Tariff), also known as Black Start Service, is necessary to ensure the continued reliable operation of the New England transmission system. This service allows for the payment to generators who have the capability of supplying load and the ability to re-start without an outside electrical supply to re-energize the transmission system following a system-wide blackout.

Reactive Supply and Voltage Control (Section II - Schedule 2 of the ISO Tariff), also known as Reactive Power Service, is necessary to maintain transmission voltages within acceptable limits on the ISO-NE transmission system and allows for the payment to generators or other facilities that have the capability to produce or absorb reactive power.

Lastly, Scheduling, System Control, and Dispatch Service ("Scheduling & Dispatch Service") consists of the services required to schedule the movement of power through, out of, within, or into the ISO-NE Control Area over the PTF and to maintain System Control. Scheduling & Dispatch Service also provides for the recovery of certain charges that reflect expenses incurred in the operation of satellite dispatch centers.

Q. How are the ISO-NE charges for Black Start and Reactive Power assessed to Granite State?

A. ISO-NE assesses charges for Black Start and Reactive Power Services to Granite State each month based on Granite State's proportionate share of its network load to ISO-NE's total network load.

Q. How are the charges for Scheduling & Dispatch Service assessed to Granite State?

A. Charges for Scheduling & Dispatch Service are assessed to Granite State through three separately charged tariffed services.

The first charge is for the expenses incurred by ISO-NE in providing these services and is recovered under Schedule 1 of Section IV.A of the ISO Tariff. These costs are allocated to Granite State each month based on an annually filed FERC-approved fixed rate times Granite State's monthly Network Load.

The second charge is for the costs incurred by the individual transmission owners in providing Scheduling & Dispatch Service over PTF facilities, including the costs of operating local control centers, and are recovered under Section II, Schedule 1 of the ISO Tariff. These costs are allocated to Granite State each month based on a formula rate that is determined each year based on the prior year's costs incurred times Granite State's monthly Network Load.

The final charge is for the cost of Scheduling & Dispatch Service for transmission service over transmission facilities other than PTF that are charged under Schedule 21 of the ISO

Tariff. Thus, the three types of Scheduling & Dispatch costs are similar, but are charged to Granite State through three different tariff mechanisms.

Q. What additional administrative services and/or charges flow through to Granite State under Section IV.A of the ISO Tariff?

A. Granite State also incurs charges pursuant to Section IV.A, Schedule 5 of the ISO Tariff. Schedule 5 provides for the collection of the New England States Committee on Electricity's ("NESCOE") annual budget.

Q. How are the ISO Tariff Administrative Services charges assessed?

A. ISO-NE assesses the charges in Section IV.A based upon stated rates pursuant to the ISO Tariff. These stated rates are adjusted annually when ISO-NE files a revised budget and cost allocation proposal to become effective January 1 each year. Granite State is charged the stated rate for these services as part of ISO-NE's monthly billing process, based on its Network Load for Section IV.A Schedule 1 and Schedule 5 charges.

B. Explanation of Schedule 21 NEP Tariff Services, Charges and Credits

Q. What services are provided to Granite State under Schedule 21 of the ISO Tariff?

A. Schedule 21 provides service over NEP's local, non-highway transmission facilities, considered non-PTF facilities ("Non-PTF"). The service provided over the Non-PTF is referred to as LNS. NEP also provides metering, transformation and certain ancillary services to Granite State to the extent such services are required by Granite State and not otherwise provided under the ISO Tariff.

Q. Please explain the metering and transformation services provided by NEP.

A. NEP separately surcharges the appropriate customers for these services. NEP provides metering service when a customer uses NEP-owned meter equipment to measure the delivery of transmission service. NEP provides transformation service when a customer uses NEP-owned transformation facilities to step down voltages from 69 kV or greater to a distribution voltage.

Q. Are there any other transmission services for which NEP assesses charges to Granite State?

A. Yes. Granite State relies upon the specific distribution facilities of NEP's affiliate, Massachusetts Electric Company ("Mass Electric"), which provides for NEP's use of such facilities pursuant to the Integrated Facilities provision of NEP's FERC Electric Tariff No. 1 service agreement with Mass Electric. NEP, in turn, uses these specific distribution facilities to provide transmission service to Granite State. Therefore, Granite State is also subject to a Specific Distribution Surcharge for its use of these facilities.

Q. What is the credit in Schedule 21 charges that NEP provides to Granite State in its monthly invoice?

A. As a result of the sale of Granite State to Liberty Utilities, NEP uses certain distribution facilities of Granite State to provide service to generation customers of NEP. An Integrated Facilities Supplement to Schedule 21 of the ISO Tariff provides Granite State with a credit in exchange for the continued use by NEP of Granite State's facilities to serve NEP's generation customers.

IV. ESTIMATE OF GRANITE STATE'S TRANSMISSION EXPENSES

Q. Was the forecast for Granite State's transmission and ISO expenses for 2020 prepared by you or under your supervision?

A. Yes. Granite State estimates the total transmission and ISO-NE expenses (including certain ancillary services) for 2020 to be approximately $23,231,692, as shown in Schedule JDW-1, page 1 of 2. This equates to an increase of $1,055,238 as compared to the forecast for 2019 provided in Docket No. DE 19-062, as shown on Schedule JDW-1, page 2 of 2.

Q. How have the ISO Tariff charges for RNS shown on line 3 of Schedule JDW-1 been forecasted?

A. The Company has applied an estimated rate increase to the total RNS rate currently in effect to reflect the forecast of PTF plant additions across New England, as estimated by the New England transmission owners, to be included in the annual formula rate effective June 1, 2020. The estimated rate increase was provided in the PTO Rates Working Group presentation during the 2019 NEPOOL Reliability and Transmission Committees' Summer Meeting. The estimated increase of approximately $8 per kW-year in 2020 to the RNS rate is added to the current $111.94 per kW-year RNS rate to get an estimated rate of $120 per kW-year effective June 1, 2020. The current rate of $111.94 per kW-year that was effective beginning June 1, 2019, is lower than the $117.00 per kW-year estimated in Docket No. DE 19-062. The combination of that lower current rate with the forecasted increase effective June 1, 2020, have resulted in an estimated decrease of $319,404 as shown in column 3, line 3 of Schedule JDW-1, page 2 of 2. The main reason

for the estimated decrease in costs for 2020 as compared to what was filed in 2019 is that the actual RNS rates effective June 1, 2019, were lower than the forecasted rates available at the time of filing.

Q. Schedule JDW-1 also includes estimated ISO-NE charges for Black Start, Reactive Power, and Scheduling and Dispatch. How were these costs forecasted?

A. In estimating the expected costs of the ISO-NE charges, the company used the same approach it has used in previous filings. The Black Start costs shown on line 5 of Schedule JDW-1 were derived in two steps. First, as shown in Section II of Schedule JDW-3, the Company estimated the cost for Black Start Service by, as a starting point, summing Granite State's actual monthly ISO-NE Black Start expenses for 2019 (Line 5). This estimate was divided by Granite State's 2019 Peak Load to calculate an estimated annual rate, as shown on line 7. Granite State then calculated a monthly rate (annual rate divided by 12), as shown on line 8. To obtain the estimate of Black Start costs that would be charged to Granite State, as shown in column 4 of Schedule JDW-2, page 1, the Company multiplied the monthly rate by Granite State's monthly network load, as shown for each month in column 1 of Schedule JDW-2, page 1. Using this methodology, the Company estimated an allocation of $129,941for 2020.

Q. How have you estimated Reactive Power costs for Granite State?

A. The estimated Reactive Power costs for Granite State were calculated by using actual Granite State costs for 2019 as shown in Section I of Schedule JDW-3. The annual rate was determined by dividing the total Reactive Power costs charged to Granite State (Line 1) by Granite State's peak 2019 Network Load. The monthly rate (annual rate divided by

12) was then multiplied by Granite State's monthly network load, as shown in column 1 of Schedule JDW-2, page 1, to determine the estimated charges for Reactive Power Service shown in column 5 of that same schedule. Using this methodology, the Company estimated an allocation of $124,694 for 2020.

Q. How did you forecast the Scheduling and Dispatch costs shown on line 4 of Schedule JDW-1, page 1?

A. My estimate is shown in column (3) of Schedule JDW-2, page 1. This amount was derived by using the currently effective OATT Schedule 1 rate of $1.59341 per kW-year, divided by 12, and further multiplied by Granite State's monthly network loads for 2019 as shown in column (1) of Schedule JDW-2, page 1.

Q. Have you included any Reliability Must Run ("RMR") contract charges to Granite State for 2020?

A. No. Reliability Must Run Agreements guarantee payments to generators that are needed to ensure reliability. To obtain an agreement, a generator must receive verification from ISO-NE that it is needed for reliability and must demonstrate that it is unable to cover its operating costs with revenue from other sources. Granite State has not incurred any RMR contract charges as there have been no RMR contracts for the New Hampshire reliability region over the past year. Therefore, the Company has not forecasted any RMR contract costs for 2020.

Q. Can you please explain the forecast of the ISO-NE Administrative Charges shown on lines 7 and 8 of Schedule JDW-1 page 1?

A. Yes. Lines 7 and 8 include ISO-NE Administrative charges for Scheduling & Dispatch and NESCOE respectively, and are derived on Schedule JDW-2 page 2. Line 7 on Schedule JDW-1 page 1 shows the 2020 forecast of charges to Granite State under Schedule 1, Scheduling and Load Dispatch Administrative schedules through Section IV.A of the ISO Tariff. The estimate is based on the ISO Schedule 1 rate of $0.17626 per kW-month effective January 1, 2020, and multiplied by Granite State's forecasted monthly network load as shown in column 1 of Schedule JDW-2, page 2.

Line 8 on page 1 of Schedule JDW-1 shows the estimated 2020 NESCOE charges under Schedule 5 of Section IV.A of the ISO Tariff. This amount was derived by using the ISO Schedule 5 rate of $0.00882 per kW-month effective January 1, 2020, and multiplied by Granite State's forecasted monthly network load as shown in column 1 of Schedule JDW-2, page 2.

Q. What is the sub-total of transmission expenses attributable to charges from the ISO-NE?

A. The sub-total of ISO-NE charges is $17,845,604, which is the sum of lines 3 through 8 on Schedule JDW-1 page 1.

Q. Have you estimated the charges to Granite State under Schedule 21 of the ISO Tariff?

A. Yes. Lines 1 and 2 of Schedule JDW-1 show the amount of forecasted charges from NEP pursuant to the Local Network Service ("LNS") tariff. The total amount of expenses is $5,386,088 which represents an increase of $1,343,089 in the total NEP expenses to be incurred by Granite State in 2020 (see Schedule JDW-1, page 2, lines 1 and 2) as compared to 2019. Granite State estimated the PTF and non-PTF Demand expenses based on the average of NEP's actual PTF and non-PTF Demand charges in 2019 with no adjustment. Metering, transformation, specific distribution, and ancillary service charges are based on current rates and are assessed to Granite State based on a per meter and peak load basis, respectively. A maintenance service credit, as discussed previously, was also included in the estimate.

V. EXPLANATION OF PRIMARY CHANGE FROM LAST YEAR'S FORECASTED EXPENSES

Q. What is the primary cause of the estimated increase in Granite State's 2020 transmission expenses?

A. The estimated 2020 Granite State transmission and ISO-NE expenses of $23,231,692 represent an increase of $1,265,398 from the 2019 forecast of transmission expenses for Granite State. The increase is mainly attributed to the increased cost of Schedule 21 LNS costs.

VI. CONCLUSION

Q. Does this conclude your testimony?

A. Yes.