

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

Docket No. DE 22-XXX

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty

Annual Retail Rate

**DIRECT TESTIMONY
OF
JOHN D. WARSHAW**

March 22, 2022



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1 **I. INTRODUCTION AND QUALIFICATIONS**

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

3 A. My name is John D. Warshaw, and my business address is 15 Buttrick Road,
4 Londonderry, New Hampshire. I am the Manager, Electric Supply for Liberty Utilities
5 Service Corp., which provides services to Liberty Utilities (Granite State Electric) Corp.,
6 d/b/a Liberty (“Liberty” or “the Company”). I oversee the procurement of power for
7 Energy Service for Liberty as well as the procurement of renewable energy certificates
8 (“RECs”). I am also responsible for monitoring costs and activities relative to
9 transmission service provided to the Company.

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

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

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

16 A. In November of 2011, I joined the Company as Manager, Electric Supply. Prior to my
17 employment at Liberty Utilities Service Corp., I was employed by National Grid USA
18 Service Company (“National Grid”) as a Principal Analyst in Energy Supply – New
19 England from 2000 to 2010. In that position I conducted a number of solicitations for
20 wholesale power to meet the needs of National Grid’s New England distribution
21 companies. I also administered both short-term and long-term power purchase
22 agreements for National Grid’s New England distribution companies. Prior to my

1 employment at National Grid, I was employed at COM/Energy (now NSTAR) from 1992
2 to 2000. From 1992 to 1997, I was a Rate Analyst in Regulatory Affairs at COM/Energy
3 responsible for supporting state and federal rate filings. In 1997, I transferred to
4 COM/Electric to work in Power Supply Administration.

5 **Q. Have you previously testified before the New Hampshire Public Utilities**
6 **Commission (“Commission”)?**

7 A. Yes. I most recently provided written and oral testimony before the Commission in
8 Docket No. DE 21-087 on December 22, 2021.

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

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

13 **II. PURPOSE OF TESTIMONY**

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

15 A. My testimony addresses the estimated 2022 transmission expenses for Liberty. First, I
16 will summarize the various transmission services provided to Liberty and describe how
17 Liberty pays for those services. Second, I will provide testimony supporting the forecast
18 of transmission expenses that Liberty expects to incur in 2022. As described more fully
19 in Section IV of my testimony, the Company forecasts an increase of \$2,110,950 in

prospective transmission expenses for calendar year 2022 as compared to the forecast provided for calendar year 2021 in Docket No. DE 21-063.¹

III. SUMMARY OF TRANSMISSION SERVICES PROVIDED TO LIBERTY

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

A. Liberty 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 Liberty under the ISO Tariff.

A. New England’s transmission rates utilize a highway/local pricing structure. That is, Liberty 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

¹ The forecast for calendar year 2021 was \$26,891,183. The actual amount for 2021 was \$27,125,953.

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

3 **A. Explanation of ISO Tariff Services, Rates, and Charges**

4 **Q. Please explain the services provided to Liberty under the ISO Tariff.**

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

10 **Q. How are the costs for RNS recovered?**

11 A. The ISO Tariff's RNS Rate ("RNS Rate") (Section II - Schedule 9 of the ISO Tariff)
12 recovers the RNS costs, and is determined annually based on an aggregation of the
13 transmission revenue requirements of each of the Participating Transmission Owners
14 ("PTO") in New England, calculated in accordance with a FERC-approved formula in a
15 single, "postage stamp" rate in New England. FERC opened Docket No. EL16-19 to
16 investigate the reasonableness of the formula rates and protocols used to develop both
17 RNS and LNS. A Settlement Agreement was reached and filed with FERC on June 15,
18 2020 (FERC Docket No. ER20-2054) resolving all issues regarding the RNS and LNS
19 formula rates. FERC issued its order approving the settlement on December 28, 2020. A
20 compliance filing was made on January 27, 2021, setting the effective date of the formula
21 rate revisions to be January 1, 2022. A portion of the Settlement Agreement describes
22 the establishment of more transparent transmission rate review protocols. These

1 protocols were in effect on June 15, 2021, giving interested parties sufficient time to
2 review and challenge the rates to be effective on January 1, 2022. The Participating
3 Transmission Owners Committee submitted its filing under these protocols on July 30,
4 2021, with the FERC Protocols required interested parties to file a formal challenge of
5 the proposed rates by January 31, 2022. It is my understanding that no challenges were
6 filed, and the rates went into effect on January 1, 2022.

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

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

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

20 Lastly, Scheduling, System Control, and Dispatch Service (“Scheduling & Dispatch
21 Service”) consists of the services required to schedule the movement of power through,

1 out of, within, or into the ISO-NE Control Area over the PTF and to maintain System
2 Control. Scheduling & Dispatch Service also provides for the recovery of certain charges
3 that reflect expenses incurred in the operation of satellite dispatch centers.

4 **Q. How are the ISO-NE charges for Black Start and Reactive Power assessed to**
5 **Liberty?**

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

9 **Q. How are the charges for Scheduling & Dispatch Service assessed to Liberty?**

10 A. Charges for Scheduling & Dispatch Service are assessed to Liberty through three
11 separately charged tariffed services.

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

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

1 The final charge is for the cost of Scheduling & Dispatch Service for transmission service
2 over transmission facilities other than PTF that are charged under Schedule 21 of the ISO
3 Tariff. Thus, the three types of Scheduling & Dispatch costs are similar but are charged
4 to Liberty through three different tariff mechanisms.

5 **Q. What additional administrative services and/or charges flow through to Liberty**
6 **under Section IV.A of the ISO Tariff?**

7 A. Liberty also incurs charges pursuant to Section IV.A, Schedule 5 of the ISO Tariff.
8 Schedule 5 provides for the collection of the New England States Committee on
9 Electricity's ("NESCOE") annual budget. NESCOE is the "not-for-profit entity that
10 represents the collective perspective of the six New England Governors in regional
11 electricity matters and advances the New England states' common interest in the
12 provision of electricity to consumers at the lowest possible prices over the long-term,
13 consistent with maintaining reliable service and environmental quality." See
14 www.nescoc.com.

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

16 A. ISO-NE assesses the charges in Section IV.A based upon stated rates pursuant to the ISO
17 Tariff. These stated rates are adjusted annually when ISO-NE files a revised budget and
18 cost allocation proposal to become effective January 1 each year. Liberty is charged the
19 stated rate for these services as part of ISO-NE's monthly billing process, based on its
20 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 Liberty under Schedule 21 of the ISO Tariff?

A. Schedule 21 governs the service that NEP provides to Liberty over its local, non-highway transmission facilities, considered non-PTF facilities (“Non-PTF”). The service provided over the Non-PTF is referred to as Local Network Services (“LNS”). NEP posted fixed LNS annual rates effective January 1, 2022, in compliance with FERC’s approval of the Settlement Offer in Docket ER20-2054, as mentioned above. These fixed 2022 rates will be trued-up to NEP’s actual costs in June 2023 and would be included in the LNS rates effective January 1, 2024. NEP also provides metering, transformation, and certain ancillary services to Liberty to the extent such services are required by Liberty 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 Liberty?

A. Yes. Liberty relies on 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

1 service agreement with Mass Electric. NEP, in turn, uses these specific distribution
2 facilities to provide transmission service to Liberty. Therefore, Liberty is also subject to
3 a Specific Distribution Surcharge for its use of these facilities.

4 **Q. What is the credit in Schedule 21 charges that NEP provides to Liberty in its**
5 **monthly invoice?**

6 A. As a result of National Grid's sale of Liberty in 2012, NEP (a National Grid affiliate)
7 uses certain distribution facilities of Liberty to provide service to generation customers of
8 NEP. An Integrated Facilities Supplement to Schedule 21 of the ISO Tariff provides
9 Liberty with a credit in exchange for NEP's continued use of Liberty's facilities to serve
10 NEP's generation customers.

11 **IV. ESTIMATE OF LIBERTY'S TRANSMISSION EXPENSES**

12 **Q. Was the forecast for Liberty's transmission and ISO expenses for 2022 prepared by**
13 **you or under your supervision?**

14 A. Yes. I estimate the total transmission and ISO-NE expenses (including certain ancillary
15 services) for 2022 to be approximately \$29,002,132, as shown in Schedule JDW-1, page
16 1 of 2. This equates to an increase of \$2,110,950 as compared to the forecast for 2021
17 provided in Docket No. DE 21-063, as shown on Schedule JDW-1, page 2 of 2.

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

20 A. I estimated the 2022 RNS charges by applying the posted RNS rate of \$142.78 per kW-
21 year, effective January 1, 2022. This is an increase of \$13.52 per kW-year from the rate

1 that was effective on January 1, 2021, and an increase of \$4.78 per kW-year for the rate

2 that was effective on June 1, 2021, and that was estimated in Docket No. DE 21-063.

3 The combination of current rates compared to the load forecast used in Docket No. 21-

4 063, results in an estimated increase of \$1,532,250 as shown in column 3, line 3 of

5 Schedule JDW-1, page 2 of 2. To obtain the estimate of RNS costs that would be

6 charged to Liberty, as shown in column 2 of Schedule JDW-2, I multiplied the monthly

7 rate by Liberty's monthly network load, as shown for each month in column 1 of

8 Schedule JDW-2.

9 The main reason for the estimated increase in costs for 2022 as compared to what was

10 filed in 2021 is that the transmission owners in New England continue to replace aging

11 equipment and address reliability issues regarding the delivery of supply from both

12 conventional and renewable resources.

13 These improvements to the New England transmission system are the result of a regional

14 planning process coordinated by the ISO-NE through an extensive stakeholder process to

15 identify the various needs of the New England system and how to meet those needs

16 reliably and at the least cost.

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

19 A. In estimating the expected costs of the ISO-NE charges, I used the same approach as in
20 previous filings. The Black Start costs shown on line 5 of Schedule JDW-1 were derived
21 in two steps. First, as shown in Section II of Schedule JDW-3, I estimated the cost for

1 Black Start Service by, as a starting point, summing Liberty's actual monthly ISO-NE
2 Black Start expenses for 2021 (Line 5). I divided this estimate by Liberty's 2021 Peak
3 Load to calculate an estimated annual rate, as shown on line 7. I then calculated a
4 monthly rate (annual rate divided by 12), as shown on line 8. To obtain the estimate of
5 Black Start costs that would be charged to Liberty, as shown in column 4 of Schedule
6 JDW-2, I multiplied the monthly rate by Liberty's monthly network load, as shown for
7 each month in column 1 of Schedule JDW-2. Using this methodology, I estimate an
8 allocation of \$210,598 for 2022.

9 **Q. How have you estimated Reactive Power costs for Liberty?**

10 A. I calculated the estimated Reactive Power costs for Liberty by using actual Liberty costs
11 for 2021 as shown in Section I of Schedule JDW-3. The annual rate was determined by
12 dividing the total Reactive Power costs charged to Liberty (Line 1) by Liberty's peak
13 2021 Network Load. The monthly rate (annual rate divided by 12) was then multiplied
14 by Liberty's monthly network load, as shown in column 1 of Schedule JDW-2, to
15 determine the estimated charges for Reactive Power Service shown in column 5 of that
16 same schedule. Using this methodology, I estimate an allocation of \$116,459 for 2022.

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

19 A. My estimate is shown in column 3 of Schedule JDW-2. This amount was derived by
20 using the currently effective OATT Schedule 1 rate of \$1.86858 per kW-year, divided by
21 12, and further multiplied by Liberty's monthly network loads for 2021 as shown in
22 column 1 of Schedule JDW-2.

1 **Q. Have you included any Reliability Must Run (“RMR”) contract charges to Liberty**
2 **for 2021?**

3 A. No. Reliability Must Run Agreements guarantee payments to generators that are needed
4 to ensure reliability. To obtain an agreement, a generator must receive verification from
5 ISO-NE that it is needed for reliability and must demonstrate that it is unable to cover its
6 operating costs with revenue from other sources. Liberty has not incurred any RMR
7 contract charges as there have been no RMR contracts for the New Hampshire reliability
8 region over the past year. Therefore, I have not forecasted any RMR contract costs for
9 2021.

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

12 A. Yes. Lines 7 and 8 include ISO-NE Administrative charges for Scheduling & Dispatch
13 and NESCOE, respectively, and are derived in columns 7 and 8 on Schedule JDW-2.
14 Line 7 on Schedule JDW-1, page 1, shows the 2022 forecast of charges to Liberty under
15 Schedule 1, Scheduling and Load Dispatch Administrative schedules through Section
16 IV.A of the ISO Tariff. The estimate is based on the ISO Schedule 1 rate of \$0.19175 per
17 kW-month effective January 1, 2022, multiplied by Liberty’s forecasted monthly network
18 load as shown in column 1 of Schedule JDW-2.

19 Line 8 on page 1 of Schedule JDW-1 shows the estimated 2021 NESCOE charges under
20 Schedule 5 of Section IV.A of the ISO Tariff. I derived this amount by using the ISO
21 Schedule 5 rate of \$0.00736 per kW-month effective January 1, 2022, multiplied by
22 Liberty’s forecasted monthly network load as shown in column 1 of Schedule JDW-2.

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

3 A. The sub-total of ISO-NE charges is \$22,382,418, which is the sum of lines 3 through 8 on
4 Schedule JDW-1, page 1.

5 **Q. Have you estimated the charges to Liberty under Schedule 21 of the ISO Tariff?**

6 A. Yes. Lines 1 and 2 of Schedule JDW-1 show the amount of forecasted charges from
7 NEP pursuant to the LNS tariff. The total amount of estimated expenses is \$6,619,714,
8 which represents an increase of \$535,570 in the total NEP estimated expenses to be
9 incurred by Liberty in 2022 (see Schedule JDW-1, page 2, lines 1 and 2) as compared to
10 2021. As shown on Schedule JDW-4, column 2, I estimated the LNS expenses based on
11 NEP's posted LNS charge of \$36.07 per kW-year, divided by 12, and multiplied by
12 Liberty's forecasted monthly network load as shown in column 1 of Schedule JDW-4.
13 Load Dispatch Surcharge, Metering, transformation, specific distribution, and ancillary
14 service charges are based on current rates and are assessed to Liberty based on a per
15 meter and peak load basis, respectively. A maintenance service credit, as discussed
16 previously, was also included in the estimate.

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

19 **Q. What is the primary cause of the estimated increase in Liberty's 2022 transmission**
20 **expenses?**

21 A. The estimated 2022 Liberty transmission and ISO-NE expenses of \$29,002,132 represent
22 an increase of \$2,110,950 from the 2021 forecast of transmission expenses for Liberty.

1 The increase is mainly attributed to the increased cost of OATT Schedule 9 RNS Service
2 costs. Since 2002 the transmission owners in New England have invested approximately
3 \$11.7 billion in transmission projects that were reviewed and approved in the ISO
4 transmission investment process. The transmission owners are forecasting an investment
5 of an additional \$1 billion over the next ten years.

6 **VI. CONCLUSION**

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

8 **A. Yes.**