



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

Docket No. DE 14-XXX

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

DIRECT TESTIMONY

OF

JOHN D. WARSHAW

November 25, 2014

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1 **I. Introduction and Qualifications**

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

3 A. My name is John D. Warshaw, and my business address is 15 Buttrick Rd, Londonderry, NH
4 03053.

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

6 A. I am the Manager, Electric Supply for Liberty Energy Utilities (New Hampshire) Corp. (“Liberty
7 Energy NH”) which is the sole shareholder of Liberty Utilities (Granite State Electric) Corp.
8 (“Granite State” or the “Company”) and provides services to Granite State. I oversee the
9 procurement of power for Energy Service for Granite State as well as the procurement of
10 renewable energy certificates (“RECs”). I am also responsible for monitoring costs and activities
11 relative to transmission service provided to the Company.

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

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

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

18 A. In November of 2011, I joined Liberty Energy NH as Manager, Electric Supply for Granite State.
19 Prior to my employment at Liberty Energy NH, I was employed by National Grid USA Service
20 Company (“National Grid”) as a Principal Analyst in Energy Supply – New England from 2000
21 to 2010. In that position I conducted a number of solicitations for wholesale power to meet the

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

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

9 A. Yes. I most recently provided written and oral testimony before the Commission in Docket DE
10 14-031 on September 24, 2014.

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

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

15 **II. Purpose of Testimony**

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

17 A. My testimony addresses the estimated 2015 transmission expenses for Granite State. First, I will
18 summarize the various transmission services provided to Granite State and describe how Granite
19 State pays for such services. Second, I will provide testimony supporting the forecast of
20 transmission expenses that Granite State expects to incur in 2015. As described more fully in the
21 second part of my testimony, the Company forecasts an increase of \$4,102,367 in prospective

1 transmission expenses compared to the forecast provided for calendar year 2014 in Docket No.
2 DE 13-327.

3 **III. Summary of Transmission Services Provided to Granite State**

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

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

- 9 1. Section II, Schedule 21 of the ISO Tariff provides for Local Network Service (“LNS”)
10 from the New England Power Company (“NEP”);
- 11 2. Section II (Schedules 1, 2, 9 and 16) of the ISO Tariff provides for Regional Network
12 Service (“RNS”); and
- 13 3. Section IV.A – ISO Funding Mechanisms provides for the recovery of ISO’s
14 Administrative Services.

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

17 A. New England’s transmission rates utilize a highway/local pricing structure. That is, Granite State
18 receives regional transmission service over “highway” transmission facilities under Section II of
19 the ISO Tariff (also known as RNS), and receives local transmission service over local
20 transmission facilities under Schedule 21 of the ISO Tariff (also known as LNS). Additionally, a
21 number of administration services are provided by ISO-NE under Section IV.A of the ISO Tariff.

1 **1. Explanation of ISO Tariff Services, Rates & Charges**

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

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

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

9 A. The ISO Tariff RNS Rate (“RNS Rate”) (Section II - Schedule 9 of the ISO Tariff) recovers the
10 RNS costs, and is determined annually based on an aggregation of the transmission revenue
11 requirements of each of the Participating Transmission Owners (“PTO”) in New England,
12 calculated in accordance with a FERC approved formula in a single, “postage stamp” rate in New
13 England.

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

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

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

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

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

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

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

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

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

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

6 The final service is the costs of Scheduling & Dispatch Service for transmission service over
7 transmission facilities other than PTF that are charged under Schedule 21 of the ISO Tariff.
8 Thus, the three types of Scheduling & Dispatch costs are similar, but are charged to Granite State
9 through three different tariff mechanisms.

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

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

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

1 **2. Explanation of Schedule 21 NEP Tariff Services, Charges and Credits**

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

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

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

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

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

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

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

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

6 **IV. Estimate of Granite State's Transmission Expenses**

7 **Q. Was the forecast for Granite State's transmission and ISO expenses for 2015 prepared by**
8 **you or under your supervision?**

9 A. Yes. Granite State estimates the total transmission and ISO-NE expenses (including certain
10 ancillary services) for 2015 to be approximately \$22.6 million, as shown in Schedule JDW-1,
11 Summary Page 1. This equates to an increase of \$4.1 million as compared to the forecast for
12 2014 provided in Docket No. DE 13-327.

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

15 A. The Company has applied an estimated rate increase to the total RNS rate currently in effect to
16 reflect the forecast of PTF plant additions across New England, as estimated by the New England
17 transmission owners, to be included in the annual formula rate effective June 1, 2015. The
18 estimated rate increase was provided by the PTO Rates Group presentation during the 2014
19 NEPOOL Reliability and Transmission Committees' Summer Meeting. The estimated increase
20 of \$6.80 per kW-year in 2015 to the RNS rate is added to the current RNS rate to get an estimated
21 rate of \$96.60 per kW-year. This results in an estimated increase of \$185,427 as shown in
22 column 2 of Schedule JDW-2, page 1 of 2.

1 **Q. Given the \$6.80 per kW-year (7.6%) increase in the RNS rate, why is the estimated increase**
2 **in RNS charges significantly smaller (1.3%)?**

3 A. In developing the 2014 RNS costs in DE 13-327, the forecasted RNS rate of \$94.00 per kW-year
4 to be effective June 1, 2014 was used, as provided in the 2013 NEPOOL Reliability and
5 Transmission Committees' Summer Meeting. The final, approved RNS rate effective June 1,
6 2014 was \$89.80 per kW-year. As a result, the forecasted RNS charges for 2014 were higher
7 than if the final, approved RNS rate had been used. This resulted in an over-estimate of 2014
8 RNS costs, yielding a smaller than expected increase in RNS charges for 2015.

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

11 A. The Black Start costs shown on line 5 of Schedule JDW-1 were derived in two steps. First, as
12 shown in Section II of Schedule JDW-3 ; the Company estimated the cost for Black Start Service
13 by summing Granite State's actual monthly ISO-NE Black Start expenses for the period
14 September 2013 through August 2014 (Line 5). This estimate is divided by Granite State's 2014
15 Peak Load to calculate an estimated annual rate, as shown on line 7. Granite State then calculated
16 a monthly rate (annual rate divided by 12), as shown on line 8. To obtain the estimate of Black
17 Start costs that would be charged to Granite State, as shown in column 5 of Schedule JDW-2, the
18 Company multiplied the monthly rate by Granite State's monthly network load, as shown for
19 each month in column 1 of Schedule JDW-2, page 1. Using this methodology, the Company
20 estimates an allocation of \$85,578 for 2015.

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

22 A. The estimated Reactive Power cost for Granite State was calculated by using actual Granite State
23 costs for the twelve months ending August 2014 as shown in Section I of Schedule JDW-3 . The

1 annual rate was determined by dividing the total Reactive Power costs charged to Granite State
2 (Line 1) by Granite State's peak 2014 Network Load. The monthly rate (annual rate divided by
3 12) is then multiplied by Granite State's monthly network load, as shown on column 6 of
4 Schedule JDW-2, page 1 to determine the estimated charges for Reactive Power Service. Using
5 this methodology, the Company estimates an allocation of \$172,635 for 2015.

6 **Q. How did you forecast the Scheduling and Dispatch costs shown on line 4 of Schedule JDW-**
7 **1, page 1?**

8 A. My estimate is shown in column (3) of Schedule JDW-2, page 1. This amount was derived by
9 using the currently effective OATT Schedule 1 rate of \$1.69551 per kW-year, divided by 12, and
10 further multiplied by Granite State's monthly network loads for the 12 months ending September
11 2014 as shown in column (1) of Schedule JDW-2, page 1.

12 **Q. Have you included any Reliability Must Run ("RMR") contract charges to Granite State for**
13 **2015?**

14 A. No. Reliability Must Run Agreements guarantee payments to generators that are needed to
15 ensure reliability. To obtain an agreement, a generator must receive verification from ISO-NE
16 that it is needed for reliability and must demonstrate that it is unable to cover its operating costs
17 with revenue from other sources. Granite State has not incurred any RMR contract charges as
18 there have been no RMR contracts for the New Hampshire reliability region over the past year.
19 Therefore, the Company has not forecasted any RMR contract costs for 2015.

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

1 A. Yes. Lines 7 and 8 include ISO-NE Administrative charges for Scheduling & Dispatch and
2 NESCOE respectively, and are derived on Schedule JDW-2 page 2. Line 7 on Schedule JDW-1
3 page 1 shows the 2015 forecast of charges to Granite State under Schedule 1, Scheduling and
4 Load Dispatch Administrative schedules through Section IV.A of the ISO Tariff. The estimate is
5 based on the ISO-NE revenue requirement for Schedule 1 filed each year with FERC. ISO-NE
6 filed its proposed 2015 revenue requirement with FERC on October 16, 2014. This amount was
7 derived by using the proposed ISO Schedule 1 rate of \$0.15 per kW-month and multiplied by
8 Granite State's forecasted monthly network load as shown in column 1 of Schedule JDW-2, page
9 2.

10 Line 8 on page 1 of Schedule JDW-1 shows the estimated 2015 NESCOE charges under
11 Schedule 5 of Section IV.A of the ISO Tariff. ISO-NE filed its proposed 2014 recovery of
12 NESCOE costs with FERC on October 16, 2014. As a result of the true-up reconciliation for
13 funds recovered and unspent in prior years, for calendar year 2015 there will be no Schedule 5
14 NESCOE charges.

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

16 A. The sub-total of ISO-NE charges is \$15,287,488 which is the sum of lines 3 through 8 on
17 Schedule JDW-1 page 1.

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

19 A. Yes. Lines 1 and 2 of Schedule JDW-1 show the amount of forecasted charges from NEP
20 pursuant to the Local Network Service ("LNS") tariff. The total amount of expenses is
21 \$7,276,677 which represents a net increase of \$4,043,039 in the total NEP expenses NEP will
22 charge to Granite State in 2015 (see Schedule JDW-1, page 2, lines 1 and 2). Granite State

1 estimated the PTF and non-PTF expenses based on the average of NEP's charges through
2 September 2014 and the percent change from 2013 to 2014 as shown on Schedule JDW-4 page 2.
3 Metering, transformation, specific distribution, and ancillary service charges are based on current
4 rates and are assessed to Granite State based on a per meter and peak load basis, respectively. A
5 maintenance service credit, as discussed previously, was also included in the estimate.

6 **V. Explanation of Primary Changes from Last Year's Forecasted Expenses**

7 **Q. What are the primary causes of the estimated increase in Granite State's 2014 transmission**
8 **expenses?**

9 A. The estimated 2015 Granite State transmission and ISO-NE expenses of \$22.6 million represent a
10 net increase of \$4,102,367 from the 2014 forecast of transmission expenses for Granite State.
11 The largest increase is from Granite State's LNS transmission charges, estimated to increase
12 \$4,043,039 as indicated on Schedule JDW-1 at page 2 when compared to the estimate performed
13 for 2014. This is due to the unexpected increase in LNS charges from NEP during the 12-month
14 period ending September 2014.

15 **Q. What is the reason for the increase in NEP's LNS charges?**

16 A. As a result of NEP's obligation to provide reliable transmission service and to meet the load
17 growth needs of its transmission customers, NEP has been both replacing aging transmission
18 assets and constructing new transmission assets. As shown in Schedule JDW-4 page 3, NEP
19 expects to invest approximately \$69 million in various transmission projects in 2015. This will
20 increase both its investment base, and thus the return it is allowed to pass through to its
21 transmission customers, and its recoverable fixed and variable costs.

1 Additionally, Granite State's LNS estimate developed for 2014 did not take into account NEP's
2 planned transmission projects and instead assumed that the 2014 costs would be similar to actual
3 costs incurred in 2013. In future filings, the Company will review NEP's planned transmission
4 projects when developing the LNS estimate. As shown on Schedule JDW-4 page 2, the actual
5 costs incurred by NEP in 2014 were significantly higher than Granite State had forecasted. In
6 order to account for this change in costs, the forecast of LNS charges was adjusted to reflect this
7 change. As shown in Schedule JDW-4 page 1, the estimate of Net Monthly Demand Charges,
8 based on the actual charges incurred during the 12-month period ending September 2014, was
9 adjusted upward to reflect the average increase in LNS costs when compared to the 12-month
10 period ending September 2013. This calculation is shown on Schedule JDW-4 page 2 and results
11 in a 58% increase in LNS costs from 2013 to 2014. Thus the forecasted increase in LNS charges
12 from 2014 to 2015 related to planned transmission projects is closer to \$2 million, similar to the
13 actual increase in LNS charges from 2013 to 2014.

14 **VI. Conclusion**

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

16 A. Yes.

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