

DIRECT TESTIMONY

OF

JOHN D. WARSHAW

November 21, 2013

THIS PAGE LEFT INTENTIONALLY BLANK

Table of Contents

I. Introduction and Qualifications	1
II. Purpose of Testimony	2
III. Summary of Transmission Services Provided to Granite State.....	3
IV. Estimate of Granite State's Transmission Expenses	9
V. Explanation of Primary Changes from Last Year's Forecasted Expenses	13
VI. Conclusion	15

THIS PAGE LEFT INTENTIONALLY BLANK

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 11 Northeastern Blvd., Salem,
4 NH 03079.
5

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

7 A. I am the Manager, Electric Supply for Liberty Energy Utilities (New Hampshire) Corp.
8 ("Liberty Energy NH") which is the sole shareholder of Granite State Electric Company
9 ("Granite State" or the "Company") and provides services to Granite State. I oversee the
10 procurement of power for Default Service for Granite State as well as the procurement of
11 renewable energy certificates ("RECs"). I am also responsible for monitoring costs and
12 activities relative to the Company's transmission service.
13

14 Q. Please describe your educational background.

15 A. I graduated from the State University of New York Maritime College in 1977 with a
16 Bachelor of Science in Nuclear Science. I received a Master's in Business
17 Administration from Northeastern University in 1986. In 1992, I earned a Master of Arts
18 in Energy and Environmental Management from Boston University.
19

20 Q. What is your professional background?

21 A. In November of 2011, I joined Liberty Energy NH as Manager, Electric Supply for
22 Granite State. Prior to my employment at Liberty Energy NH, I was employed by

1 National Grid USA Service Company (“National Grid”) as a Principal Analyst in Energy
2 Supply – New England from 2000 to 2010. In that position I conducted a number of
3 solicitations for wholesale power to meet the needs of National Grid’s New England
4 distribution companies. I also administered both short-term and long-term power
5 purchase agreements for National Grid’s New England distribution companies. Prior to
6 my employment at National Grid, I was employed at COM/Energy (now NSTAR) from
7 1992 to 2000. From 1992 to 1997, I was a Rate Analyst in Regulatory Affairs at
8 COM/Energy responsible for supporting state and federal rate filings. In 1997, I
9 transferred to COM/Electric to work in Power Supply Administration.
10

11 Q. Have you previously testified before the New Hampshire Public Utilities Commission
12 (“Commission”)?

13 A. Yes. I most recently provided written and oral testimony before the Commission in
14 Docket DE13-018 in September, 2013.
15

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

17 A. Yes. I have testified before both the Massachusetts Department of Public Utilities and
18 the Rhode Island Public Utilities Commission regarding electric supply and renewable
19 portfolio procurement activities.
20

21 **II. Purpose of Testimony**

22 Q. What is the purpose of your testimony?

1 A. My testimony addresses the estimated 2014 transmission expenses for Granite State.

2 First, I will summarize the various transmission services provided to Granite State and
3 describe how Granite State pays for such services. Second, I will provide testimony
4 supporting the forecast of transmission expenses that Granite State expects to incur in
5 2014. As described more fully in the second part of my testimony, the Company
6 forecasts an increase of \$1,450,897 in prospective transmission expenses compared to the
7 forecast provided for calendar year 2013 in Docket No. DE 12-341.

8
9 **III. Summary of Transmission Services Provided to Granite State**

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

13 A. Granite State receives transmission services under the ISO New England Inc.

14 Transmission, Markets and Services Tariff (“ISO Tariff”) as follows:

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

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

3 A. New England's transmission rates utilize a highway/local pricing structure. That is,
4 Granite State receives regional transmission service over "highway" transmission
5 facilities under Section II of the ISO Tariff (also known as RNS), and receives local
6 transmission service over local transmission facilities under Schedule 21 of the ISO
7 Tariff (also known as LNS). Additionally, a number of administration services are
8 provided by ISO-NE under Section IV.A of the ISO Tariff.

9
10 **Explanation of ISO Tariff Services, Rates & Charges**

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

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

17
18 Q. How are the costs for RNS recovered?

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

1
2 Q. Please describe the ISO-NE System Restoration and Planning Service, Reactive Supply
3 and Voltage Control, and Scheduling, System Control and Dispatch Services that are
4 included in the ISO Tariff.

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

11
12 Reactive Supply and Voltage Control (Section II - Schedule 2 of the ISO Tariff), also
13 known as Reactive Power Service, is necessary to maintain transmission voltages within
14 acceptable limits on the ISO-NE transmission system and allows for the payment to
15 generators or other facilities that have the capability to produce or absorb reactive power.

16
17 Lastly, Scheduling, System Control and Dispatch Service ("Scheduling & Dispatch
18 Service") consists of the services required to schedule the movement of power through,
19 out of, within, or into the ISO-NE Control Area over the PTF and to maintain System
20 Control. Scheduling & Dispatch Service also provides for the recovery of certain charges
21 that reflect expenses incurred in the operation of satellite dispatch centers.
22

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

3 A. ISO-NE assesses charges for Black Start and Reactive Power Services to Granite State
4 each month based on Granite State's proportionate share of its network load to ISO-NE's
5 total network load.
6

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

8 A. Charges for Scheduling & Dispatch Service are assessed to Granite State through three
9 separately charged tariffed services.
10

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

16 The second charge is 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, are recovered under Section II, Schedule 1 of the ISO
19 Tariff. These costs are allocated to Granite State each month based on a formula rate that
20 is determined each year based on the prior year's costs incurred times Granite State's
21 monthly Network Load.
22

1 The final service is the costs 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, there are three types of Scheduling & Dispatch costs that are similar, but
4 are charged to Granite State through three different tariff mechanisms.

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

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

11
12 Q. How are the ISO Tariff Administrative Services charges assessed?

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

18
19 **Explanation of Schedule 21 NEP Tariff Services, Charges and Credits**

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

21 A. Schedule 21 provides service over NEP's local, non-highway transmission facilities,
22 considered non-PTF facilities ("Non-PTF"). The service provided over the Non-PTF is
23 referred to as LNS. NEP also provides metering, transformation and certain ancillary

1 services to Granite State to the extent such services are required by Granite State and not
2 otherwise provided under the ISO Tariff.

3
4 Q. Please explain the metering and transformation services provided by NEP.

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

10
11 Q. Are there any other transmission services for which NEP assesses charges to Granite
12 State?

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

19
20 Q. What is the credit in Schedule 21 charges that NEP provides to Granite State in its
21 monthly invoice?

22 A. As a result the sale of Granite State to Liberty Energy NH, NEP uses certain distribution
23 facilities of Granite State to provide service to generation customers of NEP. An

1 Integrated Facilities Supplement to Schedule 21 of the ISO Tariff provides Granite State
2 with a credit in exchange for the continued use by NEP of Granite State's facilities to
3 serve NEP's generation customers.
4

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

6 Q. Was the forecast for Granite State's transmission and ISO expenses for 2014 done by you
7 or under your supervision?

8 A. Yes. Granite State estimates the total transmission and ISO-NE expenses (including
9 certain ancillary services) for 2014 to be approximately \$18.5 million, as shown in
10 Schedule JDW-1, Summary Page 1. This equates to an increase of \$1.5 million over
11 expenses embedded in Granite State's retail rates in 2013.
12

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

14 A. The Company has applied an estimated rate increase to the total RNS rate currently in
15 effect to reflect the forecast of PTF plant additions across New England, as estimated by
16 the New England transmission owners, to be included in the annual formula rate effective
17 June 1, 2014. The estimated rate increase was provided by the PTO Rates Group
18 presentation during the 2013 NEPOOL Reliability and Transmission Committees'
19 Summer Meeting. The estimated increase of \$7.05 per kW-year in 2014 to the RNS Rate
20 is added to the current RNS Rate to get an estimated rate of \$94 per kW-year. The
21 resulting calculation is shown in column 2 of Schedule JDW-2, page 1 of 2.
22

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

3 A. The Black Start costs shown on line 6 of Schedule JDW-1 were derived in two steps.
4 First, as shown in Section II of Schedule JDW-3 (line 5); the Company estimated the cost
5 for Black Start Service by combining Granite State's actual monthly ISO-NE Black Start
6 expenses for the period October 2011 through September 2013. This estimate is divided
7 by Granite State's 2013 Peak Load to calculate an estimated annual rate, as shown on line
8 7. Granite State then calculated a monthly rate (annual rate divided by 12), as shown on
9 line 8. To obtain the estimate of Black Start costs that would be charged to Granite State,
10 as shown in column 5 of Schedule JDW-2, the Company multiplied the monthly rate by
11 Granite State's monthly network load, as shown for each month in column 1 of Schedule
12 JDW-2, page 1. Using this methodology, the Company estimates an allocation of
13 \$105,826 for 2014.
14

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

16 A. The estimated Reactive Power cost for Granite State was calculated by using the twelve
17 (12) months ending September 2013 of actual Granite State costs as shown in Section I of
18 Schedule JDW-3 (line 1). The annual rate is determined by dividing the total Reactive
19 Power costs charged to Granite State by Granite State's peak 2013 Network Load. The
20 monthly rate (annual rate divided by 12) is then multiplied by Granite State's monthly
21 network load, as shown on column 6 of Schedule JDW-2 to determine the estimated

1 charges for Reactive Power Service. Using this methodology, the Company estimates an
2 allocation of \$257,656 for 2014.

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

5 A. My estimate is shown in column (3) of Schedule JDW-2, page 1. This amount was
6 derived by using the currently effective OATT Schedule 1 rate of \$1.69005 per kW-year,
7 divided by 12, and further multiplied by Granite State's forecasted monthly network load
8 as shown in column (1) of Schedule JDW-2, page 1.

9
10 Q. Have you included any Reliability Must Run ("RMR") contract charges to Granite State
11 for 2014?

12 A. No. Reliability Must Run Agreements guarantee payments to generators that are needed
13 to ensure reliability. To obtain an agreement, a generator must receive verification from
14 ISO-NE that it is needed for reliability and must demonstrate that it is unable to cover its
15 operating costs with revenue from other sources. Granite State has not incurred any
16 RMR contract charges as there have been no RMR contracts for the New Hampshire
17 reliability region over the past year. Therefore, the Company has not forecasted any
18 RMR contract costs for 2014.

19
20 Q. Can you please explain the forecast of the ISO-NE Administrative Charges shown in line
21 7 and 8 of Schedule JDW-1 page 1?

1 A. Yes. Lines 7 and 8 include ISO-NE Administrative charges for Schedule & Dispatch and
2 NESCOE respectively, and are derived in Schedule JDW-2 page 2. Line 7 shows the
3 2014 forecast of charges to Granite State under Schedule 1, Scheduling and Load
4 Dispatch Administrative schedules through Section IV.A of the ISO Tariff. The estimate
5 is based on the ISO-NE revenue requirement for Schedule 1 filed each year with FERC.
6 ISO-NE filed its proposed 2014 revenue requirement with FERC on October 15, 2013.
7 This amount was derived by using the proposed ISO Schedule 1 rate of \$0.15460 per
8 kW-month and multiplied by Granite State's forecasted monthly network load as shown
9 in column 2 of Schedule JDW-2, page 2.

10
11 Line 8 on page 1 of Schedule JDW-1 shows the estimated 2014 NESCOE charges under
12 Schedule 5 of Section IV.A of the ISO Tariff. ISO-NE filed its proposed 2014 recovery
13 of NESCOE costs with FERC on October 15, 2013. For calendar year 2014, the
14 Schedule 5 NESCOE charges were estimated using the proposed rate of \$0.00553/kW-
15 month times Granite State's monthly network load. These charges are shown in column
16 3 of Schedule JDW-2 page 2. The total estimated amount of direct ISO Tariff charges
17 under Section IV.A for the Company is estimated to be \$303,148. These estimates are
18 taken from page 2 of Schedule JDW-2 and then reflected on lines 7 and 8 of Schedule
19 JDW-1.

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

21 A. The sub-total of ISO-NE charges is \$15,228,160 which is the sum of lines 3 through 8 on
22 Schedule JDW-1 page 1.

1

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

3 A. Yes. Lines 1 and 2 of Schedule JDW-1 show the amount of forecasted charges from
4 NEP pursuant to the Local Network Service ("LNS") tariff. The total amount of
5 expenses is \$3,233,638 which represents a net decrease of \$762,163 in the total NEP
6 expenses NEP will charge to Granite State in 2014 (see Schedule JDW-1, page 2, lines
7 1 and 2). Granite State estimated the PTF and non-PTF expenses based on the average of
8 NEP's charges through September 2013. Metering, transformation, specific distribution,
9 and ancillary service charges are based on current rates and are assessed to Granite State
10 based on a per meter and peak load basis, respectively. A maintenance service credit, as
11 discussed previously, was also included in the estimate.

12

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

14 Q. What are the primary causes of the estimated increase in Granite State's 2014
15 transmission expenses?

16 A. The estimated 2014 Granite State transmission and ISO-NE expenses of \$18.5 million
17 represent a net increase of \$1,450,897 from the 2013 forecast of transmission expenses
18 for Granite State. The largest increase is to Granite State's RNS transmission charges,
19 estimated to increase \$1,958,293 as indicated on line 3 of Schedule JDW-1 at page 2.

20 This is due to the estimated RNS rate increase effective June 1, 2014 based on the PTF
21 transmission plant investment forecasted by the PTO to be "in-service" in 2014 across
22 New England.

1
2 Q. What PTF plant investment is driving the \$1,958,293 increase in the ISO-NE RNS
3 charges to Granite State effective June 1, 2014?

4 A. The \$1,958,293 increase stems from a significant number of capital additions forecasted
5 by the PTO to go into service in 2014. Schedule JDW-5 shows an estimated \$907
6 million of PTF plant additions for 2014 as provided by the PTO. This list has been
7 created by the PTO in an effort to improve the ability to forecast the impact of capital
8 investment on RNS rates. These estimates are intended to: 1) include the most current
9 project cost forecasts; 2) refine phasing of when project spending is placed into service;
10 and 3) capture any PTF capital expenditure not included in the ISO-NE Regional System
11 Plan.

12
13 Q. What are the major projects driving the significant level of projected plant additions for
14 2014?

15 A. Based on the summary of major transmission projects in New England in which a
16 portion of the project has an in-service date during 2014 are: (1) Central Maine Power's
17 Maine Power Reliability Program ("MPRP"); (2) National Grid's and Northeast Utilities'
18 New England East-West Solution ("NEEWS") and (3) a number of Northeast Utilities'
19 transmission upgrade projects. The PTO has forecasted this similar level of annual
20 investment in transmission projects through 2017. The 2013 Regional System Plan
21 issued by ISO-NE on November 7, 2013 indicates that the Central Connecticut portion of

1 NEWS is being reevaluated but no specific changes to the project implementation or
2 costs have been released.

3
4 **VI. Conclusion**

5 Q. Does this conclude your testimony?

6 A. Yes.

THIS PAGE LEFT INTENTIONALLY BLANK