

BEFORE THE STATE OF NEW HAMPSHIRE
PUBLIC UTILITIES COMMISSION

In the matter of:)
Public Service Company of New Hampshire)
DE 13-108)
Annual Reconciliation of Energy Service and)
Stranded Cost for 2012)

Direct Prefiled Testimony

of

Stephen R. Eckberg
Utility Analyst

on behalf of

The NH Office of the Consumer Advocate

Dated: **November 20, 2013**

1 **Q. Please state your name, business address and position.**

2 A. My name is Stephen R. Eckberg. I am employed by the Office of Consumer
3 Advocate (OCA) as a Utility Analyst. My business address is 21 S. Fruit Street,
4 Suite 18, Concord, NH 03301. I include as Attachment SRE-1 to my testimony a
5 statement of my education and experience.

6
7 **Q. Have you previously testified before the Commission?**

8 A. Yes, as noted in Attachment SRE-1, I have testified on behalf of the OCA in a
9 number of dockets during my six years with the OCA.

10
11 **Q. Does the OCA support the Company's Energy Service reconciliation of 2012
12 Energy Services expenses as filed?**

13 A. No. The OCA has identified four issues which I discuss in my testimony below. I
14 provide a recommendation to the Commission for one of these issues. The OCA
15 believes that the other three issues need further investigation and discussion before
16 we can make a final recommendation to the Commission regarding the Company's
17 filing. A discussion of these issues follows.

18
19 **Q. Please identify the specific issues that the OCA believes must be more fully
20 explored and addressed before the final reconciliation of PSNH's Energy Service
21 costs in 2012 can be established.**

22 A. The issues include:

23 1. Whether the Company should be allowed to recover certain affiliate costs
24 from customers in the absence of an affiliate agreement.

- 1 2. Whether it is appropriate for the Commission to approve of any of PSNH's
2 proposed changes to the Average Year of Final Retirement for generation
3 assets and any resulting Depreciation Reserve Imbalance without analytical
4 support.
- 5 3. Whether PSNH's sale of #6 oil inventory, a rate base investment, which
6 resulted in a net loss to ratepayers of \$2 million was prudent.
- 7 4. Whether PSNH shareholders should earn a return on the full net plant value
8 of its generation assets when certain assets were not fully used and useful in
9 providing energy service in 2012.

10 Each of these issues has the potential to significantly impact the total energy service
11 expense recovery under review in this docket.

12

13 **1. RECOVERY OF CERTAIN AFFILIATE COSTS.**

14 **Q. Please address your first issue regarding costs allocated to PSNH from NSTAR.**

15 A. In April, 2012, Northeast Utilities (NU) announced that it had completed its merger
16 with NSTAR¹. Northeast Utilities Service Company (NUSCO) provides services
17 and allocated costs to PSNH in accordance with an affiliate agreement on file with
18 the Commission and in effect during 2012. These services include a variety of
19 centralized operations, planning, financial, and management services which NUSCO
20 provides to each of NU's regulated utilities. The affiliate agreement specifies the type
21 of charges that can be allocated and the method of allocation that will be used for
22 each.

23

¹ See NU News Release dated 04/10/2012 available at <http://www.nu.com/media/news.asp>

1 **Q. Is your concern regarding expenses allocated to PSNH from NUSCO or from**
2 **another affiliate company?**

3 A. My concern relates to expenses from another affiliate – not NUSCO. In response to
4 discovery, PSNH confirmed that expenses totaling approximately \$900,000 were
5 allocated to PSNH from NSTAR Electric and Gas Corporation (NSTAR-EGC) –
6 NSTAR’s service company. This concerns the OCA because we find no evidence of
7 an affiliate agreement filed with the Commission between PSNH and NSTAR-EGC.
8 No new filing of an affiliate agreement was made in PSNH's then existing docket
9 relating to affiliate agreements, DA 12-030. Nor does there appear to be any new
10 filing otherwise docketed in 2012² that would permit PSNH to recover from
11 customers costs from NSTAR-EGC “allocated” to PSNH.

12
13 **Q. Does the OCA have a recommendation regarding these costs?**

14 A. Yes. The OCA recommends that the Commission disallow these charges as
15 permitted by RSA 366:4. That statute states “Any contract or arrangement not filed
16 with the commission pursuant to RSA 366:3 shall be unenforceable in any court in
17 this state and payments thereunder may be disallowed by the commission unless the
18 later filing thereof is approved in writing by the commission.”

19
20 **2. DEPRECIATION CHANGES AND DEPRECIATION RESERVE IMBALANCE.**

21 **Q. What is a depreciation reserve imbalance and what are the OCA’s concerns?**

22 A. Depreciation of the company's assets is the recognition of the decrease in value that
23 an asset experiences over the term of its useful service life. Depreciation cost

² Based on a review of 2012 dockets listed at <http://www.puc.nh.gov/Regulatory/docketbk-2012.html>

1 accounting is the measurement of this decline in value and the allocation of the
2 property's original cost over its life. The Company records the amount of
3 depreciation expense collected from its customers to track the "depreciation reserve,"
4 which is the cumulative depreciation cost recovered in rates. The amount of the
5 depreciation reserve is subtracted from the original cost of plant in calculating rate
6 base on which the Company is entitled to recover a return through rates.

7
8 From time to time, the Company may review the depreciation rates which apply to its
9 various accounts of property. If the depreciation rates change, such a change may
10 create an imbalance between the "depreciation reserve" amount on the company's
11 books, and the new theoretical reserve amount calculated using new rates. Such an
12 imbalance could represent either an overcollection or an undercollection of
13 depreciation from customers. When such imbalances occur regulators may seek to
14 correct the imbalance by amortizing the imbalance over a reasonable period of time.
15 This could mean collecting more or less than the actual amount of depreciation
16 calculated based on approved depreciation rates.

17
18 In this filing, PSNH has proposed changes to the Average Year of Final Retirement
19 (AYFR) for some of its generation assets. This, in turn, has changed certain
20 depreciation rates. The Company has not, based on my understanding of the
21 information available, provided any detailed information on the Depreciation Reserve
22 Imbalances which may exist as a result of these changes to depreciation rates. Thus,
23 it is not possible to determine if an imbalance exists and whether regulatory action to
24 address any such imbalance would be appropriate.

1 **Q. Please provide an example of one of the Company's proposed changes to**
2 **depreciation rates.**

3 A. The Company's response to Staff 2-1 in DE 11-215 is a useful source of information
4 on these details. I include that response and its attachments 1 through 3 as
5 Attachment SRE-2 to my testimony. Examining the first long row of information in
6 "Attachment 1" (at page 1 of 1) to Attachment SRE-2 the details on "PSNH 311
7 Steam Generation – Structures – Merrimack" are shown. This row of information
8 shows the new proposed AYFR value of 2038. Then, all the way to the right is the
9 new proposed "Derived 2012 Depreciation Rate" of 0.930%.

10
11 To compare this value to the current depreciation rate for the corresponding asset,
12 refer to "Attachment 2" of Attachment SRE-2 at page 3 of 45. This document is the
13 2007 AYFR Technical Update (depreciation study which the OCA understands
14 contains the currently approved depreciation rates for PSNH's generation assets.
15 Looking at the very first row of information under "Steam Production," one sees
16 account "311.00 Structures and Improvements" which shows a proposed "R/L Rate"
17 of 1.66%. It is my understanding that this means a proposed "Remaining Life"
18 depreciation rate of 1.66%. Compared to the newly proposed rate of 0.930%
19 described above, this is a noticeable change. Such a change could create an
20 imbalance between the actual booked depreciation reserve amounts and the
21 theoretical reserve amounts calculated using the newly proposed rates.

22

1 **Q. In the documents you just referred to it appears that the information provided**
2 **for the 2012 AYFR Technical Update is different than that for the 2007 AYFR**
3 **Technical Update. Is that correct?**

4 A. Yes. The 2007 AYFR Technical Update provided more detailed information and
5 includes information on "Recorded Reserve," "Computed Reserve," and "Reserve
6 Imbalance." The Company has not, to the OCA's knowledge, produced these same
7 schedules with its 2012 AYFR Technical Update which would assist us in resolving
8 our concerns about the possible Reserve Imbalances.

9
10 **Q. In total, what amount of depreciation costs are included in this 2012 Energy**
11 **Service Reconciliation filing?**

12 A. Depreciation costs related to PSNH's fossil fuel and hydro generating assets totaling
13 \$33,220,000 for 2012 are shown in the Company's filing on Attachment MLS-4 page
14 13.

15
16 **Q. Do you have a recommendation for the Commission on this issue?**

17 A. Yes. The OCA recommends that the Commission direct the Company to provide
18 additional details related to the 2012 AYFR Technical Update which adjusted 2012
19 depreciation rates for certain generation assets. The additional details should include
20 schedules similar to those the Company provided with its 2007 Depreciation Update
21 so that an evaluation of depreciation reserve imbalances can be made. The OCA also
22 asks for an opportunity at that point to present a recommendation to the Commission.

23

24

1 **3. NEWINGTON FUEL OIL SALES.**

2 **Q. Please address your next issue regarding the sale of fuel oil inventory in 2012.**

3 A. In April and May, 2012, the Company completed two sales of #6 oil used at
4 Newington station. These sales resulted in net total credit to customers in the 2012
5 energy service calculation of \$8.4 million. However, the total gross sales amount of
6 the two separate transactions was \$20.7 million. Ratepayers realized only 41% of the
7 gross value of the transactions. The OCA is concerned that the Company has not
8 provided evidence that they made the best decision about these transactions for the
9 benefit of the ratepayers.

10
11 **Q. How long had this fuel been in inventory prior to its sale?**

12 A. PSNH stated in discovery that the fuel was purchased at least three years earlier, in
13 January and February 2009, as these were the most recent fuel purchases. See
14 response to OCA 2-14 included as Attachment SRE-3.

15
16 **Q. How much did ratepayers pay for the fuel?**

17 A. The costs to ratepayers of this fuel include the costs to purchase it and return earned
18 by the Company on the inventory. The Company's calculation as shown in
19 Attachment SRE-3 assumes that the fuel was acquired in January and February of
20 2009 at a total cost of \$7,690,191. Applying the Company's authorized Rate of
21 Return to the inventory value over the ensuing period resulted in ratepayers paying
22 \$2,760,047 in return. This makes the total cost to ratepayers \$10,450,238.

1 **Q. What was the total impact on ratepayers regarding the oil sale transactions?**

2 A. Ratepayers realized a loss of roughly \$2 million. The calculation of this amount is
3 based on the \$10,450,238 cost to ratepayers less the benefits totaling \$8.451 million
4 from the sales resulting in the overall impact of a loss of roughly \$2 million.

5
6 **Q. Did the Company provide support to show that this transaction was prudent?**

7 A. No. The OCA asked for details of any cost/benefit analysis undertaken, but the
8 Company's response did not provide the details requested. The Company instead
9 claimed "Prior to the oil sale an evaluation of Newington Station's 2012 operation
10 reconfirmed that burning natural gas was the more economic choice compared to
11 burning oil." See response to OCA 1-19 included as Attachment SRE-4. An
12 economic analysis of other options to the sale of the oil would be useful to see
13 because of the loss ratepayers experienced. Our interest is to ensure that the
14 Company evaluated such options and made the best decision given the totality of the
15 circumstances.

16

17 **Q. Do you have a recommendation for the Commission on this issue?**

18 A. Yes. The OCA recommends that the Commission direct the Company to provide
19 additional analytic support for its decision to execute the two #6 oil sales in 2012
20 which resulted in providing only 41% of the gross sales value to ratepayers, as well
21 as a loss to ratepayers. In addition, the OCA would like an opportunity to make a
22 recommendation to the Commission after the Company provides this additional
23 information and before the Commission issues a decision on the Company's 2012
24 Energy Service Reconciliation

1 **4. RETURN ON GENERATION ASSETS NOT FULLY USED AND USEFUL.**

2 **Q. Please address your fourth issue regarding the Company's use of its generation**
3 **assets in 2012 and whether those assets were fully used and useful.**

4 A. The evidence provided by PSNH demonstrates that it did not use its own fossil fuel
5 generation assets to provide service to customers to the full extent that these assets
6 were built and intended to provide such service. The entirety of these generation
7 assets, then, do not meet the requirements of RSA 378:27 and RSA 378:28 which
8 limits the recovery of a return on investment to assets that are "used and useful" in
9 the service to customers. The Commission should therefore disallow PSNH's
10 proposal to recover a return on the full value of these plants in rate base.

11
12 **Q. What information in the filing are you relying on to support your contention**
13 **that the Company's generation assets were not fully used and useful in 2012?**

14 A. The testimony of William H. Smagula includes attachments which provide historical
15 performance data including the heat rate, the equivalent availability factor and the
16 capacity factor for each of the Company's fossil fuel generation plants. See
17 Testimony of Smagula Appendix A pages 144 – 148. On these pages, Mr. Smagula
18 provides a graphical presentation of this data from 1993 – 2012.

19
20 **Q. What observations do you make from this data?**

21 A. The data, presented in graphical form, demonstrate that each of the fossil plants has
22 had historically higher capacity factors during the time period 1993-2001 than in the
23 more recent time period 2009 – 2012. The main exception to this trend is the
24 performance of Schiller 5 which is generating unit that PSNH rebuilt and retrofitted

1 to burn wood chips in 2007.³ Therefore, its operational and economic characteristics
2 are significantly different than the Company's other vintage fossil fuel stations.
3

4 **Q. What is the significance of these time periods you used in your observations**
5 **above?**

6 A. The period of 1993 – 2001 corresponds roughly to the time period leading up to and
7 covering the development of electric deregulation in New Hampshire. The more
8 recent time period, 2009 – 2012, corresponds to a time period of significant evolution
9 in the electricity markets in which PSNH operates.
10

11 **Q. What do you conclude from the data?**

12 A. I have used the data presented by Mr. Smagula to calculate the average capacity
13 factors for these two time periods for each generating asset. This data is presented in
14 Table 1 below.

	MK1	MK2	Newington	Schiller4	Schiller5	Schiller6
Average Capacity Factor 1993-2001	80.1%	71.2%	29%	56%	54.6%	56.4%
Average Capacity Factor 2009-2012	60.5%	50.3%	4.5%	38.3%	83.0%	36.5%

15

³ See Docket DE 03-166

1 A comparison of the values in the table confirms the downward trend in capacity
2 factor reflected in Mr. Smagula's graphs. The average capacity factors for each of
3 PSNH's fossil fuel generating plants (except Schiller 5 as discussed above) were
4 much higher in the earlier time period than they are in the more recent period. From
5 these comparisons, I conclude that the Company's generation assets are being used in
6 a different way – at much lower capacity factors – than they were earlier in their
7 service lives.

8
9 Based on this comparison of historical versus recent capacity factor, I conclude that
10 PSNH's generation assets are no longer fully "used and useful" as required by law.
11 The plants' capacity factors have decreased as shown above. If the Commission were
12 to approve the Company's 2012 energy service reconciliation as proposed, customers
13 would pay PSNH shareholders a return on assets which are not fully used and useful.
14 Such an action would conflict with NH law.

15
16 **Q. Do you have a recommendation for the Commission?**

17 **A.** Yes. I recommend that the Commission not allow the Company to include a portion
18 of each fossil fuel generation asset in its rate base for purposes of calculating the
19 Energy Service rate. Only the "used and useful fraction" of each generation asset
20 would be used to calculate the return. The rate base reduction will be determined by
21 comparing recent plant capacity factors with historical capacity factors and allowing
22 the Company's shareholders to earn a return only on the used and useful portion of
23 each generation asset (i.e. "used and useful fraction"). Costs related to the "non used
24 and useful portion" would be collected via an appropriate method but would not be

1 used to calculate the return. I recommend, below, a process that the Commission can
2 use to avoid having ratepayers pay a return on non-used and useful assets.

3
4 OCA Recommended Process for Determining “Used and Useful Fraction.”

- 5 1. The 1993 – 2001 average historical capacity factor will be considered as the
6 “baseline” capacity factor for each generating asset. This value will be used as the
7 denominator in the “used and useful fraction.”
- 8 2. The average capacity factor for the period 2009 – 2012 will be used as the
9 numerator in the “used and useful fraction.”
- 10 3. Calculate the “used and useful fraction” using the values defined above.
- 11 4. Multiply the “Net Plant” value for each generating facility by the “used and useful
12 fraction.” See for example, filing Attachment MLS-4 page 12 which shows “Net
13 Plant.” The information in this schedule would need to be disaggregated by
14 generating facility.
- 15 5. Calculate the “Return-Adjusted” value as shown on Attachment MLS-4 Line 12
16 based ONLY on the used and useful fraction of each fossil generating plant permitted
17 to earn a return. The value on line 2 of this Schedule listed as “Net Plant” would be
18 replaced by the total “used and useful fraction” of Net Plant.
- 19 6. The adjusted return value, based on the “used and useful fraction,” derived using
20 the calculations shown on Schedule MLS-4 would carry forward into the remainder
21 of the Company’s calculations of its total energy service cost for 2012.

1 Q. Is it correct that your proposal does not include disallowance of costs related to
 2 the non-used and useful portion of the fossil fuel generation assets?

3 A. That is correct. The Company would continue to recover the costs of ownership of
 4 the non-used and useful portion of the fossil fuel generation assets from ratepayers.
 5 The only disallowance my proposal is that the Company's shareholders not earn a
 6 return on the non-used and useful fraction of the fossil generating facilities.

7
 8 Q. Have you performed these calculations to determine the "used and useful
 9 fraction" for the Company's generating assets that would be impacted by your
 10 proposal?

11 A. Yes. I have used the information in Table 1 above to calculate the "used and useful
 12 fraction" for each asset. This information is presented below in Table 2.

Table 2.						
	MK1	MK2	Newington	Schiller4	Schiller5	Schiller6
Average Capacity Factor 1993-2001 (B)	80.1%	71.2%	29%	56%	54.6%	56.4%
Average Capacity Factor 2009-2012 (A)	60.5%	50.3%	4.5%	38.3%	83.0%	36.5%
Used & Useful Fraction (=A/B)	75.5%	70.6%	15.5%	68.3%	100%*	64.7%

* Eligible Portion limited to a maximum of 100%

1 **Q. Please provide an example of how this process would work.**

2 A. Let's say that the historical data show that coal fired unit "Generator X" had a 1993-
3 2001 average capacity factor of 80% and a 2009-2012 average capacity factor of
4 40%. We would use these values of 40% as the numerator and 80% as the
5 denominator to calculate the "used and useful fraction" of $40/80 = \frac{1}{2}$. This indicates
6 that Generator X is used and useful approximately one half of the amount that it was
7 used historically. As a result, only one-half of the net plant in service for Generator
8 X would, therefore, be allowed to earn a regulated return on rate base at Commission
9 approved rates. The remaining fraction of rate base related to Generator X would not
10 earn a return. The Company would continue to fully collect costs of ownership for
11 the plant (O&M, property taxes, etc.) providing those were determined to be prudent.

12

13 **Q. Have you estimated the impact of this proposal on the Company's 2012 Energy**
14 **Service reconciliation filing?**

15 A. My estimate is that under the method I propose above, the Company's earned return
16 on rate base as shown on the Company's schedule Attachment MLS-4 page 12 would
17 be reduced by approximately \$18,400,000. That is, a reduction in earned return on
18 rate base from \$82,727,000 to approximately \$64,334,000.

19

20 **Q. Does that conclude your testimony?**

21 A. Yes.

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