

ORIGINAL

N.H.P.U.C. Case No. DE 11-250

Exhibit No. # 9

Witness Panel 2

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Before the  
STATE OF NEW HAMPSHIRE  
PUBLIC UTILITIES COMMISSION

DE 11-250

In the Matter of:  
Public Service Company of New Hampshire

Investigation of Merrimack Station Scrubber Project and Cost Recovery

Direct Testimony

of

Steven E. Mullen  
Assistant Director – Electric Division

February 24, 2012

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<b>Attachment SEM-1</b>	<b>PSNH Response to Technical Session Data Request #1-1</b>
<b>Attachment SEM-2</b>	<b>Temporary Rate Calculation</b>
<b>Attachment SEM-3</b>	<b>PSNH Response to Staff #1-17 (DE 11-215)</b>

**Public Service Company of New Hampshire  
DE 11-250**

**I. Introduction and Summary**

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

A. My name is Steven E. Mullen. I am employed by the New Hampshire Public Utilities Commission as Assistant Director of the Electric Division. My business address is 21 South Fruit Street, Suite 10, Concord, New Hampshire.

**Q. Please summarize your educational background and work experience.**

In 1989, I graduated *magna cum laude* from Plymouth State College with a Bachelor of Science degree in Accounting. I attended the NARUC Annual Regulatory Studies Program at Michigan State University in 1997. In 1999, I attended the Eastern Utility Rate School sponsored by Florida State University. I am a Certified Public Accountant and have obtained numerous continuing education credits in accounting, auditing, tax, finance and utility related courses.

From 1989 through 1996, I was employed as an accountant with Chester C. Raymond, Public Accountant in Manchester, New Hampshire. My duties involved preparation of financial statements and tax returns as well as participation in year-end engagements. In 1996, I joined the Commission as a PUC Examiner in the Finance Department. In that capacity I participated in field audits of regulated utilities' books and records in the electric, telecommunications, water, sewer and gas industries. I also performed rate of return analysis, participated in financing dockets and presented oral testimony before the Commission. In 1998, I was promoted to the position of Utility Analyst III and

1 continued to work in all of the regulated industry fields, although the largest part of my  
2 time was concentrated on electric and water issues. As part of an internal reorganization  
3 of the Commission's Staff in 2001, I became a member of the Electric Division. I was  
4 promoted to Utility Analyst IV in 2007 and then Assistant Director of the Electric  
5 Division in 2008. Working with the Director of the Electric Division, I am responsible  
6 for the day-to-day management of the Electric Division including decisions on matters of  
7 policy. In addition, I evaluate and make recommendations concerning rate, financing,  
8 accounting and other general industry filings. I represent Staff in meetings with company  
9 officials, outside attorneys, accountants and consultants relative to the Commission's  
10 policies, procedures, Uniform System of Accounts, rate case, financing and other  
11 industry and regulatory matters.

12 **Q. Have you previously testified before this Commission?**

13 A. Yes. I have testified before the Commission on numerous occasions.

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

15 A. The purpose of my testimony is to provide a recommendation concerning Public Service  
16 Company of New Hampshire's (PSNH) request to establish temporary rates to  
17 commence recovery of the costs it incurred in installing a wet flue gas desulfurization  
18 scrubber unit at its coal-fired Merrimack Station generating plant in Bow, New  
19 Hampshire. Specifically, on November 18, 2011, PSNH requested a temporary energy  
20 service (ES) rate of 1.18 cents per kilowatt-hour (kWh) for scrubber-related costs,  
21 effective with service rendered on and after January 1, 2012. That filing was in response  
22 to the Commission's November 15, 2011 secretarial letter in Docket No. DE 11-215,  
23 PSNH's most recent ES rate setting proceeding, which set forth the Commission's

1 decision to not include scrubber costs in ES rates effective January 1, 2012. Instead, the  
2 Commission determined that it would open a separate docket to consider the prudence of  
3 the scrubber project and the related costs. The Commission further stated that it would  
4 consider the propriety of setting temporary rates for PSNH's recovery of scrubber costs  
5 in that docket.

6 **Q. How would the requested temporary rate for the scrubber interact with PSNH's**  
7 **energy service (ES) rate?**

8 A. The temporary scrubber rate of 1.18 cents per kWh would be added on to the existing ES  
9 rate (also known as PSNH's default service rate), which is currently 8.31 cents per kWh.<sup>1</sup>  
10 Such inclusion in ES rates is consistent with RSA 125-O:18 which states, in part,

11 If the owner<sup>2</sup> is a regulated utility, the owner shall be allowed to recover  
12 all prudent costs of complying with the requirements of this subdivision in  
13 a manner approved by the public utilities commission. During ownership  
14 and operation by the regulated utility, such costs shall be recovered via the  
15 utility's default service charge.  
16

17 **Q. Has the timetable for a hearing on temporary rates changed since PSNH made that**  
18 **November 18, 2011 filing?**

19 A. Yes. The original date for a hearing was postponed, and a hearing is now scheduled for  
20 March 12-13, 2012. Therefore, the working assumption of a potential effective date for  
21 temporary rates is now April 1, 2012.

22 **Q. Has that change in dates also resulted in a change in the proposed temporary rate**  
23 **level?**

24 A. Yes. The original temporary rate adder of 1.18 cents per kWh has now been revised to

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<sup>1</sup> See Order No. 25,313 in Docket No. DE 11-215 (December 30, 2011).

<sup>2</sup> Pursuant to RSA 125-O:12, "owner" means the owner of an "affected source," with the affected sources being PSNH's Merrimack Station in Bow, New Hampshire and Schiller Station in Portsmouth, New Hampshire.

1 1.58 cents per kWh.<sup>3</sup> Although PSNH has not specifically revised its request to include  
2 the updated calculations, I have referenced the updated calculations throughout my  
3 testimony and incorporated them into my recommendation.

4 **Q. Does your testimony address the issue of the prudence of the scrubber project or the**  
5 **costs?**

6 A. No. Those issues will be fully explored during what I will refer to as the “permanent  
7 rates” portion of this proceeding. My testimony provides my recommendation for an  
8 appropriate level of temporary rates to be in place during the pendency of this  
9 proceeding. As contrasted with the extensive procedural schedule expected in the  
10 permanent rates portion of this proceeding, the procedural schedule with respect to  
11 temporary rates is much more limited, consisting of one round of discovery and a  
12 technical session.

13 **Q. Please summarize your testimony.**

14 A. Taking into account various temporary rate options, the rate and cost implications of each  
15 option, and a balancing of customer and shareholder interests, I recommend that the  
16 Commission establish temporary rates effective April 1, 2012 at a level of 0.98 cents per  
17 kilowatt-hour for the scrubber-related costs. That rate level assumes a one-year  
18 temporary rate period and was calculated using the projected 2012 annual ES kWh sales.  
19 Further details are provided later in my testimony.

20 **Q. How have you organized your testimony?**

21 A. I begin with a discussion of various temporary rate options for the Commission to  
22 consider, including advantages and disadvantages of each. Next, I discuss the costs at

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<sup>3</sup> See Attachment SEM-1, PSNH’s response to Technical Session data request #1-1.

1 issue in this proceeding. Finally, I provide my recommendation with regard to the  
2 implementation of temporary rates along with the associated rate impacts.

## 3 4 **II. Temporary Rate Options**

5 **Q. Please explain the purpose and operation of temporary rates.**

6 A. Temporary rates, which are specifically allowed pursuant to RSA 378:27, provide a  
7 means for a utility to begin recovery of certain costs, pending the outcome of a full  
8 proceeding to investigate those costs. Following the completion of the full proceeding, a  
9 “permanent rate” level is determined, and the difference between the temporary rate level  
10 and the permanent rate level is then reconciled through either collection from or refund to  
11 customers.

12 **Q. Please describe in general terms how a temporary rate reconciliation would work.**

13 A. At the conclusion of the “permanent rate” part of this proceeding, the Commission will  
14 determine whether PSNH complied with the law and whether PSNH’s costs of doing so  
15 were prudently incurred. Then: a) any permanent rate increment attributable to the  
16 scrubber would be set, and b) a reconciliation amount would be calculated and reconciled  
17 through a collection from or a refund to customers. The reconciliation amount would be  
18 calculated by determining the difference between the revenues that would have been  
19 received during the period of temporary rates if the permanent rate level was in effect and  
20 the actual revenues received during the temporary rate period.

21 **Q. What are the potential options for the Commission to consider in determining  
22 whether to implement temporary rates?**

23 A. As I see it, there are four options for the Commission to consider:

- Deny the request to implement temporary rates;
- Establish temporary rates at the current non-scrubber ES rate level, excluding 2011 under-collection;
- Establish temporary rates at the current non-scrubber ES rate level of 8.31 cents per kWh, including 2011 under-collection; or
- Establish temporary rates at a level in excess of the current ES rate.

**Q. Please describe the advantages and disadvantages of each of those options.**

A. With the first option, if the Commission were to deny PSNH's request for temporary rates, PSNH would not be allowed to begin recovering any costs of owning and operating the scrubber until the completion of this proceeding. In such a scenario, PSNH would defer recovery of those costs until after a Commission decision. PSNH has estimated the deferral costs – which include capital, operation and maintenance and carrying costs – to be \$5 - \$6 million per month. So, to the extent the Commission were to find that most, if not all of the costs were prudent and the scrubber used and useful, the total amount to be paid by customers would be higher than if a temporary rate level was established.<sup>4</sup> Those added costs would have provided no additional benefit to customers. However, in the event that the Commission was to disallow recovery of some or all of the costs, a refund of those costs would not be due to customers because they would not have already paid them.

**Q. In the event the Commission denied PSNH's request to establish temporary rates, would the existing ES rate of 8.31 cents per kWh change?**

A. As there has not been a formal request to change the non-scrubber ES rate in this

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<sup>4</sup> Any temporary rate scenario that is at a level below full cost recovery would include some amount of deferred costs.



proceeding, the answer to that question is unclear. The 8.31 cents per kWh rate established in Order No. 25,313 was effective for service rendered “on and after January 1, 2012 until such time the Commission approves any adjustment to that rate.”<sup>5</sup> As part of the discovery process, PSNH has filed updates to its rate calculations, so there is a potential basis for the Commission to change the rate.

**Q. Please explain the difference between the second and third options described above.**

A. As previously mentioned, PSNH’s ES rate is currently 8.31 cents per kWh. Although that rate does not include recovery of scrubber costs, it is above the 7.91 cents per kWh<sup>6</sup> that PSNH had calculated the non-scrubber ES rate to be as of December 14, 2011. The reason for the 0.40 cents per kWh difference is that in Order No. 25,313 the Commission set the ES rate at a level above the “non-scrubber” rate to allow PSNH to recoup an under-recovery of 2011 non-scrubber ES costs. So, the current non-scrubber ES rate under the second option would be 7.91 cents per kWh and under the third option it would be 8.31 cents per kWh.

**Q. With respect to the second option, has the 7.91 cents per kWh non-scrubber rate been recalculated?**

A. Yes. As shown in Attachment SEM-1, a more recent calculation by PSNH of the non-scrubber ES rate for the period April – December 2012 is 7.77 cents per kWh. So, the Commission could use those revised calculations as a starting point.

**Q. Would establishing temporary rates at a level of 7.77 cents per kWh recover any scrubber-related costs?**

A. Assuming that PSNH’s non-scrubber ES costs do not decrease to a level below 7.77 cents

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<sup>5</sup> See Order No. 25,313 at 17.

<sup>6</sup> See DE-11-215, Exhibit 2 and the correction to the rate noted in Order No. 25,313 (December 30, 2011) at 15.

per kWh, the answer is “no.” The date of implementing temporary rates would, however, establish a date for commencement of the reconciliation of costs and revenues once a permanent scrubber rate is determined at the conclusion of this proceeding.

**Q. Using a potential effective date for temporary rates of April 1, 2012, what would happen to scrubber costs incurred prior to that date, assuming an earlier scrubber in-service date?**

A. While this is the first instance of the use of temporary rates in a default service proceeding,<sup>7</sup> I would expect that costs related to plant placed in service prior to the effective date of temporary rates would be included in the reconciliation. Generally, PSNH’s ES rates are reconciled each year, so prudent compliance costs associated with the scrubber would have eventually been included in an ES rate reconciliation, regardless of the implementation of temporary rates.

**Q. Regarding the third option, how does the current ES rate of 8.31 cents per kWh compare to the proposed temporary rate level?**

A. As shown in Attachment SEM-1 and as discussed above, a more recent calculation by PSNH of the non-scrubber ES rate for the period April – December 2012 is 7.77 cents per kWh. Comparing that rate to the current ES rate of 8.31 cents per kWh reveals that the current rate is 0.54 cents per kWh above the rate needed for PSNH to recover its non-scrubber ES costs. That 0.54 increment is roughly one-third of the total 1.58 cents per kWh increment calculated by PSNH as necessary to begin fully recovering its scrubber-related costs.

**Q. If temporary rates were established at the current rate of 8.31 cents per kWh, what**

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<sup>7</sup> Temporary rates have historically been used in connection with base rate proceedings in the various regulated industries.

1           **would that mean for customers?**

2       A.     Current ES customers would see no change in the ES rate until July 1, 2012. Each year,  
3           to mitigate over- and under-recoveries that may accrue during the year, the Commission  
4           conducts a mid-year review of PSNH's ES rate for effect from July 1 through December  
5           31. Given the pendency of this current proceeding, I would expect that the mid-year  
6           review to be performed for 2012 would involve only PSNH's non-scrubber costs. Thus,  
7           if temporary rates were established at the existing ES rate level, the 0.54 cents per kWh  
8           increment attributable to scrubber cost recovery would continue until the conclusion of  
9           this proceeding and would be independent of whatever ES rate is determined as a result  
10          of the mid-year review.

11   **Q.     Moving to your fourth option, has PSNH requested the establishment of temporary**  
12   **rates at a level in excess of the 8.31 cents per kWh current ES rate?**

13   A.     Yes. PSNH originally requested a temporary rate increment to recover scrubber costs of  
14          1.18 cents per kWh, based on a twelve-month recovery period. Due primarily to the use  
15          of a shorter nine-month recovery period, PSNH's calculations now reflect an ES rate  
16          increment associated with scrubber costs of 1.58 cents per kWh.

17   **Q.     If the Commission elects to implement temporary rates at a level above the current**  
18   **ES rate, must it choose PSNH's proposed rate?**

19   A.     In my view, the Commission has options. The Commission is charged with balancing the  
20          interests of customers and shareholders, so it must carefully consider the impacts not only  
21          to customer rates but also to the utility. Pursuant to RSA 378:27, it must also make such  
22          a decision based on the "reports of the utility filed with the commission, unless there  
23          appears to be reasonable ground for questioning the figures in such reports." Based on

1 the filings to date in this and other proceedings involving PSNH and the scrubber, I  
2 expect parties to raise numerous questions. Therefore, I view PSNH's proposed  
3 temporary rate as an upper bound of potential temporary rate levels. Generally speaking,  
4 the advantages and disadvantages of this option center on the level of temporary rates  
5 chosen. A higher temporary rate level will result in a larger initial impact to customers  
6 but less deferred costs and, therefore, potentially lower total costs associated with the  
7 scrubber project. Conversely, a lower temporary rate level will result in a smaller initial  
8 impact to customers but increased deferred costs and, therefore, potentially higher total  
9 costs associated with the scrubber project.

### 11 III. Scrubber Costs

12 **Q. Does PSNH's request for cost recovery include only capital costs or are other costs**  
13 **included?**

14 A. PSNH is seeking recovery for operation and maintenance costs, fuel costs, avoided SO<sub>2</sub>  
15 costs, property taxes, depreciation and return on rate base. The total annual costs for  
16 2012 as reported in PSNH's November 18, 2011 filing are \$57.2 million.

17 **Q. Did PSNH include any other amounts for recovery?**

18 A. Yes, consistent with its position that the scrubber was placed in service in 2011 and 2011  
19 scrubber costs have to date not been recovered, PSNH proposed amortizing the 2011  
20 scrubber-related costs over three years and including one-third of those costs with its  
21 2012 costs, bringing the total proposed 2012 recovery to \$61.8 million.

22 **Q. Were those costs also updated and included in Attachment SEM-1?**

23 A. Yes. A table showing both PSNH's original and updated amounts (in \$000) is included

below:

	Nov. 18, 2011	Jan. 27, 2012
O&M, fuel & avoided SO <sub>2</sub> costs	\$ 6,679	\$ 6,671
Depreciation expense	13,761	13,761
Property tax expense	267	267
Return on rate base	36,539	34,801
Subtotal	57,246	55,500
1/3 of 2011 scrubber costs	4,520	4,367
Total	\$ 61,766	\$ 59,867

**Q. Have all of the capital costs for the scrubber project been included in PSNH's request for temporary rates?**

A. No. Certain plant items either had not yet been placed into service at the time of PSNH's filing or won't be placed in service until later in 2012 or early 2013. Those plant items are described in a Progress Report filed by PSNH in Docket No. DE 08-103 on November 10, 2011.

**Q. What does PSNH expect the total capital costs of the scrubber project to be?**

A. As reported in that same Progress Report, PSNH expects the total capital costs to be \$422 million.

**Q. How does that compare to earlier estimates of the project cost?**

A. The answer to that depends on how far back in time we go. At the time the legislation regarding mercury reductions was being discussed in the 2005 – 2006 time frame, it was expected that the project cost would not exceed \$250 million. Subsequently, in 2008, after putting contracts out to bid, PSNH increased its project cost estimate to \$457 million.

**Q. How do those earlier project cost estimates and the most recent forecast of the total project cost fit into the temporary rate determination?**

1 A. Since the project is not yet 100 percent complete, those various cost projections are  
2 instructive in framing the discussion regarding an appropriate level of temporary rates, as  
3 discussed in more detail below.  
4

#### 5 IV. Recommendation re: Temporary Rates

6 **Q. Please describe your recommendation for temporary rates to be established in this**  
7 **proceeding.**

8 A. After consideration of the various temporary rate options, deferred cost issues and the  
9 balancing of interests, I recommend that the Commission establish temporary rates  
10 effective April 1, 2012 at a level of 0.98 cents per kilowatt-hour. That rate level assumes  
11 a one-year temporary rate period and was calculated using the projected 2012 annual ES  
12 kWh sales.

13 **Q. Are you recommending that the 0.98 cents per kWh be added to the existing 8.31**  
14 **cents per kWh ES rate, or should the ES rate first be adjusted downward to PSNH's**  
15 **recent calculation of 7.77 cents per kWh?**

16 A. I recommend that the Commission adjust the non-scrubber ES rate to 7.77 cents per kWh  
17 and then the 0.98 cents per kWh temporary rate would be added to that rate, resulting in a  
18 total ES rate of 8.75 cents per kWh effective April 1, 2012. This is a variation of the  
19 fourth option described above and would result in a net increase to the ES rate of 0.44  
20 cents per kWh above the current 8.31 cents per kWh rate.

21 **Q. How long would that total rate of 8.75 cents per kWh be in effect?**

22 A. The ES rate would remain at 8.75 cents until at least July 1, 2012, at which time the non-  
23 scrubber portion of the rate would be subject to change through the normal mid-year

review process. The 0.98 cents per kWh temporary portion of the ES rate would continue through the conclusion of this proceeding.

**Q. How does your proposed 0.98 cents per kWh temporary rate compare to PSNH's proposed 1.58 cents per kWh rate?**

A. It is important to note as an initial matter that those rates were computed using different recovery periods. That is, while I used a twelve-month effective rate period, PSNH used a nine-month (April – December 2012) effective rate period. For a direct comparison using like time periods, the resulting rates under both proposals are as follows:

	<u>PSNH</u>	<u>Staff</u>
9-Month Rate	1.58 ¢/kWh	1.31 ¢/kWh
12-Month Rate	1.18 ¢/kWh	0.98 ¢/kWh

Detailed calculations of those rates are provided on Attachment SEM-2.

**Q. Why do you propose using a twelve-month rate rather than a nine-month rate as proposed by PSNH?**

A. PSNH proposed a nine-month rate as that time period of April – December 2012 coincides with the end of the traditional calendar year ES reconciliation period. While that approach is certainly logical, it creates a significant increase in the ES rate as twelve months of costs are collected over a nine-month period. My proposal to use a twelve-month rate removes some of the rate shock and is a better match of the period over which costs are incurred and recovered.

**Q. Please explain how you calculated the rate.**

A. As a starting point, I used PSNH's January 27, 2012 response to technical session data request #1-1. From page 5 of that response, I used the updated "Total Forecasted Merrimack Scrubber Cost" of \$55,500,000 shown on line 19. Then, taking into account

1 earlier cost estimates for the scrubber project as well as potential questions to be raised  
2 about the actual costs, I calculated a percentage – which I have termed a “Temporary  
3 Rate Cost Percentage” – of 66.00 percent using \$250,000,000 as the numerator and  
4 \$378,773,000 as the denominator. The \$378,773,000 figure was derived by taking the  
5 average of the 13 monthly gross plant balances for 2012 (includes December 31, 2011)  
6 from PSNH’s response to Staff data request #1-17 in DE 11-215.<sup>8</sup> Applying the 66.00  
7 percent to \$55,500,000 resulted in a product of \$36,631,000. To that I added PSNH’s  
8 total under-collected amount of \$13,101,000 from 2011, resulting in a total cost to be  
9 collected of \$49,732,000.

10 **Q. Does your Temporary Rate Cost Percentage have any significance with respect to**  
11 **decisions to be made regarding prudence or cost allowances and disallowances?**

12 A. No. The percentage was calculated solely for the purpose of developing a temporary rate  
13 recommendation and it has no other significance. Any decisions regarding prudence and  
14 potential cost allowances and disallowances should be made in the permanent rates  
15 portion of this proceeding after all of the evidence has been examined. The percentage  
16 represents what I view as a reasonable balancing of the various interests and concerns.

17 **Q. Please explain why you used \$250,000,000 as the numerator in calculating your**  
18 **Temporary Rate Cost Percentage.**

19 A. As stated earlier, I expect parties to raise a number of questions regarding the scrubber  
20 construction and costs. Given that \$250,000,000 was a publicly discussed early cost

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<sup>8</sup> While that discovery response (Attachment SEM-3) included monthly balances labeled “gross plant,” the amounts were net of accumulated depreciation. On Attachment SEM-2, I added back the accumulated depreciation to arrive at gross plant amounts for the purpose of deriving my “Temporary Rate Cost Percentage.”



1 estimate for the scrubber project,<sup>9</sup> I determined it to be a valid reference point in  
2 determining a temporary rate level that would allow PSNH to begin recovery of its  
3 scrubber costs.  
4

## 5 **V. Rate Impacts**

6 **Q. Have you calculated the rate impact of your recommendation?**

7 A. Yes. As noted above, my recommendation results in a net increase to the ES rate of 0.44  
8 cents per kWh. The monthly bill impact to a residential customer using 500 kWh per  
9 month would be an increase of \$2.20, or 2.5 percent, over the \$86.86 total bill using rates  
10 in effect today. Since ES is charged to all customer classes on a cents per kWh basis, for  
11 every 1,000 kWh used on a monthly basis, customers taking energy service from PSNH  
12 would see an increase of \$4.40.

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

14 A. Yes, it does.

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<sup>9</sup> See, for example, the Commission's secretarial letter dated August 22, 2008 opening Docket No. DE 08-103.