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|-------------------------|------------------|
| ORIGINAL                |                  |
| N.H.P.U.C. Case No.     | DE 11-250        |
| Exhibit No.             | #40 TransCanada  |
| Witness                 | THOMAS C. FRANTZ |
| DO NOT REMOVE FROM FILE |                  |

Public Service Company of New Hampshire  
DE 11-250

**NH PUC Staff Responses to Data Requests of TransCanada**

Date Received: January 21, 2014  
Request: TC - 1-1

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

Reference page 10, line 15 through page 11, line 5, and pages 14 and 15 of Mr. Mullen's prefiled testimony in this docket, did PSNH representatives do any presentations to Staff and the OCA regarding the increase in the estimate of the cost of the scrubber project in the summer of 2008?

**RESPONSE:**

Yes.

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DE 11-250**

**NH PUC Staff Responses to Data Requests of TransCanada**

Date Received: January 21, 2014  
Request: TC – 1-2

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

What were the dates of any such presentations?

**RESPONSE:**

A presentation was made on July 30, 2008.

Public Service Company of New Hampshire  
DE 11-250

NH PUC Staff Responses to Data Requests of TransCanada

Date Received: January 21, 2014  
Request: TC – 1-3

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

Are any of those dates the same as the one that was referenced in the PSNH response to TransCanada 4-24?

**RESPONSE:**

Yes.

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

**NH PUC Staff Responses to Data Requests of TransCanada**

Date Received: January 21, 2014  
Request: TC – 1-4

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

Is the presentation that PSNH provided in response to TransCanada 4-24 an accurate copy of the presentation that PSNH made during that meeting?

**RESPONSE:**

Yes.

Public Service Company of New Hampshire  
DE 11-250

NH PUC Staff Responses to Data Requests of TransCanada

Date Received: January 21, 2014  
Request: TC – 1-5

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

Please identify any and all persons who were present for the presentation which PSNH made to Staff and the Office of Consumer Advocate on or about July 30, 2008, which presentation was referred to in the PSNH response to data request TransCanada 4-24 in this docket, or for any other presentations PSNH made to Staff.

**RESPONSE:**

In attendance at the July 30, 2008 presentation:

PSNH: John McDonald, Steve Hall, Linda Landis, Terry Large, Lynn Tillotson  
Staff: Tom Frantz, George McCluskey, Steve Mullen, Anne Ross  
OCA: Meredith Hatfield, Ken Traum

**Public Service Company of New Hampshire  
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**NH PUC Staff Responses to Data Requests of TransCanada**

Date Received: January 21, 2014  
Request: TC – 1-6

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

Please provide copies of any and all documents in the possession of Staff related to the meeting or meetings referred to in question 4 above, including, but not limited to, any correspondence including any emails or other forms of correspondence between and among Staff, the OCA and PSNH representatives or any other persons present at this meeting, any notes kept by any Staff members in attendance at this meeting, and any other related documentation.

**RESPONSE:**

Attached is my copy of the July 30, 2008 presentation including my handwritten notes on the presentation as well as additional notes taken by me.

It is important to understand that the July 30, 2008 meeting was in the nature of PSNH providing Staff and OCA a confidential briefing as to the status of the project including the increased costs in advance of public disclosure. The Electric Division consistently instructs the electric utilities to inform us of newsworthy events either in advance or as soon as the possible after the event has occurred (depending on the nature of the event) so we will not be surprised by potential media or customer inquiries. The July 30, 2008 meeting was not a meeting designed to provide Staff with all justifications or analyses related to the scrubber project.

7-30-08 Meeting w/PSNH re: Merrimack Scriber Project

PSNH - Hall, McDonald, Landis, Lorge, Tillotson

OCA - Hatfield, Traum

Staff - Mullen, McCluskey, Frantz, Ross

8/4 → 10-Q to be issued

- rec'd commitment from Board of Trustees

- 4 major contractors

→ Project Manager = The Washington Group

→ 6/18 - Legislative Briefing

→ Discussed permits with DES

McDonald - have an "extreme confidence in the project"

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

**NH PUC Staff Responses to Data Requests of TransCanada**

Date Received: January 21, 2014  
Request: TC – 1-7

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

Please provide a copy of any materials that were provided to Staff associated with this meeting or meetings, either before, during or after the meeting or meetings.

**RESPONSE:**

See the response to TC 1-6.

Public Service Company of New Hampshire  
DE 11-250

NH PUC Staff Responses to Data Requests of TransCanada

Date Received: January 21, 2014  
Request: TC – 1-8

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

Reference page 14 of Mr. Mullen's testimony, lines 9-19, please explain your understanding of the statements in the presentation PSNH representatives made to the Board of Trustees that the relationship between the price of natural gas and the price of coal was critical to whether the project would be economic for ratepayers.

**RESPONSE:**

The July 15, 2008 presentation to the Board of Trustees made by PSNH and NU personnel included statements indicating that in assessing the benefit or cost to customers of comparative alternatives for securing equivalent energy and capacity as produced by Merrimack Station, such assessments were most sensitive to the relationship between the price of natural gas and the price of coal. While that spread was a key factor in determining customer benefit/cost, it was not the only factor, and it was based on consideration of a number of interdependent components.

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DE 11-250**

**NH PUC Staff Responses to Data Requests of TransCanada**

Date Received: January 21, 2014  
Request: TC – 1-9

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

Reference page 14 of Mr. Mullen's testimony, lines 9-19, please explain your understanding of the statements in the presentation PSNH representatives made to the Board of Trustees that net ratepayer or customer cost, or what they equated with "net present value" (the 2008 present value of Merrimack Plant revenue requirements from 2012-2027 minus the 2008 present value of market energy plus 2008 present value of capacity payments from 2012-2027) was most sensitive to expected future natural gas and coal prices.

**RESPONSE:**

See the response to TC 1-8.

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NH PUC Staff Responses to Data Requests of TransCanada

Date Received: January 21, 2014  
Request: TC – 1-10

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

Reference page 14 of your Mr. Mullen's testimony, lines 9-19, please explain your understanding of the statements in the presentation PSNH representatives made to the Board of Trustees that at assumed 2012 price levels, a spread of \$5.29/mmbtu (escalating) between natural gas and coal over the course of the next 15 years would be "required to create customer benefits."

**RESPONSE:**

See the response to TC 1-8. In addition, I note the question left out some relevant wording. The entire referenced bulleted item from that presentation reads as follows: "At assumed 2012 natural gas and coal price levels *and other base case parameters*, a spread of approximately \$5.29/mmbtu (escalating) is required to create customer benefits." (emphasis added). Therefore, I understand the spread to be the result of the consideration of a number of factors rather than a simple comparison of natural gas and coal prices.

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NH PUC Staff Responses to Data Requests of TransCanada

Date Received: January 21, 2014  
Request: TC – 1-11

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

Did PSNH provide the information referred to in questions 8, 9 and 10 above in the meeting with Staff and others on July 30 or any other meetings? If so, please provide any and all documentation indicating that any of this information was presented during that meeting or meetings.

**RESPONSE:**

Page 15 of the July 30, 2008 presentation contains the following bullet point: “Our analysis shows that customer economics are most sensitive to the Coal/Natural Gas price spread and far less sensitive to capital cost or RGGI cost increases.”

In addition, see the response to TC 1-5 where the nature of that meeting is explained.

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DE 11-250**

**NH PUC Staff Responses to Data Requests of TransCanada**

Date Received: January 21, 2014  
Request: TC – 1-12

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

Did PSNH present the information referred to in questions 8, 9 and 10 above to the Commission in DE 08-103? If so, please provide any and all documentation indicating that any of this information was presented to the Commission in that docket.

**RESPONSE:**

All documents filed in DE 08-103 are available to TransCanada at:  
<http://www.puc.nh.gov/Regulatory/Docketbk/2008/08-103.htm>

In response to the question, I provide the following information. I have not, however, performed a search of all documents filed in that docket.

Regarding questions 8, 9 and 10, the following information was provided to the Commission in DE 08-103:

PSNH's September 2, 2008 Report to the Commission:

- Page 14 – “D. Sensitivity analyses were conducted to test the impact of changes to each of the key assumptions (capital cost, coal cost and equivalent CO<sub>2</sub> allowance cost) on the overall bus bar cost of Merrimack Station. These sensitivity analyses indicated the economics of the project are most sensitive to variations in the future price of coal, and far less sensitive to variations in the capital cost or equivalent CO<sub>2</sub> allowance cost.”
- Pages 14 – 16. PSNH explained its methodology and provided its coal and gas price assumptions used in evaluating scenarios involving market purchases and construction of new coal and natural gas generating stations. Clearly, coal and natural gas price assumptions were important factors in those analyses.

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

**NH PUC Staff Responses to Data Requests of TransCanada**

Date Received: January 21, 2014  
Request: TC – 1-13

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

Do you have any knowledge or evidence of whether PSNH presented the information referred to in questions 8, 9 and 10 above to the Legislature? If so, please provide any and all such documentation.

**RESPONSE:**

To my knowledge, TransCanada has been provided with copies of documentation that PSNH provided to the Legislature although, given that this question is not time-bounded, I am not aware if any additional relevant documentation was presented to the Legislature. It is my understanding that PSNH at times may also have discussions with legislators. If any of the referenced information was provided through any such discussions, I have no knowledge.

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DE 11-250

NH PUC Staff Responses to Data Requests of TransCanada

Date Received: January 21, 2014  
Request: TC – 1-14

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

Reference page 11 of Mr. Mullen's testimony lines 24-25, is there any evidence that PSNH told the Legislature during the 2006 legislative session that the \$250 million estimate was "preliminary" and that it "did not include things such as the cost of the emissions removal guarantees" or "site-specific considerations or PSNH's internal costs"?

**RESPONSE:**

I am not aware of, nor was I a participant in, all conversations, meetings and presentations PSNH may have had with members of the Legislature during the time period in question. Thus, I am unable to state with any certainty whether any such evidence exists.

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

**NH PUC Staff Responses to Data Requests of TransCanada**

Date Received: January 21, 2014  
Request: TC – 1-15

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

If the answer to data request #14 is that there is evidence that PSNH provided such information to the Legislature please provide copies of any and all such evidence.

**RESPONSE:**

See the response to TC 1-14.

Public Service Company of New Hampshire  
DE 11-250

NH PUC Staff Responses to Data Requests of TransCanada

Date Received: January 21, 2014  
Request: TC – 1-16

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

If the answer to data request #14 is that there is no such evidence, please explain whether the Commission should take this failure to tell the Legislature that the estimate was "preliminary" given the language in the fiscal note on the bill regarding the "not-to-exceed" estimate of \$250 million "based on information from PSNH" into account when considering the issue of prudence in this docket? Please explain your response.

**RESPONSE:**

I expect the Commission to take the totality of evidence in this proceeding into consideration. In addition, see the response to TC 1-14.

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

**NH PUC Staff Responses to Data Requests of TransCanada**

Date Received: January 21, 2014  
Request: TC – 1-17

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

If the answer to data request #14 is that there is no such evidence, please explain how this failure to tell the Legislature that the number was "preliminary" was not important to the issue of prudence given the language in the scrubber law passed that year that the requirements in the law represent "a careful, thoughtful balancing of cost, benefits, and technological feasibility and therefore the requirements shall be viewed as an integrated strategy of non-severable components." [RSA 125-O:11, VIII]?

**RESPONSE:**

I expect the Commission to take the totality of evidence in this proceeding into consideration. In addition, see the response to TC 1-14.

Public Service Company of New Hampshire  
DE 11-250

NH PUC Staff Responses to Data Requests of TransCanada

Date Received: January 21, 2014  
Request: TC – 1-18

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

Reference page 19 of Mr. Mullen's testimony, lines 5-11, do you have any evidence or information indicating that PSNH told the Oversight Committee at its annual update in June of 2008 of the increase in the cost estimate, which by its own admission (response to TC 4-13), PSNH knew of at least as early as May of 2008? If you do have such information, please provide a description of such information and copies of any such documentation.

**RESPONSE:**

I do not have any such information. The presentation made by PSNH in its June 18, 2008 update to the Oversight Committee contains the following bullet:

- Project costs will be updated with review of major equipment bids

I was not present during the presentation and have no knowledge of whether any spoken words went beyond the words written on the handout.

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

**NH PUC Staff Responses to Data Requests of TransCanada**

Date Received: January 21, 2014  
Request: TC – 1-19

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

If the answer to data request #18 is that you do not have any such evidence or information please explain whether you believe PSNH was fulfilling its responsibilities of informing the Legislature and the Oversight Committee (see the RSA 125-O:13, IX) relative to providing updated cost information by not providing updated cost information during the June 18, 2008 meeting of the Oversight Committee.

**RESPONSE:**

As stated in the response to TC 1-18 and noted in this question, PSNH presented its update to the Oversight Committee on June 18, 2008. Including that presentation, here is the sequence of relevant events:

- June 18, 2008 – Presentation to Oversight Committee
- June 25, 2008 – Presentation to Northeast Utilities' Risk and Capital Committee
- July 15, 2008 – Presentation to Northeast Utilities' Board of Trustees
- July 30, 2008 – Confidential update presentation to Staff and OCA
- August 7, 2008 – SEC disclosure

As I follow that sequence of events, given that at the time of the meeting of the Oversight Committee the updated cost information had not been vetted with NU's Risk and Capital Committee and Board of Trustees nor publicly disclosed to the Securities and Exchange Commission, in my view PSNH met its responsibilities by providing updates as required by the statute while taking a reasonable approach to fully vetting the cost information prior to public disclosure.

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

**NH PUC Staff Responses to Data Requests of TransCanada**

Date Received: January 21, 2014  
Request: TC – 1-20

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

Reference page 16, lines 5-10, of your prefiled testimony, do you think PSNH had any duty to update financial analyses that were done in the summer of 2008 at any subsequent point in time given the changes in commodity prices and changes in the economy that occurred in 2008 and 2009?

**RESPONSE:**

As stated on pages 16 – 17 of my testimony, PSNH hired PowerAdvocate to review the costs of the Scrubber project including an analysis of the market conditions.

In addition, in its October 15, 2010 filing with the Commission in DE 08-103, PSNH included updated fuel, environmental and energy market information along with an updated analysis of its default energy service rate if Merrimack Station was not in the mix of PSNH's fossil and hydro plants.

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

**NH PUC Staff Responses to Data Requests of TransCanada**

Date Received: January 21, 2014  
Request: TC – 1-21

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

Is there any evidence that PSNH did any updates described in question #20? If so please provide all documentation of such evidence.

**RESPONSE:**

As stated in my testimony, Power Advocate's March 2009 report is included as Attachment WHS-3 to PSNH witness William Smagula's June 15, 2012 testimony.

PSNH's October 15, 2010 filing with the Commission in DE 08-103 can be found at:  
<http://www.puc.nh.gov/Regulatory/CASEFILE/2008/08-103/LETTERS,%20MEMOS/08-103%202010-10-15%20PSNH%20REQUEST%20FOR%20INFORMATION.PDF>

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

**NH PUC Staff Responses to Data Requests of TransCanada**

Date Received: January 21, 2014  
Request: TC – 1-22

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

Reference page 16, lines 11-16, of Mr. Mullen's prefiled testimony, prior to preparing your testimony did you review the response to TransCanada 4-17?

**RESPONSE:**

Yes. A more in-depth review of the information contained in that response was performed by Staff's consultant, Jacobs Consultancy as discussed on pages 19 – 20 of Jacobs' testimony along with Jacobs' June 2011 Due Diligence Report and the September 2012 Final Report.

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

**NH PUC Staff Responses to Data Requests of TransCanada**

Date Received: January 21, 2014  
Request: TC – 1-23

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

Please explain what importance from a prudence perspective should be given to the following references in the June 2008 version of the PowerAdvocate report: the report's conclusion that Merrimack Station's cost estimate was on the high end of cost per kilowatt hour range for a complete FGD retrofit relative to similar FGD retrofit projects; with respect to cost predictions, the report's conclusion that capital construction costs for new generation remained at historic levels with no clear understanding of whether or not a peak had been reached due to recent volatility of costs associated with the supply market; the report's indication that there were significant levels of uncertainty around projected carbon regulations; the report's reference to the effects of a tight labor market on the economics of scrubber investments; the report's conclusion that there were no good indicators to follow for investment decisions.

**RESPONSE:**

I expect the totality of evidence in this proceeding will be taken into account by the Commission when it rules on the prudence of the Scrubber project.

I note that the report also discussed certain site specific components (a list the authors considered to be not all-inclusive) and stated, "Each of these factors contributes to the "uniqueness" of the CAP project when compared to a more standard Wet FGD system. When these attributes are summarized and used to levelize the per-kilowatt costs, Merrimack Station's CAP is more in line with other projects of similar size and scope. Those site specific factors were:

- Mercury scrubber;
- Asymmetrical units combining into a single scrubber;
- Station site constraints;
- All-subcontract construction basis; and
- Pressurized cyclone boiler

Consistent with the first statement of this response, I would expect the Commission to consider the report in its entirety rather than only the items identified in the question.

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

**NH PUC Staff Responses to Data Requests of TransCanada**

Date Received: January 21, 2014  
Request: TC – 1-24

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

Reference page 5, line 13, of Mr. Mullen's prefiled testimony where he refers to the "prescriptive nature of the legislation", what meaning do you ascribe to the variance provision in RSA 125-O:17?

**RESPONSE:**

As stated on page 5 of my testimony, the "prescriptive nature of the legislation" refers to the law prescribing the particular technology to be installed.

The variance provision in RSA 125-O:17 allows for only two types of variances: a variance as to the schedule for compliance and a variance as to seeking an alternative to the at least 80 percent mercury reduction requirement found in RSA 125-O:13, II.

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

**NH PUC Staff Responses to Data Requests of TransCanada**

Date Received: January 21, 2014  
Request: TC – 1-25

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

Reference page 28, lines 19-23 of Mr. Mullen's prefiled testimony, is it your testimony that Merrimack Station, with the scrubber installed, is currently used and useful? Please explain your response.

**RESPONSE:**

The referenced portion of my testimony specifically addresses the scrubber and my position that the scrubber is used and useful. As stated on page 30 of my testimony, the scrubber is performing as planned and is reducing emissions of mercury and SO<sub>2</sub> as required by law.

Public Service Company of New Hampshire  
DE 11-250

NH PUC Staff Responses to Data Requests of TransCanada

Date Received: January 21, 2014  
Request: TC – 1-26

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

Reference pages 14-15 of Mr. Mullen's testimony, did you review and consider the PSNH response to TransCanada 1-2 as part of your review of the projections and analyses provided during discovery? Please explain your response and the level of your review of this response.

**RESPONSE:**

Yes. I reviewed that response and considered the reasonableness of the pricing information in that response as compared to the information in PSNH's analyses.

Public Service Company of New Hampshire  
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NH PUC Staff Responses to Data Requests of TransCanada

Date Received: January 21, 2014  
Request: TC – 1-27

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

Reference page 15, lines 15-20 of Mr. Mullen's testimony, would not the decline in the average natural gas prices noted in this portion of your testimony make the scrubber project uneconomic according to PSNH's own analysis presented in its June and July 2008 presentations to the Risk and Capital Committee and Board of Trustees?

**RESPONSE:**

Changing only one factor in an analysis while leaving the others unchanged would be an overly simplistic and inappropriate evaluation. As stated in the response to TC 1-8, PSNH's analyses were performed using a number of interdependent components. It is unrealistic to assume that a change in one component would not necessitate a change in another component.

For instance, PSNH's analyses used a \$4.82/mmBtu coal price based on a (\$130/ton delivered price) escalated 2.5% annually. In PSNH's most recent energy service rate proceeding, its delivered coal prices were roughly \$100/ton. Using the same Btu/lb content for the coal, that would change the \$4.82/mmBtu price to \$3.70/mmBtu. I use this as an example to show that given the dynamic fuel and energy markets, it is unrealistic to assume that a change in one cost component would not necessitate a change in other components.

Public Service Company of New Hampshire  
DE 11-250

NH PUC Staff Responses to Data Requests of TransCanada

Date Received: January 21, 2014  
Request: TC – 1-28

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

Reference pages 16-17 of Mr. Mullen's prefiled testimony, in any of the additional meetings of the Northeast Utilities Risk and Capital Committee cited in your testimony is there any evidence that PSNH did an update of gas prices and of their summer of 2008 analysis of the required spread between the price of natural gas and the price of coal to make the scrubber project economic for default service customers? If so, please provide copies of such evidence.

**RESPONSE:**

I am not aware of any such evidence.

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

**NH PUC Staff Responses to Data Requests of TransCanada**

Date Received: January 21, 2014  
Request: TC – 1-29

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

Reference page 19 of Mr. Mullen's prefiled testimony, lines 12-18, in any of the written status reports filed with the Commission cited in your testimony is there any evidence that PSNH provided an update of gas prices and of their summer of 2008 analysis of the required spread between the price of natural gas and the price of coal to make the scrubber project economic for default service customers? If so, please provide copies of such evidence.

**RESPONSE:**

See the responses to TC 1-20 and TC 1-21.

Public Service Company of New Hampshire  
DE 11-250

NH PUC Staff Responses to Data Requests of TransCanada

Date Received: January 21, 2014  
Request: TC – 1-30

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

Please explain in detail whether you agree with each of these PSNH statements in the July 2008 presentation to the Board of Trustees: (1) "Net customer benefit is most sensitive to expected future natural gas and coal prices and the relative spread between the two commodities." (2) "Customer value of scrubber installation extremely sensitive to future expected natural gas/coal price spread." (3) "At assumed 2012 natural gas and coal price levels and other base case parameters, a spread of approximately \$5.29/mmbtu (escalating) is required to create customer benefits." (4) "Recent spreads suggest that this level is realistic; however, historic spread levels have averaged lower."

**RESPONSE:**

As stated in my testimony, based on the information available at the time the presentation was created, PSNH's presentation and the statements in it were not unreasonable.

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

**NH PUC Staff Responses to Data Requests of TransCanada**

Date Received: January 21, 2014  
Request: TC – 1-31

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

The NH PUC is listed as a member of the study group for the 2007 Synapse AESC study referred to in Mr. Hachey's testimony. Was Staff aware of this study? When did Staff first become aware of the study and the natural gas forecasts in that study? Did any members of Staff participate in the study? If so, who and to what degree?

**RESPONSE:**

- a) Yes, Staff was aware of this study.
- b) Staff first became aware of the study and the natural gas forecasts in the study during its development.
- c) Thomas Frantz participated in conference calls and other communications with the authors of the study and other study group members to discuss general matters such as status updates.

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NH PUC Staff Responses to Data Requests of TransCanada

Date Received: January 21, 2014  
Request: TC – 1-32

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

Did the NHPUC support the findings of the 2007 Synapse AESC study?

**RESPONSE:**

As a member of the study group for whom the report was prepared, the NHPUC contributed to the funding of the study. I do not believe that the NHPUC ever explicitly endorsed or supported the findings. The study was used as a tool in analyzing, for example, programs in the Core energy efficiency docket.

Public Service Company of New Hampshire  
DE 11-250

NH PUC Staff Responses to Data Requests of TransCanada

Date Received: January 21, 2014  
Request: TC – 1-33

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

Did any member of the NHPUC Staff at any point consider whether the Synapse study or any other study regarding natural gas prices conflicted with the PSNH gas forecast? If not, please explain why not, if so, please explain what if any impact that consideration had on Staff's testimony in this docket.

**RESPONSE:**

Given the dynamics of the fuel and energy markets, it is not unusual for studies to conflict based on things such as the vintage of the data being used and assumptions made about supply, demand and economic factors. While some studies may conflict, others may be supportive of PSNH's representations. For instance, the following statements were included in the FERC's Office of Enforcement's report on *Increasing Costs in Electric Markets* presented to the FERC Commissioners on June 19, 2008<sup>1</sup> (page numbers reference the Bates page numbers of PSNH's September 2, 2008 filing):

Page 21 – “There is little reason to believe that this summer is unusual. Rather it may be the beginning of significantly higher power prices that will last for years.”

Page 22 – “The primary reason for the electric power price increase this year is high fuel prices. All current market indications suggest that they will remain high. Let's look at natural gas, which often determines prices because it is so frequently on the margin... The implication is that markets anticipate continuing high prices, even though they know that the United States has seen a significant increase in domestic natural gas production over the last year and a half. The anticipation of further high prices makes more sense when one considers the likely increase in gas demand for generation and the global nature of competition for LNG.”

Page 25 – “Natural gas fueled most of the last great wave of generation investment, which occurred between 1995 and 2004. In recent years, demand in most regions has gradually caught up with the capacity built around 2000. Looking forward, demand will continue to grow and the need for new capacity will become ever more acute and ever more acute and ever more widespread.”

As stated in my testimony, based on the information available at the time PSNH's analyses were performed, PSNH's analyses were not unreasonable.

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<sup>1</sup> The FERC presentation was included with PSNH's September 2, 2008 in DE 08-103.

Public Service Company of New Hampshire  
DE 11-250

NH PUC Staff Responses to Data Requests of TransCanada

Date Received: January 21, 2014  
Request: TC – 1-34

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

Please provide any and all documentation in Staff's files associated with the Synapse study.

**RESPONSE:**

Other than the study itself, Staff has no other documentation responsive to this request.

While searching for documents, I did learn that of the total \$212,805 cost of the study, New Hampshire's 7.83% portion—which is paid for through collections from the System Benefits Charge—was \$16,657.

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

**NH PUC Staff Responses to Data Requests of TransCanada**

Date Received: January 21, 2014  
Request: TC – 1-35

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

Reference page 19 of Mr. Mullen's testimony lines 5 through 18, did PSNH have any obligation regarding the substance of the information provided to the Legislature or the Commission (e.g., candor)? What categories of information would you expect a prudent utility to provide to the Legislature and regulators regarding the scrubber?

**RESPONSE:**

PSNH's reporting responsibilities to the Legislature with respect to the scrubber project are identified in RSA 125-O:13, IX. As for the Commission, PSNH and any utility would be expected to provide any and all information necessary to support its case in any proceeding before the Commission, or any information required by the Commission as part of its duty to keep informed pursuant to RSA 374:4.

Public Service Company of New Hampshire  
DE 11-250

NH PUC Staff Responses to Data Requests of TransCanada

Date Received: January 21, 2014  
Request: TC – 1-36

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

Please identify all persons with whom Mr. Mullen discussed his testimony, who provided advice or suggestions relative to his testimony, and who reviewed or commented on his testimony prior to its filing.

**RESPONSE:**

Members of Staff who performed any of the above activities were Thomas Frantz and Suzanne Amidon.

Public Service Company of New Hampshire  
DE 11-250

NH PUC Staff Responses to Data Requests of TransCanada

Date Received: January 21, 2014  
Request: TC – 1-37

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

Reference the PSNH response to data request Staff 2-2, p. 37 of 50, what data would Mr. Mullen review to know whether "the required customer break-even level of \$5.29" gas/coal spread was achieved?

**RESPONSE:**

The referenced page states that the break-even level of \$5.29/mmbtu was "based on current price levels" with "current" meaning at the time the presentation was prepared, i.e., mid-2008. Further, on page 38 of that presentation, it states that the \$5.29/mmbtu gas/coal spread is based on "assumed 2012 natural gas and coal price levels *and other base case parameters*" (emphasis added). Those other parameters include carbon costs, capital costs and environmental costs. So, one would have to look at all of the interdependent factors that went into the development of the gas/coal spread.

Public Service Company of New Hampshire  
DE 11-250

NH PUC Staff Responses to Data Requests of TransCanada

Date Received: January 21, 2014  
Request: TC – 1-38

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

Does Mr. Mullen believe the volume of natural gas futures trades more than a few years in the future provides a valid basis to establish a market price determined between gas producers and gas consumers?

**RESPONSE:**

The question is an apparent reference to Mr. Hachey's criticism of PSNH's use of NYMEX prices in determining future natural gas pricing. In my testimony, I stated that the information used by PSNH was consistent with information available at the time. Futures prices are commonly used as a method of gauging forward-looking prices. I note that on page 2-7 of the 2007 Synapse AESC study it states that NYMEX prices were used to check the validity of the Henry Hub natural gas price forecast contained in the study.

Public Service Company of New Hampshire  
DE 11-250

NH PUC Staff Responses to Data Requests of TransCanada

Date Received: January 21, 2014  
Request: TC – 1-39

Date of Response: February 14, 2014  
Witness: Steven E. Mullen

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**REQUEST:**

Reference page 10, line 5 of Mr. Mullen's prefiled testimony in this docket, please provide the definition of "prudent costs" that Mr. Mullen is relying on.

**RESPONSE:**

As stated by the New Hampshire Supreme Court in its January 31, 1986 decision in *Appeal of Conservation Law Foundation*, 127 N.H. 606, 638 (1986), "prudence judges an investment or expenditure in the light of what due care required at the time an investment or expenditure was planned and made." I used that definition in examining the costs incurred by PSNH.