



ORIGINAL NHPUC NOV04'14 PM 2:15

STATE OF NEW HAMPSHIRE  
PUBLIC UTILITIES COMMISSION

October 21, 2014 - 2:03 p.m. DAY 5  
Concord, New Hampshire AFTERNOON SESSION ONLY

RE:DE 11-250  
PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE:  
Investigation of Scrubber Costs and  
Cost Recovery

**PRESENT:** Commissioner Martin P. Honigberg, Presiding  
Special Commissioner Michael J. Iacopino

F. Anne Ross, Esq., General Counsel

Sandy Deno - Clerk

**APPEARANCES:**

**Reptg. Public Service Co. of N.H.:**  
Robert A. Bersak, Esq.  
Barry Needleman, Esq. (McLane...)  
Wilbur A. Glahn, III, Esq. (McLane...)

**Reptg. TransCanada Power Marketing, Ltd.,  
and TransCanada Hydro Northeast, Inc.:**  
Douglas L. Patch, Esq. (Orr & Reno)  
Rachel A. Goldwasser, Esq. (Orr & Reno)

**Reptg. Conservation Law Foundation:**  
Ivy L. Frignoca, Esq.  
Thomas R. Irwin, Esq.

**Reptg. the Sierra Club:**  
Zachary M. Fabish, Esq.

**COURT REPORTER: SUSAN J. ROBIDAS, N.H. LCR NO. 44**

1 APPEARANCES (CONT'D):

2 Reptg. Residential Ratepayers:

3 Susan Chamberlin, Esq., Consumer Advocate  
4 James Brennan, Finance Director  
Office of Consumer Advocate

5 Reptg. PUC Staff:

6 Suzanne G. Amidon, Esq.  
7 Michael J. Sheehan, Esq.  
Thomas C. Frantz, Dir. Electric Div.  
Leszek Stachow, Asst. Dir. Electric Div.

## I N D E X

WITNESS: MICHAEL E. HACHEY (CONT'D)

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1 AFTERNOON SESSION

2 CMSR. HONIGBERG: Mr. Glahn.

3 MR. GLAHN: Thank you.

4 CROSS-EXAMINATION

5 BY MR. GLAHN:

6 Q. Mr. Hachey, I just have a few more questions  
7 to ask you. Would you agree that, in  
8 determining whether PSNH was prudent in  
9 installing the Scrubber, that you'd be  
10 required to make an assessment of whether  
11 there were viable options to installing the  
12 Scrubber?

13 A. Yes, I believe all options --

14 CMSR. HONIGBERG: Is your  
15 microphone on?

16 MS. AMIDON: The red light  
17 would be on.

18 A. Yes, I believe all options should have been  
19 considered.

20 BY MR. GLAHN:

21 Q. And in your testimony you talk about four  
22 options: Retirement, divestiture, a study,  
23 or seeking a variance; right?

24 (Witness reviews document.)

1     A.     That's my recollection.  I'm just looking  
2             for --

3     Q.     Are there any other options or alternatives  
4             that you think should have been considered?

5     A.     Could you give me the testimony cite?

6     Q.     Yes.  It's on Page 30 of your testimony, I  
7             believe.  I apologize.  I think it might be  
8             on page -- it's on Page 28 of your testimony,  
9             the section called "Options Open to PSNH."

10    A.     That's a correct recital of the options, yes.

11    Q.     Are there any other options that you  
12             considered when you were preparing your  
13             testimony?

14    A.     I think those cover them, the gamut of them.

15    Q.     And is it also your understanding that each  
16             of those options would have required PSNH to  
17             get the approval of another body, whether  
18             it's the PUC or the Legislature or DES, some  
19             other body?

20    A.     I think that's generally accurate, yes.

21    Q.     Okay.  All right.  So let's talk about the  
22             options that you identify.

23             And you measure the prudence of the  
24             activity by whether the activity would have

1           resulted in an economic benefit to PSNH's  
2           customers. Do you recall that from your  
3           testimony on Friday?

4    A.    That's been my general focus, yes --

5    Q.    Okay.

6    A.    -- whether or not the Scrubber made sense for  
7           the customers who took electric service.

8    Q.    So when you look at whether PSNH was prudent,  
9           I think we've agreed that you have to look at  
10          the information that PSNH had available to it  
11          when it was -- or could have made the  
12          decision; right?

13   A.    In general, that's what we're talking about  
14          here is what information PSNH had at the time  
15          it was pursuing the Scrubber.

16   Q.    Okay. And in the fall of 2008 and into early  
17          2009, what PSNH would have known -- see if  
18          you agree with me on this -- is that the PUC  
19          had already made a statement about whether  
20          the plant could be retired.

21   A.    If you're referring to the Order 25,546 --

22   Q.    I'm actually referring to 24,898 and to the  
23          order on reconsideration of that order, which  
24          was issued in November of 2008.

1     A.     Okay.  You'll have to refresh me on that,  
2            then, if you have the document.

3     Q.     Well, let me refresh your recollection more  
4            specifically on Order 24,898.

5                 On Page 12 of that order, the PUC said  
6                 the following:  Nowhere in RSA 125-O does the  
7                 Legislature suggest that an alternative to  
8                 installing scrubber technology as a means of  
9                 mercury compliance may be considered, whether  
10                in the form of some other technology or  
11                retirement of the facility."

12               Did you know that the PUC had said that  
13               when you issued your testimony?

14    A.     I think I'd like to see the document.

15                         MS. AMIDON:  I have a copy if  
16                you give me --

17    BY MR. GLAHN:

18    Q.     Can you answer the question first before you  
19            look at the document?

20    A.     Well, it's a little easier to tell if I see  
21            the actual document than to try to recollect  
22            one statement out of a PUC decision.

23                         MS. AMIDON:  Your Honor, I  
24                have a copy of this.  If he could tell me

1           what page it is --

2                       MR. GLAHN: We have a copy,  
3           too. So let me give a copy to Mr. Hachey.

4                       (Mr. Glahn hands document to witness.)

5                       MS. FRIGNOCA: What order is  
6           this so we can follow along?

7                       MR. GLAHN: It's 24,898.

8                       MS. AMIDON: It's an order in  
9           Docket DE 08-103. The order number is  
10          24,898. It's dated September 19th, 2008.

11                      (Witness reviews document.)

12    A.    Reading that order, it says, "Nowhere in RSA  
13           125-O does the Legislature suggest that an  
14           alternative to installing scrubber technology  
15           as a means of mercury compliance may be  
16           considered, whether in... some form [sic] of  
17           [sic] other technology or retirement of the  
18           facility."

19    BY MR. GLAHN:

20    Q.    Would you agree with me that, whatever the  
21           PUC may have said about retirement after  
22           2011, PSNH would not have known about that at  
23           the time it was making the decision to go  
24           forward with the Scrubber in 2008 or 2009?



1     A.     PSNH would not have known about something in  
2           2011 in 2008 -- that occurred in 2011 in  
3           2008.

4     Q.     Good. I'm glad we can agree on that.

5     A.     Yes.

6     Q.     So my question to you is this: If no  
7           alternative to installing the Scrubber as a  
8           means of mercury compliance existed -- that  
9           is, if retirement was not an option as an  
10          alternative to installing the Scrubber as a  
11          means of mercury compliance -- how is it that  
12          the plant could have been retired?

13    A.     Well, I've always had the common-sense view,  
14           I thought, that, to the extent that the cost  
15           of the Scrubber did not lead to consumer  
16           benefits any longer, that PSNH needed to  
17           notify the relevant parties, the PUC and the  
18           Legislature, of that fact. And one of the  
19           issues, at least for me as I've looked at  
20           this, is the only party that really had the  
21           information to do that, that commonly would  
22           be expected to do that, would be PSNH. In  
23           other words, you wouldn't expect that the PUC  
24           would have sufficient information to be

1 making the determination that the Scrubber  
2 economics weren't working anymore, or you  
3 certainly wouldn't expect that of the  
4 Legislature. So it really came down to PSNH.  
5 And, you know, I worked for a regulated  
6 utility for a long time, for about 20 years.  
7 And my expectation is that the regulated  
8 utility, to the extent that it became aware  
9 that the economics of a particular project no  
10 longer worked, that it would go back to the  
11 Legislature, if it was a legislative change  
12 that needed to be made, or go back to the PUC  
13 if it was a regulatory change that needed to  
14 be made, and say, Hey, this isn't working out  
15 as we had originally anticipated. We need to  
16 do X, or we need to consider Y. But that  
17 isn't what happened.

18 Q. So the only thing a prudent utility could  
19 have done at that point is gone back to the  
20 Legislature and say change the law.

21 A. Again, I'm not an attorney. But I'm not sure  
22 whether or not the variance provisions would  
23 have worked. So, anyway, those variance  
24 provisions were in the law, and I think we

1 pointed that out.

2 Q. We'll get to variance in a minute.

3 A. Okay.

4 Q. You didn't do any analysis of PSNH's  
5 contractual obligations if the Scrubber  
6 Project was cancelled, did you?

7 A. I believe I accepted Mr. Long's statement  
8 back in September of 2008 that they had  
9 committed \$10 million and -- no, I was  
10 looking -- I didn't do an independent  
11 analysis. I was relying on what PSNH had  
12 presented.

13 Q. Okay. And since you didn't do any analysis  
14 or study of the cost of benefit -- well, I'm  
15 sorry. Strike that. Let me ask another  
16 question.

17 You didn't do any analysis of the costs  
18 or benefits of retirement of the plant  
19 either, did you?

20 A. I didn't do a detailed retirement study, no.  
21 I wouldn't have been in the position to do  
22 that. That's something that we -- I would  
23 have expected PSNH would have had to do,  
24 because there's a --

1 Q. Let me make sure I pick up on the word  
2 "detailed" in your answer.

3 You didn't do any analysis of the costs  
4 or benefits of retirement of the plant, did  
5 you?

6 A. I didn't do a retirement study, no, of the  
7 plant, no.

8 Q. And since you didn't do any analysis or study  
9 of the costs or benefits to PSNH's customers  
10 of retiring the plant, you don't know whether  
11 retirement would have benefitted PSNH's  
12 default service customers in 2008, or at any  
13 later date, do you?

14 A. I identified it as an "option."

15 Q. You identified it as an "option." But you  
16 don't know whether that option would have  
17 returned a benefit to PSNH's customers in  
18 2008, or at any other time, do you?

19 A. Again, I didn't do the retirement study. So,  
20 without having done the retirement study, I  
21 wouldn't have known the result. Correct.

22 Q. So the answer to my question is "Yes"; is  
23 that correct?

24 A. I think I -- yes.

1 Q. Yes, you don't know whether there would have  
2 been a benefit. Let me go back because --

3 CMSR. HONIGBERG: I would have  
4 gone with "No" myself, but...

5 MR. GLAHN: And as Judge  
6 Aldrich once said, "I can think of a shorter  
7 and perhaps more accurate answer." So let me  
8 go back.

9 CMSR. HONIGBERG: I think,  
10 stated affirmatively, he doesn't know.

11 MR. GLAHN: All right.

12 BY MR. GLAHN:

13 Q. You don't know whether retirement in 2008, or  
14 at any later date, would have provided a  
15 benefit to PSNH's customers, do you?

16 A. I do not know without performing a retirement  
17 study.

18 Q. Thank you.

19 MR. GLAHN: And thank you,  
20 Commissioner Honigberg.

21 BY MR. GLAHN:

22 Q. So you also say that one other option that  
23 PSNH had is it could have done a study; is  
24 that right? Or it could have asked to delay

1 an order to do a study?

2 A. I think, as I stated at the outset, one of  
3 the options that PSNH had was, to the extent  
4 that it recognized that the Scrubber  
5 economics weren't working, it needed to go  
6 back to the PUC, and perhaps the Legislature,  
7 probably both, and tell them what the  
8 circumstances were and discuss options from  
9 there. And undoubtedly, both the Commission  
10 and the Legislature would have had some  
11 ideas, some thoughts.

12 Q. And did you understand when you gave that  
13 answer or prepared your testimony, that the  
14 PUC had said it didn't have any jurisdiction  
15 over the installation of the Scrubber in the  
16 fall of 2008?

17 A. Could you give me a cite?

18 Q. I'm sorry. I didn't hear your answer.

19 A. Could you give me a cite?

20 Q. Well, I'm not asking you for your testimony.  
21 I'm asking you whether you understood -- you  
22 want a cite to the PUC's statement that it  
23 didn't have any jurisdiction?

24 A. Yes.

1 Q. How about 24,898 and the subsequent order?

2 (Witness reviews document.)

3 Q. I direct your attention, Mr. Hachey, to  
4 Page 13 of that order, in which the  
5 Commission said, "Accordingly, the  
6 Commission's authority is limited to  
7 determining at a later time the prudence of  
8 the costs of complying with the  
9 requirements... and the manner of recovery  
10 for prudent costs."

11 A. I read that.

12 Q. So, did you take into account when you were  
13 determining whether a study could be done,  
14 the fact that the PUC had already indicated  
15 it had no jurisdiction over construction of  
16 the Scrubber under the Modifications section  
17 of RSA 369-B:3-a?

18 A. Well, I'm having a hard time understanding  
19 how the order says that they couldn't have  
20 done a study.

21 Q. Well, we've already established, have we not,  
22 that the law provided that PSNH was to  
23 install the Scrubber?

24 MS. FRIGNOCA: I'm going to

1           object to that characterization. That's a  
2           legal conclusion, and that's what this  
3           hearing is about.

4                               CMSR. HONIGBERG: Sustained.

5 BY MR. GLAHN:

6 Q. All right. Mr. Hachey, let me cut this part  
7       of this short. You didn't do any analysis of  
8       whether a delay would have decreased or  
9       eliminated economic performance incentives in  
10      this Project, did you?

11 A. I didn't do any analysis of a project delay.

12 Q. Okay. And since you didn't do any analysis  
13      of the impact of a delay in construction, you  
14      don't know whether a delay in 2008 would have  
15      benefitted PSNH's default customers or not.

16 A. Well, my testimony on that fact, on that  
17      issue, was it could have agreed to study  
18      whether proceeding with the Project still  
19      made sense. So, no, I didn't do the  
20      analysis.

21 Q. And because you didn't do the analysis, you  
22      don't know whether a delay on the Project  
23      would have benefitted PSNH's customers in  
24      2008, or at any other time, do you?



1     A.    The outcome of that analysis would be that  
2           determination, and I told you I didn't do  
3           that analysis.

4     Q.    Okay. On the variance issue, who would PSNH  
5           have to have asked for a variance?

6     A.    As I recall, there's language in the variance  
7           as to who it needs to go back to. And I  
8           believe -- and, you know, I'd rather not take  
9           it from memory -- but I believe there was  
10          another body in the state that it would have  
11          had to have seen to request the variance.

12    Q.    If I represented to you that that was the  
13          Department of Environmental Services, would  
14          you disagree with me?

15    A.    I can accept that as a representation.  
16          You've got the law.

17    Q.    You also know, don't you, that when the PUC  
18          issued Order No. 24,898, it specifically  
19          noted -- and this is on Page 12 -- that the  
20          law, RSA 125-O, does not set a cap on  
21          rates -- on costs or rates, or provide for  
22          the Commission review under any particular  
23          set of circumstances, or establish some other  
24          alternative review mechanism. Did you know

1           that when you drafted your testimony?

2    A.    Can you tell me where you're --

3    Q.    Yes. I started right below the sentence that  
4           we talked about earlier on Page 12, carrying  
5           over to Page 13.

6                   (Witness reviews document.)

7    A.    So you want to start with, Furthermore, RSA  
8           125 [sic] does not set any cap on costs or  
9           rates, provide for related capital costs, the  
10          severe economic downturn, the impact of  
11          migration on customers --

12                   (Court Reporter interrupts.)

13   Q.    What are you reading from, Mr. Hachey?

14   A.    Well, I don't know. I'm trying to read from  
15          where you were. I thought you said the  
16          bottom of 12 on to 13.

17   Q.    I'm reading from Page 12 to 13 of the  
18          Commission's Order in 24,898.

19   A.    I'm sorry. I'm on the wrong order. Do you  
20          have the --

21   Q.    It's the order that I -- you have it in front  
22          of you. I put it in front of you a few  
23          moments ago when I was asking you about the  
24          law. Okay? Got it?

1                   (Witness reviews document.)

2     A.     I'm reading it. I thought I was on the  
3             bottom of 12 to 13.

4     Q.     Yes.

5     A.     So, start again.

6     Q.     Well, did you know -- tell me if I read this  
7             accurately. "Furthermore, RSA 125-O does  
8             not: (1) set any cap on costs or rates; (2)  
9             provide for Commission review under any  
10            particular set of circumstances; or (3)  
11            establish some other alternative review  
12            mechanism."

13    A.     That's an accurate reading.

14    Q.     Okay. Did you know that when you drafted  
15             your testimony?

16    A.     I was aware of this order, yes.

17    Q.     Now, can we agree that you can see that the  
18             Scrubber is capable of meeting the mercury  
19             reduction requirements in RSA 125-O?

20    A.     I believe that's the case, yes. I have no  
21             contrary information.

22    Q.     Have you ever been involved in the sale or  
23             divestiture of a coal plant or natural gas  
24             plant?

1     A.     Yes.

2     Q.     Pardon?

3     A.     Yes.

4     Q.     How many?

5     A.     Well, I was involved in the divestiture of  
6           the New England Electric System generation.  
7           So that would have been two coal stations, a  
8           natural gas station, a number of hydro  
9           stations.

10    Q.     How long did that take?

11    A.     From beginning to close? About a year.

12    Q.     Was the New England Electric System required  
13           to go to an administrative body to obtain  
14           permission to divest before the divestiture  
15           proceedings began?

16    A.     There were certainly a number of  
17           administrative proceedings. I don't recall  
18           specifically whether -- what the nature of  
19           the approvals required was, but I believe  
20           there were some.

21    Q.     Okay. Let's see if we can agree on this:  
22           Whether divestiture was a good option for  
23           PSNH's ratepayers would depend on what could  
24           be received for the plant; right?

1     A.     What could be -- I would say what could be  
2            received for the plant and the nature of any  
3            follow-on provision of electric service to  
4            customers.

5     Q.     Mr. Brennan testified in this case that  
6            Merrimack Station is an uneconomic plant, in  
7            the last quarter of its life. Do you think  
8            that would make a plant more difficult to  
9            sell?

10    A.     There are many companies out there that have  
11            different views. I've just seen the Brayton  
12            Point Station sell twice in a fairly short  
13            period of time; that's regarding an  
14            uneconomic plant. So it could be that  
15            there's particular siting advantages. I  
16            don't know. But you could find that there  
17            are parties out there that have different  
18            views of the market.

19    Q.     We'll come back to that in a minute.

20            You weren't able to say, when we asked  
21            you in a data request, whether a new owner of  
22            the plant would be required to install the  
23            Scrubber, were you?

24    A.     I think I would need that data request to

1 refresh my memory.

2 Q. Well, let me first ask you this: Would a new  
3 owner of this plant be required to install  
4 the Scrubber?

5 A. Under the prevailing laws -- and, again, not  
6 being an attorney -- I wouldn't have  
7 anticipated that the new owner would not have  
8 to install the Scrubber if it wanted to  
9 continue the operation of the coal plant.  
10 But it may have other reasons that it wanted  
11 to buy the facility.

12 Q. You didn't do any analysis of the costs or  
13 benefits of selling Merrimack Station, did  
14 you?

15 A. No, I didn't do a --

16 Q. And you didn't do --

17 (Court Reporter interrupts.)

18 A. I didn't do a sales study.

19 Q. And you didn't do an analysis of the  
20 ratepayer impact of selling Merrimack  
21 Station, did you?

22 A. No. That would be impossible to do without  
23 knowing the sorts of numbers that could be  
24 received for it.

1 Q. And you didn't do an analysis of the likely  
2 market interest in Merrimack Station, did  
3 you?

4 A. No, I did not.

5 Q. You didn't do any analysis of whether a sale  
6 of the plant was feasible, did you?

7 A. I wasn't aware of any issues that made it  
8 infeasible. But I did not do a feasibility  
9 analysis, no.

10 Q. Okay. And when you were asked whether --  
11 well, let me ask this question: Would the  
12 issue of whether a buyer would have been  
13 available -- is the issue of whether a buyer  
14 would have been available relevant to your  
15 analysis?

16 A. I suppose my answer would be: I wouldn't  
17 know why it would be an issue, because we've  
18 seen numerous facilities change hands in New  
19 England. We've seen retiring coal plants  
20 change hands -- for example: The Salem  
21 Harbor Station. So I wouldn't have thought  
22 that there would be an issue as to whether  
23 there would be a buyer.

24 Q. I want you to assume for a moment that a

1           buyer of the plant would have been required  
2           to install the Scrubber. You got that  
3           assumption in mind?

4    A.    I have the assumption.

5    Q.    Okay. In your view, would it have been more  
6           difficult to sell the station with the  
7           obligation to build the Scrubber attached to  
8           it?

9    A.    It would have revised the buyer's price,  
10          that's for sure. They would have taken the  
11          cost of the Scrubber into account. It's not  
12          clear to me whether they would have had a  
13          different idea of how to meet the Scrubber  
14          requirements at a different cost. I don't  
15          know.

16   Q.    Because you didn't do any analysis of the  
17          impact of divestiture on ratepayers, you  
18          don't know whether a divestiture in 2008, or  
19          at any other date, would have benefitted  
20          PSNH's customers, do you?

21   A.    I think I've testified that I don't know the  
22          outcome of a study I didn't do. So...

23   Q.    You conclude in your report that PSNH should  
24          be entitled to recover \$10 million in this



1 case; isn't that correct?

2 A. That's what I concluded, yes.

3 Q. Pardon?

4 A. Yes.

5 Q. And when we asked you in a data request for  
6 your support for that \$10 million number,  
7 what you did was refer us to Page 30 of your  
8 testimony, Lines 6 through 9.

9 MR. GLAHN: Let's actually  
10 mark this response.

11 So, Denise, this is our File  
12 110, number -- it's the answer to Data  
13 Request 124.

14 CMSR. HONIGBERG: And it's  
15 going to be 115 for us.

16 MR. GLAHN: Thank you.

17 (Ms. Frazier hands document to witness.)

18 (The document, as described, was herewith  
19 marked as Exhibit 115 for  
20 identification.)

21 BY MR. GLAHN:

22 Q. Mr. Hachey, I'm confused by your answer. The  
23 question was: "...provide support for the  
24 \$10 million of allowed recovery you propose."

1           And what you said was, See my testimony  
2           at Lines 6 through 9 on Page 3.

3           And on Page 30, what you say is, "I  
4           believe that the Commission should only let  
5           PSNH recover what it had spent on the project  
6           as of that date, which I understand to be \$10  
7           million based on the September 2, 2008 filing  
8           in DE 08-103."

9           Do you have any support for your \$10  
10          million number, other than that's just what  
11          you understand was spent as of September 2nd,  
12          2008?

13       A.    I believe my testimony says that's what the  
14              support is.

15       Q.    That's not the question I asked you. I asked  
16              you: Do you have any other support for your  
17              \$10 million number other than that's what was  
18              spent at the time?

19       A.    Okay. I'm sorry if you didn't take it as a  
20              full answer, but that was the support.

21       Q.    Okay.

22       A.    I didn't say I had additional support beyond  
23              that. I said that was my support.

24       Q.    So your testimony in this case, what you want

1           the Commissioners to believe, is that the  
2           only dollar value at which the Scrubber would  
3           have been a prudent investment was  
4           \$10 million.

5    A.    That's what the testimony is, yes.

6    Q.    That's your testimony; right?

7    A.    Yes.

8    Q.    Okay.  So that's the price at which  
9           installation of the Scrubber would no  
10          longer -- say it this way:  Does it follow  
11          from that, that any amount above \$10 million,  
12          installation of the Scrubber would no longer  
13          have been economic or beneficial to PSNH's  
14          ratepayers?

15   A.    I have a question about your question.  Are  
16          you asking me to look into the period of time  
17          following September of 2008, in terms of how  
18          the Scrubber is operated and the economics of  
19          the Scrubber and that sort of thing?

20   Q.    No.  What you've just said is that it's your  
21          testimony that the only price at which the  
22          installation of the Scrubber would have been  
23          prudent was \$10 million.  That's your  
24          testimony; correct?

1     A.    Well, I think the testimony speaks for  
2           itself.   PSNH should have realized that, by  
3           September of 2008, going forward with the  
4           Scrubber didn't make sense and should have  
5           put a halt to any additional spending on the  
6           project until the economics could be further  
7           studied --

8     Q.    Didn't you make --

9     A.    -- and that, to go on, I believe the  
10           Commission should only let PSNH recover what  
11           it had spent on the Project as of that date,  
12           which I understand to be \$10 million.

13    Q.    So, at any amount above \$10 million,  
14           installation of the Scrubber would not have  
15           been prudent.  Is that your testimony?

16    A.    Yeah, my testimony is that, what makes sense  
17           is for PSNH to have recovered the monies that  
18           it had spent at that time, up to that point.

19    Q.    And I think, as you said earlier today, you  
20           didn't -- I asked you whether the  
21           installation of the Scrubber at \$250 million  
22           would have been prudent.  And you said you  
23           didn't do any analysis of that, so you can't  
24           make a judgment on that.  Do you recall that?

1 A. That's what I said.

2 Q. In fact, it is true that you didn't do any  
3 analysis of the price at which the  
4 installation of the Scrubber would have been  
5 economic for PSNH's customers.

6 MR. PATCH: Objection. Asked  
7 and answered.

8 CMSR. HONIGBERG: I agree.

9 BY MR. GLAHN:

10 Q. Thank you, Mr. Hachey. That's all I have.

11 A. Thank you.

12 CMSR. HONIGBERG: Staff have  
13 any questions for Mr. Hachey?

14 MR. SHEEHAN: I have a couple.

15 CROSS-EXAMINATION

16 BY MR. SHEEHAN:

17 Q. Mr. Hachey, just some clarification for me,  
18 please. If we were to group together the 10  
19 or so exhibits that were statements from  
20 TransCanada that Mr. Glahn went over with you  
21 just before lunch, those were a number of  
22 statements from TransCanada giving whatever  
23 statements they were about price forecasting  
24 at Henry Hub, et cetera.

1           So, with those in mind, let me first  
2           say, could you just restate the four studies  
3           that you say PSNH had available and should  
4           have looked at before building the Scrubber  
5           forecast.

6    A.    The EIA forecast -- I'm sorry -- the Energy  
7           Information Agency forecast; the Brattle  
8           Group forecast; the Synapse forecast; and the  
9           Energy Ventures, what we now know as the  
10          Energy Ventures Analysis forecast, which I  
11          think we found in their files --

12   Q.    And if I understand --

13   A.    -- and other places.   Sorry.

14   Q.    Sorry.   And if I understand the gist of your  
15          testimony, those are forecasts that are  
16          appropriate to rely upon when making a  
17          capital decision, such as the Scrubber  
18          Project here.

19   A.    Yes.

20   Q.    And of course, as we've mentioned, the fault  
21          the fact that they didn't look at those and  
22          instead relied on what they say they relied  
23          on.

24   A.    Correct.

1 Q. Now, going back to those various documents  
2 from TransCanada that Mr. Glahn walked you  
3 through, did you see anywhere in any of those  
4 documents -- there may be -- a reference to a  
5 report or a forecast similar to the four that  
6 you say PSNH should have looked at? I'm  
7 trying to get apples-to-apples.

8 A. Right.

9 Q. Was he making -- was he comparing  
10 apples-to-apples with you, or was there some  
11 difference?

12 A. I didn't see any references to reports or  
13 forecasts, other than perhaps what  
14 TransCanada itself may have developed. And  
15 the only reason I say "may" is because I know  
16 that we have a corporate forecast, and I  
17 recognize that the various CEOs were quoting  
18 numbers. And I don't know whether the  
19 numbers were based on a forecast or not.

20 Q. So it may well be that the numbers that Mr.  
21 Glahn went through --

22 MR. GLAHN: Can I just  
23 interrupt with one question? I'm sorry,  
24 Mike. I didn't hear the answer to the last

1 question. Could I have the stenographer read  
2 Mr. Hachey's answer back to me?

3 (Record read back as requested.)

4 MR. SHEEHAN: All set, Mr.  
5 Glahn?

6 MR. GLAHN: Yeah.

7 MR. SHEEHAN: Thank you.

8 BY MR. SHEEHAN:

9 Q. So we heard those numbers through these  
10 TransCanada documents. And it may be that  
11 those numbers are supported by something like  
12 the EIA. But is it fair to say -- well, let  
13 me ask you. Did you see any evidence of that  
14 through what you saw presented to you today?

15 A. Well, I saw a lot of prices in those papers,  
16 and I didn't think any of them were  
17 particularly out of line with the four  
18 forecasts I cited. But I'd have to go back  
19 and look at them. I saw numbers from 6 to  
20 10 --

21 (Court Reporter interrupts.)

22 A. I saw numbers between 6 and 10, and that  
23 seems to be consistent with where some of the  
24 other forecasts we've been talking about here



1           came out.

2       Q.     Some of the documents that Mr. Glahn went  
3           through with you concerned production,  
4           TransCanada production in western Canada; is  
5           that correct?

6       A.     Correct.

7       Q.     The WCSB or whatever it was?

8       A.     Correct.

9       Q.     Can you tell us how production from that --  
10          do you know where production from western  
11          Canada goes when it's sold? Does it come  
12          this far east so that it would have an impact  
13          in New Hampshire? Or would it impact the  
14          markets? Do you have any sense of that?

15      A.     I'm sure that's something that's developed  
16          over time. You know, if you go back far  
17          enough westbound, Alberta production was  
18          coming into New England.

19      Q.     Okay. Far enough in time you mean?

20      A.     If you go back far enough in time. And by  
21          that I mean the mid-'80s or so. Because my  
22          recollection is that some of the non-utility  
23          projects that New England Power had contracts  
24          with were buying Canadian gas; so that could

1           only have come from Alberta. But how that  
2           changed over time, I really couldn't speak to  
3           very well.

4                           MR. SHEEHAN: That's all I  
5           had. Thank you.

6                           CMSR. HONIGBERG: Commissioner  
7           Iacopino.

8   INTERROGATORIES BY SP. CMSR. IACOPINO:

9   Q.    Good afternoon, Mr. Hachey.

10  A.    Hi.

11  Q.    I just have a few questions. The first one  
12        is you've got me a little confused about the  
13        relationship between your company and Public  
14        Service. You indicated somewhere early in  
15        the cross-examination that you did not  
16        consider your company to be a "competitor" of  
17        Public Service; is that correct?

18  A.    That's correct.

19  Q.    Okay. What about Northeast Utilities, their  
20        parent company? Do you consider your  
21        companies to be competitors with them?

22  A.    No.

23  Q.    Why not?

24  A.    When I think of competition and I began our

1 retail program, I think of the people that we  
2 compete with at the retail level, where we're  
3 trying to -- customer solicitation, devise  
4 products, devise terms of contracts -- you  
5 know, compete on pricing and put in a firm  
6 and final offer and that sort of thing,  
7 that's the kind of vigorous competition that  
8 I think of, whether it be at the retail level  
9 or at the wholesale level. PSNH has a  
10 default price. So it's a last-resort price,  
11 which is, you know, a fairly stayed product.  
12 And it's -- like I say, it's a last resort.  
13 So, maybe I've just been in the competition  
14 game for too long. But I don't regard that  
15 as "competition." I regard competition with  
16 now PSNH's former affiliate, Select Energy,  
17 was a competitive entity. And they were very  
18 much in competition with us when they  
19 existed. Others, you know, such as Direct  
20 and Constellation and the like, I consider  
21 the competitors. I do not, for example,  
22 consider the Massachusetts Electric Default  
23 Rate to be a competitor to us. It's just my  
24 sense and my use of the term.

1 Q. Okay. I have another question about  
2 definitions. You mentioned during the course  
3 of cross-examination that you couldn't answer  
4 Mr. Glahn's question about the price of shale  
5 gas unless you knew the "lift price"? What  
6 do you define -- how do you define the "lift  
7 price"?

8 A. So, my definition -- and I'm not a gas guru,  
9 I've just been around gas. And when I think  
10 what's the cost, whether the engineering  
11 cost, if you will, the OEM cost of getting  
12 that gas out of the ground. And that, of  
13 course, means drilling the well and all the  
14 directional drilling and the use of the sand  
15 and the water and the additives. So you go  
16 through all of that, and you're going to get  
17 into a certain amount of gas; what's the cost  
18 per million Btu of that resulting gas. That  
19 then gives you a number that fits on the  
20 supply curve of natural gas.

21 Q. Wouldn't that price -- wouldn't that cost,  
22 though, be included in the various exhibits  
23 that Mr. Glahn showed to you regarding shale  
24 gas?

1 A. Well --

2 Q. He showed you exhibits that had, you know,  
3 market share and cost of gas. Isn't all of  
4 that included in those exhibits? And you  
5 tried to parse it out, but you couldn't  
6 answer the question because you didn't know  
7 that lift price. I'm trying to understand  
8 why you couldn't answer the question.

9 A. We've got a whole supply curve of ways of  
10 producing gas, you know, and then we have a  
11 demand curve that intersects. And as I  
12 recall, the difficulty I was having is you  
13 can have a tremendous quantity of shale gas,  
14 for example, in the ground. And if it takes  
15 you \$10 to get it out, well, that's not going  
16 to be relevant in terms of gas pricing until  
17 gas gets up to that level. Other than that,  
18 it's not really relevant. On the other hand,  
19 if it's \$2, and all the conventional supplies  
20 are \$4, well, it's hugely relevant.

21 Q. In the beginning of your cross-examination,  
22 or maybe it was at the beginning of your  
23 direct testimony, you indicated that one of  
24 the things you faulted Public Service for was

1           that they failed to update the Public  
2           Utilities Commission about the increase in  
3           the price. And I think you're talking  
4           about -- I think you were referencing the  
5           meeting with Staff. I forget the date, but  
6           back in the 2008 time frame. Is that  
7           correct?

8       A.   Well, there was -- I'm not quite sure which  
9           meeting. There was a meeting with Staff  
10          where the chart that we've been talking about  
11          was discussed. Are we talking about another  
12          meeting?

13       Q.   Well, I was asking you. Is that the  
14          meeting -- is that what you're talking about  
15          when you -- at the beginning of your  
16          testimony, one of the things you told us was  
17          that PSNH failed to provide information to  
18          the PUC and the OCA about the gas price, you  
19          know, the break-even price and --

20       A.   Can you give me the testimony cite?

21       Q.   I don't have the cite. That's my note from  
22          your direct testimony before you were  
23          tendered for cross-examination. You  
24          identified three basics of your testimony:

1 First one was about Public Service failing to  
2 provide information to the PUC and the OCA  
3 with respect to the sensitivity of gas  
4 prices, which I took to mean that break-even  
5 point.

6 A. Yes.

7 Q. I guess my question is, let's assume that  
8 they didn't inform the PUC. They didn't  
9 inform the Staff. As a Commission, what are  
10 we to make of that in the prudence  
11 proceeding?

12 A. Well, that was a fundamental piece of data  
13 that told you what the threshold price would  
14 be. In other words, you didn't have to run  
15 an economic analysis; you had a number. And  
16 then you could periodically check to see,  
17 well, was that \$5.29 -- how close to the line  
18 is that? And as conditions changed,  
19 certainly as they did in 2008 and well into  
20 2009, conditions were changing radically. So  
21 the Commission could have raised further  
22 questions, to the extent that PSNH didn't  
23 tell you itself, about the changes in  
24 conditions. It would have been a very

1           valuable piece of information, for example,  
2           to Mr. Janeway, when he brought his bill to  
3           have a study done, if, for example, in the --

4   Q.   Well, let's stick with the Public Utilities  
5       Commission right now, okay.

6   A.   Sure.

7   Q.   Because I can ask you about the Legislature  
8       in a minute.

9   A.   Okay.

10   Q.   But what are we as a Commission to make of  
11       the fact that Staff was not provided with  
12       that number?  What is your position that we  
13       should make of that?  That we should make a  
14       finding of imprudence because they did not  
15       provide that information?  Or should we use  
16       the \$5.29 number to somehow determine  
17       prudence?  I guess I'm trying to understand  
18       what relevance it should have to the  
19       Committee [sic] in our decision or what your  
20       position is.

21   A.   Well, the end result is that the \$5.29 is not  
22       being met, and there could have been earlier  
23       questions raised well before major dollars  
24       were being committed, major customer dollars,



1           to the extent that all the dollars flowed to  
2           customers, to the extent that major customer  
3           dollars were being committed and spent.

4           So the questions -- the PUC could have  
5           raised quite a number of questions, and it  
6           wasn't in a position to do so because it  
7           didn't have that information.

8    Q.    Okay. Let's assume the same fact, but only  
9           change the subject to what should this  
10          Commission make of the fact that, if we  
11          accept what you say, that the Public Service  
12          Company did not provide that information to  
13          the Legislature? Is it the same analysis?

14   A.    Well, I started with the Janeway Bill as an  
15          example. And that was a bill that said we  
16          need to stop and take another look at this  
17          because of the dramatic run-up in cost. And  
18          what that would have led to, that \$5.29  
19          number would have led to, is what is the  
20          price breakdown, what is the cost  
21          differential, and it would have led to an  
22          awful lot of questions and perhaps slowing  
23          down and re-evaluating whether it made sense  
24          to go forward at all.

1 Q. So, as a Commission, we should assume that,  
2 if that number had been made known -- taking  
3 your testimony that it hadn't been made  
4 known -- but as a Commission, we should  
5 assume that, had it been made known, the  
6 Legislature would have done something else.

7 A. Well, it was a determinant of whether  
8 customer benefits were going to result. And  
9 I guess I'm making the presumption that both  
10 the PUC and the Legislature would have  
11 been -- and the OCA to this matter -- would  
12 have been looking to ensure that the end  
13 result would have been net customer benefits.  
14 And to the extent that information was out  
15 there that indicated that there wouldn't be,  
16 my presumption is, you know, the PUC and the  
17 Legislature would have taken action of some  
18 sort, whether it be to study or to say, you  
19 know, perhaps we need a change in the law  
20 here before this gets too far and negative  
21 consequences fall onto customers. Because  
22 certainly -- and I know that, as PSNH's  
23 indicated, most of my analysis is economic.  
24 That's what I was focused on. And so that's

1           the scenario I would have seen playing out,  
2           that in fact the Commission and the  
3           Legislature both would have responded in a  
4           manner to ensure that the customer interest  
5           was being met. Precisely how? I don't know.

6   Q.    Let me shift gears, then, from the  
7           Legislature and the PUC to something that  
8           you're probably much more familiar with.

9                    You mentioned during the course of your  
10           testimony that you were involved in the sale  
11           of Brayton Point --

12   A.    Yes.

13   Q.    -- coal facility?

14   A.    Yes.

15   Q.    And when were you involved in that? What  
16           year?

17   A.    1997 to 1998.

18   Q.    And what were the circumstances of that sale?  
19           Was that a divestiture, or was that just a  
20           sale of assets by a generating company?

21   A.    That was the divestiture of the New England  
22           Power Company fleet of assets and as a result  
23           of deregulation of the industry.

24   Q.    Okay. And you also indicated that -- well,

1           actually, you said it was sold twice. Were  
2           you involved in the other sale?

3       A.    No. And I probably have to say it was sold  
4           three times. The first sale was to -- of the  
5           assets was to USGen, who went bankrupt. From  
6           that bankruptcy, Dominion bought the coal  
7           assets and Manchester Street. Dominion then  
8           constructed the -- quite a variety of  
9           back-end and expensive environmental  
10          controls, such as closed-cycle cooling and  
11          air emission.

12       Q.   And when Dominion owns it, it's a unregulated  
13          asset?

14       A.   Yes. And then Dominion sold it to EquiPower.  
15          EquiPower has now -- if you're following the  
16          NEPOOL events, EquiPower has announced its  
17          closure, and EquiPower has now sold it -- or  
18          not; it may not have closed -- but has  
19          announced the sale to Dynegy. And I don't  
20          believe it has closed. And the other coal  
21          plant, which was Salem Harbor, has a similar  
22          set of events, a little different twist.

23       Q.   When you were involved with the sale, the  
24          original sale of Brayton Point, was it sold

1 as a group with other facilities?

2 A. Yes. The sale to USGen was virtually the  
3 entire set of assets, with the exception of  
4 their equity ownership in Ocean State Power,  
5 which TransCanada purchased.

6 Q. You also made a reference in your  
7 cross-examination to the fact that "numerous  
8 facilities have changed hands in New England  
9 under various circumstances" is what I noted.

10 A. Correct.

11 Q. And are you thinking of any particular  
12 facilities when you say that? I mean, I  
13 guess I'm looking for a time frame. I'm  
14 looking for a little more definition, I  
15 suppose --

16 A. Facilities are constantly changing hands. Do  
17 I have any particular one? I have dozens in  
18 my mind. I'm trying to give you the  
19 particulars on each and every one of them,  
20 but there's -- most of the generation fleet  
21 has changed hands two or three times.

22 SP. CMSR. IACOPINO: Thank  
23 you. I don't have any further questions.

24

1 INTERROGATORIES BY CMSR. HONIGBERG:

2 Q. Good afternoon, Mr. Hachey.

3 A. Good afternoon.

4 Q. I have a couple areas I want to ask you  
5 about. The first is a number of the exhibits  
6 that Mr. Glahn showed you this morning were  
7 PowerPoint slides that have a TransCanada  
8 logo on them.

9 A. Yes.

10 Q. A number of them have a graph that is  
11 entitled "NYMEX Gas Prices" for different  
12 years, but they all had -- they were all  
13 graphs that looked roughly the same. Do you  
14 remember those?

15 You can look at -- if you can find  
16 Exhibit 106, on the second page, the top  
17 slide is an example of one.

18 MR. SHEEHAN: Mr. Honigberg,  
19 at a break, I numbered those exhibits for  
20 ease. So if it's wrong, blame me, not him.  
21 But he should be able to find it.

22 A. It works. I have it.

23 (Witness reviews document.)

24 BY CMSR. HONIGBERG:

1 Q. During your exchange with Mr. Glahn, you used  
2 the phrase "cash price." "This might be  
3 based on a NYMEX cash price."

4 A. Correct.

5 Q. I do not in any way have any great  
6 understanding of what goes on with the New  
7 York Mercantile Exchange. Can you tell me  
8 what you mean by "cash price"?

9 A. Spot price.

10 Q. Okay. So you -- and what, then, do you  
11 believe this graph shows using spot prices?

12 A. The spot price on some basis. I don't know  
13 whether it's end-of-month spot or average  
14 spot for the month, but it's a spot price  
15 for, you know, daily exchanges. So if I  
16 needed, you know, 10,000, 20,000 cubic feet,  
17 what would I pay on January 2nd in the NYMEX  
18 exchange. So it's similar to, for example,  
19 what we would have in NEPOOL. So if you went  
20 to the ISO Web site and you looked at, you  
21 know, today's price, you know -- actually, we  
22 have an hourly price. But what's the average  
23 of the hourly price. Or you can say, what's  
24 the average of the on-peak prices. So that's

1           the "spot market." And of course, we make it  
2           even more complicated because we have real  
3           time and day ahead. But I'll leave that  
4           aside. So it's the spot price of the daily  
5           exchange price. That's my presumption. But  
6           obviously, as I caveat it, I didn't make the  
7           chart.

8       Q.    I understand you didn't create this. But if  
9           this graph is in some way based on the actual  
10          spot prices, what -- so this was prepared in  
11          2011. It presumably shows the actual spot  
12          price up until sometime shortly before the  
13          report was prepared and then a projection  
14          going forward?

15    A.    That would be my understanding, yeah.

16    Q.    Would it in any way, then, have used the  
17          futures prices that are also being  
18          established at the NYMEX, at least for the  
19          shorter term, to create the projections?

20    A.    That would not be my expectation, no.

21    Q.    The futures prices being set, though, are the  
22          projections by those who are paid to make  
23          those projections and hedge contracts and  
24          purchases for future use of what the price is



1           going to be a month from now, two months from  
2           now, a year from now; is it not?

3    A.   Well, the futures prices are prices that's  
4           off in the future -- that is, buyers and  
5           sellers are consummating deals. And so  
6           it's -- you know, in my presentation -- I'm  
7           sorry -- in my --

8    Q.   Testimony?

9    A.   -- testimony -- thank you -- you know, I  
10           explained what the nature of NYMEX futures  
11           prices are. And they're very useful because,  
12           you know, people who are quoting -- who have  
13           quoted prices to customers and -- for  
14           example: It's very useful to power  
15           generators, because knowing how they can lock  
16           down their gas price, they can then lock down  
17           their power price. And so they can quote  
18           prices out -- you know, if today we're  
19           sitting here, in October, I can quote a  
20           December price based on the use of the NYMEX  
21           futures.

22   Q.   And because it's a prediction of what the  
23           spot price is going to be at that time; is it  
24           not?

1     A.    No, it's not a prediction.  It's the price at  
2           which parties will exchange -- you've got a  
3           buyer and a seller.

4     Q.    How do those buyers and sellers know what  
5           prices to offer or bid in the future on the  
6           futures market?

7     A.    It's the nature of the market, I guess.

8     Q.    And when they are doing their spot price  
9           deals at that time, they're based on supply  
10          and demand at that time.  Are you saying  
11          there's no relationship between one and the  
12          other?

13    A.    What I think I said in my testimony is that  
14          the nature of the NYMEX futures is that  
15          there's a tremendous amount of liquidity in  
16          about the next year.  After that, I've got  
17          exhibits in my testimony -- I think the NERA  
18          folks have exhibits in their testimony -- and  
19          we have the U.S. Senate Committee report  
20          which says tremendous volume in the very near  
21          term; after that, in the case of the U.S.  
22          Senate report, it says it's speculative.

23                 So, you know, it's not even an issue of  
24          what the forecast is.  You can secure the gas

1 at that price for, like, the next year.

2 After that, it gets a lot more interesting  
3 because of how thin the market gets.

4 Q. Understood.

5 A. So the point I was making is that it's very  
6 robust for trading and locking in in the next  
7 year. After that, it's speculative. In  
8 fact, the U.S. Senate report is really an  
9 investigation of the Amaranth scandal, which  
10 is manipulation of those prices, which gets  
11 right to the heart of the speculation as you  
12 go out into the future. Who's behind those  
13 prices? What's going on? I don't know.  
14 What I do know is that, in the case of the  
15 forecasts, people at the EIA have sat down  
16 and gone through the hard work of drawing on  
17 a national basis the supply and demand  
18 curves -- we're really into Economics 101,  
19 drawing supply and demand curves -- and  
20 finding the intersection points.

21 Q. But coming back, then, to the slide, the  
22 third slide of the PowerPoint, when whoever  
23 was creating this graph for the 2011 report,  
24 you don't think they would have looked at the

1 futures prices in the short term from that  
2 point to get a sense of what the projections  
3 should be? They had all the past spot price  
4 information. You don't think they would have  
5 used the futures prices for some period of  
6 time before they started using other sources  
7 to project?

8 A. Well, if futures prices are inflated, hyped  
9 for some reason, because there's a hurricane  
10 coming or -- you know, that's trader --  
11 trader games can start hyping prices and  
12 pushing up prices because the buyers are  
13 worried and that sort of thing. And I think  
14 what the forecasters are really doing is  
15 taking a calm view of the market, not an  
16 inflated view, not a deflated view, and  
17 saying, look, these are the -- assuming a  
18 competitive market, then -- and of course, we  
19 believe it is -- then you go right back to  
20 market fundamentals, which is the  
21 intersection of the supply and the demand  
22 curves.

23 Q. But those people who just did that, you  
24 speculated they would have discounted certain

1           of the futures prices because they might have  
2           been manipulated. But they look at them and  
3           consider whether they are -- whether they  
4           have value in making their projections in the  
5           short term; would they not?

6       A.    Perhaps. I'm sure they're looking at the  
7           cash prices, the recent cash prices, too. I  
8           really can't sit here and say what -- whether  
9           the EIA looks at them or not. I mean, that  
10          isn't what they say.

11     Q.    Well, we're not talking about the EIA. I'm  
12           just trying to get an understanding of what  
13           your concerns were about the creation of that  
14           graph. And I think I understand where you  
15           are.

16                But speaking of hype, one of the things  
17           that you felt was important -- and I'm not  
18           going to be able to find it in my notes --  
19           was a report done, I think by Navigant, for  
20           gas producers?

21     A.    Yes.

22     Q.    The gas producers' interests at that time was  
23           certainly to make their industry attractive  
24           and interesting to investors and those

1           considering where to take the energy market;  
2           was it not?

3    A.    I can't read their minds.

4    Q.    Well, it certainly would have been in their  
5           economic interests for a report to be very  
6           bullish on their industry, wouldn't it?

7    A.    Well, it wouldn't -- I hear what you're  
8           saying. But what I'm thinking of, it's not  
9           bullish on pushing gas prices to say that we  
10          have these tremendous reserves. So I'm not  
11          quite sure how it cuts. I don't really know  
12          why they did what they did.

13   Q.    Last thing I want to ask you about is the  
14          \$10 million that's on Page 30 of your  
15          testimony, one of the very last topics you  
16          discussed with Mr. Glahn.

17   A.    Right.

18   Q.    And I had the sense that you and Mr. Glahn  
19          were talking right past each other during  
20          that stretch.

21                Your basis for saying \$10 million was  
22                essentially what their sunk costs were at  
23                that time, and that's what they should get  
24                back; right?

1 A. Correct.

2 Q. You were making no assertions about whether  
3 that number or any other number was the point  
4 at which building the Scrubber was economic  
5 or not economic; correct?

6 A. That's correct.

7 Q. All right. I have nothing further.

8 INTERROGATORIES BY SP. CMSR. IACOPINO (cont'd):

9 Q. I just want to ask you one more question.

10 Without getting into the whole economic  
11 analysis, when you answered Commissioner  
12 Honigberg's question about Exhibit 106 --  
13 that being the NYMEX gas prices, January 2011  
14 forecast slide on the Slide No. 3 -- you've  
15 said that it could be -- they could have used  
16 spot prices or cash prices, or spot price or  
17 whatever you want to call it. Is there  
18 something about the prices in the chart that  
19 is informing you in saying that, or is it  
20 just because you know that those other prices  
21 exist? Because it's been suggested by PSNH  
22 that these are futures prices.

23 A. Right.

24 Q. So I'm just trying to figure out what informs

1           your suggestion that this chart might be  
2           based on cash prices. Is it something about  
3           the prices that you know, or is it just  
4           because you know that there are two different  
5           ways that NYMEX will garner the information?

6    A.   Well, as I said, I didn't -- I just want to  
7           be careful. I didn't make the chart.

8    Q.   I understand that. That's why I'm asking --

9                   (Court Reporter interrupts.)

10   A.   Sorry. If they were NYMEX futures, they  
11           would have said "NYMEX futures." NYMEX gas  
12           prices to me is almost synonymous with the  
13           Henry Hub prices, which means spot.

14   Q.   Okay. So it's just the title that informs  
15           you the most.

16   A.   Well, the other thing we could do is, I have  
17           a chart of Henry Hub prices that the EIA  
18           prepares, that my recollection is that it  
19           looks a whole lot like that. So...

20   Q.   Is that in your testimony as one of your  
21           attachments?

22   A.   I don't -- I don't know. But it's -- quite  
23           frankly, it's about two clicks away on a  
24           computer. It's readily available if it's not



1 an exhibit. But I'm not so sure we  
2 actually --

3 SP. CMSR. IACOPINO: Mr.  
4 Patch, do we know if it's an exhibit or if  
5 it's attached to his testimony?

6 MR. PATCH: I'm sorry. I was  
7 focused on something else.

8 SP. CMSR. IACOPINO: We're  
9 talking about -- he said there's an  
10 exhibit -- or, well, he doesn't know if it's  
11 an exhibit -- but a document of Henry Hub  
12 prices for the time frame, I guess, from 2000  
13 to 2020.

14 MS. GOLDWASSER: We can get  
15 you that number.

16 SP. CMSR. IACOPINO: It's  
17 actually a chart he's talking about.

18 MR. PATCH: I think it's an  
19 attachment to his testimony.

20 SP. CMSR. IACOPINO: Okay.  
21 If you could just -- you don't have to do it  
22 right now, but if you could just alert us if  
23 it's already in the testimony. If not, if  
24 you could get us the document.

1 THE WITNESS: Sure.

2 MR. GLAHN: If may?

3 CMSR. HONIGBERG: Mr. Glahn.

4 MR. GLAHN: It's a little bit  
5 late for TransCanada to be producing  
6 documents now. Mr. Hachey's in here  
7 testifying about prices and methodology. He  
8 hasn't produced any of the documents that  
9 would support that. So, of course, we can't  
10 question whether in fact this document is  
11 based on a particular price or what the  
12 methodology was. That's a concern. And  
13 we'll address that at the end of it, but --

14 SP. CMSR. IACOPINO: Do  
15 you --

16 CMSR. HONIGBERG: Well, Mr.  
17 Glahn, there's a document you gave him during  
18 cross-examination which raised some  
19 questions. Both Commissioners asked him  
20 questions about that document. Commissioner  
21 Iacopino has asked for a document. I think  
22 that, to the extent you want to object to the  
23 production of a page that the witness has  
24 referred to, it's going to be denied -- it's

1           going to be overruled. But --

2                       MR. GLAHN: Well, I'm not  
3           going to say anything further because I know  
4           where you're going. So I'm going to leave it  
5           alone.

6                       SP. CMSR. IACOPINO: Mr.  
7           Glahn, though, if you -- do you have any  
8           information that would inform us as to what  
9           the basis of the chart that you put into  
10          evidence --

11                      MR. GLAHN: No, I think --  
12                      (Court Reporter interrupts.)

13                      MR. GLAHN: I think you can  
14           ask Mr. Large about that. But these are just  
15           the only documents we've been able to find,  
16           all of which are publicly available.

17                      SP. CMSR. IACOPINO: Okay.  
18           But to the precise question --

19                      MR. GLAHN: I don't --  
20                      (Court Reporter interrupts.)

21                      SP. CMSR. IACOPINO: Let me  
22           finish. But to your question, you don't have  
23           any further information that informs why we  
24           should accept your suggestion that these are

1 future prices.

2 MR. GLAHN: I don't know that  
3 I suggested anything. I asked him whether in  
4 fact they were, to see if I could get his  
5 answer and -- but I take your point. And  
6 you're going to get the document if it  
7 exists, and we'll see then.

8 SP. CMSR. IACOPINO: If you  
9 come across anything that informs us, please  
10 let us know.

11 MR. GLAHN: I will. And I  
12 hope, if he's going to produce the document,  
13 he does it before Mr. Large finishes his  
14 testimony.

15 CMSR. HONIGBERG: Mr. Hachey.

16 THE WITNESS: Apparently it's  
17 Exhibit 53.

18 CMSR. HONIGBERG: Is there a  
19 Bates page number?

20 MS. GOLDWASSER: It's a single  
21 page.

22 CMSR. HONIGBERG: I'm sorry.  
23 It's a document -- it's not an attachment to  
24 his testimony? It's an exhibit we've already

1           marked?

2                           MS. GOLDWASSER:   Exhibit 53  
3           was marked as "EIA Natural Gas Prices at  
4           Henry Hub."   Is that what you were looking  
5           for, sir?

6                           SP. CMSR. IACOPINO:   That  
7           sounds like one of the exhibits that's been  
8           marked by the parties, but we have not been  
9           provided --

10                          CMSR. HONIGBERG:   No, no, I  
11           think we may have it.   Yeah, we do.

12                          MS. GOLDWASSER:   I think it  
13           came in on the first day.

14                          CMSR. HONIGBERG:   It's this  
15           right here (indicating).

16                          SP. CMSR. IACOPINO:   Thank  
17           you.

18                          MR. SHEEHAN:   Mr. Frantz  
19           pointed out that it's also attached to Steve  
20           Mullen's testimony.   SEM-8 is a graph with  
21           the Henry Hub...

22                          SP. CMSR. IACOPINO:   I have  
23           no further questions, Mr. Chairman.

24                          CMSR. HONIGBERG:   Mr. Patch,

1 redirect?

2 MR. PATCH: Yes. Thank you.

3 REDIRECT EXAMINATION

4 BY MR. PATCH:

5 Q. First of all, the Chairman asked you a  
6 question about the Clean Skies report.

7 MR. PATCH: And I just want to  
8 make it clear for the record. I believe the  
9 exhibit number for that is 51.

10 BY MR. PATCH:

11 Q. I don't know if you have in front of you  
12 there the exhibits, Mr. Hachey, but that was  
13 a response to -- it's mislabeled, I think, in  
14 the list I have. It was TransCanada's  
15 response to PSNH Question No. 66.

16 (Ms. Goldwasser hands document to  
17 witness.)

18 MR. PATCH: And it's not the  
19 entire report, I would just point out to the  
20 Chairman. We'd be happy to produce the  
21 entire report if you would like. We produced  
22 a couple of pages from that. We provided a  
23 link in the response.

24 BY MR. PATCH:

1 Q. But Mr. Hachey, is that in fact the report  
2 that the Chairman was asking you questions  
3 about that you referred to?

4 A. Yes.

5 CMSR. HONIGBERG: Thank you,  
6 Mr. Patch.

7 BY MR. PATCH:

8 Q. Do you remember Mr. Glahn asking you a  
9 question about Ken Colburn and the document  
10 that he had provided to the Legislature under  
11 his name and Symbiotic Strategies? I think  
12 it's Exhibit 96 [sic].

13 A. I remember the question.

14 Q. And I believe he asked you whether  
15 TransCanada had paid for that, for the  
16 production of that document at all. Do you  
17 remember that question?

18 A. Yes.

19 Q. And have you since been able to inform  
20 yourself as to whether in fact TransCanada  
21 did pay for that?

22 A. I have.

23 Q. And did they?

24 A. No.

1 Q. You were asked a number of questions by Mr.  
2 Glahn about things that you did not have  
3 before you when you put together your  
4 testimony. And I want to ask you a question  
5 about Exhibit 37, which I believe is  
6 something that you did not have before you  
7 when you prepared your testimony, and that is  
8 the New Hampshire -- the Public Service  
9 Company of New Hampshire affiliate, Yankee  
10 Gas, and what Yankee Gas had filed with the  
11 Connecticut Commission. Do you have that in  
12 front of you?

13 (Ms. Goldwasser hands document to  
14 witness.)

15 A. I do now.

16 MR. GLAHN: Someone have an  
17 extra copy I can look at?

18 (Ms. Goldwasser hands document to Atty.  
19 Glahn.)

20 BY MR. PATCH:

21 Q. Is this a document that was available to you  
22 in response to a data request from PSNH or in  
23 any other way when you prepared your  
24 testimony?



1 A. No.

2 Q. Do you know when and how TransCanada and  
3 TransCanada's counsel came across that  
4 document?

5 A. My recollection is it was --

6 MR. GLAHN: And again --

7 CMSR. HONIGBERG: Wait, wait,  
8 wait, Mr. Hachey.

9 MR. GLAHN: Is he going to  
10 open a conversation that he had with his  
11 counsel, with his lawyer? Is this privileged  
12 communication he's going to waive?

13 CMSR. HONIGBERG: I don't  
14 know. He asked the question. Let's find  
15 out.

16 A. My recollection is our counsel said publicly  
17 that she found this on Columbus Day.

18 BY MR. PATCH:

19 Q. So it was not available to you at the time  
20 your testimony was filed; correct?

21 A. That's correct.

22 Q. Have you had a chance to look at the  
23 document?

24 A. I've had some chance to look at it, yes.

1 Q. Do you see the letter of March 2nd, 2009?

2 A. I do.

3 Q. Do you a see reference in the first paragraph  
4 to, "On November 13, 2008, the Company  
5 requested an extension of time to March 1,  
6 2009, to allow the Company to assess recent  
7 energy and market changes, to incorporate  
8 those impacts into a new forecast, and to  
9 develop detailed support for the updated  
10 forecast"?

11 A. I do.

12 Q. Is that in any way inconsistent with any of  
13 the testimony that you put together?

14 A. No.

15 Q. Do you think it supports your testimony?

16 MR. GLAHN: I'm going to  
17 object. I don't think there's any evidence  
18 here that -- looking at this, this report  
19 indicates that it's a report that was  
20 required by a specific provision of  
21 Connecticut law. I don't think there's any  
22 foundation for the fact as to what that  
23 update -- whether there was an update  
24 required under law or what the update

1           required.

2                               CMSR. HONIGBERG: Overruled.

3    A.    Well, my testimony was that there were market  
4           changes.

5    BY MR. PATCH:

6    Q.    And does this seem to suggest that at least a  
7           PSNH affiliate was aware of those market  
8           changes?

9    A.    Yes.

10   Q.    I'm going to direct your attention to Page 23  
11          of this exhibit. In the lower right-hand  
12          corner it's also Roman III-16. At the top it  
13          says, "Major Forecast Inputs."

14   A.    Yes.

15   Q.    Do you see the second paragraph, the first  
16          sentence, "Another major input to the  
17          forecast models is energy prices"?

18   A.    I see that.

19   Q.    And the next sentence, "The Company uses  
20          Energy Ventures Analysis... forecasts of  
21          retail and wholesale energy price in its  
22          forecasting process"?

23   A.    Yes.

24   Q.    Are those, in fact, the forecasts that

1 TransCanada's been trying to get for the last  
2 two years?

3 MR. GLAHN: Objection.

4 CMSR. HONIGBERG: Mr. Patch.

5 MR. PATCH: I think it's a  
6 simple question. Mr. Hachey knows, as does  
7 Mr. Glahn, that TransCanada's asked numerous  
8 data requests about this, and we finally got  
9 some information on Friday about this. And  
10 this is something that was available,  
11 apparently, to an affiliate. As we know from  
12 the record, PSNH cited it in the LCIRP, the  
13 2007 one that is now in the record, that PSNH  
14 put in the record. There are other  
15 references in the record to it, too.

16 MR. GLAHN: We --

17 CMSR. HONIGBERG: Seems like  
18 testimony about the discovery problems. I  
19 mean, is that where you're going with this --

20 MR. PATCH: No.

21 CMSR. HONIGBERG: -- or is  
22 there something substantive you want to ask  
23 him about?

24 MR. PATCH: No, there's

1 something substantive. So I'll ask another  
2 question.

3 MR. GLAHN: I'll also note for  
4 the record that he -- there's no evidence  
5 that he didn't have the EVA forecast for  
6 2008, which was produced a long time ago.

7 MR. PATCH: No, it wasn't.  
8 That's just not true.

9 CMSR. HONIGBERG: Well, what's  
10 the substantive question you want to ask him  
11 about the EVA forecast?

12 BY MR. PATCH:

13 Q. Isn't it true, in your testimony, Mr. Hachey,  
14 that you made reference to the fact -- and I  
15 believe it's -- let me just find the cite in  
16 your testimony -- at the bottom of Page 24,  
17 that you had eliminated the EVA forecast  
18 because you were not provided -- well, as it  
19 says there, "We only were provided EVA  
20 forecast values through 2018 by PSNH, and we  
21 lacked any narrative explanation of how to  
22 extrapolate it through 2017 [sic]"?

23 A. I think it's 2027.

24 Q. I'm sorry. I misread that.

1 A. Yes, that's in my testimony.

2 Q. And so you, in fact, discounted the EVA  
3 forecast because you weren't provided with  
4 sufficient information from PSNH, some of  
5 which we have now received; is that correct?

6 A. That's correct.

7 Q. And then there's one more page in this  
8 exhibit. The next, Page 24, "Long-Run Growth  
9 Potential," the second paragraph. I'm going  
10 to read you the third -- actually, the fourth  
11 sentence I guess it is. It says, "Natural  
12 gas prices, as measured by Henry Hub, also  
13 saw a plunge in 2008 and are expected to  
14 remain below recent history for the next  
15 several years for reasons similar to those  
16 affecting oil." Did I read that correctly?

17 A. Yes.

18 Q. "But, also, and perhaps more importantly,  
19 prices are likely to remain depressed because  
20 of the newly discovered and exploitable  
21 supply response available from the  
22 unconventional sources (shale plays)." Did I  
23 read that correctly?

24 A. Yes, you did.

1 Q. So, is it your understanding that PSNH  
2 affiliates, in fact, had this information  
3 available to them in the time frame that is  
4 under consideration by the Commission in this  
5 docket?

6 MR. GLAHN: That time frame  
7 being what, Mr. Patch?

8 I object to the question. The  
9 time frame isn't specified. This report was  
10 issued in March of 2009.

11 MR. PATCH: That's right. But  
12 there's a letter indicating November 13th of  
13 2008, that they were asking for evaluating  
14 the impact of market drivers on the most  
15 recent sales forecast.

16 MR. GLAHN: But the report was  
17 filed in March of 2009, and you're asking him  
18 about a statement in -- Mr. Hachey's asking  
19 about a statement -- Mr. Patch is asking  
20 about a statement in a 2009 report. And I'm  
21 objecting to the question because he's not  
22 identifying the time frame in which he  
23 purports to argue that PSNH had access to  
24 this information.

1                   MR. PATCH: Well, it's clearly  
2                   in the fall of 2008 when they asked for the  
3                   extension.

4 BY MR. PATCH:

5 Q.     Would you think that's fair, Mr. Hachey?

6 A.     That's what the document says.

7 Q.     And then also in 2009, because that's when  
8           the actual report was filed. Would you say  
9           that's fair?

10 A.    Yes.

11 Q.    Do you remember Mr. Glahn walked you through  
12        a number of, I guess I'll call them "math  
13        problems," on the chart up there in front of  
14        the Commission, where he started with the 457  
15        million, and then subtracted from that, for  
16        example, 35 million for the secondary  
17        wastewater treatment, and then also  
18        subtracted some other numbers from that? Do  
19        you remember that discussion?

20 A.    Yes.

21 Q.    And I think he came up originally with an  
22        83 percent increase in the original estimate  
23        of 250 million to the 457 million. Do you  
24        remember that?



1 A. Yes.

2 Q. Of all those numbers that he walked you  
3 through, isn't that the only relevant one?

4 MR. GLAHN: Objection.

5 Relevant to what?

6 MR. PATCH: I'll reask the  
7 question.

8 CMSR. HONIGBERG: Thank you.

9 BY MR. PATCH:

10 Q. Isn't it fair to say that the other math that  
11 he had you do was based on information that  
12 came out after what was known to PSNH in the  
13 summer of 2008?

14 A. That's my understanding.

15 Q. So that, in effect, would be a look-back.  
16 That would, in effect, be using hindsight;  
17 would it not?

18 A. That's correct.

19 Q. Now, Mr. Hachey, I'd just like to explore a  
20 little bit about your own personal  
21 background.

22 I think in response to some questions  
23 earlier today, you talked about how you had  
24 worked for New England Electric System for a

1           number of years. Did I hear that correctly?

2    A.    Yes.

3    Q.    And New England Electric System, at that  
4           time, was a regulated public utility; is that  
5           correct?

6    A.    Yes.

7    Q.    And were you involved at all in doing  
8           analyses associated with investments that  
9           NEES, the regulated utility, was going to be  
10          making in power plants or in other assets  
11          that they owned?

12                   MR. GLAHN: Objection. I  
13                   think this witness has already testified that  
14                   he didn't have any involvement. I asked him  
15                   about making decisions in real time as to  
16                   whether things were prudent. He said he  
17                   didn't have any involvement in that.

18                   CMSR. HONIGBERG: I remember  
19                   that question and answer. Mr. Patch.

20                   MR. PATCH: I think the  
21                   question was with respect to TransCanada and  
22                   not with NEES. So we can establish  
23                   now what --

24                   CMSR. HONIGBERG: Let's -- all

1 right. You can answer the question.

2 A. For, you know, a number of years as I  
3 joined -- it was New England Power; New  
4 England Power was the relevant subsidiary --  
5 I was assessing capital projects at  
6 generating stations, doing the economic  
7 assessments. I wasn't making prudence  
8 determinations. I was doing the economic  
9 analysis of the projects.

10 BY MR. PATCH:

11 Q. And can you give us, you know, just sort of a  
12 ballpark, a 10,000-foot summary of the kinds  
13 of things that you would look at when you did  
14 those kinds of assessments?

15 A. Well, typically it would involve -- the  
16 carrying charges on the capital investment  
17 would be the cost, and the savings would be  
18 the production savings, which would be  
19 determined by doing a with and without  
20 analysis on a production-cost simulation  
21 model, which is very common in the industry.

22 Q. And did that experience that you had inform  
23 your testimony in this docket?

24 A. Yes.

1 Q. And going back to the board of trustees  
2 presentation, do you recall how they had in  
3 there the spread of \$5.29 between the price  
4 of natural gas and coal as being basically  
5 the break-even point that was necessary to  
6 make the Project economic? Do you recall  
7 that?

8 A. Yes.

9 Q. And obviously, we've had a lot of testimony  
10 so far, and I'm sure there'll be more, about  
11 the fact that that was not presented to Staff  
12 and not presented to the Commission and not  
13 presented to the Legislature.

14 MR. GLAHN: Objection. I  
15 think we've had plenty of testimony about  
16 what was presented: The sensitivity  
17 analysis, the price of gas, the price of  
18 coal.

19 CMSR. HONIGBERG: Sustained.  
20 Why don't you get to the question that you  
21 want to ask him about it.

22 BY MR. PATCH:

23 Q. What did you understand that \$5.29 figure to  
24 be?

1     A.     That was the differential cost between  
2           natural gas prices and coal prices at which  
3           the net benefits to electric customers would  
4           appear.

5     Q.     And based on your experience with New England  
6           Power Company, if a utility had that  
7           available to them, how would they use that  
8           number?

9     A.     Well, it's a very concise way of assessing  
10          the Project at any point in time as market  
11          conditions changed. It's a very useful --  
12          trying to come up with a word. But it's a  
13          very useful concept, a very useful number.

14    Q.     And so, a utility that had that number  
15          available to it, would that be the end of the  
16          story? Would it ever have gone back and  
17          checked that number periodically going  
18          forward?

19    A.     Well, I would think that the utility would  
20          recognize that that's what -- that's the  
21          number -- that's the spread that was  
22          necessary for there to be consumer benefits.  
23          And that would have been a number you'd want  
24          to be sure of to -- that as time and life

1 unfolded, that it would be a robust number  
2 and would not be an ethereal number, if you  
3 will.

4 Q. And if the utility also had available to it  
5 information that indicated that that \$5.29  
6 spread, looking back historically over a  
7 15-year period, had never been met, that in  
8 fact the average had been \$3.18, do you think  
9 that would have given them pause on whether  
10 to proceed?

11 A. Yeah.

12 MR. GLAHN: Objection. The  
13 evidence is not that the not been met over  
14 that period of time. The evidence is from  
15 the chart. If Mr. Patch wants to narrow his  
16 question to the period from 1993 or identify  
17 the specific time frame, the question makes  
18 sense. But he hasn't laid a foundation for  
19 it otherwise.

20 MR. PATCH: I thought I did  
21 lay the foundation. It's the 15-year period.  
22 The average spread over that 15-year period  
23 is \$3.18, according to the chart. We can go  
24 back to the chart if necessary, but that's

1           what the chart says.

2                       MR. GLAHN:   If Mr. Patch has  
3           evidence as to what the average spread was  
4           over the 15 years, I don't know where it is.

5                       MR. PATCH:   It's right on the  
6           chart.

7                       CMSR. HONIGBERG:   I think --

8                       MR. GLAHN:   Where?

9                       CMSR. HONIGBERG:   -- Ms.  
10          Goldwasser's going to find it for us, and  
11          we'll find out.

12                      MS. GOLDWASSER:   Do you want  
13          me to read it?

14                      CMSR. HONIGBERG:   Off the  
15          record.

16                      (Discussion off the record)

17                      CMSR. HONIGBERG:   All right.  
18          Let's go back on the record.

19                      MR. GLAHN:   With that chart,  
20          I'll withdraw my question.   But I'd like the  
21          question reread, please.

22                      MR. PATCH:   Would it be easier  
23          for me to restate it?

24                      MR. GLAHN:   I think so.

1 BY MR. PATCH:

2 Q. Well, I guess, just to establish, Mr. Hachey,  
3 you have in front of you that chart?

4 A. Yes.

5 Q. And does it indicate what the historical  
6 average spread was over the prior 15-year  
7 period?

8 A. It says, "Gas/coal spread has averaged \$3.18  
9 per million Btu over the last 15 years."

10 Q. And does it also indicate what the spread is  
11 that's required to make the Project economic?

12 A. It goes on to say, "as compared to the  
13 required customer break-even level of \$5.29  
14 per million Btu."

15 Q. So my question to you is: Based on your  
16 experience working for a public utility and  
17 working on capital projects and analyses that  
18 you did, whether that would have given pause  
19 to a public utility on whether or not to  
20 proceed with this project.

21 MR. GLAHN: That being the  
22 statements that are on the chart?

23 MR. PATCH: That's right.

24 A. I believe so, yes.



1 BY MR. PATCH:

2 Q. What is your understanding of when PSNH first  
3 became aware of the fact that the estimate  
4 for the project had risen to \$457 million?

5 MR. GLAHN: I think that  
6 question's been asked a number of times,  
7 including of this witness.

8 CMSR. HONIGBERG: Do you  
9 know --

10 MR. GLAHN: I don't think  
11 there's any dispute that it's May of 2008.

12 CMSR. HONIGBERG: Does that  
13 work for you, Mr. Hachey?

14 THE WITNESS: At this point,  
15 sure.

16 BY MR. PATCH:

17 Q. Well, I'd like to show you an attachment to  
18 Mr. Large's and Mr. Vancho's rebuttal  
19 testimony. And I think that has been marked  
20 as Exhibit 23.

21 (Ms. Goldwasser hands document to  
22 witness.)

23 Q. It's Attachment 2, Page 12 of 17.

24 CMSR. HONIGBERG: Is there a

1 Bates number on the bottom of that?

2 MR. PATCH: Yeah, 431.

3 MR. GLAHN: Give us a minute.

4 Doug, could you give us the numbers again,  
5 please?

6 MR. PATCH: Yup. It's the  
7 second -- No. 2 attachment to the rebuttal  
8 testimony of Large and Vancho, and it's Bates  
9 Page 431.

10 BY MR. PATCH:

11 Q. Mr. Hachey, do you have that in front of you?

12 A. I do.

13 Q. And if you look back at Bates Page 420, I  
14 think that's actually the beginning of the  
15 attachment, or at least that identifies what  
16 the information is part of, it says "Clean  
17 Air Project, Merrimack Station - PSNH,  
18 Progress Update, April 25, 2008."

19 A. Yes.

20 Q. And then, if you look again at Page 12 of the  
21 presentation, Bates Page 431, and you look  
22 down at the very bottom under the line, what  
23 does it say there?

24 A. It says "Merrimack CAP: \$425 million capital

1 investment."

2 Q. So it sounds like, at least in this update in  
3 April, PSNH was certainly aware that the cost  
4 had gone up to \$425 million. You think  
5 that's a fair statement?

6 MR. GLAHN: Objection. Is he  
7 asking him what "Merrimack CAP" means? He's  
8 asking him to make an inference from this  
9 document.

10 MR. PATCH: I can ask him what  
11 he thinks "C-A-P" means.

12 MR. GLAHN: Fine.

13 CMSR. HONIGBERG: Go ahead.

14 BY MR. PATCH:

15 Q. Would it be your understanding that that  
16 stands for "Clean Air Project"?

17 A. That's the title of the document, "Clean Air  
18 Project," and that is an acronym that seems  
19 to fit. So...

20 Q. So this document, again, is dated in April of  
21 2008. So it appears from this document, does  
22 it not, that PSNH actually knew as of April,  
23 now, that the Project was going to be far in  
24 excess of 450 -- \$250 million. Do you think

1           that's fair?

2    A.    Seems to open up the idea that the Clean Air  
3           Project is a \$425 million capital investment,  
4           certainly.

5    Q.    And the reason I'm asking you these  
6           questions, Mr. Glahn walked you through a  
7           number of questions associated with the  
8           timing of notifying the Securities and  
9           Exchange commission. Do you remember those  
10          questions?

11   A.    Yes.

12   Q.    And I think it was basically early in August  
13          that they notified the Securities and  
14          Exchange Commission. Is that your  
15          understanding?

16   A.    That's my recollection, yes.

17   Q.    And it was to try to point out that they did  
18          not notify the Legislature at the June 18,  
19          2008 meeting; correct?

20   A.    Yes.

21   Q.    Which we've already established through  
22          attachments to your testimony; correct?

23   A.    That's correct.

24   Q.    But do you know any reason why they couldn't

1           have notified the Securities and Exchange  
2           Commission before or why they couldn't have  
3           told the Legislature earlier about the  
4           increase in the costs of the Scrubber  
5           Project?

6    A.    I don't know of any reason, no.

7                         MR. PATCH:  I'm not sure I  
8           need to go here, Mr. Chairman, but there was  
9           an exhibit that Mr. Hachey was provided with,  
10          which was a letter from Mr. Kapala.  And  
11          there were certain sentences from the letter  
12          that were read to Mr. Hachey, and he  
13          confirmed that they were in fact read  
14          appropriately.  And there were follow-up  
15          statements in that letter in each of those  
16          two locations, that I'm not sure it's  
17          necessary, you know, to read them all again.  
18          I would if you would like me to.  But I just  
19          want to make sure that the Commission reads  
20          the rest of those paragraphs because I think  
21          that information is very important.  And if  
22          you think it's necessary, I can walk the  
23          witness through.  But I don't --

24                        CMSR. HONIGBERG:  We don't

1 think it's necessary. I think you've done  
2 what you need to do.

3 MR. PATCH: Okay.

4 BY MR. PATCH:

5 Q. You were asked some questions about the  
6 September order in the 08-103 docket. Do you  
7 remember those questions? It was Order No.  
8 24,898. And I think it was at the bottom of  
9 Page 12, where Mr. Glahn had asked you a  
10 number of questions about what was in that  
11 order?

12 A. I have the order.

13 Q. Is it your understanding that the Commission  
14 issued another order in that docket on a  
15 motion for rehearing that had been made by  
16 TransCanada, among others; that there was, in  
17 fact, an Order No. 24,914 that, in fact,  
18 clarified a number of positions for a number  
19 of things that the Commission had spoken  
20 about in the first order?

21 A. Well, if I had the order, it would refresh my  
22 recollection.

23 (Ms. Goldwasser hands document to  
24 witness.)

1     A.     I have order No. 24,914.

2     Q.     And so it's your understanding that this  
3             order, in effect, superseded the prior order,  
4             in the sense that it was an order issued by  
5             the Commission on a motion for rehearing in  
6             that same document?

7                     MR. GLAHN:  Objection.  I  
8             think this witness has said any number of  
9             times, "I'm not lawyer," "I can't conclude  
10            that," and now he's asking if one order  
11            supercedes another, as opposed to simply  
12            denying reconsideration.

13                    CMSR. HONIGBERG:  As asked,  
14            that question has a problem.

15  BY MR. PATCH:

16  Q.     Is this a later order in that docket?  Is it  
17             your understanding this is a later order from  
18             the Commission in that docket, Mr. Hachey?

19  A.     This is Docket 08-103, which I believe is the  
20             same docket, and it's dated November 12th,  
21             2008, which is after the prior order which  
22             was dated September 19, 2008.

23  Q.     There's just one provision in the order I'd  
24             like to point out to you and ask --

1 MR. GLAHN: What page are you  
2 on, Doug?

3 CMSR. HONIGBERG: He hasn't  
4 gotten there yet.

5 BY MR. PATCH:

6 Q. I wonder if you would just read into the  
7 record the sentence in the order at the  
8 bottom of the Page 13 that begins, "RSA  
9 125-O:17" and goes over to the top of the  
10 next page.

11 A. "RSA 125-O:17 does, however, provide a basis  
12 for the Commission to consider, in the  
13 context of a later prudence review, arguments  
14 as to whether PSNH had been prudent in  
15 proceeding with installation of scrubber  
16 technology in light of increased cost  
17 estimates and additional costs from other  
18 reasonably foreseeable regulatory  
19 requirements, such as those cited by the  
20 Commercial Ratepayers, which include the  
21 Clean Air Act, 42 U.S.C., Section 7401, et  
22 seq., and the Clean Water Act, 33 U.S.C.,  
23 Section 1251, et seq." Not a lawyer.

24 Q. Okay.



1 MR. GLAHN: Was there a  
2 question?

3 BY MR. PATCH:

4 Q. Is it your understanding that that was part  
5 of the order that was issued later than the  
6 one that Mr. Glahn asked you about in the  
7 same docket?

8 A. Yes, it is.

9 MR. PATCH: Mr. Chairman, I  
10 think that's all we have on redirect. I  
11 guess what I would like to do at this point  
12 in time, though, is just to reserve the right  
13 to bring Mr. Hachey back once we've had a  
14 chance to review all the materials that PSNH  
15 has provided to us starting on Friday and  
16 then again yesterday in response to data  
17 requests that we asked a long time ago.

18 MR. GLAHN: I don't think we  
19 have any objection to that.

20 CMSR. HONIGBERG: All right.

21 Mr. Hachey, I know this has  
22 been a lot of fun, but I think we're going to  
23 let you go for a while, anyway.

24 THE WITNESS: Thank you.

1 CMSR. HONIGBERG: We need to  
2 give everyone a break. Let's say 10 minutes.  
3 Come back shortly before 4:00, and we'll get  
4 done what we can with -- I've forgotten who  
5 we said we were going to come up with.

6 MS. AMIDON: Large.

7 CMSR. HONIGBERG: Large.  
8 That's right. So we'll start with that.

9 (Whereupon a recess was taken at 3:47  
10 p.m., and the hearing resumed at 4:03  
11 p.m.)

12 MR. PATCH: Mr. Chairman, we  
13 had indicated in response to the data request  
14 objections that Mr. Glahn was asking of Mr.  
15 Hachey that we wanted to fill the record with  
16 the ultimate responses, in the case that  
17 there were such. That's what I have here,  
18 and I guess I'd like to ask that they be  
19 marked as an exhibit.

20 MR. GLAHN: Could he just  
21 identify what the numbers of the responses  
22 are?

23 CMSR. HONIGBERG: Yes, I think  
24 he probably can.

1 MR. PATCH: It's 34, 37, 52,  
2 57, 66, 67, 68, 71, 74, 75, 97, 151. And we  
3 also have a chart in which we listed all of  
4 the questions that we had been handed on  
5 Friday and then the response or objections,  
6 in the case that there was a response, or  
7 PSNH had elected not to pursue it. So we  
8 have a chart that sort of describes that,  
9 that might be useful.

10 CMSR. HONIGBERG: Okay.

11 MR. GLAHN: We haven't had a  
12 chance to see the chart, so it's hard for us  
13 to object to it.

14 CMSR. HONIGBERG: Why don't  
15 you show it to Mr. Glahn.

16 MR. GLAHN: I mean, if I can  
17 look at it overnight and let you know in the  
18 morning whether --

19 CMSR. HONIGBERG: It's not  
20 urgent. So, yes, why don't you hang on to  
21 it, and we'll deal with it tomorrow morning.

22 MR. GLAHN: Okay.

23 CMSR. HONIGBERG: So we're  
24 going to mark this as Exhibit 116.

1           (The document, as described, was herewith  
2           marked as Exhibit 116 for  
3           identification.)

4           MR. PATCH: Should we mark the  
5           chart now, too, or wait on that?

6           CMSR. HONIGBERG: Wait until  
7           tomorrow morning.

8           MR. GLAHN: I do have a motion  
9           before we get started with these witnesses.

10          CMSR. HONIGBERG: Mr. Glahn.

11          MR. GLAHN: This is a point at  
12          which I'd like to move for the adverse  
13          inference again. I'll let the record stand  
14          on the adverse inference request that we made  
15          on Friday. You recall that we made one with  
16          respect to gas forecasting. And the  
17          Commission will also recall that after that  
18          testimony, I referenced an ESAI forecast that  
19          they had in their possession, had not  
20          produced until April, and which was  
21          inconsistent with Mr. Hachey's testimony and  
22          consistent with PSNH's. That was the ESAI  
23          forecast for June of 2008 that showed a price  
24          above the line.

1                   We now have -- in his  
2                   testimony this afternoon, Mr. Hachey said  
3                   that TransCanada has a forecasting department  
4                   and that they prepare corporate forecasts.  
5                   We've -- that alone, I think, is sufficient  
6                   to draw the inference, because the -- what we  
7                   know is this: We put in a lot of documents  
8                   now that show TransCanada projecting gas  
9                   prices to increase, that shows very  
10                  inconsistent positions with respect to Mr.  
11                  Hachey's testimony about when people knew or  
12                  didn't know about fracking. All of the  
13                  statements of Mr. Hachey's testimony is that  
14                  people would have known as of 2006 and 2007.  
15                  There was clear documentation. In fact, of  
16                  course, TransCanada made a series of  
17                  statements about that, that are inconsistent  
18                  with that point as we've shown. We've also  
19                  shown that TransCanada's CEO was projecting  
20                  gas prices to be between 6 and 10 as late as  
21                  2009, 2010. So, not only have we tied it to  
22                  the inference because they haven't produced  
23                  documents -- remember, this is a witness who  
24                  said the answer in No. 34 -- I'm sure

1 Mr. Patch will point out that it was  
2 subsequently answered, but they didn't  
3 withdraw the objection -- that Mr. Hachey has  
4 no information about fuel price forecast  
5 relating to coal, oil or natural gas produced  
6 or available to TransCanada from 2005 to  
7 2012. Now he says he does know that  
8 corporate forecasts were prepared. To go  
9 back to the colloquy we had a moment ago  
10 with -- on questions asked by Commissioner  
11 Iacopino, if TransCanada had produced  
12 documents in a timely manner, produced them  
13 at all, or, for that matter, even looked at  
14 them, we wouldn't have this dispute about  
15 whether these are NYMEX futures prices or  
16 NYMEX prices or any other forecasts. We  
17 would know because we would have had a chance  
18 to ask about it.

19 So, we were instructed that --  
20 or the Commission ordered that it may infer  
21 as appropriate during the balance of the  
22 document, that documents and information that  
23 the TransCanada intervenors refused to  
24 produce, as required by Order 25,663, would

1       have been adverse to TransCanada's positions  
2       relative to those topics -- "those topics"  
3       being gas price forecasting and fracking.

4               Not only do we have evidence  
5       that there are indeed documents that are  
6       contrary to their position, but we now know  
7       that they made no effort whatsoever to  
8       produce information that was readily  
9       available. Mr. Hachey testified on Friday  
10      that he made no effort. He didn't call  
11      anybody. He didn't look for any documents at  
12      TransCanada because, in his view, they were  
13      irrelevant. He didn't bother to call up the  
14      forecasting department to determine that. So  
15      I think this is a point in which the adverse  
16      inference should be drawn.

17             (Commissioners conferring.)

18             CMSR. HONIGBERG: And we will  
19      consider whether and how to apply the adverse  
20      inference during the course of our  
21      deliberations. We appreciate the position  
22      you've taken.

23             MR. GLAHN: Thank you.

24             CMSR. HONIGBERG: So, are we

1           ready for the next witnesses? They seem to  
2           be up there. So, Mr. Needleman, you'll be  
3           doing the honors on this one?

4                       MR. NEEDLEMAN: I will.

5                       (WHEREUPON, TERRANCE J. LARGE AND JAMES  
6                       J. VANCHO were duly sworn and cautioned  
7                       by the Court Reporter.)

8                       TERRANCE J. LARGE, SWORN

9                       JAMES J. VANCHO, SWORN

10                      EXAMINATION

11   BY MR. NEEDLEMAN:

12   Q.   Mr. Large, why don't we start with you.

13           Could you state your full name, please.

14   A.   (Mr. Large) Certainly. My name is

15           Terrance J. large.

16   Q.   And your employer is?

17   A.   (Mr. Large) Public Service Company of New  
18           Hampshire.

19   Q.   And what is your position there today?

20   A.   (Mr. Large) I'm currently Director of  
21           Generation.

22   Q.   And has that position changed since the time  
23           you filed your prefiled testimony?

24   A.   (Mr. Large) Yes, it has.



1 Q. What was your position at the time?

2 A. (Mr. Large) Let me be sure.

3 (Witness reviews document.)

4 A. (Mr. Large) No, it has not changed since the  
5 time of the prefiled testimony.

6 Q. And could you provide a very brief overview  
7 of your educational background and  
8 professional experience?

9 A. (Mr. Large) Certainly. I have two degrees in  
10 engineering: One from Dartmouth College and  
11 one Union College. I have 31 years'  
12 experience in the electric industry, 20-plus  
13 of which are in the generation-focused area.

14 Q. And you have in front of you Exhibit 23  
15 that's been premarked here?

16 A. (Mr. Large) I do.

17 Q. And is that a copy of the prefiled testimony  
18 filed in this proceeding?

19 A. (Mr. Large) Yes, it is.

20 Q. And you have also accompanying that Exhibits  
21 23-1 through 23-15?

22 A. (Mr. Large) I do.

23 Q. And those are the exhibits that were attached  
24 to your prefiled testimony?

1 A. (Mr. Large) That is correct.

2 Q. Before I ask you to swear it out, let me turn  
3 to you, Mr. Vancho.

4 Mr. Vancho, could you state your name,  
5 please.

6 A. (Mr. Vancho) James J. Vancho.

7 Q. And your employer, please?

8 A. (Mr. Vancho) Northeast Utilities.

9 Q. And just a very brief overview of your  
10 educational experience and background?

11 A. (Mr. Vancho) Sure. I have a bachelor's  
12 degree in business management and a master's  
13 in business administration, with a  
14 concentration of finance. I've been with NU  
15 for 13 years now, basically involved in  
16 project analysis and capital market reviews  
17 and corporate planning and areas such as  
18 that.

19 Q. What's your current title?

20 A. (Mr. Vancho) Manager, Financial Analysis.

21 Q. And you also have in front of you Exhibit 23?

22 A. (Mr. Vancho) Yes, I do.

23 Q. Together with Exhibits 23-1 through 23-15?

24 A. (Mr. Vancho) Yes.

1 Q. Let me ask either of you at this point if  
2 there are any corrections to that prefiled  
3 testimony.

4 A. (Mr. Large) Yes. I have two, and they're  
5 related to one another. If we could please  
6 turn to Page 6. There's a transposition with  
7 respect to the exhibit numbers for the last  
8 two exhibits. So, on Line 6, the number "14"  
9 should be "15"; and on Line 13, the number  
10 "15" should be "14." I apologize.

11 Q. Any other corrections besides those?

12 A. (Mr. Large) None.

13 Q. Then let me ask you both. With those  
14 corrections in mind, do you adopt this  
15 prefiled testimony and swear to it?

16 A. (Mr. Large) Yes, I do.

17 A. (Mr. Vancho) Yes.

18 Q. And Mr. Large, could you please provide a  
19 brief summary of the testimony.

20 A. (Mr. Large) Thank you, I will.

21 Our testimony here today focuses  
22 primarily on the economic analyses we  
23 conducted for PSNH in connection with the  
24 Scrubber Project. These analyses were

1 prepared for use by the Northeast Utilities  
2 Risk and Capital Committee and the Northeast  
3 Utilities Board of Trustees to review the  
4 investment requirements associated with the  
5 Project for budgeting purposes and to get an  
6 understanding of major drivers of project  
7 development and execution risks.

8 As the Commission stated in Order 24,979  
9 in Docket DE 09-033, "Installation of  
10 scrubber technology at Merrimack Station is a  
11 legislative mandate," and as such, it "does  
12 not reflect a utility management choice among  
13 the range of options." Therefore, the  
14 economic analyses we performed were for  
15 informational purposes and did not form the  
16 basis for determining whether the Project  
17 should go forward or not. The analyses we  
18 conducted are attached to our testimony, as  
19 referred by Mr. Needleman.

20 The base case analysis show present  
21 value of economic benefits to customers of  
22 \$132 million. We also conducted sensitivity  
23 assessments in the model to show senior  
24 management and the board if changes in key

1 drivers could lead to upside or downside  
2 changes from the base case. One aspect of  
3 the model involved natural gas prices. We  
4 used prices built on our own actual  
5 experience in natural gas delivered for use  
6 at PSNH generating facilities here in New  
7 Hampshire in early 2008. Those prices were  
8 consistent with NYMEX futures prices in their  
9 development, and they were available with  
10 those NYMEX prices in the summer of 2008.  
11 They were also consistent with gas price data  
12 that was available before the Commission  
13 later that year and data as discussed by the  
14 Energy Information Administration at that  
15 time. We believe the gas price we used was  
16 well within the range of reasonableness for  
17 gas prices at that juncture.

18 Further analysis was performed during  
19 late August 2008 in response to the  
20 Commission's Secretarial letter of  
21 August 22nd, 2008, seeking specific  
22 information from the Company. No further  
23 updates were done after this time.

24 Following our September filing to the

1 August 22nd request, the Legislature  
2 considered two bills during the 2009 session:  
3 Senate Bill 152 and House Bill 496. PSNH  
4 monitored those bills carefully. And on  
5 March 19th, the House Science, Technology and  
6 Energy Committee issued its report, which  
7 stated, in part, that it did not want, "a  
8 pause in or cancellation of the project."  
9 The Senate did not pass Senate Bill 152.  
10 Based on the results of these legislative  
11 actions or inactions, and the Project status,  
12 no further assessments were necessary, in our  
13 view.

14 Finally, Mr. Vancho and I were involved  
15 in the development of presentations and  
16 discussion packets that were presented to the  
17 Risk and Capital Committee and the board of  
18 trustees and to the Public Utilities  
19 Commission Staff and OCA. We are, therefore,  
20 prepared to speak to those issues as well.  
21 Thank you.

22 Q. Thank you, Mr. Large.

23 MR. NEEDLEMAN: Mr. Chairman,  
24 they're available for cross-examination.

1 CMSR. HONIGBERG: Who's going  
2 to be asking questions first?

3 MR. SHEEHAN: I think we are  
4 first.

5 CMSR. HONIGBERG: Mr. Sheehan.

6 CROSS-EXAMINATION

7 BY MR. SHEEHAN:

8 Q. Good afternoon, gentlemen.

9 A. (Mr. Large) Good afternoon.

10 A. (Mr. Vancho) Good afternoon.

11 Q. I have a few big-picture topics to run  
12 through with you, and then I will turn it  
13 over to the others.

14 First, you alluded to it -- and either  
15 of you answer as appropriate -- you alluded  
16 to it in your opening, that throughout this  
17 case, PSNH has taken the position that  
18 building the Scrubber was a legislative  
19 mandate, that you had to do it; yet, the  
20 documents from the summer of 2008, the  
21 presentations to the committees and to Staff,  
22 contain a lot of financial analysis. Why do  
23 a financial analysis if at the end of the day  
24 you had to build it?

1     A.     (Mr. Large) Well, in the case of the RaCC and  
2           board presentations, those were required by  
3           corporate requirements. In order to gain  
4           authorization for spending in excess of  
5           \$10 million, corporate requirements were that  
6           we need to present before the Risk and  
7           Capital Committee. And there was a  
8           standardized format that was necessary to  
9           complete, and that included an economic  
10          analysis. So we performed that. Any project  
11          in excess of \$50 million was required to go  
12          to the board of trustees, and a similar type  
13          of analysis was expected as part of the  
14          overall authorization process. So those were  
15          done in that regard.

16     A.     (Mr. Vancho) I agree.

17     A.     (Mr. Large) Sorry.

18     Q.     If you could turn to your testimony,  
19           Attachment 12, Bates Page 588 is the  
20           beginning of Attachment 12.

21     A.     (Mr. Large) I have that.

22     Q.     That's a data response. And what I'd like  
23           you to do is turn further, to pages beginning  
24           591. And these are a series of charts



1           showing fuel prices.

2       A.     (Mr. Large) Yes.

3       Q.     And as I understand it, these are from EVA;  
4           is that correct?

5       A.     (Mr. Large) Page 591 is the commencement of  
6           EVA information that I believe was from the  
7           spring of 2008.

8       Q.     Now, if you turn further to Page 601, it's  
9           the last page of what looks like the EVA-type  
10          charts.

11      A.     (Mr. Large) Yes.

12      Q.     This one is listed "Boston City Gate Natural  
13           Gas Price." Other charts have prices for  
14           natural gas in different places, and for  
15           propane and for oil, et cetera.

16               If we were to look for the most  
17           appropriate natural gas price for New  
18           Hampshire, would this be the best one to look  
19           at -- that being the Boston City Gate Natural  
20           Gas Price?

21      A.     (Mr. Large) If one were selecting EVA  
22           forecasts as the basis for judging rightness,  
23           or the right number, of those that are  
24           presented here, the Boston City Gate would be

1           the right choice.

2       Q.     That's a fair characterization? Of the EVA  
3           forecasts, the one most applicable to natural  
4           gas in Bow is the Boston City Gate one? Did  
5           I say that right?

6       A.     (Mr. Large) In New England, yes. Right.

7       Q.     Okay. Over the weekend, your attorney  
8           provided more of these EVA charts. And in  
9           scanning through them, I noted some of them  
10          were listed "low case," some "high case,"  
11          some "base case." And I can't tell from Page  
12          601 which this is. Can you tell me which  
13          this is?

14      A.     (Mr. Large) Yes, I can. This is a base case  
15          forecast.

16      Q.     Okay. And is that true of all of the  
17          forecasts contained in the pages preceding  
18          601 from EVA?

19      A.     (Mr. Large) I believe that to be true,  
20          subject to check.

21      Q.     Okay.

22      A.     (Mr. Large) And for completeness, this is the  
23          February 2008 EVA forecast.

24      Q.     In one of the binders up there you will see

1           Mr. Long's deposition. I'm going to refer to  
2           a couple of documents in that, if you can  
3           find that.

4    A.   (Mr. Large) Okay. Is it okay if I work from  
5           my own version --

6    Q.   Sure.

7    A.   (Mr. Large) -- or is it referenced  
8           differently, so that --

9                   (Court Reporter interrupts.)

10   A.   (Mr. Large) I brought a copy of Mr. Long's  
11          deposition. I don't know if you'll be  
12          referring to things that might be noted  
13          specifically in that one that would make it  
14          easier for us to get to the information  
15          quickly.

16   Q.   I'm looking at a couple attachments to his  
17          deposition.

18   A.   (Mr. Large) We'll need it, then.

19   Q.   The first is No. 9.

20   A.   (Mr. Large) So, to ensure I have the right  
21          document, is that Exhibit 17?

22   Q.   Should be 27.

23                   CMSR. HONIGBERG: Let's go off  
24          the record.

1 (Discussion off the record)

2 CMSR. HONIGBERG: All right.

3 Let's go back on the record.

4 BY MR. SHEEHAN:

5 Q. So I asked you to look at Attachment 9, which  
6 is the report Public Service provided to the  
7 Commission in the fall of 2008. Do you  
8 recognize that document?

9 A. (Mr. Large) I do, yes.

10 Q. And if you could turn to Page 14.

11 MR. SHEEHAN: Bates 494, for  
12 those following at home.

13 A. (Mr. Large) I have Page 14.

14 Q. And in the middle of the page there are a  
15 series of assumptions that the Company says  
16 it made in doing its analysis of the Scrubber  
17 Project, which includes what we can all see  
18 in front of us. What is not in that list is  
19 any assumptions on the price of natural gas.  
20 Would you agree with that?

21 A. (Mr. Large) That is correct.

22 Q. Can you tell me why there is no assumption  
23 for natural gas prices in this report?

24 A. (Mr. Large) Certainly. Because the analysis

1           that's being referred to here is a revenue  
2           requirement analysis associated with the  
3           operation of Merrimack Station, and Merrimack  
4           Station does not utilize natural gas.

5   Q.    Okay. Fair enough. And Paragraph D  
6           underneath the chart?

7   A.    (Mr. Large) Yes.

8   Q.    It says that sensitivity analyses were  
9           conducted to test some of the variables on  
10          the overall bus bar cost. Is the bus bar  
11          cost -- tell me what the definition of "bus  
12          bar cost" is?

13   A.    (Mr. Large) "Bus bar cost" is the total  
14          annual or monthly cost of operation of the  
15          unit divided by the kilowatt hours that it  
16          produced.

17   Q.    And so the last sentence of Paragraph D that  
18          says, "These sensitivity analyses indicated  
19          the economics of the Project..." -- and I'm  
20          underlining "economics of the Project" --  
21          those aren't the economics of the Project to  
22          build it; those are the economics of running  
23          the Scrubber. Is that fair, or do I have  
24          that wrong?

1 (Witness reviews document.)

2 A. (Mr. Large) I think the choice of the word  
3 "project" is to be inclusive of operating  
4 Merrimack Station with the Scrubber in  
5 service.

6 Q. Okay. Because it's clear the focus of my  
7 question is, that in other places the price  
8 of natural gas is important when you're  
9 looking at the overall cost of the Scrubber.  
10 Here, it's not mentioned. And I think the  
11 distinction you're drawing is this is simply  
12 looking at a different cost running the  
13 Project rather than building the Scrubber.  
14 Did I say that accurately?

15 A. (Mr. Large) Where I would differ is that the  
16 cost of comparisons between operating  
17 Merrimack Station and alternatives like a  
18 natural gas-fired power plant operating,  
19 replacing the output for Merrimack Station;  
20 or in our analysis, the assumption associated  
21 with market purchases would be contingent  
22 upon natural gas pricing. But the operation  
23 of Merrimack Station in and of itself is not.

24 Q. Wouldn't the bus bar cost include the --

1 well, never mind.

2 So, did you do that comparison that  
3 would involve a natural gas analysis?

4 A. (Mr. Large) Yes.

5 Q. And in what context did you do that?

6 A. (Mr. Large) Subsequent analyses that are  
7 presented in this report.

8 Q. Okay. And what did you assume for natural  
9 gas prices there? Or did you?

10 A. (Mr. Large) We did. The assumption that we  
11 utilized was that natural gas would be at \$11  
12 per million Btus beginning in the year 2012  
13 and then escalated at a rate of 2.5 percent  
14 going forward.

15 Q. And as I understand it, that's the price in  
16 the forecast that PSNH used throughout the  
17 Scrubber Project?

18 A. (Mr. Large) We utilized the \$11 per million  
19 Btus in 2012, with 2-1/2 percent inflation  
20 consistently through all our analyses, yes.

21 Q. Next topic, sulfur dioxide.

22 A. (Mr. Large) Are we finished with --

23 Q. Yes. Part of the information provided in the  
24 original passage of the Scrubber was related

1           to sulfur dioxide credits. Are you aware of  
2           that?

3     A.     (Mr. Large) Yes, I am.

4     Q.     And PSNH and others made certain statements  
5           about how much money could be generated from  
6           the sale of those credits in the context of  
7           pricing the Project; correct?

8     A.     (Mr. Large) Yes. And that, with the  
9           installation of scrubber technology,  
10          Merrimack Station's emissions of sulfur  
11          dioxides would be dramatically reduced;  
12          therefore, there would be savings, either not  
13          having to purchase allowances or the ability  
14          to sell allowances that we had in our  
15          possession.

16    Q.     And the projections -- well, what assumptions  
17           was PSNH making at the time the Scrubber Law  
18           was passed in '06 about the price of those  
19           SO2 credits? And proximations are fine.

20    A.     (Mr. Large) At the time the Scrubber  
21           collaborative was working to come up with the  
22           proposal, it's my recollection that we  
23           offered cases of a little over \$1,000 and  
24           then plus \$500 or minus \$500. But I could



1           validate that if you wanted to give me a  
2           moment to look.

3       Q.     That's fine for at least my purposes.

4                     And this is in the '06 time frame?

5       A.     (Mr. Large) '05, '06. Pardon me.

6       Q.     Did PSNH continue to monitor the SO2 prices  
7           as we went into what's more relevant in this  
8           docket, the '07, '08, '09 period?

9       A.     (Mr. Large) Yes, we did.

10      Q.     And what did you see happen to the SO2 prices  
11           from the passage of the bill in '06 until,  
12           say, the first of '08? And again,  
13           approximations are fine.

14      A.     (Mr. Large) I hope it will be okay if I give  
15           directional.

16      Q.     Sure.

17      A.     (Mr. Large) From the time that we produced  
18           charts that showed what economic benefit  
19           could be realized from the sale of SO2  
20           allowances to offset the cost of the  
21           Scrubber, SO2 allowances actually increased  
22           in cost for a period of time, and then they  
23           subsequently fell. By the time we were  
24           conducting the analysis, the SO2 allowance

1 prices were in the several-hundred-dollar  
2 range, and I believe we used \$500 as the  
3 starting point in our analysis.

4 Q. And that is spring of 2008, roughly?

5 A. (Mr. Large) Spring/summer 2008.

6 Q. Because those were the analyses you were  
7 presenting to Staff and others, your  
8 committees, which I think were June and July  
9 of 2008?

10 A. (Mr. Large) That is correct.

11 Q. And at that time, you say you recall your  
12 assumption being around \$500?

13 A. (Mr. Vancho) That's right. About \$500.

14 Q. And I think that actually appears in some of  
15 the PowerPoints we've all seen.

16 A. (Mr. Vancho) That's right.

17 Q. Do you know what happened -- did you monitor  
18 the SO2 price from the summer of '08 forward?

19 A. (Mr. Large) We "continually" -- maybe too  
20 strong a word -- but "regularly" monitored  
21 SO2 prices as part of our compliance  
22 obligations. We need to know that we have  
23 enough on hand and what it is we need to pay  
24 in order to obtain them if needed.

1 Q. And what's happened to the price since the  
2 summer of 2008?

3 A. (Mr. Large) It's dropped even substantially  
4 further to very small dollars.

5 Q. Meaning what?

6 A. (Mr. Large) Less than 10.

7 Q. How long has it been, let's say, under \$100,  
8 roughly?

9 A. (Mr. Large) Roughly two or three years.  
10 Might be longer than that.

11 Q. You said your assumptions, roughly in the  
12 summer of 2008, that your assumption was  
13 \$500. Do you know when the price went under  
14 \$500?

15 A. (Mr. Large) Not as I sit here right now, but  
16 I could research that.

17 Q. Okay. There's a reference in the statute to  
18 "economic incentives" that are available to  
19 the Company. Are those incentives largely  
20 the SO2 credits, to your understanding?

21 A. (Mr. Large) At the time of the passage of the  
22 bill, that would have been the largest dollar  
23 volume incentive, yes.

24 Q. And is it fair to say, if the SO2 price, when

1           it falls as it has to under \$100, those  
2           incentives have largely evaporated as well?

3    A.    (Mr. Large) That is true.

4    Q.    Has PSNH obtained any incentives under the  
5           statute?

6    A.    (Mr. Large) Yes.

7    Q.    On the order of magnitude of what?   And I  
8           understand I'm getting -- hitting you with  
9           this from left field.   So your  
10          approximations, or at least an idea --

11   A.    (Mr. Large) As a result of all the  
12          incentives, quote, unquote, if you will, with  
13          regard to bonus CO2 allowances, SO2  
14          allowances, you know, there are tens of  
15          millions of bonus CO2 allowances that have  
16          been attributable to the Company.   So --

17   Q.    Any SO2?

18   A.    (Mr. Large) Yes.

19   Q.    Okay.   And how has that -- or has that  
20          affected, if you will, the customer -- the  
21          ratepayer's cost of the Scrubber?   Is it --

22   A.    (Mr. Large) Well, it's reduced it, but  
23          miniscule amounts.

24   Q.    Can you translate that into, you know,

1 kilowatt-hour savings or dollar savings?

2 A. (Mr. Large) It would be in a decimal place  
3 far to the right of something that would  
4 appear in a bus bar cost number. I hope that  
5 math language makes sense to...

6 Q. I'm looking at an article that has not been  
7 introduced yet, and it says that the SO<sub>2</sub>  
8 price was about \$55 in March of '09. Is that  
9 consistent with your recollection of how far  
10 the price had gone by then?

11 A. (Mr. Large) I could research that. I don't  
12 have that recollection.

13 MR. SHEEHAN: Okay. When we  
14 close for the day, I will introduce a  
15 document that shows the chart, and we can  
16 pick up with that to close this loop on the  
17 prices and what's happened to them.

18 I'd like to turn to, unless  
19 you want to stop, a new topic. I've got 20  
20 minutes or so. So I'm not sure if we can  
21 finish today.

22 CMSR. HONIGBERG: Yeah, why  
23 don't we break now and you can pick it up  
24 tomorrow morning.

1 MR. SHEEHAN: Okay.

2 CMSR. HONIGBERG: So we'll  
3 close the hearing and pick up again tomorrow  
4 morning at 9:00. I know you'll all probably  
5 be here earlier than that. So, we're done.

6

7 (Whereupon the hearing was adjourned at  
8 4:36 p.m. and will resume on Wednesday,  
9 October 22, 2014, at 9:00 a.m.)

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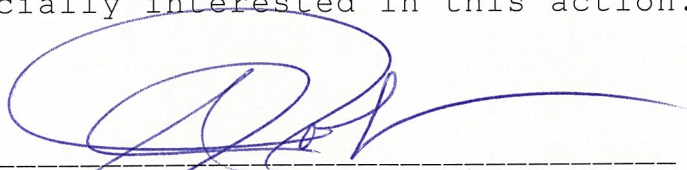
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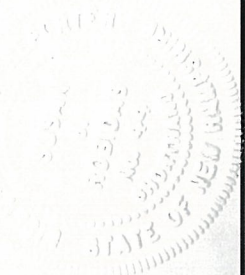
[WITNESS PANEL: LARGE|VANCHO]

**C E R T I F I C A T E**

I, Susan J. Robidas, a Licensed  
Shorthand Court Reporter and Notary Public  
of the State of New Hampshire, do hereby  
certify that the foregoing is a true and  
accurate transcript of my stenographic  
notes of these proceedings taken at the  
place and on the date hereinbefore set  
forth, to the best of my skill and ability  
under the conditions present at the time.

I further certify that I am neither  
attorney or counsel for, nor related to or  
employed by any of the parties to the  
action; and further, that I am not a  
relative or employee of any attorney or  
counsel employed in this case, nor am I  
financially interested in this action.

  
-----  
Susan J. Robidas, LCR/RPR  
Licensed Shorthand Court Reporter  
Registered Professional Reporter  
N.H. LCR No. 44 (RSA 310-A:173)



**DAY 5 - AFTERNOON SESSION ONLY - October 21, 2014**  
**DE 11-250 PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE INVESTIGATION OF SCRUBBER COSTS**

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**DAY 5 - AFTERNOON SESSION ONLY - October 21, 2014**  
**DE 11-250 PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE INVESTIGATION OF SCRUBBER COSTS**

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