



ORIGINAL

NHPUC NOV04'14 PM 2:14

STATE OF NEW HAMPSHIRE

PUBLIC UTILITIES COMMISSION

October 14, 2014 - 1:55 p.m.
Concord, New Hampshire

DAY 1
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 Division
Leszek Stachow, Asst. Dir. Electric Div.

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

I N D E X

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

WITNESS: WILLIAM H. SMAGULA (resumed)

PAGE

Cross-Examination by Mr. Fabish	8
Interrogatories by Sp. Cmsr. Iacopino	16
Interrogatories by Cmsr. Honigberg	34
Redirect Examination by Mr. Bersak	44

WITNESS: THOMAS C. FRANTZ

Direct Examination by Mr. Sheehan	59
Cross-Examination by Mr. Bersak	63
Cross-Examination by Ms. Chamberlin	87
Cross-Examination by Mr. Patch	94

1	EXHIBITS	PAGE
2		
3	38 Article from Concord Monitor,	13
4	"Assessed value of Bow power	
5	plant drops nearly \$50 million;	
6	tax rates to spike" (11-12-13)	
7		
8	39 Staff Responses to TransCanada	82
9	Data Requests TC 1-5 thru	
10	TC1-12 and TC-27, TC1-37	
11		
12	40 Staff Responses TransCanada	95
13	Data Requests TC 1-1 thru	
14	TC 1-39	
15		
16	41 8/22/08 Letter from Staff	101
17	with request for information	
18		
19	42 PSNH Clean Air Project Capital	109
20	Project Review and Approval	
21		
22	43 Staff Response to TransCanada	109
23	Data Request 6-201	
24		

1 AFTERNOON SESSION
2 (Resumed at 1:00 p.m.)

3 CMSR. HONIGBERG: Ms.

4 Goldwasser, I have a question. Do you have
5 any other documents like the last document
6 we were talking about that you would go over
7 with other witnesses? I'm talking about
8 things you think that the Company should
9 have produced that it didn't produce.

10 MS. GOLDWASSER: I'm thinking
11 hard about your answer [sic], sir, just so
12 that I make sure that I answer correctly.

13 I have a 2010 document that is
14 similar to the one that we just discussed that I
15 didn't use because the one that we discussed was
16 much more relevant to the facts of this case. I
17 wasn't planning on asking any witnesses about
18 that 2010 document. But it would have been
19 responsive to the discovery requests.

20 CMSR. HONIGBERG: Okay.

21 MS. GOLDWASSER: I can't think
22 of anything. I mean, this resulted from
23 literal Google searches.

24 CMSR. HONIGBERG: Okay. I

1 would ask counsel over here, what process
2 did you all go through to respond to the
3 requests regarding reports?

4 MR. BERSAK: When data
5 requests are made of the Company, there is a
6 rigorous team approach to making sure that
7 we provide, you know, responsive and
8 complete answers. With respect to this kind
9 of data request, where there was a need to
10 go to other operating companies, a number of
11 us, including myself, made calls of the
12 usual suspects over there as to who would
13 have this data. Now, is there data
14 available? I can represent that I
15 personally made phone calls to folks at
16 Yankee Gas to find out what they would have
17 had during the relevant time periods. I
18 know that Mr. Smagula made those efforts, as
19 well as others on the team that were
20 responding to data requests. Is it
21 possible, or is it even likely, given what
22 we saw, that perhaps Yankee Gas subscribed
23 to EVA back in 2008? It appears that they
24 did. Now, does that mean we didn't make the

1 attempt to find it? No. We've had, since
2 the merger with NSTAR, significant turnovers
3 in personnel and who's responsible for what.
4 You know, practically my entire Scrubber
5 team that started this case is now working
6 at Liberty. I was going to subcontract this
7 case out to them, you know. But trying to
8 find information --

9 CMSR. HONIGBERG: I think
10 Staff has that problem, too.

11 MR. BERSAK: Yeah. So, you
12 know, did we make a good-faith effort to
13 find the information? Yes, we did. Did we
14 miss something? Perhaps. Did we refuse to
15 comply? No, we did not.

16 (Commissioners conferring.)

17 CMSR. HONIGBERG: We're going
18 to wait until we're done with Mr. Smagula, I
19 think, before ruling on Ms. Goldwasser's
20 motion. We're going to hear from the rest
21 of the questioning and have our questions
22 answered and redirect.

23 So, who was next? Okay. Mr.
24 Fabish.

1 CROSS-EXAMINATION

2 BY MR. FABISH:

3 Q. Good afternoon, Mr. Smagula.

4 A. Good afternoon.

5 Q. So I just have a couple of questions about
6 your rebuttal testimony, which, if I
7 remember correctly, was marked as Exhibit 12
8 in this proceeding; right?

9 MR. BERSAK: No, that's not
10 correct.

11 MR. FABISH: That's not
12 correct?

13 MR. BERSAK: The rebuttal
14 testimony, so we're all on the same page...

15 CMSR. HONIGBERG: No, it is
16 12, I think.

17 MS. GOLDWASSER: It is 12.

18 MR. BERSAK: Oh, is it 12?
19 You're right. I'm sorry. I take that back.
20 You're correct.

21 BY MR. FABISH:

22 Q. Well, I apologize for the confusion.
23 Exhibit 12, the rebuttal testimony, if you
24 could turn to Page 33. And I'm looking at

1 Line 1 on Page 33. There you make the
2 statement, "Carbon regulation will increase
3 everyone's costs, not just those at
4 Merrimack Station." Is that correct?

5 A. Yes, that's the first part of the sentence.

6 Q. Uh-huh. Okay. And could you explain what
7 you mean by "everyone" in that statement.

8 A. Generating facilities that burn a
9 carbon-based fuel -- gas, oil, coal -- will
10 all have a incremental compliance cost due
11 to emerging federal regulation.

12 Q. Okay. So when you say "everyone," that is
13 excluding -- that's excluding things like
14 nuclear generation, hydro generation, wind
15 generation, solar generation, things that
16 don't burn carbon-based fuels; is that
17 right?

18 A. Those facilities may not have that if they
19 don't have a carbon-based fuel for their
20 primary purposes of generating electricity.
21 So you're right.

22 Q. Is it your understanding that all
23 carbon-based fuels when combusted emit the
24 same amount of CO2 per unit energy?

1 A. No. Different facilities will burn
2 different amounts, depending on a number of
3 factors: Their design or their capacity
4 factor.

5 Q. That wasn't quite my question, so let me
6 rephrase. I apologize again for the
7 confusion.

8 All else being equal -- boiler
9 efficiency, dispatch, et cetera -- do all
10 types of carbon-based fuel emit the same
11 amount of carbon dioxide when combusted for
12 unit energy?

13 A. The gas-fired generating facilities
14 generally have a lower emitting rate than
15 their counterparts to burn a solid fuel or
16 liquid fuel.

17 Q. So if I said that -- scratch that.

18 When you refer to a "solid fuel," are
19 you referring to coal?

20 A. Coal or a liquid such as oil. I said solid
21 or liquid.

22 Q. Sure. How much more CO2 per unit energy
23 does coal emit than, say, gas?

24 A. It depends on the efficiency of the

1 facility. It could be anywhere from 40 to
2 50 percent or -- well, let's see. Let's say
3 a coal plant could burn... let me put it a
4 different way. A gas-fired plant would burn
5 50 to 60 percent the amount, depending on
6 the coal plant design. With some of the
7 newer coal plants, efficiencies are getting
8 such that, that difference is becoming
9 smaller.

10 Q. Is Merrimack Station one of those new coal
11 plants?

12 A. No.

13 Q. And Merrimack Station burns coal; correct?

14 A. Yes. Yeah.

15 Q. All right. Switching gears a little bit.
16 Could I ask you to take a look at Page 24 of
17 your rebuttal testimony. I've got a couple
18 questions for you that refer to the
19 materials starting at the bullet point at
20 Line 15.

21 A. Page 24. I believe that was part of the
22 text that's been stricken.

23 Q. Has it been? I thought that the stricken
24 part ended at Line 5. But I could be

1 mistaken, and so I apologize.

2 CMSR. HONIGBERG: Mr. Sheehan.

3 MR. SHEEHAN: The copy we
4 have, the strike ends at Line 5 as well.

5 CMSR. HONIGBERG: So that part
6 has not been struck.

7 MR. SHEEHAN: Correct.

8 CMSR. HONIGBERG: All right.

9 BY MR. FABISH:

10 Q. Are you offering to strike it now?

11 A. No.

12 CMSR. HONIGBERG: Lawyer's
13 humor for you.

14 BY MR. FABISH:

15 Q. Okay. Well, then, referring to that
16 section, could you tell us now what the
17 current assessment of the Merrimack Station
18 is for tax purposes by the Town of Bow?

19 A. Boy, you know, I don't think I recall the
20 specific valuation amount for the Town of
21 Bow, off the top of my head.

22 Q. Without speculating, could you offer a
23 general number?

24 A. No, I would prefer not to.

1 Q. Okay.

2 A. I don't have any idea.

3 MR. FABISH: So I have
4 something I'd like to offer as an exhibit if
5 I could. I guess this would be 38.

6 (The document, as described, was herewith
7 marked as Exhibit 38 for identification.)

8 CMSR. HONIGBERG: Okay. Let's
9 go off the record for a second.

10 (Discussion off the record.)

11 CMSR. HONIGBERG: All right.

12 Let's go back on.

13 BY MR. FABISH:

14 Q. So, Mr. Smagula, I know you didn't write
15 this document, but I thought maybe it would
16 help refresh your memory.

17 A. Yes, it's very helpful. Thank you.

18 Q. All right. If you can look at the second
19 page of the docket -- or document. If you
20 look, there's a little advertisement in this
21 newspaper article or periodical article for
22 Smile Masters. If you look to the left of
23 that, the lowest paragraph immediately to
24 the left of that, starting in 2012, the

1 plant was assessed at 143.5 million in 2012.

2 Does that number sound right to you?

3 A. Yes, and I'm very glad I didn't take a guess
4 at what the price was -- the estimate was.
5 I would have had a lot lower number.

6 Q. Okay. And then this year, given that the
7 date of this is November 12th, 2013, it says
8 the assessed value has been 93.5 million.
9 Is that also accurate, to your knowledge?

10 A. That's what the article says.

11 Q. Yeah, but does that sound right to you?

12 A. Yes.

13 Q. All right. And is PSNH challenging the
14 value assessment of the value of the
15 property for tax purposes by Bow?

16 A. Well, PSNH is always -- whenever a tax
17 assessment comes up for renewal, we always
18 participate with the town and the town's
19 agent to come up with what's the relevant
20 and proper amount. I'm not familiar with us
21 involved in challenging it at the moment.
22 But that doesn't mean it's not occurring. I
23 don't currently get involved in those
24 activities.

1 Q. Okay. So you wouldn't have any knowledge
2 about that at all.

3 A. Not at present. I believe there may be some
4 discussions going on with one or more of our
5 plants. There often is some discussions
6 going on with towns with one or more of our
7 plants. I believe there is some discussions
8 with the Town of Bow, but that's the extent
9 of my knowledge.

10 Q. Okay. Is there another witness that would
11 have knowledge about that, that you think I
12 should direct these questions to you?

13 A. Not here.

14 Q. Okay. Thank you.

15 MR. FABISH: I think those are
16 all the questions that I have. Thank you.

17 CMSR. HONIGBERG: Ms.
18 Frignoca.

19 MS. FRIGNOCA: Having
20 conferred with Zach over the lunch break,
21 and cognizant of our instructions to work
22 together, I have no questions.

23 CMSR. HONIGBERG: Delightful.
24 Mr. Iacopino.

1 SP. CMSR. IACOPINO: Thank
2 you.

3 INTERROGATORIES BY SP. CMSR. IACOPINO:

4 Q. Mr. Smagula, I would like to talk with you
5 about the secondary wastewater treatment
6 system. I believe that you indicated on
7 cross-examination that the decision was made
8 to construct the secondary system, and you
9 gave us a date, which I believe you said was
10 November of 2010; is that correct?

11 A. Yes.

12 Q. And if I understand your testimony, you've
13 had sort of a lengthy history of issues with
14 the EPA with the existing NPDES certificate;
15 is that correct?

16 A. Yes. The existing permit that we are
17 currently operating under was last issued in
18 1997. And after five years of operation,
19 you are to apply and get a new permit. And
20 we did do that on a timely basis; however,
21 the EPA had not responded and issued a new
22 permit or a new draft permit until 2011.
23 So, in order for us to have an incremental
24 or added discharge, we would normally go to

1 the EPA and say we're going to have this
2 intermittent discharge, and they would
3 modify the permit, or give you a separate
4 special permit. They would work with the
5 facility to accommodate their operational
6 needs.

7 Q. And prior to knowing you're going to have an
8 incremental discharge, which I understand
9 you say is small, in any event, did you have
10 any other reason to be seeking a change in
11 your permits at that facility?

12 A. No.

13 Q. Okay. When did you learn you were going to
14 have this increase in the incremental
15 discharge?

16 A. As soon as the Project began. And we
17 pursued and got all of the necessary permits
18 to do the construction, and then we focused
19 on operational permits. And as I indicated
20 previously, we spent over a year, I'd say
21 close to a year and a half, working with the
22 state DES on, once we understood the
23 guarantees provided to us from the primary
24 wastewater treatment facility, the volumes,

1 the constituencies and the make-up, and the
2 guarantees they were going to provide us, we
3 then had the data to go to the DES and start
4 talking with them about our discharge
5 permit. And we spent over a year going back
6 and forth over excruciating detail to
7 eventually come to an agreement and
8 conclusion that the treated effluent from
9 the primary system would be satisfactory to
10 meet the standards for water quality that
11 the state supported. During that time, the
12 state had discussions with EPA. So there
13 was awareness of our intent and our efforts
14 and our focus. But upon going to them
15 formally, that's when things changed, and a
16 new opinion was provided to us from EPA as
17 to how this would proceed in their view.

18 Q. If I understand correctly, this particular
19 issue was managed by Public Service itself,
20 correct, not by your EPC contractor?

21 A. No, the EPC contractor provided technical
22 assistance to us with some experts. But we
23 have always, as a company, pursued our
24 relationships with state and federal

1 agencies directly.

2 Q. And when I was reading your prefiled
3 testimony from June 15th, 2012, and the
4 attachments to it, there's the Beck Reports
5 that were filed every month. Are you
6 familiar with those?

7 A. Yes. Yes.

8 Q. I'm just curious, because I noted that
9 starting in January 2010, there was
10 references to the wastewater treatment --
11 secondary wastewater treatment facility.
12 And there were notes, such as "preparation
13 was begun on a request for proposals for
14 providing additional FGD WWT systems to
15 limit the discharge of small quantities and
16 various elements in the Project wastewater
17 effluent."

18 A. Yes.

19 Q. So, is that what you're talking about when
20 you were dealing with DES?

21 A. With the DES, they required us to put on
22 additional filtration equipment on the
23 primary wastewater treatment system to get
24 certain elements to a level that they felt

1 was acceptable. But we were concerned about
2 the ultimate approval of the EPA. And as a
3 result, even though our primary discharge
4 philosophy and direction was to have that
5 primary wastewater treatment facility
6 effluent discharge, we were concerned, and
7 we started exploring what would happen if
8 that was not easily achieved.

9 And I think I'll just say that that was
10 the philosophy upon which we managed the
11 entire project. We always had a course of
12 direction, and I think it was with proper
13 conviction and proper basis. However, we
14 anticipated what risks there were and what
15 potential problems could occur, and we were
16 always exploring those, because if we wanted
17 to make an adjustment and have to have a
18 change, then we were further down that path.

19 Q. All right. So you then eventually hired
20 Siemens again, or SESS, and they basically
21 became responsible for the construction of
22 the secondary?

23 A. No, we worked with Siemens to provide
24 additional filtration on the primary

1 wastewater treatment system. However, when
2 it became clear that that effluent was not
3 going to be allowed to be discharged and we
4 were going to have to install and make --
5 build an additional building and put in
6 additional, different equipment to further
7 treat the water, we went with a company that
8 had experience with that technology, and
9 that was Burns & McDonnell. So we went with
10 a different company for our engineering and
11 design and construction.

12 Q. And if I understand correctly, you dealt
13 with the issue of not being able to
14 discharge for some period of time by just
15 basically hauling the wastewater to
16 publicly-owned wastewater treatment plants;
17 is that correct?

18 A. That's correct.

19 Q. And do you know yourself, or do you know if
20 there is a document that would inform us as
21 to what the cost of doing that are -- were
22 at the time and what they might be at
23 present?

24 A. There is a document that has some of those

1 costs. I don't have it with me. We kept a
2 log of how many vehicles were used and the
3 fees associated with where they went.
4 They'd go to different locations.

5 The concern with continuing down that
6 path was that we had numerous discussions
7 with the Town of Bow regarding truck
8 traffic. They were concerned about truck
9 traffic. And if you look at our
10 information, as far as the quantity of
11 trucks needed to haul water from the primary
12 wastewater treatment system, the secondary
13 would be significantly less. Greatly -- a
14 great amount less. It was approaching 500
15 to 600 trucks a day. That's, you know, 20
16 trucks -- 500 to 600 per month. Excuse me.
17 Per month. That's maybe 20 trucks a day.
18 So you're going to really have to be loading
19 trucks almost continuously, 24 hours. POTWs
20 are not open 24 hours. So there are
21 logistic challenges. There are town
22 trucking traffic issues. There's costs.
23 There's a lack of control over the ability
24 to continue to bring in this liquid to these

1 facilities. There are a number of risks and
2 costs and concerns that entered into our --
3 and among other things, that entered into
4 our overall assessment.

5 Q. Was any economic analysis done comparing
6 running the plant on hauling the wastewater
7 away as compared to spending the additional
8 capital on building a secondary wastewater
9 treatment system?

10 A. I wouldn't say that there was a rigorous
11 analysis made. However, if you look at the
12 risks associated with continuing to haul
13 trucks, one truck an hour, almost 24 hours a
14 day, every day, I think that's not a
15 reasonable expectation that is sustainable,
16 especially with the Town of Bow concerned
17 about traffic and about the other facilities
18 being opened just to receive our effluent.
19 And it allowed too many variables to be out
20 of the control of the Company; whereas, with
21 the secondary system, we could have a much
22 significantly less amount. We could manage
23 the effluent, and we could do it -- but
24 also, if we couldn't do that, and we had

1 problems with risks with the primary system,
2 the Project -- the facility -- the Scrubber
3 facility may not be able to operate if we
4 have nowhere to put these large volumes, and
5 it would shut the plant down.

6 Q. Let me go back to that point in a minute.

7 But let me just talk about --

8 (Court Reporter interrupts.)

9 Q. I want to put the plant shutting down aside
10 for a moment. But when you -- would you
11 say, then, that the primary reason why the
12 choice was made to construct the secondary
13 wastewater treatment system was because of
14 the concern that you had about truck
15 traffic?

16 A. That was a primary concern in the short
17 term. But we saw too many other risks that
18 would perhaps ultimately stop the trucking
19 totally if POTWs would change their mind or
20 for some reason have a difference of opinion
21 as to receiving the liquid. We would lose
22 control of our ability to bring it
23 somewhere. So we had to reduce the volume
24 to better manage it.

1 Q. Talk about the truck traffic for a minute
2 again, though. Did you sit down and have
3 any types of meetings with Bow or --

4 A. Yes.

5 Q. -- Franklin or wherever you were taking the
6 materials to, to those towns, to discuss the
7 amount of truck traffic?

8 A. We met with all of the POTWs involved that
9 we dealt with, and we met with the Town of
10 Bow on numerous occasions on trucking -- for
11 a number of topics. We have trucks for
12 gypsum. We have -- and that was one of the
13 reasons we put in the truck wash, in order
14 to minimize truck traffic. We had
15 construction trucks. We had -- I'm trying
16 to think of what other volume of material we
17 had. Anytime we had to change our truck
18 patterns bringing coal to the facility from
19 Schiller, from South America, the town paid
20 extra attention and was very concerned about
21 incremental truck traffic on not only River
22 Road and Johnson Road, but on Route 3A. So,
23 truck traffic was a high sensitivity issue
24 with the town on any issue.

1 Q. And how does the truck traffic with respect
2 to the hauling of the wastewater compare to
3 the other truck traffic that you see at the
4 facility both before and after the
5 construction of the facility? I'm not so
6 much concerned about construction trucks.

7 A. Right, right. I would say the truck traffic
8 would be significantly increased due to this
9 primary water trucking.

10 Q. You said the price for -- well, the
11 additional costs for the secondary
12 wastewater treatment system was about
13 \$32 million.

14 A. About \$35 million.

15 Q. Thirty-five?

16 A. Yup.

17 Q. And there's been some discussion here this
18 morning about the change in the price
19 estimate. Did that change in the wastewater
20 treatment system have anything to do with
21 the increase from \$250 million to the \$457
22 million estimated project cost?

23 A. No, because the need to pursue a secondary
24 wastewater treatment system was not

1 determined until approximately 2011, which
2 was three years beyond the new estimate of
3 457.

4 Q. Another question I have is, I understand
5 that as part of the process of the FGD
6 process you actually create a byproduct
7 known as gypsum; correct?

8 A. Synthetic gypsum, yes.

9 Q. And you sell that product; correct?

10 A. We do.

11 Q. And I guess it's considered to be synthetic
12 gypsum?

13 A. Right. That's correct.

14 Q. And it's sold to wallboard companies and
15 places like that?

16 A. We have a contract with Georgia-Pacific in
17 Newington, New Hampshire.

18 Q. At the time that you put -- well, after
19 putting the Scrubber into service and before
20 filing here -- and before filing for your
21 temporary rates, do you know how much gypsum
22 you had manufactured or how much byproduct
23 you had produced?

24 A. I'm sorry. I don't have that number in

1 hand. We have a large building that it's
2 stored in, and trucks are moving that. But
3 when our units are running, the trucks are
4 running that with high frequency.

5 Q. And what is the price that you generally get
6 for gypsum? Do you know? Is it usually
7 sold by the ton?

8 A. It's sold by the ton. I think it's on the
9 order of \$6 or \$7 per ton, and then there's
10 a trucking cost associated with it.

11 The key reason, however, for removal of
12 the gypsum is because, if it was not
13 developed as a wallboard-grade gypsum --
14 which it is and meets all the federal
15 standards -- if it were not for that, we
16 would have a large amount of off-spec gypsum
17 with no receiver, and we would be spending
18 20 times the cost per ton to dispose of it.
19 So it's -- we're not necessarily trying to
20 make money. We're trying to avoid a huge
21 expense.

22 Q. How do you account for the money earned from
23 selling the gypsum?

24 A. That's all a credit to customers.

1 Q. Is it?

2 A. Yes.

3 Q. Okay. Do you --

4 A. There's a trucking cost and there's a cost
5 to bring it there. So, any of the net
6 positive or negative proceeds of that is
7 part of our operating budget, our expense
8 budget.

9 Q. So it would be an operating item?

10 A. Yes. But as I indicated earlier, because
11 it's a cost -- or a credit associated with
12 the Scrubber, it's in a deferred account,
13 and we're not collecting that from
14 customers. It's part of the deferral.

15 Q. Until this proceeding is resolved.

16 A. Yes.

17 Q. So that the ratepayers will get whatever
18 credit there may be from the sale of the
19 gypsum from the facility.

20 A. Yes.

21 Q. Is the secondary wastewater treatment
22 facility, is that operational now?

23 A. It's fully functional, yes. We continue
24 to -- because this technology is extremely

1 new to the United States -- there's probably
2 only a half a dozen facilities, perhaps
3 eight in the world that have used this; it's
4 a technology that's been used in other
5 industries, but adapted to Scrubber
6 effluent. There's only a handful. And we
7 have gone through a number of
8 troubleshooting and tuning. So it is
9 functioning well now. We think it will
10 continue to function better going forward.
11 But we did have a lot of not unusual
12 activities associated with scaling and
13 things like that until we balanced the
14 chemistry. So it's a very complex chemistry
15 equation we're solving from the Scrubber to
16 the primary wastewater, to the secondary,
17 and it's very challenging.

18 Q. Can you tell me, then, why it is you still
19 want to discharge effluent, why you're still
20 looking for the NPDES permit if it's working
21 well?

22 A. Because we think the facts and the data
23 support that ability. And we also -- if
24 that is not able to be achieved, and there

1 is an upset or a malfunction or something
2 goes wrong with the secondary system, we
3 need to be able -- we would like to have the
4 flexibility from an operations' viewpoint to
5 take an effluent that is deemed acceptable
6 to the state to be able to be discharged at
7 least for periods of time.

8 Q. So what's the first plan of action, though?
9 Is it -- let's assume you get your NPDES,
10 which I know is an assumption. Is the first
11 plan of action to use the secondary
12 wastewater treatment system and simply take
13 the solids that wind up off site, or is it
14 to discharge in the first instance and only
15 use the secondary wastewater treatment
16 system as a backup?

17 A. Well, the secondary system does still have
18 effluent. It still has a small amount of
19 liquid that comes out of it. That's not --
20 we recycle it as best we can, but there is
21 always some residual material. And I think
22 our intentions are to await the NPDES permit
23 and then see what allows us -- what allows
24 the flexibility. I think the costs for that

1 secondary system, as far as our savings and
2 other expenses, we have far more than offset
3 that customer cost for the secondary system.
4 But ultimately, depending on the final
5 permit, will determine what's the best
6 course of action for customers.

7 Q. But it sounds to me like one of those could
8 be that the secondary water system will not
9 be used very much.

10 A. I don't know what the likelihood of that
11 will be from --

12 Q. But that's what could happen; is that
13 correct?

14 A. That is a potential possibility. But a
15 final NPDES permit is not expected for quite
16 a while. As I indicated earlier, it's
17 recently been reopened, which is a little
18 unusual, and it may even be reopened again.
19 Ultimately, a final permit will be issued.
20 And I suspect, based on our experience, no
21 matter what is issued in that final permit,
22 it will be appealed. And there's two levels
23 of appeals processes. So this secondary
24 system is going to be in full use for many,

1 many years to come.

2 Q. Assuming all your predictions about appeals
3 come true again.

4 A. Yes, and I believe that's one of the
5 assumptions that I feel pretty good about.
6 Or bad about. I'm not sure which.

7 [Laughter]

8 Q. And I have one other question. This is just
9 to satisfy my curiosity. In your rebuttal
10 testimony, you made the claim that there are
11 135 New Hampshire Supreme Court decisions
12 that deal with the term "statutory mandate."
13 And did you do that research yourself?

14 A. I didn't do it myself. But I think,
15 actually, the number is 137. But I did
16 review that document to validate it.

17 Q. Did you review all 137 New Hampshire Supreme
18 Court --

19 A. No, I had a summary of the cites. But it
20 was about eight pages long, highlighted. It
21 was highlighted to make it easy on me to
22 check the count.

23 SP. CMSR. IACOPINO: Mr.
24 Chairman, I have no other questions.

1 CMSR. HONIGBERG: I have a
2 few.

3 INTERROGATORIES BY CMSR. HONIGBERG:

4 Q. Looking at Mr. Long's deposition and Exhibit
5 7 to that deposition -- that is, the draft
6 cost estimate analysis for PowerAdvocate --

7 A. I have it, yes.

8 Q. -- there are the two tables and then graphs
9 that were generated from those tables.

10 A. Yes.

11 Q. The "levelized concept," which is the
12 triangle on the graphs, can you explain
13 "levelized" in this context?

14 A. Yes. "Levelized" means that, in simple
15 terms, when you're comparing
16 project-to-project, every project is a bit
17 different. It's site-specific. And I can
18 identify the six or eight specific items
19 associated with Merrimack Station that make
20 it unique from others. But in order to
21 compare scrubber to scrubber, you have to
22 have some basis of getting them on an equal
23 playing field. For example -- and I guess
24 I'll take a second here. It's worth the

1 effort to understand.

2 Merrimack Station has one scrubber for
3 two units. That's not uncommon. But it's
4 often one-on-one. We have two
5 different-size boilers. The boilers are
6 pressurized. They don't have induced draft
7 fans. The boilers are cyclone-fired, which
8 is also unusual. They have SCRs on both
9 units to reduce NOx emissions. The site was
10 very constrained with regard to where the
11 Scrubber could go, and we had to bring
12 ductwork around to the Scrubber while we
13 still had an operating railroad line
14 receiving coal underneath these elements.

15 So you have to take out the incremental
16 costs for the site -- and this was a mercury
17 Scrubber. All these other Scrubber are
18 generally for removal of sulfur. So this
19 absorber vessel, the big heart of the
20 Scrubber equipment, was wider in diameter,
21 was taller, and it had incremental design
22 features on its internal. So it was unique
23 for this site. Well, if you try to discount
24 all these site-specific elements to get it

1 to be vanilla or be an apple so you could
2 compare it to other apples, normalizing it
3 is making it so you could compare apples and
4 apples.

5 Q. In both charts from the exhibit to the Long
6 deposition, and also in the Attachment 3 to
7 your June 15th testimony, the table that's
8 associated with the chart has for Merrimack
9 Station's cost the 354, just under the
10 \$355 million number.

11 A. Right.

12 Q. You testified earlier that that number is a
13 partial -- you said a "partial cost."

14 A. Yeah.

15 Q. It doesn't include everything.

16 A. Yeah.

17 Q. Why is the full number not used here?

18 A. Because every company's cost of capital,
19 every company's overhead, every company's
20 approach to doing the engineering work is
21 also a bit different. So they try to get
22 just the hardware. They try to get it down
23 to something that is analogous from project
24 to project. And that's why we went from a

1 site-specific to a levelized. And when that
2 is done, we get in the ballpark of all -- of
3 the other facilities.

4 Q. New topic. The large spreadsheet that is
5 Exhibit 31, and Exhibit 32, which has --
6 which is a data response, but it has
7 attached to it a presentation that was
8 prepared by somebody at PSNH for use -- I
9 don't think you knew where -- regarding
10 Senate Bill 152. So it's Exhibits 31 and
11 32.

12 A. Yeah. I don't have that.

13 Q. Okay. That's 31. Do you also have 32?

14 A. I'm sure I do. I just have to figure out --
15 I don't mark them.

16 (Pause)

17 Q. If you could turn to Page 24 of the
18 presentation that's in Exhibit 32. I think
19 you were asked questions about it earlier.
20 It's the one that has the statement that,
21 "PSNH customers could be on the hook for
22 \$300 million in stranded costs with nothing
23 to show for it." Is there a relationship
24 between the statement in that document and

1 the spreadsheet?

2 A. No.

3 Q. They certainly -- they seem to be talking
4 about the same topic.

5 A. They could be talking about costs for the
6 customers, but there's no correlation with
7 those two numbers.

8 Q. How was the number in Exhibit 32 developed
9 then?

10 A. Which number? The 230?

11 Q. The 230.

12 A. The 230 was the costs that were committed.
13 It's the sum of all of the values of all the
14 purchase orders that have been issued. It
15 wasn't how much had been spent on each one.
16 It wasn't the cancellation cost. It was the
17 sum -- if we took all the purchase orders
18 that had been issued, as to what the full
19 amount was, that's where that number came
20 from.

21 Q. Then what's Exhibit 31? That's the big
22 spreadsheet.

23 A. This exhibit was developed by a team of
24 engineers and professionals under my

1 guidance. It utilized the services of two
2 to three URS project experts who worked on
3 this Project for many years. And it used
4 three or four people who worked for PSNH on
5 the project -- our project team for many
6 years. And we spent a lot of time
7 developing a spreadsheet for every major
8 contract and every minor contract, looking
9 at when the contract was issued, the cash
10 flow for every contract, the type of
11 contract, whether it was labor-intensive or
12 whether it was material-intensive, and other
13 aspects of it. And we did an analysis on a
14 contract-by-contract basis, based on when
15 the contract was issued, what the scope of
16 work was, and over what period of time that
17 work would have occurred. And we developed
18 a cost to -- if we were to stop that
19 contract at any given month, how much would
20 the cost be to do that. And the report that
21 accompanied this large spreadsheet is about
22 18 pages long and simply explains our
23 methodology in very clear detail. And we
24 developed costs that were for money spent,

1 money that was either paid or booked, costs
2 in liabilities, payment of all tangible
3 contractor and vendor work that was
4 completed. Because when you release a
5 contract, a lot of these vendors go to
6 subcontractors, and they start building
7 pumps and tanks, and you have to go in and
8 shut all those down.

9 What were reasonable and customary
10 termination costs? In the first page of my
11 report it talks about termination expenses,
12 settlement costs, immobilization, reasonable
13 mark-up, things that are in our contracts
14 typical for our industry and our business.
15 And there's also stationary remediation
16 costs.

17 And we asked ourselves these series of
18 questions for every purchase order on the
19 calendar -- of each purchase order within
20 the calendar of the whole project, and we
21 went through excruciating detail to develop
22 a methodology to assess this. And we built
23 up a series of dozens of spreadsheets which
24 then summed this spreadsheet. And

1 eventually, this became -- this wasn't
2 really designed to be, you know, discussed
3 in this forum. It was really a working
4 document. But we were able to get through
5 it, I think, pretty well with some questions
6 today. So we developed all the costs and a
7 lot of other information, and then
8 eventually from that we broke our costs into
9 four categories that were also discussed
10 here.

11 Q. Are those the four categories at the bottom
12 of the page?

13 A. Yes. The terminology used there is a little
14 awkward. But it's money spent, project
15 costs and liabilities, reasonable and
16 customary termination costs, and station
17 remediation and project area mothballing.
18 Those were -- that was the analyst's jargon
19 for what those four were.

20 Q. Now, when you talked about those four with
21 Ms. Goldwasser, she directed you to a couple
22 entries that had boxes around them in purple
23 under September '08 and November '08. Do
24 you remember that?

1 A. Yes.

2 Q. And I think that she and you talked about
3 the four numbers below each of those
4 figures --

5 A. Yup.

6 Q. -- being added together to get to those
7 figures.

8 A. Correct.

9 Q. Now, I was playing around with this, and
10 that seemed to hold until the next page,
11 under June of 2010, because if you add the
12 numbers together under June of 2010, which
13 is the third to the last column, and it
14 seems that all columns afterwards, they
15 don't sum anymore. Those four figures below
16 don't add up to the figure that's just above
17 them. So I'm wondering -- and this may be
18 totally insignificant. But since my
19 attention was drawn to it earlier and I
20 started looking at it, it doesn't seem like
21 the numbers add up anymore. So tell me if
22 I'm wrong, or if I'm right, what it means.

23 A. Let me look at this just for one moment,
24 please.

1 (Witness reviews document.)

2 A. I believe the difference is in the line
3 above the 308,000. It's the \$25 million
4 amount. But I'm hard-pressed to recall...
5 let me see if...

6 (Witness reviews document.)

7 Q. Tell you what. Why don't we go to something
8 else. And we're going to probably, after
9 your counsel has a question -- has an
10 opportunity to ask you some questions, maybe
11 take a break. Maybe you'll be able to look
12 at that during the break --

13 A. Okay. Yeah.

14 Q. -- and then we'll finish and close that out.

15 A. I'm sure I have a reasonable answer, but not
16 at the moment.

17 Q. All right. You were asked about the
18 valuation of the plant for tax purposes. I
19 think from that Concord Monitor article that
20 you were shown printed off the Web, it looks
21 like the last valuation was done last fall.
22 If property tax cycles are what they are,
23 usually you should be getting a new
24 valuation pretty soon on that.

1 A. Yes.

2 Q. Do you have any idea what that's going to
3 be?

4 A. No. But whatever the outcome of that will
5 be, there will be a discussion, and it'll --
6 I can't predict what the ultimate number
7 would end up being.

8 CMSR. HONIGBERG: I don't have
9 anything else.

10 (No verbal response)

11 CMSR. HONIGBERG: Mr.
12 Iacopino, do you have anything else?

13 (No verbal response)

14 CMSR. HONIGBERG: Counsel, do
15 you have redirect?

16 MR. BERSAK: Yes, I do. Thank
17 you, Mr. Honigberg.

18 I want to first commend both
19 of you Commissioners for reading my mind. You
20 did a great job of going through many of my
21 redirect questions, so there'll be much less than
22 there would have been.

23 REDIRECT EXAMINATION

24 BY MR. BERSAK:

1 Q. I would like to just fill in a couple more
2 details with respect to the NPDES permit,
3 Mr. Smagula, that you were asked about by
4 Commissioner Iacopino.

5 A. Yes.

6 Q. First of all, is it correct that the current
7 NPDES permit under which Merrimack Station
8 is operating actually expired on June 27,
9 1997?

10 A. Yes.

11 Q. I believe that you had originally testified
12 it was issued in 1997.

13 And is it correct, then, that EPA has
14 been responsible for renewing that permit
15 since that 1997 expiration date?

16 A. Yes. It's something they've been working
17 on, I guess, for that period.

18 Q. In light of that, is the need for an NPDES
19 permit something that would exist, even
20 without the Scrubber Project having been
21 installed?

22 A. Yes.

23 Q. When did NPDES finally issue a new draft
24 permit for Merrimack Station?

1 A. September 30th, 2011.

2 Q. Was that before or after the Scrubber went
3 into commercial operation?

4 A. Two days after the Scrubber went into
5 commercial operation.

6 Q. So you're saying it took over 14 years for
7 EPA to renew an expired permit?

8 A. To issue a new draft of the permit, yes.

9 Q. Since that September 2011 draft permit was
10 issued, has the EPA issued a new draft of
11 that same permit?

12 A. In that draft permit there were a number of
13 technical flaws associated with it, both
14 from a science viewpoint and legal concerns.
15 Our comments were extensive, as were
16 comments from other parties. The EPA
17 received those comments in February of 2012
18 and was assessing all of those inputs to
19 determine what they would do with the final
20 permit. One aspect in their draft permit
21 was their interest in putting some
22 additional treatment equipment on our
23 wastewater effluent. We challenged their
24 technical recommendation on a number of

1 bases. And a few months ago, the EPA opened
2 their draft permit proceeding, removed their
3 technology and imposed an additional,
4 different technology in their modified draft
5 permit. That proceeding is still in a
6 review and comment phase which ultimately
7 will close soon, and then the EPA will go
8 about their business assessing not only the
9 original comments on the draft permit but
10 the new comments on the draft permit.

11 Q. In the new, modified draft EPA NPDES permit,
12 did they include a restriction that would
13 require the operation of a secondary
14 wastewater treatment facility in order to
15 allow the Merrimack Station to go into
16 commercial operation?

17 A. Yes. They specified that we should install
18 the equipment that we had installed.

19 Q. Are interested parties now submitting
20 comments to EPA on this new draft?

21 A. Yes.

22 Q. Do you know whether EPA might issue yet
23 another draft of this permit in the future?

24 A. We did not agree with many of their

1 scientific and technical and economic
2 conclusions, and we responded to them with
3 an equal level of specific questions and
4 concerns, similar to what we did on their
5 original draft permit. So, while I'm not
6 sure what they will do, I would not be
7 surprised if they were to consider our
8 comments, because I believe we are perhaps
9 one of the most expert in this technological
10 field of secondary wastewater treatment in
11 the country. And I would not be surprised
12 if they accepted those comments and had to
13 rethink some of their conclusions. So it
14 would not be surprising if it were reissued
15 again, in my view.

16 Q. Is EPA right now in the process of issuing
17 new regulations that would limit water
18 emissions, such as those from Merrimack
19 Station?

20 A. There are a number of EPA decisions that
21 have emerged and have potential to emerge
22 which affect cooling water systems.

23 Q. Do you have any idea when the EPA might
24 actually issue a final NPDES permit for

1 Merrimack Station?

2 A. No. But as I indicated previously, based on
3 the length of time they take to review our
4 comments and the comments of others, and
5 their subsequent decisions and issuances of
6 final permits, potential appeals, I think it
7 could go on for many, many years.

8 Q. Until a final permit is issued, what's the
9 status of the permitting requirements for
10 Merrimack Station?

11 A. We remain in full force with the existing
12 permit that had been in place for a long
13 time.

14 Q. And that's the permit which the EPA refused
15 to reopen to allow Merrimack Station to
16 operate without additional water treatment?

17 A. Yes.

18 Q. You were asked a question by Commissioner
19 Honigberg regarding the \$355 million price
20 that appears in the PowerAdvocate report
21 that's attached to Mr. Long's deposition
22 exhibits that's been marked as 27-7. Do you
23 recall that?

24 A. Yes.

1 Q. And you said that the \$354- or \$355 million
2 estimate was made "because we needed to
3 compare apples to apples."

4 A. Yes.

5 Q. Suppose that you and I -- we both live in
6 Bedford. Suppose we both went out and
7 bought new cars. We're going to buy
8 Mercurys, because I think that would be
9 appropriate for this proceeding. Now,
10 you've got a lot more money than I do, so
11 you pay cash. I have to go to that Payday
12 Loan thing on South Willow Street in
13 Manchester to finance it. If we're going to
14 compare the cost of the cars and see whether
15 we got a good deal or not, would you include
16 my financing costs in that comparison?

17 A. No.

18 Q. Is that kind of what you were trying to sort
19 of explain when you said that those kind of
20 costs were taken out in order to compare our
21 price for the Scrubber equipment to others
22 around the country?

23 A. That's one example of the types of costs
24 that would be appropriate to levelize true

1 costs to compare apples and apples, yes.

2 Q. If you recall, there was also a couple
3 graphs that Commissioner Honigberg brought
4 your attention to in 27-7, the ones with the
5 squares and the triangles.

6 A. Yes.

7 Q. All the other plants represented on that
8 graph were diamonds. Do you know if any of
9 those diamond plants were scrubbers designed
10 to remove mercury or which had
11 mercury-removal guarantees from the
12 suppliers?

13 A. No.

14 Q. No, you don't know or, no, they don't have
15 guarantees?

16 A. I don't know specifically. But I guess I
17 will say that the Merrimack Station
18 Scrubber, to my knowledge, was the first
19 mercury Scrubber specifically designed for
20 that element in the country. So I
21 suspect -- I don't know for a fact, but I
22 suspect all of the rest were the traditional
23 sulfur, SO₂-removal scrubbers.

24 Q. One final question. You were asked a

1 question by counsel for Sierra Club
2 regarding the assessed value of our facility
3 in Bow, New Hampshire. If Merrimack Station
4 was retired or was unable to operate, do you
5 have an opinion of what would happen to its
6 assessed tax value for the Town of Bow?

7 A. Well, Merrimack Station is assessed based on
8 its function, which is to provide
9 electricity to customers in New Hampshire at
10 PSNH. So if it is unable to fulfill that
11 mission, I think the facility could not
12 operate. And as a result, one of the key
13 criterias that is looked at for value
14 assessment is its capacity factor and its
15 use for customers in the state. So I
16 suspect the assessed value would plummet.

17 Q. Thank you, Mr. Smagula.

18 CMSR. HONIGBERG: I think
19 that's all we have for now, subject to the
20 desire to try and figure out what's going on
21 with that spreadsheet.

22 So, can we take a few-minute
23 break and give everybody a chance to come back in
24 about 10 minutes to finish the questioning, and

1 then we'll strike the I.D. from whatever exhibits
2 need to be struck -- I think I've got it written
3 down -- and then move on to the next witness?
4 Does that sound right?

5 MR. BERSAK: If we could talk
6 about, before you go, the next witness. If
7 we're talking about getting back here
8 sometime after 3:00, I don't think it will
9 be possible to get all the way through Mr.
10 Frantz. But we do have a swing witness, Mr.
11 Chung, who I think we definitely can finish
12 up with today, and we can start fresh with a
13 new witness tomorrow, if that makes sense to
14 everybody.

15 CMSR. HONIGBERG: Does that
16 make sense to everybody else?

17 MR. SHEEHAN: That's fine with
18 the Staff.

19 CMSR. HONIGBERG: Wait. Ms.
20 Goldwasser has a concern.

21 MS. GOLDWASSER: I'm just not
22 sure if we'll be able to get through Mr.
23 Chung today but --

24 CMSR. HONIGBERG: Well, I

1 mean, we may break wherever we break. And
2 if someone's on the stand and we break, it's
3 not the end of the world. We come back and
4 finish.

5 MR. BERSAK: We definitely
6 won't finish with Tom, but we might with
7 Eric. So, whatever works best.

8 CMSR. HONIGBERG: Any other
9 opinions? The plan would be to go with Mr.
10 Chung when we get back? All right. So
11 we'll come back shortly after 3:00.

12 (Whereupon a recess was taken at 2:55
13 p.m. and the hearing resumed at 3:11 p.m.)

14 CMSR. HONIGBERG: I gather
15 there was discussions about how to proceed
16 during the break. So, my understanding is
17 that Mr. Smagula was not able to resolve the
18 issues with the spreadsheet in the short
19 time he had, and I understand that. What we
20 can do is we can basically wrap him up
21 otherwise. And if there's a relatively
22 straightforward, simple explanation from
23 that, counsel can make an offer tomorrow or
24 the next day as to what the situation is

1 with that. If we need to bring him back to
2 explain that, we can do that. But as far as
3 we're concerned, Mr. Smagula's going to be
4 done. And we'll deal with the exhibits in a
5 minute.

6 I also understand there was a
7 concern about bringing Mr. Chung up right away,
8 and that's fine. We can -- the plan was to have
9 Mr. Frantz start, and we can have Mr. Frantz
10 start. We can get to wherever we get, and we'll
11 break right around 4:30 and pick up tomorrow
12 morning at that point. I know there's scheduling
13 limitations on tomorrow, at least one or two of
14 tomorrow's witnesses, and we'll deal with that as
15 we have to.

16 So, is there anything -- did I
17 get that correct?

18 (No verbal response)

19 CMSR. HONIGBERG: All right.
20 So, is there any objection to striking the
21 identification on the exhibits that were
22 used during Mr. Smagula's testimony? And I
23 don't know that I have a complete and exact
24 list of what those were. It seems to me it

1 was 11 and 12, which were his June testimony
2 and his rebuttal testimony. There was a
3 part of, or exhibits from, I guess, the
4 deposition; is that right? Were there any
5 other -- what's happening with that exhibit?
6 Is it just the exhibits that were used that
7 were I.D.'d and are going to be put in at
8 this time?

9 Mr. Sheehan, you seem ready to
10 say something.

11 MR. SHEEHAN: I was going to
12 say I don't know.

13 CMSR. HONIGBERG: You're in
14 the same shape I am.

15 MR. BERSAK: What was the
16 question? I'm sorry.

17 CMSR. HONIGBERG: Well, we
18 used parts of the deposition transcript --
19 we didn't use the transcript. We used the
20 exhibits from the deposition. Is it just
21 those exhibits that are going in at this
22 point as exhibits for our purposes in this
23 hearing, or is it the whole transcript and
24 all the exhibits?

1 MR. BERSAK: I believe that
2 the entire transcript and all the exhibits
3 have been marked for identification.

4 CMSR. HONIGBERG: How? The
5 question is: What are we striking? From
6 what are we striking the I.D. and making
7 full exhibits at this time? Ms. Amidon.

8 MS. AMIDON: If I may? I
9 don't think the Commission should do
10 anything at this point. Perhaps at the end
11 of this week we can agree to what to offer
12 as exhibits. But I don't believe Staff, for
13 example, has looked through everything and
14 agreed with everything being introduced as
15 an exhibit. I mean, customarily, as you
16 know, the Commission waits -- we have a big
17 volume here --

18 CMSR. HONIGBERG: I was hoping
19 to try to get some of that knocked down.

20 MS. AMIDON: Maybe that's one
21 thing that the parties can talk about
22 tomorrow morning and present a solution to
23 you tomorrow. But that's what I would
24 propose.

1 CMSR. HONIGBERG: Works for me
2 if it works for everybody else.

3 MS. AMIDON: And with respect
4 to tomorrow, you are correct. There are
5 some scheduling concerns. The witnesses
6 from Jacobs Consultancy are only available
7 tomorrow. And I'm looking to the Consumer
8 Advocate.

9 MS. CHAMBERLIN: My witness is
10 available -- he's flying in tonight, and
11 he's available all day tomorrow. And I
12 believe he's available Thursday morning.

13 MS. AMIDON: So that's just
14 for your information as we go forward. And,
15 you know, we'll probably give you friendly
16 reminders of things going away that might
17 interfere with that schedule. Thank you.

18 CMSR. HONIGBERG: Okay. So,
19 then, are we done with this at this point
20 and ready to call Mr. Frantz? All right.

21 (WHEREUPON, THOMAS C. FRANTZ was duly
22 sworn and cautioned by the Court
23 Reporter.)

24 THOMAS C. FRANTZ, SWORN

1 DIRECT EXAMINATION

2 BY MR. SHEEHAN:

3 Q. Your name, sir.

4 A. Thomas C. Frantz, F-R-A-N-T-Z.

5 Q. You're sure it's not Steven Mullen?

6 A. I am.

7 Q. Okay.

8 A. That may change, though, during the course
9 of this examination.

10 Q. And your occupation, sir?

11 A. I'm the Director of the Electric Division
12 here at the Public Utilities Commission.

13 Q. And can you give a very brief overview of
14 your background.

15 A. I came to the Commission in 1989; 25-1/2
16 years as an analyst first -- well, largely
17 as an economist first and then analyst, and
18 then chief economist. When the Commission
19 restructured, I was assigned the Electric
20 Division as its Director. And I've
21 testified numerous times before this
22 Commission on cost of capital, rate design,
23 general ratemaking.

24 Q. And in this proceeding, you have the chore

1 or obligation or joy to adopt another
2 person's testimony; is that correct?

3 A. That is correct.

4 Q. And that other person is whom?

5 A. That person is Steven Mullen. He was -- at
6 the time the prefiled testimony was filed
7 with the Commission, he was the Assistant
8 Director of the Electric Division.

9 Q. And you are here today to adopt Mr. Mullen's
10 testimony.

11 A. I am.

12 Q. Can you tell us what involvement you may
13 have had in drafting and preparing Mr.
14 Mullen's testimony that was filed?

15 A. Mr. Mullen worked directly under my
16 supervision. He was the lead Staff member
17 for the Scrubber proceeding. He worked
18 closely with Jacobs Consultancy. And we
19 conferred throughout this proceeding on
20 numerous issues, and including his
21 testimony.

22 Q. Today, are there any changes that you would
23 like to offer to the testimony before you
24 formally adopt it?

1 A. Yes, there is one. If we look at Footnote
2 No. 12, which is found on Page 10, it
3 states: "The Commission currently has an
4 open proceeding [sic], IR 13-020, regarding
5 the valuation and potential divestiture of
6 PSNH's generating assets" -- "generating
7 units." I would like to add the words
8 "Also, the Commission recently opened Docket
9 No. DE 14-238, Determination Regarding
10 PSNH's Generation Assets."

11 Q. And other than that change, Mr. Frantz, if I
12 were to ask you all the same questions that
13 appear in Mr. Mullen's testimony, would you
14 adopt the answers that Mr. Mullen gave?

15 A. Yes.

16 Q. And I understand you have a brief statement
17 you'd like to give to the Commissioners
18 prior to your cross-examination.

19 A. I do, if I may. My testimony, adopted from
20 the prefiled testimony of Mr. Steven Mullen,
21 as I said, at the time of the filing was the
22 Assistant Director of the Electric Division,
23 provides an overview of the Scrubber
24 Project, including the legislation

1 addressing mercury emissions. The testimony
2 also includes recommendations concerning
3 "prudence" of the Project's management and
4 construction based on the work done by
5 Staff's consultant, Jacobs Consultancy, and
6 the audit reports filed by the Commission's
7 Audit Division. Based on those reports,
8 review of the legislation and the
9 information available during the time frame
10 under consideration, Staff's position is
11 that PSNH acted prudently in the management
12 and construction of the Project and that the
13 costs were prudently incurred. The
14 prudently incurred costs should be recovered
15 in permanent rates and included in default
16 service.

17 In addition, the unrecovered costs, due
18 to the passage of time between setting
19 temporary and permanent rates, and the
20 less-than-full amount included in the
21 setting of the temporary rates, has created
22 a difficult ratemaking issue. Staff
23 proposes that the unrecovered costs be
24 recovered over a seven-year period as a way

1 to balance the significant rate effects of
2 those unrecovered costs with the interest of
3 shareholders. So it's a balance of
4 interests of customers and shareholders for
5 rate recovery. That concludes my remarks.

6 Q. Thank you.

7 MR. SHEEHAN: Mr. Honigberg,
8 he's now available for cross-examination.

9 CMSR. HONIGBERG: Who's going
10 to be asking questions first of Mr. Frantz?

11 MR. BERSAK: I believe that
12 the Company is going first on this one.

13 CMSR. HONIGBERG: Mr. Bersak
14 or someone else over there?

15 MR. BERSAK: It shall be me.

16 CROSS-EXAMINATION

17 BY MR. BERSAK:

18 Q. Good afternoon, Mr. Frantz.

19 A. Good afternoon.

20 Q. You just indicated you're adopting Mr.
21 Mullen's prefiled testimony in this
22 proceeding. Is it correct to assume you're
23 also adopting his responses to the data
24 requests that were made by Staff in this

1 proceeding?

2 A. Correct.

3 Q. Thank you. Are you aware that other parties
4 to this proceeding have taken the position
5 that there are practical alternatives
6 available to PSNH in lieu of installing the
7 Scrubber?

8 A. Yes.

9 Q. I'd like to start by discussing the
10 so-called "divestiture alternative" of the
11 Scrubber installation with you.

12 If you turn to Page 8, Line 13, of your
13 testimony -- and I'll refer to it as "your
14 testimony" because Mr. Mullen has escaped --
15 you indicate that, in your opinion, the
16 Scrubber Law was "written with a single
17 owner of the affected sources in mind"; is
18 that correct?

19 A. Correct.

20 Q. And that single owner was PSNH?

21 A. Correct.

22 Q. You also testified that the sale of only one
23 of the, in quotation marks, "affected
24 sources," as that term's defined in the

1 Scrubber Law, such as the sale of the
2 Merrimack Station but not Schiller Station,
3 would be impractical, because then you would
4 wind up with different owners tied together
5 by a common emissions reduction requirement;
6 is that correct?

7 A. Yes.

8 Q. So, is it your opinion that any proposed
9 divestiture, in lieu of installation of the
10 Scrubber, would realistically require that
11 all the affected sources would have to be
12 sold together so there was one common owner
13 responsible for meeting the aggregated
14 emissions reduction requirement?

15 A. Practically speaking, that answer is yes.
16 It would be extremely unlikely and difficult
17 to have had more than one owner.

18 Q. So, since the --

19 MR. PATCH: Mr. Chairman, I
20 would like to raise an objection at this
21 point in time. We were counseled during the
22 technical session not to do "friendly
23 cross," and I think that's exactly what this
24 is. And we've not prepared friendly cross

1 of witnesses by other intervenors because we
2 were counseled not to do that.

3 CMSR. HONIGBERG: I'm not -- I
4 tend to agree with you.

5 Mr. Bersak, certainly that
6 first set of questions was just a repetition of
7 something that's already in the testimony. I
8 think we'd all prefer if you have other areas you
9 want the witness to elaborate on, that would be
10 great. But we have read Mr. Mullen's testimony,
11 which Mr. Frantz has adopted.

12 MR. BERSAK: If I can sort of
13 make an offer of proof here as to where I'm
14 going with respect to divestiture, is that
15 the alternatives that have been proposed in
16 other's testimony is we could have -- or the
17 Company could have divested Merrimack
18 Station. The witness just testified that
19 was not practical; it would really have to
20 be Merrimack and Schiller.

21 The next thing I'm going to
22 ask about is, in light of what the Company would
23 have left, which is Newington Station and some
24 hydros, would that essentially put us into the

1 total divestiture situation, which is --

2 CMSR. HONIGBERG: I think --
3 you don't need to go any further because I
4 think that's fair. It occurred to me, as I
5 was listening to the questions, that I
6 thought he was probably setting up the next
7 couple of questions. So, on that basis, I'm
8 going to let him proceed. But you
9 understand what Mr. Patch said.

10 MR. BERSAK: I understand.

11 CMSR. HONIGBERG: And I think
12 we all agree that's a good way for us to go
13 going forward. So, ask the question --

14 BY MR. BERSAK:

15 Q. If in fact a divestiture of both Merrimack
16 Station and Schiller Station was proposed,
17 that would have left PSNH with only
18 Newington Station and its hydros and the two
19 combustion turbine sites as generating
20 assets; is that correct?

21 A. Correct.

22 Q. Do you agree that Newington effectively
23 operates in the capacity market and is
24 primarily a peaking plant?

1 A. It has a very low capacity factor, and it's
2 probably going to continue to have a very
3 low capacity factor.

4 Q. So, would it be unreasonable for PSNH to
5 consider that a generation fleet consisting
6 only of Newtonian and the hydros would be
7 impractical to be the basis of providing
8 energy service to its customers?

9 A. It also has purchase power agreements, I
10 would state that, of some significance.
11 However, it would create a lot of
12 difficulties to have only one fossil-related
13 generating asset and then the hydros.

14 Q. So, based on your opinions I'm hearing, in
15 reality, any thought of using divestiture as
16 an option to avoid installation of the
17 Scrubber by PSNH would really have resulted
18 not just in the sale of the Merrimack
19 Station, but also Schiller, and quite
20 possibly lead to a decision as to whether
21 the entirety of PSNH's generating fleet
22 should be divested. Would you agree?

23 A. I think it would have been an issue. And
24 whether the hydros would have been divested

1 or not under those kind of scenarios, well,
2 that's one of the things we'll be looking at
3 in DE 14-238.

4 Q. And that's -- 14-238 is a proceeding that's
5 being held under the auspices of R.S.A.
6 369-B 3-a; is that correct?

7 A. Correct.

8 Q. And in order to have such a divestiture of
9 Merrimack or Schiller, or even more than
10 those two assets, there would have to be an
11 adjudicative document to determine whether
12 such divestiture was in the economic
13 interests of PSNH's customers?

14 A. Correct.

15 Q. In his testimony, do you recall that
16 Mr. Reed referred to an October 25, 2013
17 letter from Commission Chair Ignatius to the
18 Chair of the Electric Restructuring
19 Legislative Oversight Committee concerning
20 how long such a proceeding might take?

21 A. I remember reading that as part of his
22 testimony.

23 Q. And in that letter, do you recall that the
24 Chair stated that the litigated portion of

1 such a proceeding, which would typically
2 follow initial Staff report, would take six
3 months or more, barring appeals or any
4 traditional remedies?

5 A. Yes, I do remember reading that.

6 Q. If a divestiture attempt was deemed to be
7 the proper course of action following any
8 such investigation under R.S.A. R.S.A.
9 369-B:3-a, do you recall that Mr. Reed
10 testified that the time period to determine
11 how that divestiture process should be run,
12 the time to initiate it, to have bidders
13 perform their necessary due diligence, to
14 receive bids, analyze bids, meet with
15 bidders, determine potential winning bids,
16 negotiate final contracts and have the
17 Commission review the process, and then, if
18 all that goes well, reach closing, would be
19 an additional 10 to 18 months?

20 A. I recall that he mentioned a much longer
21 time frame.

22 CMSR. HONIGBERG: Mr. Bersak,
23 now you have him repeating Mr. Reed's
24 testimony.

1 MR. BERSAK: Well, I'm just
2 establishing a time period as to whether
3 divestiture was going to be practical in
4 light of the legislative requirements of the
5 Scrubber Law.

6 CMSR. HONIGBERG: Okay.

7 BY MR. BERSAK:

8 Q. So the entire divestiture process, from
9 start to finish, would have been a year and
10 a half to two and a half years or longer
11 perhaps.

12 A. It would require a significant time frame,
13 in my opinion.

14 Q. And that also assumes that the divestiture
15 process was successful and did not result in
16 a failed option.

17 A. That's always an assumption.

18 Q. In light of the obligation under the
19 Scrubber Law for the owner to install and
20 have a Scrubber operational at Merrimack
21 Station, would you consider the possibility
22 of having a failed option to be higher than
23 normal?

24 A. Could you repeat that question, please?

1 Q. Sure. In light of the obligation of the
2 owner under the Scrubber Law to install and
3 have operational Scrubber technology at
4 Merrimack Station by July 1st of 2013, if
5 there was to be an attempt to divest
6 Merrimack Station in lieu of installing the
7 Scrubber, do you think that that obligation
8 would result in a higher likelihood of a
9 failed option than a normal option?

10 A. I think it would create challenges for any
11 option with that type of requirement hanging
12 over any potential bidder. Whether they'd
13 come to the table, I think that would depend
14 on how the contracts were written and the
15 bid was solicited -- the solicitation of the
16 bid.

17 Q. As I recall, subsequent to the restructuring
18 law going into effect in the state, you were
19 involved in several generation divestiture
20 processes; is that correct?

21 A. I was.

22 Q. In light of the statutory operations -- I'm
23 sorry -- statutory obligation for the owner
24 to have Scrubber technology installed and

1 operational at Merrimack Station by July 20,
2 2013 --

3 (Court Reporter interrupts.)

4 Q. Do you have an opinion on how that
5 obligation would impact a rational bidder's
6 due diligence?

7 A. Well, as I said, I think it complicates any
8 bid. And the kind of requirement time frame
9 of it, the potential costs of installing the
10 technology would all -- with all those
11 aspects would make any bidder probably more
12 nervous or at least risk-averse to bidding
13 on assets.

14 Q. Is it likely that such a bidder or potential
15 bidder would deem the Scrubber Law
16 obligation to be an economic liability that
17 had to be factored into the price?

18 A. You're asking me what I think the bidder
19 would actually legally look at, and I just
20 think it would complicate any analysis of a
21 bidder that would be interested in those
22 assets. And uncertainty is never a friend
23 of financial outcomes.

24 Q. In making your determination and

1 recommendation to the Commission that PSNH's
2 efforts to comply with the mercury reduction
3 law were prudent, did that include a review
4 of the Company's installation of the
5 secondary wastewater treatment facility?

6 A. It did. And that was based on discussions
7 and reports with our consultant, Jacobs
8 Consultancy, who looked in detail at those
9 aspects. I will say that at the time, I
10 think the record reflects that there was an
11 expectation that the wastewater treatment
12 facility would literally be in the zero to
13 5 percent level for waste from that
14 facility. And so that was what the
15 expectation was. I think that's reflected
16 in the Jacobs testimony and reports.

17 Q. Are you familiar with Mr. Hachey's testimony
18 in this proceeding?

19 A. I'm familiar with it.

20 Q. And in his testimony, Mr. Hachey discusses
21 the economic analysis that PSNH prepared
22 regarding the Scrubber, especially
23 concentrating his discussion on the spread
24 between gas and coal prices included in the

1 analysis. Are you aware of that emphasis
2 that Mr. Hachey placed on that coal/gas
3 price spread?

4 A. Generally, yes. If you want to refer me to
5 the specific number in his testimony, that's
6 fine.

7 Q. In his testimony, if you want to look at
8 Pages 11 to 13 of Mr. Hachey's testimony, do
9 you recall that he testified that it appears
10 PSNH did not disclose information regarding
11 the significance of that coal/gas price
12 spread to Staff and OCA?

13 A. You're at Page 11 of his testimony?

14 Q. Yes. Between 11 and 13 generally.

15 A. Hmm-hmm.

16 MR. PATCH: Mr. Chairman, I
17 doubt very much this is unfriendly cross.
18 You know, I mean, maybe Mr. Bersak can make
19 an offer of proof that it is. But it seems
20 to me, again, we were told at a technical
21 session that the Commissioners did not want
22 to hear friendly cross. And I'm just
23 worried that Mr. Bersak's spending a lot of
24 time, you know, basically trying to boost

1 Mr. Frantz's testimony on issues that favor
2 his company --

3 MR. BERSAK: Well, actually --

4 MR. PATCH: -- and I think
5 that's "friendly cross."

6 CMSR. HONIGBERG: Mr. Bersak.

7 MR. BERSAK: Actually, what
8 I'm trying to do is discredit Mr. Hachey's
9 testimony.

10 CMSR. HONIGBERG: Yeah, I
11 thought that's where he was going with this.
12 I thought he was going to ask the witness --
13 I expect he's going to ask the witness to
14 criticize Mr. Hachey's testimony rather than
15 bolster his own. I totally agree with you,
16 but --

17 MR. PATCH: Isn't that
18 friendly cross?

19 CMSR. HONIGBERG: Well, I
20 think there was a -- I think what we have in
21 mind is we don't want the parties to pile on
22 bolstering a particular witness' testimony
23 through friendly cross-examination. That
24 doesn't mean a party can't ask a witness of

1 another party who tends to be aligned with
2 them on topics that will help them
3 otherwise, that the witness didn't address
4 in his or her own testimony. Is that a
5 distinction that people can appreciate?

6 MR. PATCH: Well, I wish we'd
7 been told that at the technical session,
8 because the advice we were given at the
9 technical session was different than that.

10 CMSR. HONIGBERG: We're going
11 to go off the record for a minute.

12 (Discussion off the record)

13 CMSR. HONIGBERG: Let's go
14 back on the record.

15 MR. BERSAK: I'm willing to
16 make an offer of proof in response to that
17 objection.

18 CMSR. HONIGBERG: Mr. Bersak.

19 MR. BERSAK: In the cited
20 pages of Mr. Hachey's testimony, Pages 11
21 through 13, he testifies that it's his
22 opinion that PSNH did not provide
23 information regarding the price spread and
24 sensitivity of the Scrubber Project to that

1 price spread between gas and coal to Staff
2 and OCA. There are a series of data request
3 questions asked by TransCanada where they
4 inquired of Staff on this very topic, and
5 Staff's responses to those questions are
6 educational and indicate that Staff was well
7 aware of the sensitivity of the Scrubber
8 Project to the price spread between gas and
9 coal as a result of PSNH's presentation to
10 them.

11 CMSR. HONIGBERG: Mr. Patch.

12 MR. PATCH: I think I've
13 stated the arguments I have so far. They
14 didn't ask any data requests about this. I
15 think they've made it pretty clear. It's
16 clearly an attempt to try to, you know,
17 contradict testimony of opposing witnesses,
18 Mr. Hachey in particular, and they're using
19 Mr. Frantz for that. And I think that
20 qualifies as friendly cross.

21 CMSR. HONIGBERG: I think when
22 we were off the record you also said it
23 was -- it exceeded the scope of the direct
24 testimony. Did I remember that correctly?

1 MR. PATCH: Well, I think
2 that's right, although I guess one of the
3 things that we asked data requests about,
4 you know, once Mr. Hachey filed that
5 testimony, was specifically about that. So
6 we've got some hard evidence that we want to
7 offer, you know, in terms of questions of
8 Mr. Frantz about that presentation. So I
9 don't want to mislead you into thinking that
10 I don't have questions about that, because I
11 do. But it just seems to me that this is a
12 preemptive effort by Mr. Bersak to try to
13 get to those issues first and try to get Mr.
14 Frantz to say good things on behalf of his
15 client about that. And it seems to me
16 that's what we were told we should not be
17 doing.

18 CMSR. HONIGBERG: Mr. Sheehan.

19 MR. SHEEHAN: I'm not sure
20 what the response to Mr. Patch is.

21 CMSR. HONIGBERG: I guess the
22 question is: Should your witness be allowed
23 to answer that question, in your view?

24 MR. SHEEHAN: Well, this is --

1 and again, I don't want to argue for Mr.
2 Bersak. This is Mr. Bersak's chance to ask
3 questions. And if he's anticipating what
4 Mr. Patch may do, so what? What if
5 Mr. Patch doesn't ask the question? Then
6 Mr. Bersak's lost the opportunity. I think
7 that's the nature of the beast when you have
8 questions going in an order, that maybe the
9 usual order that you expect from courtrooms
10 doesn't quite come out. I'm comfortable
11 with the friendly cross ruling, if you will,
12 as you've made it. To the extent he's
13 asking questions to impeach another witness,
14 that seems okay, and assuming it's within
15 the bounds of discovery and direct
16 testimony.

17 CMSR. HONIGBERG: Mr. Patch.

18 MR. PATCH: Yeah, the only
19 other thing I would say is that PSNH had a
20 full and fair opportunity to put in rebuttal
21 testimony on the issue of Mr. Hachey's
22 testimony, and they did that. They could
23 have rebutted that specifically if they
24 wanted to. They had eight witnesses. They

1 had 700 pages of testimony and attachments.
2 So, using Mr. Frantz to make this point --
3 you know, I mean, if you don't let them
4 cross on this, you're not precluding them
5 from doing something they had a full and
6 fair opportunity to do.

7 CMSR. HONIGBERG: Mr. Bersak.

8 MR. BERSAK: If I could, Mr.
9 Honigberg.

10 (Commissioners conferring)

11 CMSR. HONIGBERG: We're going
12 to let Mr. Bersak proceed with this. So
13 we're overruling the objection.

14 MR. BERSAK: Thank you.

15 BY MR. BERSAK:

16 Q. Where we left off or were discussing is the
17 part of Mr. Hachey's testimony where he was
18 asked the question whether PSNH presented
19 information regarding the natural gas/coal
20 spread to Staff and OCA, and his answer was
21 "apparently not."

22 I'd like to turn your attention to
23 Staff's response to several data requests
24 that were asked of Staff by TransCanada.

1 MR. BERSAK: I'd like to mark
2 as an exhibit Staff's responses to
3 TransCanada data requests Questions TC 1
4 through 12, No. 27 and 1-37. And we'll have
5 copies sent around.

6 (The document, as described, was herewith
7 marked as 39 for identification.)

8 Q. So Exhibit 39 is a total of 10 data request
9 responses from Staff to questions proposed
10 by TransCanada.

11 Mr. Frantz, would you please take a
12 look at Staff's response to TC Question 1-5
13 discussing a presentation made by PSNH to
14 Staff and OCA on July 30, 2008 regarding the
15 Scrubber Project. Do you have that?

16 A. I do.

17 Q. According to this data request response, you
18 were in attendance at that presentation?

19 A. I was.

20 Q. And according to this data response, you
21 were accompanied by Mr. Mullen and
22 Mr. McCluskey, Attorney Ross, Attorney
23 Hatfield, who was then the consumer
24 advocate, and Mr. Traum, then the deputy

1 consumer advocate; is that correct?

2 A. Yes.

3 Q. If you could turn your attention now to the
4 next data response from Staff, TC 1-6.
5 According to this data request, Staff
6 responded with an annotated copy of the
7 presentation that PSNH made to Staff and OCA
8 on that date; is that correct?

9 A. Yes.

10 Q. And is it correct to assume that the
11 annotations on that attachment were made by
12 Mr. Mullen?

13 (Witness reviews document.)

14 A. I saw his handwriting for a lot of years.
15 It appears to be his.

16 Q. His name was originally on the response to
17 this question; is that correct?

18 A. Yes.

19 Q. And in that response it says, "Attached is
20 my copy of the presentation [sic], including
21 my handwritten notes on the presentation, as
22 well as additional notes taken by me." So
23 that would appear to be Mr. Mullen's
24 annotations?

1 A. Yes.

2 Q. I would like to turn your attention to
3 Page 15 of the presentation that was
4 annotated by Staff, a slide captioned
5 "Financial Assessment." Let me know when
6 you have that.

7 (Witness reviews document.)

8 A. I am there.

9 Q. Okay. On that slide, is it correct that
10 PSNH discussed natural gas and coal price
11 assumptions for the Scrubber Project?

12 A. That's correct.

13 Q. I'd like you to turn your attention to the
14 last bullet on that slide, the one that
15 reads, quote, "Our analysis show that
16 customer economics are most sensitive to the
17 coal/natural gas price spread and far less
18 sensitive to capital cost or RGGI cost
19 increases"; is that correct?

20 A. That is correct.

21 Q. Do you see that the words "are most
22 sensitive to" are underlined on what was
23 attached to Staff's response to this data
24 request?

1 A. Yes.

2 Q. Is it correct to assume from the response to
3 this question that the underline was made by
4 Mr. Mullen?

5 A. Yes.

6 Q. Since you were at that meeting where PSNH
7 provided this presentation, would it be
8 reasonable to assume that Mr. Mullen's
9 underlining of that phrase was the result of
10 PSNH's discussing that bulleted item during
11 its presentation to Staff and the Consumer
12 Advocate's Office?

13 A. I don't know what his motivation was. It's
14 fair to acknowledge that that caught his
15 attention.

16 Q. You were there. Do you recall it?

17 A. I do.

18 Q. Thank you.

19 And those underlined words, in fact,
20 emphasize the importance of the spread
21 between the price of natural gas and coal.
22 Do you agree?

23 A. Yes.

24 Q. In fact, do you agree that Staff was well

1 aware of the significance of the differences
2 in cost between coal and gas on the
3 economics of the Scrubber?

4 A. Yes.

5 Q. In response to questions from TransCanada,
6 do you agree that Staff indicated that the
7 economics of the Scrubber were subject to
8 many moving parts and not just to the
9 relative prices of gas and coal?

10 A. On a project of that size and significance,
11 there are always a lot of moving parts,
12 including the overall capital costs, delay
13 for potential weather. There's a tremendous
14 amount of moving parts in a large project
15 like that.

16 Q. That is it. Thank you very much, Mr.
17 Frantz.

18 CMSR. HONIGBERG: All right.
19 Who's going to be asking questions of Mr.
20 Frantz next? Ms. Chamberlin.

21 MS. CHAMBERLIN: Yes, I have a
22 few.

23 CROSS-EXAMINATION

24 BY MS. CHAMBERLIN:

1 Q. The Mercury Emissions Statute refers to
2 cost-effective reductions in sulfur dioxide;
3 is that correct?

4 A. Well, there's the general R.S.A. 125-0,
5 which is the four pollutants overall
6 statute, and that refers to four pollutants:
7 Sulfur dioxide, oxides of nitrogen, mercury
8 and carbon dioxide. The subsections of
9 125-0, from 11 to 18, are referred to as the
10 "mercury emissions" subsections.

11 Q. So your answer is that it refers to
12 cost-effective reductions in sulfur dioxide
13 as well as other pollutants. Is that a fair
14 summary?

15 (Witness reviews document.)

16 A. If you're referring to 125-0:13, it directly
17 addresses mercury emissions reductions.

18 Q. I was referring to Page 5 of your testimony,
19 and I was referring to Line 9 through 11,
20 which is a quote of R.S.A. 125-0:11.

21 (Witness reviews document.)

22 A. Yes, that's...

23 Q. So that section refers to, "including, but
24 not limited to, cost-effective reductions in

1 sulfur dioxide" and some other pollutants?

2 A. Yes.

3 Q. The statute, R.S.A. 125-O, includes
4 reporting obligations; is that correct?

5 A. Correct.

6 Q. And one of those reporting obligations is to
7 the Legislature?

8 A. Yes.

9 Q. And your testimony is that legislators knew
10 in 2008 and 2009 about the increased
11 construction costs of the Scrubber; is that
12 a fair summary?

13 A. Yes.

14 Q. And the basis of that conclusion is that
15 PSNH provided documents to the Legislature
16 discussing the price increase; is that true?

17 A. Yes.

18 Q. And you agree that the Legislature relied on
19 PSNH for information about the Scrubber.

20 A. Well, now you're asking me to infer what the
21 Legislature relied upon, and I'm not sure
22 I'm quite capable of making that conclusion.

23 Q. Well, in your 25 years of experience as a
24 regulator, have you had any experience with

1 the Legislature?

2 A. A lot, yes.

3 Q. And would you say that the Legislature
4 relies on the expertise of the people who
5 come before it for information?

6 A. I believe that the Legislature relies upon
7 the expertise of people who come before it
8 and the discussions that ensue. And how
9 they ultimately reach their decisions is
10 somewhat still a mystery to me.

11 Q. And is it a fair conclusion to say that the
12 Legislature was relying on PSNH to provide
13 it information based on the reporting
14 requirements of the statute 125-O?

15 A. Clearly, PSNH made disclosures to the
16 Legislature and provided information, as it
17 was required to do. I was at some of those
18 hearings.

19 Q. Turning to the exhibits that Mr. Bersak just
20 handed out, and I believe...

21 MS. CHAMBERLIN: Did you mark
22 it? Is it one single exhibit?

23 MR. BERSAK: Yes, Exhibit 39.

24 MS. CHAMBERLIN: Exhibit 39.

1 BY MS. CHAMBERLIN:

2 Q. And turning to the presentation given to the
3 PUC, Staff and the Office of the Consumer
4 Advocate, PSNH concluded that there would be
5 a net customer benefit under "expected
6 conditions." Is that a fair summary?

7 A. Point me to exactly where you see that.

8 Q. I used a different exhibit, so hold on.

9 A. Are you talking about Page 3, "The Net
10 Present Value of Revenue Requirements... and
11 the benefit to customers of \$132 million"
12 or --

13 Q. Yes, that is what I am talking about.

14 A. That is stated on Page 3.

15 Q. Right. And that's the arrow for above that
16 says under "expected conditions"; correct?

17 (Witness reviews document.)

18 A. Yes. To be clear for the record, it's the
19 fourth arrow down under "Executive Summary"
20 and states in its entirety, "Despite the
21 capital cost increases, Merrimack Station
22 remains economic for customers under
23 expected conditions."

24 Q. And turning to Page 5, Arrow No. 2 -- let me

1 know when you're there.

2 A. I'm there.

3 Q. Is one of the "expected conditions" the
4 "historic high capacity factor and
5 cost-effective operation of Merrimack
6 Station" that's listed there?

7 A. Listed there is the "historic high capacity
8 factor and cost-effective operation of
9 Merrimack Station." That is correct.

10 Q. And would you say that that qualifies as an
11 "expected condition"?

12 (Witness reviews document.)

13 A. Well, it's listed under "Merrimack Station
14 Benefits PSNH's Customers." Whether that's
15 a direct tie to a needed or listed
16 condition, I'm not sure I would make that
17 jump.

18 Q. So this is a description of the "historic
19 benefits of Merrimack Station"; correct?

20 A. Yes.

21 Q. And having occurred historically, is it a
22 reasonable jump to say that that's one of
23 the "expected conditions" of ongoing
24 operation for the benefits to occur?

1 A. If you can give me a moment.

2 (Witness reviews document.)

3 A. I think it was a reasonable conclusion that
4 the plant would operate at a fairly high
5 capacity factor. That's my recollection.

6 Q. Thank you. And the bold -- right above the
7 bold lettering on the same page it says,
8 "Historically, coal has maintained a price
9 advantage over oil or natural gas..." Have
10 I read that correctly?

11 A. Could you tell me exactly where you are
12 right now?

13 Q. Yes. I'm on the fifth arrow on the same --
14 on Page 5.

15 A. Yes, that's correct.

16 Q. And is it fair to conclude that, with the
17 description "historically" in front of that,
18 that that is one of the "expected
19 conditions" PSNH was relying on for customer
20 benefits?

21 A. I think that was a reasonable conclusion
22 from that arrow.

23 (Court Reporter interrupts.)

24 A. I think that was a reasonable conclusion

1 from that arrow.

2 Q. Now, PSNH provided one slide on historic
3 fuel prices. I'm trying to find the page
4 number. I know it's in here. Here it is.
5 Page 16.

6 A. I'm there.

7 Q. And the slide shows the price differences
8 between gas and coal; correct?

9 A. Correct.

10 Q. And it shows them from the year 2000 to
11 2008, approximately?

12 A. Correct.

13 Q. Now, there isn't a written statement
14 certainly on this page regarding the
15 historic fuel spreads before the year 2000;
16 is that correct?

17 A. That's correct.

18 Q. So, history is simply starting at 2000 on
19 this chart.

20 A. Yes.

21 Q. That's all I have. Thank you.

22 CMSR. HONIGBERG: Who's next
23 to ask questions of Mr. Frantz? Mr. Patch.

24

1 CROSS-EXAMINATION

2 BY MR. PATCH:

3 Q. Good afternoon, Mr. Frantz.

4 A. Good afternoon.

5 Q. I want to start pretty much where Ms.
6 Chamberlin left off.

7 MR. PATCH: We actually would
8 like to have marked the entire set of
9 responses to the data requests from
10 TransCanada. And we have them in a package,
11 so there may be some duplication with
12 Exhibit 39 that PSNH presented. But --

13 CMSR. HONIGBERG: Is
14 everything in your Exhibit also in 39 or
15 not?

16 MR. PATCH: Yes. No, no.
17 There's more in our exhibit than there is in
18 39.

19 MR. BERSAK: So ours is a
20 subset of his. So we can replace his with
21 ours and we can --

22 MR. PATCH: Except that
23 there's a disagreement between counsel. It
24 sounds to me like -- let's just deal with

1 this individually. So we'll call this
2 Exhibit 40 and move on, because it sounds --
3 in looking at it in Ms. Goldwasser's hand,
4 it looks smaller.

5 (The document, as described, was herewith
6 marked as Exhibit 40 for identification.)

7 BY MR. PATCH:

8 Q. And just to keep things moving, Mr. Frantz,
9 these are our -- I'll represent to you that
10 these are responses that Staff provided
11 under Steve Mullen's name to the data
12 requests that TransCanada propounded on
13 January 21st of this year.

14 And the one thing that is a little
15 different from what PSNH provided, the
16 attachment to 1-6, the only thing included
17 there is the last page of the attachment
18 that Staff provided, which are Mr. Mullen's
19 notes, independent of the notes that he
20 wrote on the slides.

21 So, you know, fair to say, I mean, you
22 haven't looked through all of these. I'm
23 going to walk you through a few of these.
24 But first of all, with regard to 1-6, if we

1 could start there.

2 A. I'm there.

3 Q. You had described -- or Mr. Mullen had
4 described -- I guess I'll say "you" from now
5 on, but understanding that it was Mr. Mullen
6 who provided the response, but you've
7 adopted it. You described that meeting on
8 July 30th with Staff, the consumer advocate,
9 PSNH representatives, and I think the
10 Governor's Energy Office, as a meeting -- as
11 a "confidential briefing"; is that correct?

12 A. I think that's correct. But I don't -- I
13 believe it was the OCA, Staff and PSNH. I
14 don't believe it was the Office of Energy
15 Policy. It was the OCA.

16 Q. Okay. Well, I guess the record will speak
17 for itself. I thought the Governor's Office
18 of Energy had a representative there. But
19 in any event, I'm not concerned about that
20 right now. It's really more about your
21 response to 1-6.

22 So, you said it was a "confidential
23 briefing"; correct?

24 A. Yes. And the materials provided stated at

1 the bottom, "privileged and confidential."

2 Q. And "not a meeting designed to provide Staff
3 with all justifications or analyses related
4 to the Scrubber Project"; correct?

5 A. Correct.

6 Q. What does that mean?

7 A. Well, I think there was a lot of data and
8 information that probably could have been
9 provided to Staff that wasn't. It was a
10 high-level overview. It was information
11 that talked about the increase in cost,
12 talked about the work that was being done.
13 There was what I would say was -- though
14 it's an overused term, it was certainly a
15 "general overview" and information to keep
16 Staff up to date on some recent changes in
17 the Project.

18 Q. And so you didn't expect them -- seems like
19 you're comfortable with the fact that they
20 didn't provide you with the same analysis or
21 justification that they provided to the
22 Board of Trustees or the NU RACC Committee;
23 is that fair to say?

24 A. Well, I don't know if that's fair to say.

1 But we're not the Company's board of
2 directors and we're not the risk assessment
3 group and we're not the ones making the
4 decision to expend the money. I do think as
5 regulators that we're entitled to and should
6 receive information of major changes of
7 major projects. And in that light, I think
8 we got that type of information. I would
9 expect any company to provide more detail
10 and more information to the people that are
11 approving a project or writing the check at
12 the time than on an ongoing basis to
13 regulators.

14 Q. So, to the full Commission, as opposed to
15 just in a briefing like that to Staff I take
16 it is what you're saying?

17 A. Yes. However, at this point in this docket,
18 there's a lot of information that should be
19 provided, and has been.

20 Q. And so you're saying the Commission really
21 ought to take into account all of that
22 information when making its decision; is
23 that right?

24 A. All what information?

1 Q. I'm trying to pick up on what you just said.

2 A. Well, I'm just saying you asked for context
3 of the type of briefing we got from PSNH at
4 the time, and I'm saying I don't think that
5 was an unreasonable briefing of the
6 information at the time.

7 Q. And if something was required to make the
8 project economic for ratepayers -- required
9 to make it economic -- would you expect they
10 would have raised it at that meeting?

11 A. I think that it would have been reasonable
12 to expect all the fairly high-level,
13 important, pertinent information to have
14 been mentioned.

15 Q. And then, what about the report to the
16 Commission in DE 08-103, which I believe
17 it's already been indicated is 27-1 -- or
18 27-9? That's the September 2nd, 2008 report
19 that PSNH filed. Is that the time when PSNH
20 should have provided all of that information
21 that you're referring to, even if they
22 didn't provide it all in that briefing to
23 Staff?

24 A. I think there was a request by the

1 Commission on that. And if you have that
2 request, I'd be happy to take a look at what
3 the request was.

4 Q. I do have a copy of that. And I think
5 that's the August 22nd, 2008 letter that --

6 A. From the executive director.

7 Q. That's right. And I think it went to Mr.
8 Bersak, actually, I think. Have to take a
9 look at that. Ms. Goldwasser is going to
10 hand out a copy of that letter. Do you have
11 one handy right there?

12 A. I don't. I'll be happy to look at it.

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

15 A. Thank you.

16 (Witness reviews document.)

17 CMSR. HONIGBERG: Are we
18 marking this as an exhibit, or is it
19 somewhere else already?

20 MR. PATCH: Well, that's a
21 good question.

22 CMSR. HONIGBERG: Well, why
23 don't we just mark it. That would be
24 easier.

1 MR. PATCH: Okay. Fine.

2 CMSR. HONIGBERG: That's 41.

3 (The document, as described, was herewith
4 marked as Exhibit 41 for identification.)

5 A. I would point to the second paragraph,
6 Mr. Patch.

7 BY MR. PATCH:

8 Q. Yes.

9 A. And this type of letter from the Executive
10 Director of the Commission does provide, I
11 think, a rather detailed and descriptive
12 aspect of what the Commission was seeking
13 from PSNH. In effect, it says "a
14 comprehensive status report on its
15 installation plans, a detailed cost estimate
16 for the Project, an analysis of the
17 anticipated effect of the Project on energy
18 service rates," and these others things.

19 Q. Well, and I thank you for sort of jumping
20 ahead so I didn't have to read that.

21 And the last thing is kind of
22 interesting, too, isn't it, "an analysis of
23 the effect on energy service rates if
24 Merrimack Station were not in the mix of

1 fossil and hydro facilities operated by
2 PSNH"? I thought that was kind of curious,
3 in light of sort of how far we have come in
4 this docket and issues about all of the
5 types of options that PSNH had and that they
6 should have reviewed. Don't you think
7 that's kind of interesting in that light?

8 A. I guess you could call it interesting, or at
9 least something for them to file.

10 Q. So, is it your opinion that PSNH should have
11 provided the Commission, in September of
12 2008, with all of the justifications and
13 analyses, as you referred to them, that they
14 provided to the board of trustees?

15 A. No. I think, in 2008, based on the
16 requirement in this executive letter, they
17 should have filed exactly what the
18 Commission asked for.

19 Q. Okay.

20 MR. PATCH: These probably
21 ought to be marked as separate exhibits.
22 But we have a couple blow-ups of the charts
23 comparing the -- it's the chart that Ms.
24 Chamberlin had referred to about the

1 historical gas prices that was included in
2 the presentation to Staff, and so it's
3 already included as another exhibit. But we
4 have a blow-up of that. And then we also
5 have a blow-up of the similar graph or chart
6 that was presented to the board of trustees
7 on July 15th of 2008.

8 BY MR. PATCH:

9 Q. And so I'm going to ask you, Mr. Frantz, to
10 make a couple of observations about those
11 two charts. And as Ms. Chamberlin already
12 walked you through the chart that was
13 presented to Staff, which is the chart
14 included, I believe, to the right there --
15 and you can't see them from where you are,
16 so -- but if you've got -- have you got that
17 chart in front of you?

18 A. The one from July 30th?

19 Q. Yes, included in the presentation to Staff.

20 A. I do. If you'll just wait a second. It's
21 the one on Page 16; correct?

22 Q. Yes.

23 A. I have it.

24 Q. And as indicated, that shows, you know,

1 pretty consistently the price of coal
2 doesn't change significantly, does it, over
3 that period of time?

4 A. No. Coal is the dark line in that chart,
5 and it is fairly constant throughout the
6 range of years in the chart.

7 Q. But the price of natural gas, in green,
8 obviously fluctuates quite a bit in that
9 chart.

10 A. Yes, it does.

11 Q. So, then I'd like you to look at the
12 corollary to that, the chart that was
13 presented to the board of trustees. And I
14 don't know if you have that in front of you.
15 If you don't, we can certainly get you a
16 copy of that.

17 A. I can see it from here.

18 Q. You can?

19 A. I can.

20 Q. Okay. And so what's the time period that
21 that chart covers?

22 A. I can't see that.

23 Q. You can't see that.

24 MR. PATCH: I'm going to ask

1 Ms. Goldwasser to pass out colored copies of
2 the presentation that was made to -- in this
3 case, this was the board of trustees I think
4 that you're handing out, Ms. Goldwasser;
5 correct?

6 MS. GOLDWASSER: Yes.

7 (Ms. Goldwasser hands document to
8 witness.)

9 Q. So this is the presentation made basically
10 two weeks before the presentation to Staff.
11 And I think if you look at --

12 A. I am on Page 9. I believe that's the chart
13 you're referring to.

14 Q. Okay. Thank you. And the historical price
15 of natural gas that's reflected in that
16 chart goes back to what year?

17 A. This one goes back to 1993, and it's a 1993
18 through 2008 time frame. So the ending time
19 period appears to be exactly the same as the
20 one we saw; however, there are seven years
21 of additional data prior to the 2000 start
22 period for the one that we saw.

23 Q. And I'd like you, if you would, to read into
24 the record the narrative that is above the

1 chart at the top of that page.

2 A. Well, it starts with, "Historic Fuel
3 Spreads" and has an arrow. Would you like
4 me to read what's beside the arrow?

5 Q. Yeah, there are two green arrows there.

6 A. Yes. "Gas/coal spread has averaged \$3.18
7 per million Btu over the last 15 years, as
8 compared to the required customer break-even
9 level of \$5.29 per MMBtu," and in parens,
10 "based on current price levels." And then
11 there's a little indentation and a dot from
12 that that says, "However, post the hurricane
13 season of 2005, the spread has averaged
14 \$6.22 per MMBtu." And then there's a second
15 arrow, and it says, "Since January 2007, the
16 spread has averaged nearly \$6.63 per MMBtu,
17 and current spreads are more than
18 approximately \$9 per MMBtu."

19 Q. And so, is it fair to say that, based on
20 what they told the board of trustees, in
21 order for there to be a customer break-even
22 level on this Project, on the Clean Air
23 Project, as it says in the upper right-hand
24 corner, there had to be a spread of \$5.29

1 per MMBtu between the price of natural gas
2 and the price of coal?

3 A. That's what it says on that first arrow.
4 That is correct. "As compared to the
5 required customer break-even level of \$5.29
6 per MMBtu (based on current price levels)."

7 Q. And what it says, actually, at the very
8 beginning of that sentence, is that the
9 average over the period of time going back
10 to '93, not to 2000, as they presented to
11 Staff, but to '93, has actually been more
12 than \$2 less than that required spread; is
13 that correct?

14 A. That's correct. \$2.11 less, to be precise.

15 Q. And so, did they present this information to
16 you on the 30th of July?

17 A. Not that information.

18 Q. And to the best of your knowledge, did they
19 present it to the Commission on
20 September 2nd of '08?

21 A. I'd have to look at what was filed in '08.
22 I don't believe so. But I think that's
23 subject to check.

24 Q. We had asked PSNH in a data request about

1 the differences in the presentations, and I
2 want to show you a copy of their response.
3 It's TC 6-201.

4 MR. PATCH: And I would ask
5 that this be marked as an exhibit. Ms.
6 Goldwasser will hand it out.

7 (Ms. Goldwasser hands document to
8 witness.)

9 CMSR. HONIGBERG: Before we
10 mark that, let's talk about the numbering on
11 what we have in front of us. Do you want to
12 mark the document you were just talking
13 about with Mr. Frantz, the presentation to
14 the board of trustees, as 42?

15 MR. PATCH: We can if you'd
16 like. I can tell you where else it already
17 is in the existing ones. It's not a colored
18 copy there. So if you want to just mark it
19 separately for ease of convenience or
20 whatever, that's fine.

21 CMSR. HONIGBERG: Where is it
22 elsewhere?

23 MR. PATCH: It's 20-11, I
24 believe. It was an attachment to Mr.

1 Hachey's testimony.

2 CMSR. HONIGBERG: Let's mark
3 it here because it's a nice, clean copy.

4 MR. PATCH: Okay.

5 CMSR. HONIGBERG: So that's
6 42.

7 (The document, as described, was herewith
8 marked as Exhibit 42 for identification.)

9 MR. GLAHN: What was the
10 secretarial letter of August 22? Was that
11 41?

12 CMSR. HONIGBERG: Yeah, that
13 was 41.

14 So what Ms. Goldwasser is
15 handing around right now is 43?

16 MR. PATCH: Yes. Thank you.

17 (The document, as described, was herewith
18 marked as Exhibit 43 for identification.)

19 Q. And so the question that we asked: "Was the
20 information shared with the PUC and the OCA
21 the same as was shared with the Utilities
22 Risk and Capital Committee? If not, what
23 were the differences, and why did PSNH not
24 provide the same information both to the PUC

1 and the OCA as to the Utilities Risk and
2 Capital Committee and the Board of Trustees?

3 And the response is that, "The facts
4 shared with the PUC Staff and OCA were the
5 same as those shared with the RACC." Did I
6 read that correctly?

7 A. You read that correctly.

8 Q. Do you think that's true, given what we just
9 went through? Was the fact about the \$5.29
10 spread shared? Was the fact about the
11 historical average being \$3.18 shared? Were
12 those facts shared with the Staff and the
13 OCA?

14 MR. SHEEHAN: Just an
15 objection. Just ask one question at a time
16 so we know which one he's answering, please.

17 BY MR. PATCH:

18 Q. Okay. We'll start with the \$5.29.

19 A. We did not receive the \$5.29.

20 Q. And did you receive the \$3.18, the actual
21 spread over the historical period going back
22 to 1993? Was that a fact you received?

23 A. Not in the July 30th, 2008 submission.

24 Q. And to the best of your knowledge, you said

1 not also in the filing with the Commission
2 on September 2nd; is that correct?

3 A. I think I'd prefer to look at that
4 submission.

5 Q. You said "subject to check."

6 A. Subject to check, yeah.

7 Q. Yeah. I just want to walk you through a
8 couple of pages in that September 2nd, 2008
9 report to the PUC. I think it's marked as
10 27-9. I don't know if you have a copy in
11 front of you.

12 (Attorney Sheehan hands copy to witness.)

13 CMSR. HONIGBERG: Mr. Patch,
14 how long do you think you have? Because
15 we're getting close to 4:30 and --

16 MR. PATCH: Boy, I've got a
17 fair amount.

18 CMSR. HONIGBERG: So why don't
19 we get to -- or go to 4:30, come to a
20 breaking point, and then we'll pick it up
21 tomorrow morning.

22 MR. PATCH: Okay. Thank you.

23 A. I have it in front of me now, Mr. Patch.

24 BY MR. PATCH:

1 Q. Okay. And I would ask you to look at
2 Page 14 of that report.

3 A. Already there.

4 Q. Already there. Okay. And it talks on that
5 page about "Sensitivity analyses were
6 conducted to test the impact of changes to
7 each of the key assumptions." Do you see
8 that?

9 A. Yes. That's under III.D.

10 Q. And where does it say -- what does it list
11 as "key assumptions"?

12 A. It says, "Sensitivity analyses were
13 conducted to test the impact of changes to
14 each of the key assumptions," and in parens,
15 "capital cost, coal cost and equivalent CO2
16 allowance cost," close parens, "on the
17 overall bus bar cost to Merrimack Station."

18 Q. I don't see any mention of natural gas
19 prices in there, do you?

20 A. No.

21 Q. And then it goes on to say, "These
22 sensitivity analyses indicated the economics
23 of the Project are most sensitive to
24 variations in the future price of coal and

1 far less sensitive to variations in the
2 capital cost or equivalent CO2 allowance
3 cost." Did I read that correctly?

4 A. Yes.

5 Q. I don't see anything there about the spread
6 between the price of natural gas and coal,
7 do you?

8 A. No.

9 Q. And in a response to TransCanada 1-13, we
10 had asked you a question, whether you had
11 any knowledge about whether PSNH had
12 presented this kind of information to the
13 Legislature. And your response was, that we
14 had been provided with copies of
15 documentation that PSNH provided to the
16 Legislature. And you said at times they may
17 have had discussions with the legislators.
18 "If any of the referenced information was
19 provided through any such discussions, I
20 have no knowledge." So you don't have any
21 knowledge that they ever presented any of
22 that critical information, information that
23 they themselves said was required to make
24 the economics of the Project work, was ever

1 presented to the Legislature, do you?

2 A. I think the response stands for itself. If
3 any of the referenced information was
4 provided through any such discussions, I
5 don't have any knowledge of that.

6 (**check/fix)

7 MR. PATCH: May be a good
8 stopping point.

9 CMSR. HONIGBERG: Fair enough.
10 So we'll break now. We're scheduled to come
11 back at 9:00 tomorrow morning; correct? All
12 right.

13 MR. SHEEHAN: With the
14 understanding that parties will be here at
15 8:30 to go through any technical issues or
16 procedural issues.

17 CMSR. HONIGBERG: Okay. Good
18 point. We'll be here at 9:00. You guys
19 will be here at 8:30.

20 So, is there anything else we
21 need to do right now? Yes, Ms. Chamberlin.

22 MS. CHAMBERLIN: May I clarify
23 that it will be the OCA's witness that comes
24 after Mr. Frantz, or are we doing somebody

1 else?

2 MR. SHEEHAN: The Jacobs
3 witnesses.

4 MS. CHAMBERLIN: Oh, Jacobs.

5 CMSR. HONIGBERG: Yeah, we
6 have Jacobs on the schedule. That's
7 supposed to be in the morning after Mr.
8 Frantz. I mean, we'll see how long it goes.
9 I'm guessing, based on how we've gone today,
10 that we'll be on the schedule that was
11 published on October 10th. But we can
12 always change if we need to.

13 With that, anything else?

14 (No verbal response)

15 CMSR. HONIGBERG: All right.
16 We are adjourned. Thank you all.

17 (Whereupon the hearing was adjourned at
18 4:28 p.m., and the hearing to resume on
19 October 15, 2014, commencing at 9:00 a.m.)
20
21
22
23
24

[WITNESS: FRANTZ]

C E R T I F I C A T E

1
2 I, Susan J. Robidas, a Licensed
3 Shorthand Court Reporter and Notary Public
4 of the State of New Hampshire, do hereby
5 certify that the foregoing is a true and
6 accurate transcript of my stenographic
7 notes of these proceedings taken at the
8 place and on the date hereinbefore set
9 forth, to the best of my skill and ability
10 under the conditions present at the time.

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

18
19 

20 Susan J. Robidas, LCR/RPR
21 Licensed Shorthand Court Reporter
22 Registered Professional Reporter
23 N.H. LCR No. 44 (RSA 310-A:173)
24

DAY 1 - AFTERNOON SESSION ONLY - October 14, 2014
DE 11-250 PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE INVESTIGATION OF SCRUBBER COSTS

AND COST RECOVERY				
	92:6;105:24	63:20,23	64:5;66:15	apple (1)
\$	absorber (1) 35:19	advantage (1) 92:9	although (1) 79:2	36:1
\$132 (1) 90:11	acceptable (2) 20:1;31:5	advertisement (1) 13:20	always (9) 14:16,17;18:23; 20:11,16;31:21; 71:17;86:11;115:12	apples (7) 36:2,3,4;50:3,3; 51:1,1
\$2 (1) 107:12	accepted (1) 48:12	advice (1) 77:8	America (1) 25:19	apply (1) 16:19
\$2.11 (1) 107:14	accommodate (1) 17:5	Advocate (5) 58:8;82:24;83:1; 90:4;96:8	Amidon (5) 57:7,8,20;58:3,13	appreciate (1) 77:5
\$25 (1) 43:3	accompanied (2) 39:21;82:21	Advocate's (1) 85:12	among (1) 23:3	approach (2) 6:6;36:20
\$250 (1) 26:21	According (3) 82:17,20;83:5	affect (1) 48:22	amount (15) 9:24;10:11;11:5; 12:20;14:20;22:14; 23:22;25:7;28:16; 31:18;38:19;43:4; 62:20;86:14;111:17	approaching (1) 22:14
\$3.18 (3) 106:6;110:11,20	account (3) 28:22;29:12;98:21	affected (3) 64:17,23;65:11	amounts (1) 10:2	appropriate (2) 50:9,24
\$300 (1) 37:22	accurate (1) 14:9	afternoon (6) 8:3,4;63:18,19; 94:3,4	analogous (1) 36:23	approval (1) 20:2
\$32 (1) 26:13	achieved (2) 20:8;30:24	afterwards (1) 42:14	analyses (5) 97:3;102:13;112:5, 12,22	approving (1) 98:11
\$35 (1) 26:14	acknowledge (1) 85:14	again (8) 10:6;20:20;25:2; 32:18;33:3;48:15; 75:20;80:1	analysis (11) 23:5,11;34:6; 39:13;73:20;74:21; 75:1;84:15;97:20; 101:16,22	approximately (3) 27:1;93:11;106:18
\$354- (1) 50:1	acted (1) 62:11	agencies (1) 19:1	analyst (2) 59:16,17	area (1) 41:17
\$355 (3) 36:10;49:19;50:1	action (4) 31:8,11;32:6;70:7	agent (1) 14:19	analyst's (1) 41:18	areas (1) 66:8
\$457 (1) 26:21	activities (2) 14:24;30:12	aggregated (1) 65:13	analyze (1) 70:14	argue (1) 80:1
\$5.29 (6) 106:9,24;107:5; 110:9,18,19	actual (1) 110:20	ago (1) 47:1	annotated (2) 83:6;84:4	arguments (1) 78:13
\$6 (1) 28:9	actually (11) 27:6;33:15;45:8; 48:24;73:19;76:3,7; 94:7;100:8;107:7,11	agree (11) 47:24;57:11;66:4; 67:12,22;68:22; 76:15;85:22,24;86:6; 88:18	annotations (2) 83:11,24	around (7) 35:12;41:22;42:9; 50:22;55:11;82:5; 109:15
\$6.22 (1) 106:14	adapted (1) 30:5	agreed (1) 57:14	answered (1) 7:22	arrow (10) 90:15,19,24;92:13, 22;93:1;106:3,4,15; 107:3
\$6.63 (1) 106:16	add (4) 42:11,16,21;61:7	agreement (1) 18:7	anticipated (2) 20:14;101:17	arrows (1) 106:5
\$7 (1) 28:9	added (2) 16:24;42:6	agreements (1) 68:9	anticipating (1) 80:3	article (4) 13:21,21;14:10; 43:19
\$9 (1) 106:18	addition (1) 62:17	ahead (1) 101:20	anymore (2) 42:15,21	aside (1) 24:9
*	additional (13) 19:14,22;20:24; 21:5,6;23:7;26:11; 46:22;47:3;49:16; 70:19;83:22;105:21	Air (1) 106:22	apologize (3) 8:22;10:6;12:1	aspects (3) 39:13;73:11;74:9
***check/fix (1) 114:6	address (1) 77:3	aligned (1) 77:1	apparently (1) 81:21	assess (1) 40:22
[addresses (1) 87:17	allow (2) 47:15;49:15	appealed (1) 32:22	assessed (6) 14:1,8;52:2,6,7,16
[Laughter] (1) 33:7	addressing (1) 62:1	allowance (2) 112:16;113:2	appeals (4) 32:23;33:2;49:6; 70:3	assessing (2) 46:18;47:8
[sic] (2) 61:4;83:20	adjoined (2) 115:16,17	allowed (3) 21:3;23:19;79:22	appear (2) 61:13;83:23	assessment (7) 12:17;14:14,17; 23:4;52:14;84:5;98:2
A	adjudicative (1) 69:11	allows (2) 31:23,23	appears (5) 6:23;49:20;75:9; 83:15;105:19	asset (1) 68:13
ability (3) 22:23;24:22;30:23	adjustment (1) 20:17	almost (2) 22:19;23:13		assets (6) 61:6,10;67:20; 69:10;73:13,22
able (9) 21:13;24:3;30:24; 31:3,6;41:4;43:11; 53:22;54:17	adopt (4) 60:1,9,24;61:14	alternative (1) 64:10		assigned (1)
above (5) 42:16;43:3;90:15;	adopted (3) 61:19;66:11;96:7	alternatives (2)		
	adopting (2)			

DAY 1 - AFTERNOON SESSION ONLY - October 14, 2014
DE 11-250 PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE INVESTIGATION OF SCRUBBER COSTS

AND COST RECOVERY				
59:19 assistance (1) 18:22 Assistant (2) 60:7;61:22 associated (8) 22:3;23:12;28:10; 29:11;30:12;34:19; 36:8;46:13 assume (5) 31:9;63:22;83:10; 85:2,8 assumes (1) 71:14 Assuming (2) 33:2;80:14 assumption (2) 31:10;71:17 assumptions (5) 33:5;84:11;112:7, 11,14 attached (4) 37:7;49:21;83:19; 84:23 Attachment (5) 36:6;83:11;95:16, 17;108:24 attachments (2) 19:4;81:1 attempt (4) 7:1;70:6;72:5; 78:16 attendance (1) 82:18 attention (8) 25:20;42:19;51:4; 81:22;83:3;84:2,13; 85:15 Attorney (3) 82:22,22;111:12 audit (2) 62:6,7 August (2) 100:5;109:10 auspices (1) 69:5 available (8) 6:14;58:6,10,11, 12;62:9;63:8;64:6 average (2) 107:9;110:11 averaged (3) 106:6,13,16 avoid (2) 28:20;68:16 await (1) 31:22 aware (4) 64:3;75:1;78:7; 86:1 awareness (1) 18:13 away (3)	23:7;55:7;58:16 awkward (1) 41:14 B back (17) 6:23;8:19;13:12; 18:5;24:6;52:23; 53:7;54:3,10,11; 55:1;77:14;105:16, 17;107:9;110:21; 114:11 background (1) 59:14 backup (1) 31:16 bad (1) 33:6 balance (2) 63:1,3 balanced (1) 30:13 ballpark (1) 37:2 bar (1) 112:17 barring (1) 70:3 based (14) 32:20;39:14;49:2; 52:7;62:4,7;68:14; 74:6;89:13;102:15; 106:10,19;107:6; 115:9 bases (1) 47:1 basically (5) 20:20;21:15;54:20; 75:24;105:9 basis (8) 16:20;20:13;34:22; 39:14;67:7;68:7; 88:14;98:12 beast (1) 80:7 became (3) 20:21;21:2;41:1 Beck (1) 19:4 becoming (1) 11:8 Bedford (1) 50:6 began (1) 17:16 beginning (1) 107:8 begun (1) 19:13 behalf (1) 79:14 below (2)	42:3,15 benefit (2) 90:5,11 Benefits (4) 91:14,19,24;92:20 BERSAK (41) 6:4;7:11;8:9,13,18; 44:16,24;53:5;54:5; 56:15;57:1;63:11,13, 15,17;66:5,12;67:10, 14;70:22;71:1,7; 75:18;76:3,6,7;77:15, 18,19;79:12;80:2; 81:7,8,12,14,15;82:1; 89:19,23;94:19; 100:8 Bersak's (3) 75:23;80:2,6 beside (1) 106:4 best (5) 31:20;32:5;54:7; 107:18;110:24 better (2) 24:24;30:10 beyond (1) 27:2 bid (3) 72:15,16;73:8 bidder (6) 72:12;73:11,14,15, 18,21 bidders (2) 70:12,15 bidder's (1) 73:5 bidding (1) 73:12 bids (3) 70:14,14,15 big (3) 35:19;38:21;57:16 Bill (1) 37:10 bit (4) 11:15;34:16;36:21; 104:8 blow-up (2) 103:4,5 blow-ups (1) 102:22 Board (9) 97:22;98:1;102:14; 103:6;104:13;105:3; 106:20;108:14;110:2 boiler (1) 10:8 boilers (3) 35:5,5,7 bold (2) 92:6,7 bolster (1) 76:15	bolstering (1) 76:22 booked (1) 40:1 boost (1) 75:24 both (9) 26:4;35:8;36:5; 44:18;46:13;50:5,6; 67:15;109:24 bottom (2) 41:11;97:1 bought (1) 50:7 bounds (1) 80:15 Bow (10) 12:18,21;14:15; 15:8;22:7;23:16; 25:3,10;52:3,6 boxes (1) 41:22 Boy (2) 12:19;111:16 break (10) 15:20;43:11,12; 52:23;54:1,1,2,16; 55:11;114:10 break-even (3) 106:8,21;107:5 breaking (1) 111:20 brief (2) 59:13;61:16 briefing (6) 96:11,23;98:15; 99:3,5,22 bring (5) 22:24;24:22;29:5; 35:11;55:1 bringing (2) 25:18;55:7 broke (1) 41:8 brought (1) 51:3 Btu (1) 106:7 budget (2) 29:7,8 build (1) 21:5 building (4) 21:5;23:8;28:1; 40:6 built (1) 40:22 bullet (2) 11:19;84:14 bulleted (1) 85:10 burn (6) 9:8,16;10:1,15;	11:3,4 burns (2) 11:13;21:9 bus (1) 112:17 business (2) 40:14;47:8 buy (1) 50:7 byproduct (2) 27:6,22 C calendar (2) 40:19,20 call (3) 58:20;95:1;102:8 calls (2) 6:11,15 came (2) 38:19;59:15 can (33) 6:14;13:18;30:18; 31:20;34:12,17; 52:22;53:11,12; 54:20,20,23;55:2,8,9, 10;57:11,21;59:13; 60:12;66:12;75:18; 77:5;92:1;94:20,21; 104:15,17,18,19; 108:15,16;115:11 cancellation (1) 38:16 capable (1) 88:22 capacity (8) 10:3;52:14;67:23; 68:1,3;91:4,7;92:5 capital (10) 23:8;36:18;59:22; 84:18;86:12;90:21; 109:22;110:2; 112:15;113:2 captioned (1) 84:4 Carbon (3) 9:2;10:11;87:8 carbon-based (5) 9:9,16,19,23;10:10 cars (2) 50:7,14 case (3) 7:5,7;105:3 cash (2) 39:9;50:11 categories (2) 41:9,11 caught (1) 85:14 cautioned (1) 58:22 certain (1)

DAY 1 - AFTERNOON SESSION ONLY - October 14, 2014
DE 11-250 PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE INVESTIGATION OF SCRUBBER COSTS

AND COST RECOVERY			
19:24	114:22	combustion (1)	complicate (1)
certainly (5)	Clean (2)	67:19	73:20
38:3;66:5;93:14;	106:22;109:3	comfortable (2)	complicates (1)
97:14;104:15	clear (4)	80:10;97:19	73:7
certificate (1)	21:2;39:23;78:15;	commencing (1)	comply (2)
16:14	90:18	115:19	7:15;74:2
cetera (1)	clearly (2)	commend (1)	comprehensive (1)
10:9	78:16;89:15	44:18	101:14
Chair (3)	client (1)	comment (1)	concentrating (1)
69:17,18,24	79:15	47:6	74:23
Chairman (3)	close (5)	comments (10)	concept (1)
33:24;65:19;75:16	17:21;43:14;47:7;	46:15,16,17;47:9,	34:11
challenged (1)	111:15;112:16	10,20;48:8,12;49:4,4	concern (5)
46:23	closely (1)	commercial (3)	22:5;24:14,16;
challenges (2)	60:18	46:3,5;47:16	53:20;55:7
22:21;72:10	closing (1)	Commission (22)	concerned (8)
challenging (3)	70:18	57:9,16;59:12,15,	20:1,6;22:8;23:16;
14:13,21;30:17	Club (1)	18,22;60:7;61:3,8;	25:20;26:6;55:3;
CHAMBERLIN (13)	52:1	69:17;70:17;74:1;	96:19
58:9;86:20,21,24;	CMSR (69)	98:14,20;99:16;	concerning (2)
89:21,24;90:1;94:6;	7:9,17;8:15;12:2,5,	100:1;101:10,12;	62:2;69:19
102:24;103:11;	8,12;13:8,11;15:17,	102:11,18;107:19;	concerns (4)
114:21,22;115:4	23;16:1,3;33:23;	111:1	23:2;46:14;48:4;
chance (2)	34:1,3;44:8,11,14;	Commissioner (3)	58:5
52:23;80:2	52:18;53:15,19,24;	45:4;49:18;51:3	conclude (1)
change (10)	54:8,14;55:19;56:13,	Commissioners (5)	92:16
17:10;20:18;24:19;	17;57:4,18;58:1,18;	7:16;44:19;61:17;	concluded (1)
25:17;26:18,19;59:8;	63:9,13;66:3;67:2,	75:21;81:10	90:4
61:11;104:2;115:12	11;70:22;71:6;76:6,	Commission's (1)	concludes (1)
changed (1)	10,19;77:10,13,18;	62:6	63:5
18:15	78:11,21;79:18,21;	committed (1)	conclusion (7)
changes (5)	80:17;81:7,11;86:18;	38:12	18:8;88:14,22;
60:22;97:16;98:6;	93:22;94:13;100:17,	Committee (4)	89:11;92:3,21,24
112:6,13	22;101:2;108:9,21;	69:19;97:22;	conclusions (2)
chart (15)	109:2,5,12;111:13,	109:22;110:2	48:2,13
36:8;93:19;102:23;	18;114:9,17;115:5,15	common (2)	Concord (1)
103:5,12,13,17;	CO2 (4)	65:5,12	43:19
104:4,6,9,12,21;	9:24;10:22;112:15;	companies (2)	condition (2)
105:12,16;106:1	113:2	6:10;27:14	91:11,16
charts (3)	coal (26)	Company (10)	conditions (6)
36:5;102:22;	9:9;10:19,20,23;	6:5;18:23;21:7,10;	90:6,16,23;91:3,
103:11	11:3,6,7,10,13;25:18;	23:20;63:12;66:17,	23;92:19
check (5)	35:14;74:24;78:1,9;	22;76:2;98:9	conducted (2)
33:22;98:11;	84:10;85:21;86:2,9;	company's (5)	112:6,13
107:23;111:5,6	92:8;93:8;104:1,4;	36:18,19,19;74:4;	conferred (2)
chemistry (2)	107:2;112:15,24;	98:1	15:20;60:19
30:14,14	113:6	compare (8)	conferring (2)
chief (1)	coal/gas (2)	26:2;34:21;36:2,3;	7:16;81:10
59:18	75:2,11	50:3,14,20;51:1	confidential (3)
choice (1)	coal/natural (1)	compared (3)	96:11,22;97:1
24:12	84:17	23:7;106:8;107:4	confusion (2)
chore (1)	cognizant (1)	comparing (3)	8:22;10:7
59:24	15:21	23:5;34:15;102:23	consider (3)
Chung (4)	collecting (1)	comparison (1)	48:7;68:5;71:21
53:11,23;54:10;	29:13	50:16	consideration (1)
55:7	colored (2)	complete (2)	62:10
cited (1)	105:1;108:17	6:8;55:23	considered (1)
77:19	column (1)	completed (1)	27:11
cites (1)	42:13	40:4	consistently (1)
33:19	columns (1)	complex (1)	104:1
claim (1)	42:14	30:14	consisting (1)
33:10	combusted (2)	compliance (1)	68:5
clarify (1)	9:23;10:11	9:10	constant (1)
			104:5
			constituencies (1)
			18:1
			constrained (1)
			35:10
			construct (2)
			16:8;24:12
			construction (9)
			17:18;20:21;21:11;
			25:15;26:5,6;62:4,
			12;88:11
			Consultancy (4)
			58:6;60:18;62:5;
			74:8
			consultant (2)
			62:5;74:7
			Consumer (6)
			58:7;82:23;83:1;
			85:11;90:3;96:8
			context (2)
			34:13;99:2
			continue (4)
			22:24;29:23;30:10;
			68:2
			continuing (2)
			22:5;23:12
			continuously (1)
			22:19
			contract (9)
			27:16;39:8,8,9,10,
			11,15,19;40:5
			contract-by-contract (1)
			39:14
			contractor (3)
			18:20,21;40:3
			contracts (3)
			40:13;70:16;72:14
			contradict (1)
			78:17
			control (3)
			22:23;23:20;24:22
			convenience (1)
			108:19
			conviction (1)
			20:13
			cooling (1)
			48:22
			copies (3)
			82:5;105:1;113:14
			copy (11)
			12:3;83:6,20;
			100:4,10;104:16;
			108:2,18;109:3;
			111:10,12
			corner (1)
			106:24
			corollary (1)
			104:12
			correctly (8)
			8:7;18:18;21:12;
			78:24;92:10;110:6,7;
			113:3
			correlation (1)

DAY 1 - AFTERNOON SESSION ONLY - October 14, 2014
DE 11-250 PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE INVESTIGATION OF SCRUBBER COSTS

AND COST RECOVERY				
<p>38:6 cost (30) 9:10;21:21;26:22; 28:10,18;29:4,4,11; 32:3;34:6;36:9,13, 18;38:16;39:18,20; 50:14;59:22;84:18, 18;86:2;90:21;97:11; 101:15;112:15,15,16, 17;113:2,3 cost-effective (5) 87:2,12,24;91:5,8 costs (31) 9:3;22:1,22;23:2; 26:11;31:24;35:16; 37:22;38:5,12;39:24; 40:1,10,12,16;41:6,8, 15,16;50:16,20,23; 51:1;62:13,14,17,23; 63:2;73:9;86:12; 88:11 counsel (6) 6:1;43:9;44:14; 52:1;54:23;94:23 counseled (2) 65:21;66:2 count (1) 33:22 counterparts (1) 10:15 country (3) 48:11;50:22;51:20 couple (9) 8:5;11:17;41:21; 45:1;51:2;67:7; 102:22;103:10;111:8 course (4) 20:11;32:6;59:8; 70:7 Court (6) 24:8;33:11,18; 58:22;73:3;92:23 courtrooms (1) 80:9 covers (1) 104:21 create (3) 27:6;68:11;72:10 created (1) 62:21 credit (3) 28:24;29:11,18 criteria (1) 52:13 critical (1) 113:22 criticize (1) 76:14 cross (9) 65:23,24;75:17,22; 76:5,18;78:20;80:11; 81:4 CROSS-EXAMINATION (8)</p>	<p>8:1;16:7;61:18; 63:8,16;76:23;86:23; 94:1 curiosity (1) 33:9 curious (2) 19:8;102:2 current (5) 12:17;45:6;106:10, 17;107:6 currently (3) 14:23;16:17;61:3 customarily (1) 57:15 customary (2) 40:9;41:16 customer (7) 32:3;84:16;90:5; 92:19;106:8,21; 107:5 customers (13) 28:24;29:14;32:6; 37:21;38:6;52:9,15; 63:4;68:8;69:13; 90:11,22;91:14 cycles (1) 43:22 cyclone-fired (1) 35:7</p>	<p>89:9 deem (1) 73:15 deemed (2) 31:5;70:6 default (1) 62:15 deferral (1) 29:14 deferred (1) 29:12 defined (1) 64:24 definitely (2) 53:11;54:5 delay (1) 86:12 Delightful (1) 15:23 depend (1) 72:13 depending (3) 10:2;11:5;32:4 depends (1) 10:24 deposition (7) 34:4,5;36:6;49:21; 56:4,18,20 deputy (1) 82:24 DES (4) 17:22;18:3;19:20, 21 described (9) 13:6;82:6;95:5; 96:3,4,7;101:3;109:7, 17 description (2) 91:18;92:17 descriptive (1) 101:11 design (5) 10:3;11:6;21:11; 35:21;59:22 designed (4) 41:2;51:9,19;97:2 desire (1) 52:20 Despite (1) 90:20 detail (5) 18:6;39:23;40:21; 74:8;98:9 detailed (2) 101:11,15 details (1) 45:2 Determination (2) 61:9;73:24 determine (5) 32:5;46:19;69:11; 70:10,15 determined (1)</p>	<p>27:1 develop (1) 40:21 developed (6) 28:13;38:8,23; 39:17,24;41:6 developing (1) 39:7 diameter (1) 35:20 diamond (1) 51:9 diamonds (1) 51:8 difference (3) 11:8;24:20;43:2 differences (4) 86:1;93:7;108:1; 109:23 Different (13) 10:1,2;11:4;21:6, 10;22:4;34:17;36:21; 47:4;65:4;77:9;90:8; 95:15 different-size (1) 35:5 difficult (2) 62:22;65:16 difficulties (1) 68:12 diligence (2) 70:13;73:6 dioxide (6) 10:11;87:2,7,8,12; 88:1 direct (5) 15:12;59:1;78:23; 80:15;91:15 directed (1) 41:21 direction (2) 20:4,12 directly (3) 19:1;60:15;87:16 Director (6) 59:11,20;60:8; 61:22;100:6;101:10 directors (1) 98:2 disagreement (1) 94:23 discharge (11) 16:24;17:2,8,15; 18:4;19:15;20:3,6; 21:14;30:19;31:14 discharged (2) 21:3;31:6 disclose (1) 75:10 disclosures (1) 89:15 discount (1) 35:23</p>	<p>discovery (1) 80:15 discredit (1) 76:8 discuss (1) 25:6 discussed (3) 41:2,9;84:10 discusses (1) 74:20 discussing (5) 64:9;81:16;82:13; 85:10;88:16 Discussion (5) 13:10;26:17;44:5; 74:23;77:12 discussions (11) 15:4,5,7;18:12; 22:6;54:15;74:6; 89:8;113:17,19; 114:4 dispatch (1) 10:9 dispose (1) 28:18 distinction (1) 77:5 divest (1) 72:5 divested (3) 66:17;68:22,24 divestiture (15) 61:5;64:10;65:9; 66:14;67:1,15;68:15; 69:8,12;70:6,11;71:3, 8,14;72:19 Division (5) 59:11,20;60:8; 61:22;62:7 docket (4) 13:19;61:8;98:17; 102:4 document (28) 13:6,15,19;21:20, 24;33:16;37:24;41:4; 43:1,6;69:11;82:6; 83:13;84:7;87:15,21; 90:17;91:12;92:2; 95:5;100:13,16; 101:3;105:7;108:7, 12;109:7,17 documentation (1) 113:15 documents (1) 88:15 done (8) 7:18;23:5;37:2; 43:21;55:4;58:19; 62:4;97:12 dot (1) 106:11 doubt (1) 75:17</p>
	D			

DAY 1 - AFTERNOON SESSION ONLY - October 14, 2014
DE 11-250 PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE INVESTIGATION OF SCRUBBER COSTS

AND COST RECOVERY				
<p>down (10) 20:18;22:5;24:5,9; 25:2;36:22;40:8; 53:3;57:19;90:19</p> <p>dozen (1) 30:2</p> <p>dozens (1) 40:23</p> <p>draft (17) 16:22;34:5;35:6; 45:23;46:8,9,10,12, 20;47:2,4,9,10,11,20, 23;48:5</p> <p>drafting (1) 60:13</p> <p>drawn (1) 42:19</p> <p>ductwork (1) 35:12</p> <p>due (5) 9:10;26:8;62:17; 70:13;73:6</p> <p>duly (1) 58:21</p> <p>duplication (1) 94:11</p> <p>during (9) 6:17;18:11;43:12; 54:16;55:22;59:8; 62:9;65:21;85:10</p> <hr/> <p align="center">E</p> <hr/> <p>earlier (5) 29:10;32:16;36:12; 37:19;42:19</p> <p>earned (1) 28:22</p> <p>ease (1) 108:19</p> <p>easier (1) 100:24</p> <p>easily (1) 20:8</p> <p>easy (1) 33:21</p> <p>economic (8) 23:5;48:1;69:12; 73:16;74:21;90:22; 99:8,9</p> <p>economics (5) 84:16;86:3,7; 112:22;113:24</p> <p>economist (2) 59:17,18</p> <p>educational (1) 78:6</p> <p>effect (4) 72:18;101:13,17, 23</p> <p>effectively (1) 67:22</p> <p>effects (1)</p>	<p>63:1</p> <p>efficiencies (1) 11:7</p> <p>efficiency (2) 10:9,24</p> <p>effluent (11) 18:8;19:17;20:6; 21:2;23:18,23;30:6, 19;31:5,18;46:23</p> <p>effort (3) 7:12;35:1;79:12</p> <p>efforts (3) 6:18;18:13;74:2</p> <p>eight (4) 30:3;33:20;34:18; 80:24</p> <p>either (1) 40:1</p> <p>elaborate (1) 66:9</p> <p>Electric (5) 59:11,19;60:8; 61:22;69:18</p> <p>electricity (2) 9:20;52:9</p> <p>element (1) 51:20</p> <p>elements (4) 19:16,24;35:14,24</p> <p>else (12) 10:8;43:8;44:9,12; 53:16;58:2;63:14; 100:19;108:16; 114:20;115:1,13</p> <p>elsewhere (1) 108:22</p> <p>emerge (1) 48:21</p> <p>emerged (1) 48:21</p> <p>emerging (1) 9:11</p> <p>emissions (8) 35:9;48:18;62:1; 65:5,14;87:1,10,17</p> <p>emit (3) 9:23;10:10,23</p> <p>emitting (1) 10:14</p> <p>emphasis (1) 75:1</p> <p>emphasize (1) 85:20</p> <p>end (3) 44:7;54:3;57:10</p> <p>ended (1) 11:24</p> <p>ending (1) 105:18</p> <p>ends (1) 12:4</p> <p>energy (9) 9:24;10:12,22;</p>	<p>68:8;96:10,14,18; 101:17,23</p> <p>engineering (2) 21:10;36:20</p> <p>engineers (1) 38:24</p> <p>enough (1) 114:9</p> <p>ensue (1) 89:8</p> <p>entered (2) 23:2,3</p> <p>entire (5) 7:4;20:11;57:2; 71:8;94:8</p> <p>entirety (2) 68:21;90:20</p> <p>entitled (1) 98:5</p> <p>entries (1) 41:22</p> <p>EPA (19) 16:14,21;17:1; 18:12,16;20:2;45:13; 46:7,10,16;47:1,7,11, 20,22;48:16,20,23; 49:14</p> <p>EPC (2) 18:20,21</p> <p>equal (3) 10:8;34:22;48:3</p> <p>equation (1) 30:15</p> <p>equipment (6) 19:22;21:6;35:20; 46:22;47:18;50:21</p> <p>equivalent (2) 112:15;113:2</p> <p>Eric (1) 54:7</p> <p>escaped (1) 64:14</p> <p>especially (2) 23:16;74:22</p> <p>essentially (1) 66:24</p> <p>establishing (1) 71:2</p> <p>estimate (6) 14:4;26:19;27:2; 34:6;50:2;101:15</p> <p>estimated (1) 26:22</p> <p>et (1) 10:9</p> <p>EVA (1) 6:23</p> <p>even (6) 6:21;20:3;32:18; 45:19;69:9;99:21</p> <p>event (2) 17:9;96:19</p> <p>eventually (4)</p>	<p>18:7;20:19;41:1,8</p> <p>everybody (4) 52:23;53:14,16; 58:2</p> <p>everyone (2) 9:7,12</p> <p>everyone's (1) 9:3</p> <p>evidence (1) 79:6</p> <p>exact (1) 55:23</p> <p>exactly (5) 65:23;90:7;92:11; 102:17;105:19</p> <p>EXAMINATION (3) 44:23;59:1,9</p> <p>example (3) 34:23;50:23;57:13</p> <p>exceeded (1) 78:23</p> <p>Except (1) 94:22</p> <p>excluding (2) 9:13,13</p> <p>excruciating (2) 18:6;40:21</p> <p>Excuse (1) 22:16</p> <p>Executive (4) 90:19;100:6;101:9; 102:16</p> <p>Exhibit (31) 8:7,23;13:4,7;34:4; 36:5;37:5,5,18;38:8, 21,23;56:5;57:15; 82:2,8;89:22,23,24; 90:8;94:12,14,17; 95:2,6;100:18;101:4; 103:3;108:5;109:8, 18</p> <p>Exhibits (16) 37:10;49:22;53:1; 55:4,21;56:3,6,20,21, 22,24;57:2,7,12; 89:19;102:21</p> <p>exist (1) 45:19</p> <p>existing (4) 16:14,16;49:11; 108:17</p> <p>expect (6) 76:13;80:9;97:18; 98:9;99:9,12</p> <p>expectation (3) 23:15;74:11,15</p> <p>expected (8) 32:15;90:5,16,23; 91:3,11,23;92:18</p> <p>expend (1) 98:4</p> <p>expense (2) 28:21;29:7</p>	<p>expenses (2) 32:2;40:11</p> <p>experience (4) 21:8;32:20;88:23, 24</p> <p>expert (1) 48:9</p> <p>expertise (2) 89:4,7</p> <p>experts (2) 18:22;39:2</p> <p>expiration (1) 45:15</p> <p>expired (2) 45:8;46:7</p> <p>explain (4) 9:6;34:12;50:19; 55:2</p> <p>explains (1) 39:22</p> <p>explanation (1) 54:22</p> <p>exploring (2) 20:7,16</p> <p>extensive (1) 46:15</p> <p>extent (2) 15:8;80:12</p> <p>extra (1) 25:20</p> <p>extremely (2) 29:24;65:16</p> <hr/> <p align="center">F</p> <hr/> <p>Fabish (9) 7:24;8:2,11,21; 12:9,14;13:3,13; 15:15</p> <p>facilities (9) 9:8,18;10:1,13; 23:1,17;30:2;37:3; 102:1</p> <p>facility (19) 11:1;17:5,11,24; 19:11;20:5;24:2,3; 25:18;26:4,5;29:19, 22;47:14;52:2,11; 74:5,12,14</p> <p>fact (8) 51:21;67:15;85:19, 24;97:19;110:9,10,22</p> <p>factor (7) 10:4;52:14;68:1,3; 91:4,8;92:5</p> <p>factored (1) 73:17</p> <p>factors (1) 10:3</p> <p>facts (3) 30:22;110:3,12</p> <p>failed (3) 71:16,22;72:9</p>

DAY 1 - AFTERNOON SESSION ONLY - October 14, 2014
DE 11-250 PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE INVESTIGATION OF SCRUBBER COSTS

AND COST RECOVERY				
<p>fair (15) 67:4;80:20;81:6; 85:14;87:13;88:12; 89:11;90:6;92:16; 95:21;97:23,24; 106:19;111:17;114:9</p> <p>fairly (3) 92:4;99:12;104:5</p> <p>fall (1) 43:21</p> <p>familiar (4) 14:20;19:6;74:17, 19</p> <p>fans (1) 35:7</p> <p>far (8) 22:10;32:1,2;55:2; 78:13;84:17;102:3; 113:1</p> <p>favor (1) 76:1</p> <p>features (1) 35:22</p> <p>February (1) 46:17</p> <p>federal (3) 9:11;18:24;28:14</p> <p>feel (1) 33:5</p> <p>fees (1) 22:3</p> <p>felt (1) 19:24</p> <p>few (4) 34:2;47:1;86:22; 95:23</p> <p>few-minute (1) 52:22</p> <p>FGD (2) 19:14;27:5</p> <p>field (2) 34:23;48:10</p> <p>fifth (1) 92:13</p> <p>figure (3) 37:14;42:16;52:20</p> <p>figures (3) 42:4,7,15</p> <p>file (1) 102:9</p> <p>filed (8) 19:5;60:6,14;62:6; 79:4;99:19;102:17; 107:21</p> <p>filing (4) 27:20,20;61:21; 111:1</p> <p>fill (1) 45:1</p> <p>filtration (2) 19:22;20:24</p> <p>final (10) 32:4,15,19,21;</p>	<p>46:19;48:24;49:6,8; 51:24;70:16</p> <p>finally (1) 45:23</p> <p>finance (1) 50:13</p> <p>financial (2) 73:23;84:5</p> <p>financing (1) 50:16</p> <p>find (5) 6:16;7:1,8,13;93:3</p> <p>fine (5) 53:17;55:8;75:6; 101:1;108:20</p> <p>finish (6) 43:14;52:24;53:11; 54:4,6;71:9</p> <p>first (16) 9:5;31:8,10,14; 40:10;44:18;45:6; 51:18;59:16,17; 63:10,12;66:6;79:13; 95:24;107:3</p> <p>five (1) 16:18</p> <p>flaws (1) 46:13</p> <p>fleet (2) 68:5,21</p> <p>flexibility (2) 31:4,24</p> <p>flow (1) 39:10</p> <p>fluctuates (1) 104:8</p> <p>flying (1) 58:10</p> <p>focus (1) 18:14</p> <p>focused (1) 17:18</p> <p>folks (1) 6:15</p> <p>follow (1) 70:2</p> <p>following (1) 70:7</p> <p>Footnote (1) 61:1</p> <p>force (1) 49:11</p> <p>formally (2) 18:15;60:24</p> <p>forth (1) 18:6</p> <p>forum (1) 41:3</p> <p>forward (3) 30:10;58:14;67:13</p> <p>fossil (1) 102:1</p> <p>fossil-related (1)</p>	<p>68:12</p> <p>found (1) 61:2</p> <p>four (9) 39:4;41:9,11,19, 20;42:3,15;87:5,6</p> <p>fourth (1) 90:19</p> <p>frame (5) 62:9;70:21;71:12; 73:8;105:18</p> <p>Franklin (1) 25:5</p> <p>Frantz (25) 53:10;55:9,9; 58:20,21,24;59:4; 61:11;63:10,18; 66:11;78:19;79:8,14; 81:2;82:11;86:17,20; 93:23;94:3;95:8; 103:9;108:13; 114:24;115:8</p> <p>F-R-A-N-T-Z (1) 59:4</p> <p>Frantz's (1) 76:1</p> <p>frequency (1) 28:4</p> <p>fresh (1) 53:12</p> <p>friend (1) 73:22</p> <p>friendly (9) 58:15;65:22,24; 75:22;76:5,18,23; 78:20;80:11</p> <p>Frignoca (2) 15:18,19</p> <p>front (6) 92:17;103:17; 104:14;108:11; 111:11,23</p> <p>fuel (9) 9:9,19;10:10,15,16, 18;93:3,15;106:2</p> <p>fuels (2) 9:16,23</p> <p>fulfill (1) 52:10</p> <p>full (8) 32:24;36:17;38:18; 49:11;57:7;80:20; 81:5;98:14</p> <p>fully (1) 29:23</p> <p>function (2) 30:10;52:8</p> <p>functional (1) 29:23</p> <p>functioning (1) 30:9</p> <p>further (3) 20:18;21:6;67:3</p>	<p>future (2) 47:23;112:24</p> <hr/> <p align="center">G</p> <hr/> <p>Gas (20) 6:16,22;9:9;10:23; 74:24;78:1,8;84:10, 17;85:21;86:2,9; 92:9;93:8;103:1; 104:7;105:15;107:1; 112:18;113:6</p> <p>gas/coal (2) 81:19;106:6</p> <p>gas-fired (2) 10:13;11:4</p> <p>gather (1) 54:14</p> <p>gave (2) 16:9;61:14</p> <p>gears (1) 11:15</p> <p>general (4) 12:23;59:23;87:4; 97:15</p> <p>generally (5) 10:14;28:5;35:18; 75:4,14</p> <p>generated (1) 34:9</p> <p>Generating (8) 9:8,20;10:13;61:6, 6;67:19;68:13,21</p> <p>generation (7) 9:14,14,15,15; 61:10;68:5;72:19</p> <p>Georgia-Pacific (1) 27:16</p> <p>given (6) 6:21;14:6;39:19; 77:8;90:2;110:8</p> <p>glad (1) 14:3</p> <p>GLAHN (1) 109:9</p> <p>goes (6) 31:2;70:18;105:16, 17;112:21;115:8</p> <p>GOLDWASSER (13) 8:17;41:21;53:20, 21;100:9,13;105:1,4, 6,7;108:6,7;109:14</p> <p>Goldwasser's (2) 7:19;95:3</p> <p>Good (13) 8:3,4;33:5;50:15; 63:18,19;67:12; 79:14;94:3,4;100:21; 114:7,17</p> <p>good-faith (1) 7:12</p> <p>Governor's (2) 96:10,17</p>	<p>graph (2) 51:8;103:5</p> <p>graphs (3) 34:8,12;51:3</p> <p>great (3) 22:14;44:20;66:10</p> <p>Greatly (1) 22:13</p> <p>green (2) 104:7;106:5</p> <p>group (1) 98:3</p> <p>guarantees (4) 17:23;18:2;51:11, 15</p> <p>guess (12) 13:5;14:3;27:11; 34:23;45:17;51:16; 56:3;79:2,21;96:4, 16;102:8</p> <p>guessing (1) 115:9</p> <p>guidance (1) 39:1</p> <p>guys (1) 114:18</p> <p>gypsum (11) 25:12;27:7,8,12, 21;28:6,12,13,16,23; 29:19</p> <hr/> <p align="center">H</p> <hr/> <p>Hachey (4) 74:20;75:2;78:18; 79:4</p> <p>Hachey's (8) 74:17;75:8;76:8, 14;77:20;80:21; 81:17;109:1</p> <p>half (4) 17:21;30:2;71:10, 10</p> <p>Hampshire (5) 27:17;33:11,17; 52:3,9</p> <p>hand (4) 28:1;95:3;100:10; 108:6</p> <p>handed (1) 89:20</p> <p>handful (1) 30:6</p> <p>handing (2) 105:4;109:15</p> <p>hands (4) 100:13;105:7; 108:7;111:12</p> <p>handwriting (1) 83:14</p> <p>handwritten (1) 83:21</p> <p>handy (1)</p>

DAY 1 - AFTERNOON SESSION ONLY - October 14, 2014
DE 11-250 PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE INVESTIGATION OF SCRUBBER COSTS

AND COST RECOVERY				
100:11 hanging (1) 72:11 happen (3) 20:7;32:12;52:5 happening (1) 56:5 happy (2) 100:2,12 hard (1) 79:6 hard-pressed (1) 43:4 hardware (1) 36:22 Hatfield (1) 82:23 haul (2) 22:11;23:12 hauling (3) 21:15;23:6;26:2 head (1) 12:21 hear (2) 7:20;75:22 hearing (5) 54:13;56:23;68:14; 115:17,18 hearings (1) 89:18 heart (1) 35:19 held (1) 69:5 help (2) 13:16;77:2 helpful (1) 13:17 herewith (6) 13:6;82:6;95:5; 101:3;109:7,17 high (5) 25:23;28:4;91:4,7; 92:4 higher (2) 71:22;72:8 high-level (2) 97:10;99:12 highlighted (2) 33:20,21 hired (1) 20:19 historic (6) 91:4,7,18;93:2,15; 106:2 historical (4) 103:1;105:14; 110:11,21 historically (3) 91:21;92:8,17 history (2) 16:13;93:18 Hmm-hmm (1)	75:15 hold (2) 42:10;90:8 HONIGBERG (71) 7:9,17;8:15;12:2,5, 8,12;13:8,11;15:17, 23;34:1,3;44:8,11,14, 17;49:19;51:3;52:18; 53:15,19,24;54:8,14; 55:19;56:13,17;57:4, 18;58:1,18;63:7,9,13; 66:3;67:2,11;70:22; 71:6;76:6,10,19; 77:10,13,18;78:11, 21;79:18,21;80:17; 81:7,9,11;86:18; 93:22;94:13;100:17, 22;101:2;108:9,21; 109:2,5,12;111:13, 18;114:9,17;115:5,15 hook (1) 37:21 hoping (1) 57:18 hour (1) 23:13 hours (3) 22:19,20;23:13 huge (1) 28:20 humor (1) 12:13 hurricane (1) 106:12 hydro (2) 9:14;102:1 hydros (5) 66:24;67:18;68:6, 13,24	immobilization (1) 40:12 impact (3) 73:5;112:6,13 impeach (1) 80:13 importance (1) 85:20 important (1) 99:13 imposed (1) 47:3 impractical (2) 65:3;68:7 include (4) 36:15;47:12;50:15; 74:3 included (8) 62:15,20;74:24; 95:16;103:1,3,14,19 includes (2) 62:2;88:3 including (6) 6:11;60:20;61:24; 83:20;86:12;87:23 increase (5) 9:2;17:14;26:21; 88:16;97:11 increased (2) 26:8;88:10 increases (2) 84:19;90:21 incremental (7) 9:10;16:23;17:8, 14;25:21;35:15,21 incurred (2) 62:13,14 indentation (1) 106:11 independent (1) 95:19 indicate (2) 64:15;78:6 indicated (10) 16:6;17:19;29:10; 32:16;49:2;63:20; 86:6;99:17;103:24; 112:22 individually (1) 95:1 induced (1) 35:6 industries (1) 30:5 industry (1) 40:14 infer (1) 88:20 inform (1) 21:20 information (34) 7:8,13;22:10;41:7; 58:14;62:9;75:10;	77:23;81:19;88:19; 89:5,13,16;97:8,10, 15;98:6,8,10,18,22, 24;99:6,13,20; 107:15,17;109:20,24; 113:12,18,22,22; 114:3 initial (1) 70:2 initiate (1) 70:12 inputs (1) 46:18 inquired (1) 78:4 insignificant (1) 42:18 install (4) 21:4;47:17;71:19; 72:2 installation (5) 64:11;65:9;68:16; 74:4;101:15 installed (3) 45:21;47:18;72:24 installing (3) 64:6;72:6;73:9 instance (1) 31:14 instructions (1) 15:21 intent (1) 18:13 intentions (1) 31:22 interest (2) 46:21;63:2 interested (2) 47:19;73:21 interesting (3) 101:22;102:7,8 interests (2) 63:4;69:13 interfere (1) 58:17 intermittent (1) 17:2 internal (1) 35:22 INTERROGATORIES (2) 16:3;34:3 interrupts (3) 24:8;73:3;92:23 intervenor (1) 66:1 into (13) 23:2,3;27:19;41:8; 46:3,4;47:15;66:24; 72:18;73:17;79:9; 98:21;105:23 introduced (1) 57:14 investigation (1)	70:8 involved (4) 14:21,23;25:8; 72:19 involvement (1) 60:12 IR (1) 61:4 issuances (1) 49:5 issue (11) 18:19;21:13;25:23, 24;45:23;46:8;47:22; 48:24;62:22;68:23; 80:21 issued (12) 16:17,21;32:19,21; 38:14,18;39:9,15; 45:12;46:10,10;49:8 issues (9) 16:13;22:22;54:18; 60:20;76:1;79:13; 102:4;114:15,16 issuing (1) 48:16 item (2) 29:9;85:10 items (1) 34:18
I				
	Iacopino (6) 15:24;16:1,3; 33:23;44:12;45:4 ID (2) 53:1;57:6 ID'd (1) 56:7 idea (3) 13:2;44:2;48:23 identification (8) 13:7;55:21;57:3; 82:7;95:6;101:4; 109:8,18 identify (1) 34:18 Ignatius (1) 69:17 IID (1) 112:9 immediately (1) 13:23			
J				
			Jacobs (8) 58:6;60:18;62:5; 74:7,16;115:2,4,6 January (3) 19:9;95:13;106:15 jargon (1) 41:18 job (1) 44:20 Johnson (1) 25:22 joy (1) 60:1 July (8) 72:4;73:1;82:14; 96:8;103:7,18; 107:16;110:23 jump (2) 91:17,22 jumping (1) 101:19 June (6) 19:3;36:7;42:11, 12;45:8;56:1 justification (1) 97:21 justifications (2) 97:3;102:12	
K				

DAY 1 - AFTERNOON SESSION ONLY - October 14, 2014
DE 11-250 PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE INVESTIGATION OF SCRUBBER COSTS

AND COST RECOVERY				
<p>keep (2) 95:8;97:15</p> <p>kept (1) 22:1</p> <p>key (5) 28:11;52:12;112:7, 11,14</p> <p>kind (9) 6:8;50:18,19;69:1; 73:8;101:21;102:2,7; 113:12</p> <p>knew (2) 37:9;88:9</p> <p>knocked (1) 57:19</p> <p>knowing (1) 17:7</p> <p>knowledge (11) 14:9;15:1,9,11; 51:18;107:18; 110:24;113:11,20,21; 114:5</p> <p>known (1) 27:7</p> <hr/> <p align="center">L</p> <hr/> <p>labor-intensive (1) 39:11</p> <p>lack (1) 22:23</p> <p>large (6) 24:4;28:1,16;37:4; 39:21;86:14</p> <p>largely (1) 59:16</p> <p>last (8) 16:17;42:13;43:21, 21;84:14;95:17; 101:21;106:7</p> <p>Law (8) 64:16;65:1;71:5, 19;72:2,18;73:15; 74:3</p> <p>Lawyer's (1) 12:12</p> <p>lead (2) 60:16;68:20</p> <p>learn (1) 17:13</p> <p>least (4) 31:7;55:13;73:12; 102:9</p> <p>left (6) 13:22,24;66:23; 67:17;81:16;94:6</p> <p>legal (1) 46:14</p> <p>legally (1) 73:19</p> <p>legislation (2) 61:24;62:8</p> <p>Legislative (2)</p>	<p>69:19;71:4</p> <p>legislators (2) 88:9;113:17</p> <p>Legislature (12) 88:7,15,18,21;89:1, 3,6,12,16;113:13,16; 114:1</p> <p>length (1) 49:3</p> <p>lengthy (1) 16:13</p> <p>less (8) 22:13,14;23:22; 44:21;84:17;107:12, 14;113:1</p> <p>less-than-full (1) 62:20</p> <p>letter (7) 69:17,23;100:5,10; 101:9;102:16;109:10</p> <p>lettering (1) 92:7</p> <p>level (6) 19:24;48:3;74:13; 106:9,22;107:5</p> <p>levelize (1) 50:24</p> <p>levelized (4) 34:11,13,14;37:1</p> <p>levels (3) 32:22;106:10; 107:6</p> <p>liabilities (2) 40:2;41:15</p> <p>liability (1) 73:16</p> <p>Liberty (1) 7:6</p> <p>lieu (3) 64:6;65:9;72:6</p> <p>light (9) 45:18;66:22;71:4, 18;72:1,22;98:7; 102:3,7</p> <p>likelihood (2) 32:10;72:8</p> <p>likely (2) 6:21;73:14</p> <p>limit (2) 19:15;48:17</p> <p>limitations (1) 55:13</p> <p>limited (1) 87:24</p> <p>Line (9) 9:1;11:20,24;12:4; 35:13;43:2;64:12; 87:19;104:4</p> <p>liquid (6) 10:16,20,21;22:24; 24:21;31:19</p> <p>list (2) 55:24;112:10</p>	<p>listed (4) 91:6,7,13,15</p> <p>listening (1) 67:5</p> <p>literally (1) 74:12</p> <p>litigated (1) 69:24</p> <p>little (6) 11:15;13:20;32:17; 41:13;95:14;106:11</p> <p>live (1) 50:5</p> <p>loading (1) 22:18</p> <p>Loan (1) 50:12</p> <p>locations (1) 22:4</p> <p>log (1) 22:2</p> <p>logistic (1) 22:21</p> <p>long (7) 33:20;36:5;39:22; 49:12;69:20;111:14; 115:8</p> <p>longer (2) 70:20;71:10</p> <p>Long's (2) 34:4;49:21</p> <p>look (20) 11:16;13:18,20,22; 22:9;23:11;42:23; 43:11;61:1;73:19; 75:7;82:12;100:2,9, 12;104:11;105:11; 107:21;111:3;112:1</p> <p>looked (4) 52:13;57:13;74:8; 95:22</p> <p>looking (8) 8:24;30:20;34:4; 39:8;42:20;58:7; 69:2;95:3</p> <p>looks (2) 43:20;95:4</p> <p>lose (1) 24:21</p> <p>lost (1) 80:6</p> <p>lot (13) 14:5;30:11;39:6; 40:5;41:7;50:10; 68:11;75:23;83:14; 86:11;89:2;97:7; 98:18</p> <p>low (2) 68:1,3</p> <p>lower (2) 10:14;14:5</p> <p>lowest (1) 13:23</p>	<p>lunch (1) 15:20</p> <hr/> <p align="center">M</p> <hr/> <p>maintained (1) 92:8</p> <p>major (3) 39:7;98:6,7</p> <p>makes (1) 53:13</p> <p>make-up (1) 18:1</p> <p>making (7) 6:6;36:3;57:6; 73:24;88:22;98:3,22</p> <p>malfunction (1) 31:1</p> <p>manage (2) 23:22;24:24</p> <p>managed (2) 18:19;20:10</p> <p>management (2) 62:3,11</p> <p>Manchester (1) 50:13</p> <p>mandate (1) 33:12</p> <p>manufactured (1) 27:22</p> <p>many (12) 22:2;23:19;24:17; 32:24;33:1;39:3,5; 44:20;47:24;49:7,7; 86:8</p> <p>mark (8) 37:15;82:1;89:21; 100:23;108:10,12,18; 109:2</p> <p>marked (13) 8:7;13:7;49:22; 57:3;82:7;94:8;95:6; 101:4;102:21;108:5; 109:8,18;111:9</p> <p>market (1) 67:23</p> <p>marking (1) 100:18</p> <p>marks (1) 64:23</p> <p>mark-up (1) 40:13</p> <p>Masters (1) 13:22</p> <p>material (2) 25:16;31:21</p> <p>material-intensive (1) 39:12</p> <p>materials (3) 11:19;25:6;96:24</p> <p>matter (1) 32:21</p> <p>may (16)</p>	<p>9:18;15:3;24:3; 29:18;32:18;42:17; 54:1;57:8;59:8; 60:12;61:19;80:4; 94:11;113:16;114:7, 22</p> <p>maybe (7) 13:15;22:17;43:10, 11;57:20;75:18;80:8</p> <p>McCluskey (1) 82:22</p> <p>McDonnell (1) 21:9</p> <p>mean (11) 6:24;9:7;14:22; 54:1;57:15;75:18; 76:24;81:3;95:21; 97:6;115:8</p> <p>means (2) 34:14;42:22</p> <p>meet (2) 18:10;70:14</p> <p>meeting (6) 65:13;85:6;96:7, 10;97:2;99:10</p> <p>meetings (1) 25:3</p> <p>meets (1) 28:14</p> <p>member (1) 60:16</p> <p>memory (1) 13:16</p> <p>mention (1) 112:18</p> <p>mentioned (2) 70:20;99:14</p> <p>mercury (9) 35:16;51:10,19; 62:1;74:2;87:1,7,10, 17</p> <p>mercury-removal (1) 51:11</p> <p>Mercurys (1) 50:8</p> <p>merger (1) 7:2</p> <p>Merrimack (34) 9:4;11:10,13; 12:17;34:19;35:2; 36:8;45:7,24;47:15; 48:18;49:1,10,15; 51:17;52:3,7;65:2; 66:17,20;67:15; 68:18;69:9;71:20; 72:4,6;73:1;90:21; 91:5,9,13,19;101:24; 112:17</p> <p>met (2) 25:8,9</p> <p>methodology (2) 39:23;40:22</p> <p>might (6)</p>

DAY 1 - AFTERNOON SESSION ONLY - October 14, 2014
DE 11-250 PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE INVESTIGATION OF SCRUBBER COSTS

AND COST RECOVERY				
21:22;47:22;48:23; 54:6;58:16;69:20 million (13) 14:1,8;26:13,14,21, 22;36:10;37:22;43:3; 49:19;50:1;90:11; 106:7 mind (4) 24:19;44:19;64:17; 76:21 minimize (1) 25:14 minor (1) 39:8 minute (4) 24:6;25:1;55:5; 77:11 minutes (1) 52:24 mislead (1) 79:9 miss (1) 7:14 mission (1) 52:11 mistaken (1) 12:1 mix (1) 101:24 MMBtu (6) 106:9,14,16,18; 107:1,6 modified (2) 47:4,11 modify (1) 17:3 moment (5) 14:21;24:10;42:23; 43:16;92:1 money (7) 28:20,22;39:24; 40:1;41:14;50:10; 98:4 Monitor (1) 43:19 month (4) 19:5;22:16,17; 39:19 months (3) 47:1;70:3,19 more (16) 10:22;15:4,6;32:2; 45:1;50:10;65:17; 69:9;70:3;73:11; 94:17;96:20;98:9,10; 106:17;107:11 morning (7) 26:18;55:12;57:22; 58:12;111:21; 114:11;115:7 most (4) 48:9;84:16,21; 112:23	mothballing (1) 41:17 motion (1) 7:20 motivation (1) 85:13 move (2) 53:3;95:2 moving (5) 28:2;86:8,11,14; 95:8 much (13) 10:22;23:21;26:6; 27:21,22;32:9;38:15; 39:19;44:21;70:20; 75:17;86:16;94:5 Mullen (11) 59:5;60:5,15; 61:14,20;64:14; 82:21;83:12;85:4; 96:3,5 Mullen's (9) 60:9,14;61:13; 63:21;66:10;83:23; 85:8;95:11,18 myself (2) 6:11;33:14 mystery (1) 89:10	29:5;90:5,9 new (23) 11:10;16:19,21,22; 18:16;27:2,17;30:1; 33:11,17;37:4;43:23; 45:23;46:8,10;47:10, 11,20;48:17;50:7; 52:3,9;53:13 newer (1) 11:7 Newington (4) 27:17;66:23;67:18, 22 newspaper (1) 13:21 Newtonian (1) 68:6 next (10) 7:23;42:10;53:3,6; 54:24;66:21;67:6; 83:4;86:20;93:22 nice (1) 109:3 nitrogen (1) 87:7 normal (2) 71:23;72:9 normalizing (1) 36:2 normally (1) 16:24 noted (1) 19:8 notes (5) 19:12;83:21,22; 95:19,19 November (3) 14:7;16:10;41:23 nowhere (1) 24:4 NOx (1) 35:9 NPDES (11) 16:14;30:20;31:9, 22;32:15;45:2,7,18, 23;47:11;48:24 NSTAR (1) 7:2 NU (1) 97:22 nuclear (1) 9:14 number (22) 6:10;10:2;12:23; 14:2,5;23:1;25:11; 27:24;30:7;33:15; 36:10,12,17;38:8,10, 19;44:6;46:12,24; 48:20;75:5;93:4 numbering (1) 108:10 numbers (4) 38:7;42:3,12,21	numerous (4) 22:6;25:10;59:21; 60:20 O objection (5) 55:20;65:20;77:17; 81:13;110:15 obligation (7) 60:1;71:18;72:1,7, 23;73:5,16 obligations (2) 88:4,6 observations (1) 103:10 obviously (1) 104:8 OCA (11) 75:12;78:2;81:20; 82:14;83:7;96:13,15; 109:20;110:1,4,13 OCA's (1) 114:23 occasions (1) 25:10 occupation (1) 59:10 occur (2) 20:15;91:24 occured (3) 39:17;67:4;91:21 occurring (1) 14:22 October (3) 69:16;115:11,19 off (10) 12:21;13:9,10; 31:13;43:20;77:11, 12;78:22;81:16;94:6 offer (9) 12:22;13:4;54:23; 57:11;60:23;66:13; 75:19;77:16;79:7 offering (1) 12:10 Office (5) 85:12;90:3;96:10, 14,17 offset (1) 32:2 off-spec (1) 28:16 often (2) 15:5;35:4 oil (3) 9:9;10:20;92:9 once (2) 17:22;79:4 one (43) 11:10;15:4,6; 23:13;25:12;32:7; 33:4,8;35:2;37:20;	38:15;42:23;46:20; 48:9;50:23;51:24; 52:12;55:13;57:20; 61:1;63:12;64:22; 65:12,17;68:12;69:2; 79:2;84:14;88:6; 89:22;91:3,22;92:18; 93:2;95:14;100:11; 103:18,21;105:17,20, 22;110:15,16 one-on-one (1) 35:4 ones (3) 51:4;98:3;108:17 ongoing (2) 91:23;98:12 only (12) 25:21;30:2,6; 31:14;47:8;58:6; 64:22;67:17;68:6,12; 80:18;95:16 open (2) 22:20;61:4 opened (3) 23:18;47:1;61:8 operate (5) 24:3;49:16;52:4, 12;92:4 operated (1) 102:1 operates (1) 67:23 operating (6) 6:10;16:17;29:7,9; 35:13;45:8 operation (8) 16:18;46:3,5; 47:13,16;91:5,8,24 operational (6) 17:5,19;29:22; 71:20;72:3;73:1 operations (1) 72:22 operations' (1) 31:4 opinion (9) 18:16;24:20;52:5; 64:15;65:8;71:13; 73:4;77:22;102:10 opinions (2) 54:9;68:14 opportunity (4) 43:10;80:6,20;81:6 opposed (1) 98:14 opposing (1) 78:17 option (6) 68:16;71:16,22; 72:9,9,11 options (1) 102:5 order (12)
	N			
	name (3) 59:3;83:16;95:11 narrative (1) 105:24 natural (9) 81:19;84:10;85:21; 92:9;104:7;105:15; 107:1;112:18;113:6 nature (1) 80:7 nearly (1) 106:16 necessarily (1) 28:19 necessary (2) 17:17;70:13 need (9) 6:9;26:23;31:3; 45:18;53:2;55:1; 67:3;114:21;115:12 needed (3) 22:11;50:2;91:15 needs (1) 17:6 negative (1) 29:6 negotiate (1) 70:16 nervous (1) 73:12 net (3)			

DAY 1 - AFTERNOON SESSION ONLY - October 14, 2014
DE 11-250 PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE INVESTIGATION OF SCRUBBER COSTS

AND COST RECOVERY				
16:23;25:13;28:9; 34:20;40:18,19; 47:14;50:20;69:8; 80:8,9;106:21 orders (2) 38:14,17 original (2) 47:9;48:5 originally (2) 45:11;83:16 others (5) 6:19;34:20;49:4; 50:21;101:18 other's (1) 66:16 otherwise (2) 54:21;77:3 ought (2) 98:21;102:21 ours (2) 94:19,21 ourselves (1) 40:17 out (16) 6:16;7:7;23:19; 31:19;35:15;37:14; 43:14;50:6,20;52:20; 80:10;89:20;100:10; 105:1,4;108:6 outcome (1) 44:4 outcomes (1) 73:23 over (17) 6:1,12;15:20; 17:20;18:5,6;22:23; 39:16;46:6;62:24; 63:14;72:12;92:9; 104:2;106:7;107:9; 110:21 overall (4) 23:4;86:12;87:5; 112:17 overhead (1) 36:19 overruling (1) 81:13 Oversight (1) 69:19 overused (1) 97:14 overview (4) 59:13;61:23;97:10, 15 own (2) 76:15;77:4 owner (7) 64:17,20;65:12,17; 71:19;72:2,23 owners (1) 65:4 oxides (1) 87:7	P	50:11 Payday (1) 50:11 payment (1) 40:2 peaking (1) 67:24 people (5) 39:4;77:5;89:4,7; 98:10 per (13) 9:24;10:22;22:16, 17;28:9,18;106:7,9, 14,16,18;107:1,6 percent (3) 11:2,5;74:13 perform (1) 70:13 perhaps (7) 6:22;7:14;24:18; 30:2;48:8;57:10; 71:11 period (12) 21:14;39:16;45:17; 62:24;70:10;71:2; 104:3,20;105:19,22; 107:9;110:21 periodical (1) 13:21 periods (2) 6:17;31:7 permanent (2) 62:15,19 permit (36) 16:16,19,22,22; 17:3,4;18:5;30:20; 31:22;32:5,15,19,21; 45:2,7,14,19,24;46:7, 8,9,11,12,20,20;47:2, 5,9,10,11,23;48:5,24; 49:8,12,14 permits (4) 17:11,17,19;49:6 permitting (1) 49:9 person (2) 60:4,5 personally (1) 6:15 personnel (1) 7:3 person's (1) 60:2 pertinent (1) 99:13 phase (1) 47:6 philosophy (2) 20:4,10 phone (1) 6:15 phrase (1) 85:9	pick (3) 55:11;99:1;111:20 pile (1) 76:21 place (1) 49:12 placed (1) 75:2 places (1) 27:15 plan (4) 31:8,11;54:9;55:8 plans (1) 101:15 plant (10) 11:3,4,6;14:1;23:6; 24:5,9;43:18;67:24; 92:4 plants (7) 11:7,11;15:5,7; 21:16;51:7,9 playing (2) 34:23;42:9 please (4) 42:24;71:24;82:11; 110:16 plummet (1) 52:16 pm (3) 54:13,13;115:18 point (14) 11:19;24:6;55:12; 56:22;57:10;58:19; 65:21;81:2;90:7; 98:17;101:5;111:20; 114:8,18 Policy (1) 96:15 pollutants (4) 87:5,6,13;88:1 portion (1) 69:24 position (2) 62:10;64:4 positive (1) 29:6 possibility (2) 32:14;71:21 possible (2) 6:21;53:9 possibly (1) 68:20 post (1) 106:12 potential (10) 20:15;32:14;48:21; 49:6;61:5;70:15; 72:12;73:9,14;86:13 POTWs (3) 22:19;24:19;25:8 power (1) 68:9 PowerAdvocate (2)	34:6;49:20 practical (3) 64:5;66:19;71:3 practically (2) 7:4;65:15 precise (1) 107:14 precluding (1) 81:4 predict (1) 44:6 predictions (1) 33:2 preemptive (1) 79:12 prefer (3) 12:24;66:8;111:3 prefiled (4) 19:2;60:6;61:20; 63:21 preparation (1) 19:12 prepared (3) 37:8;65:24;74:21 preparing (1) 60:13 present (6) 15:3;21:23;57:22; 90:10;107:15,19 presentation (19) 37:7,18;78:9;79:8; 82:13,18;83:7,20,21; 84:3;85:7,11;90:2; 103:2,19;105:2,9,10; 108:13 presentations (1) 108:1 presented (9) 81:18;94:12;103:6, 13;104:13;107:10; 113:12,21;114:1 pressurized (1) 35:6 pretty (6) 33:5;41:5;43:24; 78:15;94:5;104:1 previously (2) 17:20;49:2 price (27) 14:4;26:10,18; 28:5;49:19;50:21; 73:17;75:3,11;77:23; 78:1,8;84:10,17; 85:21;88:16;92:8; 93:7;104:1,7;105:14; 106:10;107:1,2,6; 112:24;113:6 prices (5) 74:24;86:9;93:3; 103:1;112:19 primarily (1) 67:24 primary (13)

DAY 1 - AFTERNOON SESSION ONLY - October 14, 2014
DE 11-250 PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE INVESTIGATION OF SCRUBBER COSTS

AND COST RECOVERY				
<p>9:20;17:23;18:9; 19:23;20:3,5,24; 22:11;24:1,11,16; 26:9;30:16</p> <p>printed (1) 43:20</p> <p>prior (3) 17:7;61:18;105:21</p> <p>privileged (1) 97:1</p> <p>probably (8) 30:1;43:8;58:15; 67:6;68:2;73:11; 97:8;102:20</p> <p>problem (1) 7:10</p> <p>problems (2) 20:15;24:1</p> <p>procedural (1) 114:16</p> <p>proceed (4) 18:17;54:15;67:8; 81:12</p> <p>proceeding (16) 8:8;29:15;47:2,5; 50:9;59:24;60:17,19; 61:4;63:22;64:1,4; 69:4,20;70:1;74:18</p> <p>proceeds (1) 29:6</p> <p>process (8) 6:1;27:5,6;48:16; 70:11,17;71:8,15</p> <p>processes (2) 32:23;72:20</p> <p>produced (1) 27:23</p> <p>product (1) 27:9</p> <p>professionals (1) 38:24</p> <p>Project (34) 17:16;19:16;20:11; 24:2;26:22;34:16; 36:23,24;39:2,3,5,5; 40:20;41:14,17; 45:20;61:24;62:12; 77:24;78:8;82:15; 84:11;86:10,14;97:4, 17;98:11;99:8; 101:16,17;106:22,23; 112:23;113:24</p> <p>projects (1) 98:7</p> <p>Project's (1) 62:3</p> <p>project-to-project (1) 34:16</p> <p>proof (3) 66:13;75:19;77:16</p> <p>proper (4) 14:20;20:12,13; 70:7</p>	<p>property (2) 14:15;43:22</p> <p>proposals (1) 19:13</p> <p>propose (1) 57:24</p> <p>proposed (4) 65:8;66:15;67:16; 82:9</p> <p>proposes (1) 62:23</p> <p>propounded (1) 95:12</p> <p>provide (12) 6:7;18:2;20:23; 52:8;77:22;89:12; 97:2,20;98:9;99:22; 101:10;109:24</p> <p>provided (22) 17:23;18:16,21; 85:7;88:15;89:16; 93:2;95:10,15,18; 96:6,24;97:9,21; 98:19;99:20;102:11, 14;113:14,15,19; 114:4</p> <p>provides (1) 61:23</p> <p>providing (2) 19:14;68:7</p> <p>prudence (1) 62:3</p> <p>prudent (1) 74:3</p> <p>prudently (3) 62:11,13,14</p> <p>PSNH (43) 14:13,16;37:8,21; 39:4;52:10;62:11; 64:6,20;67:17;68:4, 17;74:21;75:10; 77:22;80:19;81:18; 82:13;83:7;84:10; 85:6;88:15,19;89:12, 15;90:4;92:19;93:2; 94:12;95:15;96:9,13; 99:3,19,19;101:13; 102:2,5,10;107:24; 109:23;113:11,15</p> <p>PSNH's (8) 61:6,10;68:21; 69:13;74:1;78:9; 85:10;91:14</p> <p>Public (2) 18:19;59:12</p> <p>publicly-owned (1) 21:16</p> <p>published (1) 115:11</p> <p>PUC (5) 90:3;109:20,24; 110:4;111:9</p> <p>pumps (1)</p>	<p>40:7</p> <p>purchase (5) 38:14,17;40:18,19; 68:9</p> <p>purple (1) 41:22</p> <p>purposes (5) 9:20;12:18;14:15; 43:18;56:22</p> <p>pursue (1) 26:23</p> <p>pursued (2) 17:17;18:23</p> <p>put (10) 11:3;19:21;21:5; 24:4,9;25:13;27:18; 56:7;66:24;80:20</p> <p>putting (2) 27:19;46:21</p>	<p>reach (2) 70:18;89:9</p> <p>read (8) 66:10;92:10; 101:20;105:23; 106:4;110:6,7;113:3</p> <p>reading (4) 19:2;44:19;69:21; 70:5</p> <p>reads (1) 84:15</p> <p>ready (2) 56:9;58:20</p> <p>realistically (1) 65:10</p> <p>reality (1) 68:15</p> <p>really (7) 22:18;41:2,3; 66:19;68:17;96:20; 98:20</p> <p>reason (4) 17:10;24:11,20; 28:11</p> <p>reasonable (11) 23:15;40:9,12; 41:15;43:15;85:8; 91:22;92:3,21,24; 99:11</p> <p>reasons (1) 25:13</p> <p>rebuttal (7) 8:6,13,23;11:17; 33:9;56:2;80:20</p> <p>rebutted (1) 80:23</p> <p>recall (11) 12:19;43:4;49:23; 51:2;69:15,23;70:9, 20;72:17;75:9;85:16</p> <p>receive (5) 23:18;70:14;98:6; 110:19,20</p> <p>received (2) 46:17;110:22</p> <p>receiver (1) 28:17</p> <p>receiving (2) 24:21;35:14</p> <p>recent (1) 97:16</p> <p>recently (2) 32:17;61:8</p> <p>recess (1) 54:12</p> <p>recollection (1) 92:5</p> <p>recommendation (2) 46:24;74:1</p> <p>recommendations (1) 62:2</p> <p>record (10) 13:9,10;74:10;</p>	<p>77:11,12,14;78:22; 90:18;96:16;105:24</p> <p>recovered (2) 62:14,24</p> <p>recovery (1) 63:5</p> <p>recycle (1) 31:20</p> <p>redirect (4) 7:22;44:15,21,23</p> <p>reduced (2) 24:23;35:9</p> <p>reduction (3) 65:5,14;74:2</p> <p>reductions (4) 87:2,12,17,24</p> <p>Reed (2) 69:16;70:9</p> <p>Reed's (1) 70:23</p> <p>refer (4) 10:18;11:18;64:13; 75:4</p> <p>referenced (2) 113:18;114:3</p> <p>references (1) 19:10</p> <p>referred (4) 69:16;87:9;102:13, 24</p> <p>referring (7) 10:19;12:15;87:16, 18,19;99:21;105:13</p> <p>refers (4) 87:1,6,11,23</p> <p>reflected (2) 74:15;105:15</p> <p>reflects (1) 74:10</p> <p>refresh (1) 13:16</p> <p>refuse (1) 7:14</p> <p>refused (1) 49:14</p> <p>regard (2) 35:10;95:24</p> <p>regarding (13) 6:3;22:7;37:9; 49:19;52:2;61:4,9; 74:22;75:10;77:23; 81:19;82:14;93:14</p> <p>regulation (2) 9:2,11</p> <p>regulations (1) 48:17</p> <p>regulator (1) 88:24</p> <p>regulators (2) 98:5,13</p> <p>reissued (1) 48:14</p> <p>related (1)</p>
Q				
<p>qualifies (2) 78:20;91:10</p> <p>quality (1) 18:10</p> <p>quantities (1) 19:15</p> <p>quantity (1) 22:10</p> <p>quite (6) 10:5;32:15;68:19; 80:10;88:22;104:8</p> <p>quotation (1) 64:23</p> <p>quote (2) 84:15;87:20</p>				
R				
<p>RACC (2) 97:22;110:5</p> <p>railroad (1) 35:13</p> <p>raise (1) 65:20</p> <p>raised (1) 99:10</p> <p>range (1) 104:6</p> <p>rate (4) 10:14;59:22;63:1,5</p> <p>ratemaking (2) 59:23;62:22</p> <p>ratepayers (2) 29:17;99:8</p> <p>rates (6) 27:21;62:15,19,21; 101:18,23</p> <p>rather (2) 76:14;101:11</p> <p>rational (1) 73:5</p>				

DAY 1 - AFTERNOON SESSION ONLY - October 14, 2014
DE 11-250 PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE INVESTIGATION OF SCRUBBER COSTS

AND COST RECOVERY				
97:3 relationship (1) 37:23 relationships (1) 18:24 relative (1) 86:9 relatively (1) 54:21 release (1) 40:4 relevant (2) 6:17;14:19 relied (2) 88:18,21 relies (2) 89:4,6 relying (2) 89:12;92:19 remain (1) 49:11 remains (1) 90:22 remarks (1) 63:5 remediation (2) 40:15;41:17 remedies (1) 70:4 remember (5) 8:7;41:24;69:21; 70:5;78:24 reminders (1) 58:16 removal (2) 28:11;35:18 remove (1) 51:10 removed (1) 47:2 renew (1) 46:7 renewal (1) 14:17 renewing (1) 45:14 reopen (1) 49:15 reopened (2) 32:17,18 repeat (1) 71:24 repeating (1) 70:23 repetition (1) 66:6 rephrase (1) 10:6 replace (1) 94:20 report (9) 39:20;40:11;49:20; 70:2;99:15,18;	101:14;111:9;112:2 Reporter (4) 24:8;58:23;73:3; 92:23 reporting (3) 88:4,6;89:13 reports (6) 6:3;19:4;62:6,7; 74:7,16 represent (2) 6:14;95:9 representative (1) 96:18 representatives (1) 96:9 represented (1) 51:7 request (11) 6:9;19:13;78:2; 82:8,17;83:5;84:24; 99:24;100:2,3; 107:24 requests (10) 6:3,5,20;63:24; 78:14;79:3;81:23; 82:3;94:9;95:12 require (3) 47:13;65:10;71:12 required (8) 19:21;89:17;99:7, 8;106:8;107:5,12; 113:23 requirement (5) 65:5,14;72:11; 73:8;102:16 requirements (4) 49:9;71:4;89:14; 90:10 research (1) 33:13 residual (1) 31:21 resolve (1) 54:17 resolved (1) 29:15 respect (5) 6:8;26:1;45:2; 58:3;66:14 respond (1) 6:2 responded (3) 16:21;48:2;83:6 responding (1) 6:20 response (24) 37:6;44:10,13; 55:18;77:16;79:20; 81:23;82:12,17,20; 83:4,16,19;84:23; 85:2;86:5;96:6,21; 108:2;110:3;113:9, 13;114:2;115:14	responses (6) 63:23;78:5;82:2,9; 94:9;95:10 responsible (4) 7:3;20:21;45:14; 65:13 responsive (1) 6:7 rest (2) 7:20;51:22 restriction (1) 47:12 restructured (1) 59:19 Restructuring (2) 69:18;72:17 result (6) 20:3;52:12;71:15; 72:8;78:9;85:9 resulted (1) 68:17 resume (1) 115:18 resumed (1) 54:13 rethink (1) 48:13 retired (1) 52:4 Revenue (1) 90:10 review (7) 33:16,17;47:6; 49:3;62:8;70:17;74:3 reviewed (1) 102:6 reviews (10) 43:1,6;83:13;84:7; 87:15,21;90:17; 91:12;92:2;100:16 RGGI (1) 84:18 right (40) 8:8,19;9:17,21; 11:15;12:8;13:11,18; 14:2,11,13;20:19; 26:7,7;27:13;36:11; 42:22;43:17;48:16; 53:4;54:10;55:7,11, 19;56:4;58:20;79:2; 86:18;90:15;92:6,12; 96:20;98:23;100:7, 11;103:14;109:15; 114:12,21;115:15 right-hand (1) 106:23 rigorous (2) 6:6;23:10 risk (3) 98:2;109:22;110:1 risk-averse (1) 73:12 risks (5)	20:14;23:1,12; 24:1,17 River (1) 25:21 Road (2) 25:22,22 Ross (1) 82:22 Route (1) 25:22 RSA (6) 69:5;70:8,8;87:4, 20;88:3 ruling (2) 7:19;80:11 run (1) 70:11 running (3) 23:6;28:3,4 S sale (4) 29:18;64:22;65:1; 68:18 same (14) 8:14;9:24;10:10; 38:4;46:11;56:14; 61:12;92:7,13;97:20; 105:19;109:21,24; 110:5 satisfactory (1) 18:9 satisfy (1) 33:9 savings (1) 32:1 saw (5) 6:22;24:17;83:14; 105:20,22 saying (5) 46:6;98:16,20; 99:2,4 scaling (1) 30:12 scenarios (1) 69:1 schedule (3) 58:17;115:6,10 scheduled (1) 114:10 scheduling (2) 55:12;58:5 Schiller (6) 25:19;65:2;66:20; 67:16;68:19;69:9 science (1) 46:14 scientific (1) 48:1 scope (2) 39:15;78:23 scratch (1)	10:17 SCRs (1) 35:8 Scrubber (46) 7:4;24:2;27:19; 29:12;30:5,15;34:21, 21;35:2,11,12,17,17, 20;45:20;46:2,4; 50:21;51:18,19; 60:17;61:23;64:7,11, 16;65:1,10;68:17; 71:5,19,20;72:2,3,7, 24;73:15;74:22; 77:24;78:7;82:15; 84:11;86:3,7;88:11, 19;97:4 scrubbers (2) 51:9,23 season (1) 106:13 second (6) 13:9,18;34:24; 101:5;103:20;106:14 secondary (23) 16:5,8;19:11; 20:22;22:12;23:8,21; 24:12;26:11,23; 29:21;30:16;31:2,11, 15,17;32:1,3,8,23; 47:13;48:10;74:5 secretarial (1) 109:10 section (2) 12:16;87:23 seeking (2) 17:10;101:12 seem (3) 38:3;42:20;56:9 seemed (1) 42:10 seems (7) 42:14;55:24;75:19; 79:11,15;80:14; 97:18 sell (1) 27:9 selling (1) 28:23 Senate (1) 37:10 sense (2) 53:13,16 sensitive (5) 84:16,18,22; 112:23;113:1 sensitivity (6) 25:23;77:24;78:7; 112:5,12,22 sent (1) 82:5 sentence (2) 9:5;107:8 separate (2)

DAY 1 - AFTERNOON SESSION ONLY - October 14, 2014
DE 11-250 PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE INVESTIGATION OF SCRUBBER COSTS

AND COST RECOVERY				
17:3;102:21 separately (1) 108:19 September (8) 41:23;46:1,9; 99:18;102:11; 107:20;111:2,8 series (3) 40:17,23;78:2 Service (2) 18:19;27:19;62:16; 68:8;101:18,23 services (1) 39:1 SESS (1) 20:20 session (4) 65:22;75:21;77:7,9 set (2) 66:6;94:8 setting (3) 62:18,21;67:6 settlement (1) 40:12 seven (1) 105:20 seven-year (1) 62:24 several (2) 72:19;81:23 shall (1) 63:15 shape (1) 56:14 shared (7) 109:20,21;110:4,5, 10,11,12 shareholders (2) 63:3,4 Sheehan (15) 12:2,3,7;53:17; 56:9,11;59:2;63:7; 79:18,19,24;110:14; 111:12;114:13;115:2 short (2) 24:16;54:18 shortly (1) 54:11 show (3) 37:23;84:15;108:2 shown (1) 43:20 shows (3) 93:7,10;103:24 shut (2) 24:5;40:8 shutting (1) 24:9 Siemens (2) 20:20,23 Sierra (1) 52:1 significance (4)	68:10;75:11;86:1, 10 significant (3) 7:2;63:1;71:12 significantly (4) 22:13;23:22;26:8; 104:2 similar (2) 48:4;103:5 simple (2) 34:14;54:22 simply (3) 31:12;39:22;93:18 single (3) 64:16,20;89:22 sit (1) 25:2 site (4) 31:13;35:9,16,23 sites (1) 67:19 site-specific (3) 34:17;35:24;37:1 situation (2) 54:24;67:1 six (2) 34:18;70:2 size (1) 86:10 slide (5) 84:4,9,14;93:2,7 slides (1) 95:20 Smagula (8) 6:18;7:18;8:3; 13:14;16:4;45:3; 52:17;54:17 Smagula's (2) 55:3,22 small (3) 17:9;19:15;31:18 smaller (2) 11:9;95:4 Smile (1) 13:22 SO2-removal (1) 51:23 so-called (1) 64:10 solar (1) 9:15 sold (4) 27:14;28:7,8;65:12 solicitation (1) 72:15 solicited (1) 72:15 solid (3) 10:15,18,20 solids (1) 31:13 solution (1) 57:22	solving (1) 30:15 somebody (2) 37:8;114:24 someone (1) 63:14 someone's (1) 54:2 sometime (1) 53:8 somewhat (1) 89:10 somewhere (2) 24:23;100:19 soon (3) 17:16;43:24;47:7 sorry (4) 8:19;27:24;56:16; 72:23 sort (5) 16:13;50:18;66:12; 101:19;102:3 sound (3) 14:2,11;53:4 sounds (3) 32:7;94:24;95:2 sources (3) 64:17,24;65:11 South (2) 25:19;50:12 SP (3) 16:1,3;33:23 speak (1) 96:16 speaking (1) 65:15 special (1) 17:4 specific (4) 12:20;34:18;48:3; 75:5 specifically (4) 51:16,19;79:5; 80:23 specified (1) 47:17 speculating (1) 12:22 spending (3) 23:7;28:17;75:23 spent (6) 17:20;18:5;38:15; 39:6,24;41:14 spread (17) 74:23;75:3,12; 77:23;78:1,8;81:20; 84:17;85:20;106:6, 13,16,24;107:12; 110:10,21;113:5 spreads (3) 93:15;106:3,17 spreadsheet (8) 37:4;38:1,22;39:7,	21;40:24;52:21; 54:18 spreadsheets (1) 40:23 squares (1) 51:5 Staff (39) 7:10;53:18;57:12; 60:16;62:22;63:24; 70:2;75:12;78:1,4,6; 81:20,24;82:9,14; 83:4,5,7;84:4;85:11, 24;86:6;90:3;95:10, 18;96:8,13;97:2,9,16; 98:15;99:23;103:2, 13,19;105:10; 107:11;110:4,12 Staff's (7) 62:5,10;78:5; 81:23;82:2,12;84:23 stand (1) 54:2 standards (2) 18:10;28:15 stands (1) 114:2 start (11) 18:3;40:6;53:12; 55:9,10;64:9;71:9; 94:5;96:1;105:21; 110:18 started (3) 7:5;20:7;42:20 starting (4) 11:19;13:24;19:9; 93:18 starts (1) 106:2 state (8) 17:22;18:11,12,24; 31:6;52:15;68:10; 72:18 stated (4) 69:24;78:13;90:14; 96:24 statement (6) 9:2,7;37:20,24; 61:16;93:13 States (3) 30:1;61:3;90:20 Station (36) 9:4;11:10,13; 12:17;34:19;35:2; 41:16;45:7,24;47:15; 48:19;49:1,10,15; 51:17;52:3,7;65:2,2; 66:18,23;67:16,16, 18;68:19;71:21;72:4, 6;73:1;90:21;91:6,9, 13,19;101:24;112:17 stationary (1) 40:15 Station's (1)	36:9 status (2) 49:9;101:14 Statute (4) 87:1,6;88:3;89:14 statutory (3) 33:12;72:22,23 Steve (1) 95:11 Steven (3) 59:5;60:5;61:20 still (7) 30:18,19;31:17,18; 35:13;47:5;89:10 stop (2) 24:18;39:18 stopping (1) 114:8 stored (1) 28:2 straightforward (1) 54:22 stranded (1) 37:22 Street (1) 50:12 stricken (2) 11:22,23 strike (3) 12:4,10;53:1 striking (3) 55:20;57:5,6 struck (2) 12:6;53:2 subcontract (1) 7:6 subcontractors (1) 40:6 subject (5) 52:19;86:7;107:23; 111:5,6 submission (2) 110:23;111:4 submitting (1) 47:19 subscribed (1) 6:22 subsections (2) 87:8,10 subsequent (2) 49:5;72:17 subset (1) 94:20 successful (1) 71:15 sulfur (6) 35:18;51:23;87:2, 7,12;88:1 sum (3) 38:13,17;42:15 summary (5) 33:19;87:14;88:12; 90:6,19

DAY 1 - AFTERNOON SESSION ONLY - October 14, 2014
DE 11-250 PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE INVESTIGATION OF SCRUBBER COSTS

AND COST RECOVERY		
summed (1) 40:24	53:7;90:9,13;108:12	109:1
supervision (1) 60:16	40:11;112:4	there'll (1) 44:21
suppliers (1) 51:12	35:21	thinking (1) 79:9
support (1) 30:23	40:2	third (1) 42:13
supported (1) 18:11	40:7	Thirty-five (1) 26:15
Suppose (2) 50:5,6	12:18;14:15,16; 43:18,22;52:6	THOMAS (3) 58:21,24;59:4
supposed (1) 115:7	TC (4) 82:3,12;83:4;108:3	though (5) 20:3;25:2;31:8; 59:8;97:13
Supreme (2) 33:11,17	team (5) 6:6,19;7:5;38:23; 39:5	thought (8) 11:23;13:15;67:6; 68:15;76:11,12; 96:17;102:2
sure (12) 6:6;10:22;33:6; 37:14;43:15;48:6; 53:22;59:5;72:1; 79:19;88:21;91:16	technical (9) 18:21;46:13,24; 48:1;65:22;75:20; 77:7,9;114:15	three (3) 27:2;39:2,4
surprised (2) 48:7,11	technological (1) 48:9	throughout (2) 60:19;104:5
surprising (1) 48:14	technology (8) 21:8;29:24;30:4; 47:3,4;72:3,24;73:10	Thursday (1) 58:12
suspect (4) 32:20;51:21,22; 52:16	temporary (3) 27:21;62:19,21	tie (1) 91:15
suspects (1) 6:12	tend (1) 66:4	tied (1) 65:4
sustainable (1) 23:15	tends (1) 77:1	timely (1) 16:20
swing (1) 53:10	term (3) 24:17;33:12;97:14	times (3) 28:18;59:21; 113:16
Switching (1) 11:15	termination (3) 40:10,11;41:16	today (6) 41:6;53:12,23; 60:9,22;115:9
sworn (2) 58:22,24	terminology (1) 41:13	together (5) 15:22;42:6,12; 65:4,12
Synthetic (2) 27:8,11	terms (2) 34:15;79:7	told (4) 75:20;77:7;79:16; 106:20
system (21) 16:6,8;18:9;19:23; 21:1;22:12;23:9,21; 24:1,13;26:12,20,24; 31:2,12,16,17;32:1,3, 8,24	term's (1) 64:24	Tom (1) 54:6
systems (2) 19:14;48:22	test (2) 112:6,13	tomorrow (11) 53:13;54:23;55:11, 13;57:22,23;58:4,7, 11;111:21;114:11
T	testified (7) 36:12;45:11;59:21; 64:22;66:18;70:10; 75:9	tomorrow's (1) 55:14
table (2) 36:7;72:13	testifies (1) 77:21	ton (4) 28:7,8,9,18
tables (2) 34:8,9	testimony (54) 8:6,14,23;11:17; 16:12;19:3;33:10; 36:7;55:22;56:1,2; 60:2,6,10,14,21,23; 61:13,19,20;62:1; 63:21;64:13,14;66:7, 10,16;69:15,22; 70:24;74:16,17,20; 75:5,7,8,13;76:1,9, 14,22;77:4,20;78:17, 24;79:5;80:16,21,22; 81:1,17;87:18;88:9;	tonight (1) 58:10
talk (6) 16:4;24:7;25:1; 53:5;57:21;108:10		took (2) 38:17;46:6
talked (4) 41:20;42:2;97:11, 12		top (2) 12:21;106:1
talking (8) 18:4;19:19;38:3,5;		topic (3) 37:4;38:4;78:4
		topics (2) 25:11;77:2
		total (2)
		67:1;82:8
		totally (3) 24:19;42:18;76:15
		Town (11) 12:18,20;14:18; 15:8;22:7,21;23:16; 25:9,19,24;52:6
		towns (2) 15:6;25:6
		town's (1) 14:18
		traditional (2) 51:22;70:4
		traffic (13) 22:8,9,22;23:17; 24:15;25:1,7,14,21, 23;26:1,3,7
		TransCanada (8) 78:3;81:24;82:3, 10;86:5;94:10;95:12; 113:9
		transcript (4) 56:18,19,23;57:2
		Traum (1) 82:24
		treat (1) 21:7
		treated (1) 18:8
		treatment (23) 16:5;17:24;19:10, 11,23;20:5;21:1,16; 22:12;23:9;24:13; 26:12,20,24;29:21; 31:12,15;46:22; 47:14;48:10;49:16; 74:5,11
		tremendous (1) 86:13
		triangle (1) 34:12
		triangles (1) 51:5
		troubleshooting (1) 30:8
		truck (14) 22:7,8;23:13; 24:14;25:1,7,13,14, 17,21,23;26:1,3,7
		trucking (6) 22:22;24:18;25:10; 26:9;28:10;29:4
		trucks (11) 22:11,15,16,17,19; 23:13;25:11,15;26:6; 28:2,3
		true (4) 33:3;50:24;88:16; 110:8
		Trustees (8) 97:22;102:14; 103:6;104:13;105:3; 106:20;108:14;110:2
		try (8) 35:23;36:21,22; 52:20;57:19;78:16; 79:12,13
		trying (9) 7:7;25:15;28:19, 20;50:18;75:24;76:8; 93:3;99:1
		tuning (1) 30:8
		turbine (1) 67:19
		turn (7) 8:24;37:17;64:12; 81:22;83:3;84:2,13
		Turning (3) 89:19;90:2,24
		turnovers (1) 7:2
		two (14) 32:22;34:8;35:3,4; 38:7;39:1;46:4; 55:13;67:18;69:10; 71:10;103:11; 105:10;106:5
		type (5) 39:10;72:11;98:8; 99:3;101:9
		types (4) 10:10;25:3;50:23; 102:5
		typical (1) 40:14
		typically (1) 70:1
		U
		ultimate (2) 20:2;44:6
		ultimately (5) 24:18;32:4,19; 47:6;89:9
		unable (2) 52:4,10
		uncertainty (1) 73:22
		uncommon (1) 35:3
		under (21) 16:17;36:9;38:24; 41:23;42:11,12;45:7; 60:15;62:10;69:1,5; 70:8;71:18;72:2; 90:5,16,19,22;91:13; 95:11;112:9
		underline (1) 85:3
		underlined (2) 84:22;85:19
		underlining (1) 85:9
		underneath (1)

DAY 1 - AFTERNOON SESSION ONLY - October 14, 2014
DE 11-250 PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE INVESTIGATION OF SCRUBBER COSTS

AND COST RECOVERY				
35:14 understood (1) 17:22 unfriendly (1) 75:17 unique (2) 34:20;35:22 unit (3) 9:24;10:12,22 United (1) 30:1 units (4) 28:3;35:3,9;61:7 unlikely (1) 65:16 unreasonable (2) 68:4;99:5 unrecovered (3) 62:17,23;63:2 unusual (3) 30:11;32:18;35:8 up (16) 14:17,19;31:13; 40:23;42:16,21;44:7; 53:12;54:20;55:7,11; 65:4;67:6;97:16; 99:1;111:20 upon (4) 18:14;20:10;88:21; 89:6 upper (1) 106:23 upset (1) 31:1 URS (1) 39:2 use (6) 31:11,15;32:24; 37:8;52:15;56:19 used (12) 22:2;30:3,4;32:9; 36:17;39:3;41:13; 55:22;56:6,18,19; 90:8 using (3) 68:15;78:18;81:2 usual (2) 6:12;80:9 usually (2) 28:6;43:23 Utilities (3) 59:12;109:21; 110:1 utilized (1) 39:1	value (8) 14:8,14,14;52:2,6, 13,16;90:10 values (1) 38:13 vanilla (1) 36:1 variables (1) 23:19 variations (2) 112:24;113:1 various (1) 19:16 vehicles (1) 22:2 vendor (1) 40:3 vendors (1) 40:5 verbal (4) 44:10,13;55:18; 115:14 vessel (1) 35:19 view (3) 18:17;48:15;79:23 viewpoint (2) 31:4;46:14 volume (3) 24:23;25:16;57:17 volumes (2) 17:24;24:4	way (4) 11:4;53:9;62:24; 67:12 weather (1) 86:13 Web (1) 43:20 week (1) 57:11 weeks (1) 105:10 what's (9) 14:19;31:8;32:5; 38:21;49:8;52:20; 56:5;104:20;106:4 whenever (1) 14:16 whereas (1) 23:20 Whereupon (3) 54:12;58:21; 115:17 wherever (3) 25:5;54:1;55:10 whole (2) 40:20;56:23 who's (4) 7:3;63:9;86:19; 93:22 wider (1) 35:20 willing (1) 77:15 Willow (1) 50:12 wind (3) 9:14;31:13;65:4 winning (1) 70:15 wish (1) 77:6 within (2) 40:19;80:14 Without (3) 12:22;45:20;49:16 witness (29) 15:10;43:1,6;53:3, 6,10,13;58:9;66:9,18; 76:12,13,24;77:3; 79:22;80:13;83:13; 84:7;87:15,21;90:17; 91:12;92:2;100:14, 16;105:8;108:8; 111:12;114:23 witness' (1) 76:22 witnesses (6) 55:14;58:5;66:1; 78:17;80:24;115:3 wondering (1) 42:17 words (3) 61:7;84:21;85:19	work (9) 15:21;17:4;36:20; 39:16,17;40:3;62:4; 97:12;113:24 worked (5) 20:23;39:2,4; 60:15,17 working (5) 7:5;17:21;30:20; 41:3;45:16 works (3) 54:7;58:1,2 world (2) 30:3;54:3 worried (1) 75:23 worth (1) 34:24 wrap (1) 54:20 write (1) 13:14 writing (1) 98:11 written (4) 53:2;64:16;72:14; 93:13 wrong (2) 31:2;42:22 wrote (1) 95:20 WWT (1) 19:14	08-103 (1) 99:16 <hr/> 1 <hr/> 1 (2) 9:1;82:3 10 (4) 52:24;61:2;70:19; 82:8 10th (1) 115:11 11 (7) 56:1;75:8,13,14; 77:20;87:9,19 1-13 (1) 113:9 12 (8) 8:7,16,17,18,23; 56:1;61:2;82:4 125-0 (1) 87:4 125-0:13 (1) 87:16 125-O (3) 87:9;88:3;89:14 125-O11 (1) 87:20 12th (1) 14:7 13 (4) 64:12;75:8,14; 77:21 13-020 (1) 61:4 135 (1) 33:11 137 (2) 33:15,17 1-37 (1) 82:4 14 (2) 46:6;112:2 14-238 (3) 61:9;69:3,4 143.5 (1) 14:1 15 (4) 11:20;84:3;106:7; 115:19 1-5 (1) 82:12 152 (1) 37:10 15th (3) 19:3;36:7;103:7 16 (2) 93:5;103:21 1-6 (4) 83:4;95:16,24; 96:21 18 (3) 39:22;70:19;87:9
	W		Y	
	wait (3) 7:18;53:19;103:20 waits (1) 57:16 walk (2) 95:23;111:7 walked (1) 103:12 wallboard (1) 27:14 wallboard-grade (1) 28:13 wash (1) 25:13 waste (1) 74:13 wastewater (27) 16:5;17:24;19:10, 11,16,23;20:5;21:1, 15,16;22:12;23:6,8; 24:13;26:2,12,19,24; 29:21;30:16;31:12, 15;46:23;47:14; 48:10;74:5,11 water (8) 18:10;21:7;22:11; 26:9;32:8;48:17,22; 49:16		Yankee (2) 6:16,22 year (9) 14:6;17:20,21; 18:5;71:9;93:10,15; 95:13;105:16 years (14) 16:18;27:2;33:1; 39:3,6;46:6;49:7; 59:16;71:10;83:14; 88:23;104:6;105:20; 106:7 Yup (2) 26:16;42:5	
V			Z	
validate (1) 33:16 valuation (5) 12:20;43:18,21,24; 61:5			Zach (1) 15:20 zero (1) 74:12	
			0	
			08 (4) 41:23,23;107:20, 21	

DAY 1 - AFTERNOON SESSION ONLY - October 14, 2014
DE 11-250 PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE INVESTIGATION OF SCRUBBER COSTS

		AND COST RECOVERY	
1989 (1) 59:15	45:8;82:4		27:3
1993 (3) 105:17,17;110:22	27-1 (1) 99:17	5	
1997 (4) 16:18;45:9,12,15	27-7 (2) 49:22;51:4	5 (6) 11:24;12:4;74:13; 87:18;90:24;92:14	
1st (1) 72:4	27-9 (2) 99:18;111:10	50 (2) 11:2,5	
2	2nd (4) 99:18;107:20; 111:2,8	500 (2) 22:14,16	
2 (1) 90:24	3	6	
2:55 (1) 54:12	3 (3) 36:6;90:9,14	60 (1) 11:5	
20 (4) 22:15,17;28:18; 73:1	3:00 (2) 53:8;54:11	600 (2) 22:15,16	
2000 (5) 93:10,15,18; 105:21;107:10	3:11 (1) 54:13	6-201 (1) 108:3	
2005 (1) 106:13	30 (1) 82:14	7	
2007 (1) 106:15	308,000 (1) 43:3	7 (1) 34:5	
2008 (12) 6:23;82:14;88:10; 93:11;99:18;100:5; 102:12,15;103:7; 105:18;110:23;111:8	30th (5) 46:1;96:8;103:18; 107:16;110:23	700 (1) 81:1	
2009 (1) 88:10	31 (4) 37:5,10,13;38:21	8	
2010 (4) 16:10;19:9;42:11, 12	32 (5) 37:5,11,13,18;38:8	8 (1) 64:12	
2011 (4) 16:22;27:1;46:1,9	33 (2) 8:24;9:1	8:30 (2) 114:15,19	
20-11 (1) 108:23	354 (1) 36:9	9	
2012 (4) 13:24;14:1;19:3; 46:17	369-B (1) 69:6	9 (2) 87:19;105:12	
2013 (4) 14:7;69:16;72:4; 73:2	369-B3-a (1) 70:9	9:00 (3) 114:11,18;115:19	
2014 (1) 115:19	38 (2) 13:5,7	93 (2) 107:10,11	
21st (1) 95:13	39 (7) 82:7,8;89:23,24; 94:12,14,18	93.5 (1) 14:8	
22 (1) 109:10	3A (1) 25:22		
22nd (1) 100:5	3-a (1) 69:6		
230 (3) 38:10,11,12	4		
24 (6) 11:16,21;22:19,20; 23:13;37:17	4:28 (1) 115:18		
25 (2) 69:16;88:23	4:30 (3) 55:11;111:15,19		
25-1/2 (1) 59:15	40 (3) 11:1;95:2,6		
27 (2)	41 (4) 101:2,4;109:11,13		
	42 (3) 108:14;109:6,8		
	43 (2) 109:15,18		
	457 (1)		