January 16, 2013-10:11 a.m. Concord, New Hampshire
RE: DE 12-116
PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE:
2011 Reconciliation of Energy Service
and Stranded Costs.
PRESENT: Chairman Amy L. Ignatius, Presiding Commissioner Robert R. Scott
Commissioner Michael D. Harrington
Sandy Deno, Clerk
APPEARANCES: Reptg. Public Service Co. of New Hampshire: Matthew J. Fossum, Esq.
Reptg. Residential Ratepayers:
Susan W. Chamberlin, Esq., Consumer Advocate
Stephen Eckberg, Utility Analyst
Office of Consumer Advocate
Reptg. PUC Staff:
Suzanne G. Amidon, Esg.
Suzanne G. Amidon, Esg
Steven E. Mullen, Asst. Dir./Electric Div.
Court Reporter: Steven E. Patnaude, LCR No. 52

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PROCEEDING
CHAIRMAN IGNATIUS: l'd like to open the hearing in Docket DE 12-116, PSNH's reconciliation of Energy Service and stranded costs for calendar year 2011. On May 1st, 2012, PSNH filed testimony and schedules in support of its proposed reconciliation of revenues and costs associated with its Energy Service Charge and its Stranded Cost Recovery Charge for calendar year 2011. The filing covers the reconciliation between the revenues and expenses included in the SCRC and Energy Service charges, the performance of PSNH's fossil and hydro generation facilities, and how PSNH met its energy and capacity requirements during calendar year 2011.

We have a hearing today that's been
noticed. And, I understand a Settlement has been entered into among some of the parties. So, let's begin first with appearances please.

MR. FOSSUM: Good morning. Matthew Fossum, for Public Service Company of New Hampshire.

CHAIRMAN IGNATIUS: Good morning.
MS. CHAMBERLIN: Good morning. Susan
Chamberlin, Consumer Advocate, for the residential ratepayers, and with me is Stephen Eckberg.

CHAIRMAN IGNATIUS: Good morning.
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[WITNESS PANEL: Baumann~Smagula~White \(\sim{ }^{7}{ }^{7}\) Cannata]

MS. AMIDON: Good morning. Suzanne Amidon, for Commission Staff. With me is Steve Mullen, the Assistant Director of the Electric Division, and also Michael Cannata, who is our consultant working for Accion Group.

Also, for your information, I did speak with Attorney Patch, who intervened, entered his appearance and intervened on behalf of TransCanada. And, he indicated to me that he will not be participating in the hearing today.

CHAIRMAN IGNATIUS: All right. Thank
you. So, are there any matters to take up before evidence on the Settlement proposal?
(No verbal response)
CHAIRMAN IGNATIUS: Seeing none, why
don't you get settled with -- is it a panel that's testifying?

MR. FOSSUM: Yes. From the Company, it will be Bob Baumann and Rick White and Bill Smagula, on behalf of the Company, and I believe they will be presented in a panel along with Mr. Cannata for Staff.

CHAIRMAN IGNATIUS: All right. And, this time, let's give Mr. Cannata a big chair. You got the tiny one, we could barely find you last time. Why \{DE 12-116\} \{01-16-13\}
A. (Baumann) I'm the Director of Revenue Requirements.

And, my responsibilities are all the revenue requirement calculations filed for Public Service Company of New Hampshire.
Q. And, have you previously testified before this Commission?
A. (Baumann) Yes.
Q. And, Mr. Smagula, could you state your name for the record please.
A. (Smagula) William H. Smagula.
Q. And, by whom are you employed?
A. (Smagula) I'm employed by Public Service Company of New Hampshire.
Q. And, what is your position and responsibilities in that position?
A. (Smagula) My position is Vice President of Generation.

And, I have responsibility for all fossil and hydro generating assets owned by Public Service Company.
Q. And, have you previously testified before this Commission?
A. (Smagula) Yes, I have.
Q. And, lastly, Mr. White, could you state your name for the record please.
A. (White) Frederick White.
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata] don't you get settled. This is off the record.
(Brief off-the-record discussion ensued. (Whereupon Robert A. Baumann, William H. Smagula, Frederick B. White, and Michael D. Cannata, Jr., were duly sworn by the Court Reporter.)

CHAIRMAN IGNATIUS: Are you ready?
Please proceed.
ROBERT A. BAUMANN, SWORN
WILLIAM H. SMAGULA, SWORN
FREDERICK B. WHITE, SWORN
MICHAEL D. CANNATA, JR., SWORN
DIRECT EXAMINATION

\section*{BY MR. FOSSUM:}
Q. So, I'll just go down and get all of the formalities completed for the record. Start with Mr. Baumann. Could you state your name for the record please.
A. (Baumann) My name is Robert Baumann.
Q. And, by whom are you employed?
A. (Baumann) I'm employed by Northeast Utilities Service Company, that provide services to all of our operating subsidiaries, including Public Service Company of New Hampshire.
Q. And, what are your responsibilities in your position?
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[WITNESS PANEL: Baumann~Smagula~White~Cannata]
Q. And, what is your position? I'm sorry. And, by whom are you employed?
A. (White) I'm employed by Northeast Utilities Service Company.
Q. And, what is your position and your responsibilities in that position?
A. (White) I'm a Supervisor in the Energy Supply Department. And, my responsibilities include analysis of the Public Service of New Hampshire Company's load and power supply portfolio.
Q. And, have you previously testified before this Commission?
A. (White) Yes, I have.

MS. AMIDON: Thank you.
BY MS. AMIDON:
Q. Mr. Cannata, would you state your full name for the record please.
A. (Cannata) Michael D. Cannata, Jr.
Q. For whom are you employed?
A. (Cannata) I am employed by Accion Group, who's under contractual arrangement with the Commission to provide services of this nature.
Q. So, in connection with your engagement, you reviewed the filing in this docket and other matters, is that
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White \(\sim \underset{\sim}{\sim} \stackrel{9}{n}\) ata]
A. (Cannata) That is correct.
Q. And, have you testified before this Commission previously?
A. (Cannata) Yes, I have.

MS. AMIDON: Thank you.
BY MR. FOSSUM:
Q. And, now, I guess for Mr. Baumann, Mr. White, and

Mr. Smagula, did you file prefiled testimony in this docket?
A. (Baumann) Yes.
Q. And, was that testimony prepared by you or under your direction?
A. (Baumann) Yes, it was.
Q. And, the same is for all of you?
A. (Smagula) Yes. The testimony was prepared by me or those working with me, and was filed in this docket.
A. (White) Likewise, for my portion of the testimony.
Q. Thank you. And, are there any -- strike that. Mr. Baumann, are there any updates or corrections to your testimony today?
A. (Baumann) No.
Q. And, if you were asked the same questions that are in your testimony, would your answers be the same today as \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata] correction on this page is in Line 33, energy purchase costs of "103.9 million", should read " 103.8 million".

There are associated corrections in
Exhibit FBW-3. I don't have the Bates reference for that with me. But it's Attachment FBW-3, just a few pages behind, at the end of my testimony section.

CHAIRMAN IGNATIUS: That would be
Page 059 on the Bates?
MR. FOSSUM: Yes, that would be Bates
Page 059.
CHAIRMAN IGNATIUS: Thank you.
WITNESS WHITE: Thank you.

\section*{BY THE WITNESS:}
A. (White) In that table, the section at the bottom, in the bottom left section, under "Off-Peak" purchases, the third column in, labeled "Total Bilateral Purchases", the entry for the month of May should read " 3,111 ", rather than " 3,178 ". And, in the next column to the right, under "Average Price", should read " 43.95 ", rather than " 44.88 ". And, in the "Totals" line, at the bottom of that section, under "Total Bilateral Purchases", should read "7,970", rather than " 8,036 ". And, under "Average Price", it should read "43.03", rather than "43.39".
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[WITNESS PANEL: Baumann~Smagula~White~Cannata]
they were when it was filed?
A. (Baumann) Yes.
Q. And, Mr. Smagula, are there any updates or corrections in your testimony today?
A. (Smagula) No.
Q. And, if you were asked the same questions today, would your answers be the same today?
A. (Smagula) Yes, they would.
Q. And, Mr. White, are there any updates or corrections for your testimony today?
A. (White) Yes, there are. There's some edits that I'd like to read into the record.
Q. Yes.
A. (White) And, these edits do not impact the financial reconciliation filed by the Company. This is supplemental information provided for explanatory purposes. It's developed separately from the financial reports in the filing. And, I would direct everyone to Page 3 of my testimony, which is Bates Page 052. And, I'll read through the necessary edits. On Line 24, "41.20" per megawatt-hour, should be "41.12". On Line 25, total expense figure of " 33.8 million", should be " 33.7 million". And, on Line 26, the average cost of "43.39" per megawatt-hour, should be "43.03". The last \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata]
So, these represent small decreases in purchase costs and off-peak purchase costs. Again, this is supplemental information provided for explanatory purposes, doesn't impact the financials. And, the parties in this proceeding were notified of these changes I believe it was last September, during the technical session, including Mr. Cannata. So, he was aware of this information in preparation in his work.
BY MR. FOSSUM:
Q. Thank you. And, with those changes and updates, is this testimony true and accurate to the best of your knowledge and belief today?
A. (White) Yes, it is.

MR. FOSSUM: Thank you. I would enter the combined testimony of the PSNH witnesses as the first exhibit for identification.

CHAIRMAN IGNATIUS: That's fine. And, then, is it what we received in the gray binder?

MR. FOSSUM: Yes. The complete filing from May, I believe May 1st of 2012.

CHAIRMAN IGNATIUS: Thank you. We'll mark that for identification as "Exhibit 1".
(The document, as described, was
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[WITNESS PANEL: Baumann~Smagula~White~Cannata] herewith marked as Exhibit 1 for identification.)
MR. FOSSUM: I know that lately the
Commissioners have decreased the amount of testimony being summarized from the stand. I'm willing to forgo having the witnesses summarize their testimony and move onto the next item or, if you prefer, we can have the witnesses briefly summarize their testimony?

CHAIRMAN IGNATIUS: I think that's fine.
We don't need it summarized.
MR. FOSSUM: Thank you.
BY MS. AMIDON:
Q. So, Mr. Cannata, I'm addressing this question to you. Did you file testimony on behalf of Staff in this docket?
A. (Cannata) Yes, I did.
Q. And, I have in front of me a document that indicates "Direct Testimony of Michael D. Cannata, Jr., P.E.", dated October 26, 2012. Do you have that document?
A. (Cannata) Yes, I do.
Q. And, with the attachments, it consists of 296 pages, is that correct?
A. (Cannata) I can take a quick look here. The answer is "yes".
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[WITNESS PANEL: Baumann~Smagula~White~Cannata]
MS. AMIDON: Thank you. Thank you, madam Chair.
BY MR. FOSSUM:
Q. And, returning to the Company's witnesses, did each of you participate in Settlement discussions in this docket?
A. (Baumann) Yes, I did.
A. (Smagula) Yes.
A. (White) Yes.
Q. And, those are the discussions that resulted in the Settlement Agreement that was filed on December 26, 2012?
A. (Baumann) Correct.
A. (Smagula) Yes.
A. (White) Yes.
Q. And, each of you familiar with the terms of that Settlement Agreement?
A. (Baumann) Yes.
A. (Smagula) Yes.
A. (White) Yes.

MR. FOSSUM: Thank you. I would enter
the Settlement Agreement as "Exhibit 3" for
identification.
CHAIRMAN IGNATIUS: So marked.
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[WITNESS PANEL: Baumann~Smagula~White~Cannata]
Q. Thank you. Do you have any corrections or other updates to this, to your testimony?
A. (Cannata) No, I do not.
Q. So, if you were asked the same questions today, you would provide the same answers, would that be correct?
A. (Cannata) Yes, I would.

MS. AMIDON: Thank you. I would like to mark this for identification as "Exhibit 2". And, I believe I've given copies, now that I think of it, to the stenographer and to the clerk. Thank you.

CHAIRMAN IGNATIUS: So marked. Thank you.
(The document, as described, was
herewith marked as Exhibit 2 for
identification.)
MS. AMIDON: Pardon me, madam Chairman.
May I just ask one final question of my witness?
CHAIRMAN IGNATIUS: Of course.
BY MS. AMIDON:
Q. Mr. Cannata, I had meant to ask you, did you participate in settlement agreements in this docket, that led to the Settlement Agreement between Staff and the Company?
A. (Cannata) Yes, I did.
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[WITNESS PANEL: Baumann~Smagula~White~Cannata]
(The document, as described, was herewith marked as Exhibit 3 for identification.)
MR. FOSSUM: I would, I guess, ask the same question with regard to the Settlement Agreement as with the testimony. If the Commissioners would like, we can offer a brief summary of the Settlement Agreement or we can simply move on?

CHAIRMAN IGNATIUS: I think, if there are items in particular to note in the Settlement, we've read it, obviously, and can explore it in more detail.
But you might perhaps have the witnesses walk through the sort of key provisions that you think bear some further explanation.

MR. FOSSUM: Certainly.
BY MR. FOSSUM:
Q. Mr. Baumann, Mr. Smagula, or Mr. White, as may be most appropriate, would you very briefly explain some of the provisions of the Settlement Agreement that was filed on December 26, 2012.
A. (Baumann) Sure. Why don't I start. Really, the terms of the Settlement Agreement start on Page 3, in Roman Section III, titled "Settlement Terms". And, there are just a couple. And, then, I'll turn it over to my
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[WITNESS PANEL: Baumann~Smagula~White~Cannata]
colleagues.

The first section talks about energy purchases and procurement of energy during 2011. It
finds that the values presented were accurate, they were made with sound management decisions, and that the capacity factor projections used in the procurement process were reasonable. And, last, with respect to purchases, there's a discussion on the focus on the short-term market in 2011, which reduced costs, and a recommendation that this should be continued into the near future. That's the first section.

The second section, up on Page 4, entitled "Unit Outages" or "C", it really is a section that just says that "PSNH will not seek recovery of \$2,203 of replacement power costs" associated with a handful of outages during the 2011 reconciliation period. And, those outages are actually found on Page 3 of the Settlement in a table.

And, then, the last section is really, which is Section D, as in "dog", in Page 4 of the Settlement. And, it's a series of recommendations regarding the operation and maintenance of the PSNH generating units for the year. And, there's a wide range of issues, and I would defer to my colleagues to \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata] the left here to discuss them.

And, lastly, I would just ask the Commission, on behalf of the Company, that you would review and approve in its totality the Settlement Agreement as filed in this docket. Thank you.
A. (Smagula) Good morning. In order to supplement the information that Mr. Baumann just provided, I will comment that, in the area of the generating assets, an extremely thorough review was conducted last year for these -- for the work and the management of the generating assets for 2011. This was done in significant detail, with numerous interviews of many people and a review of a huge amount of documents. The conclusion, I believe, that was reached was that a handful of outages were deemed to have some questions regarding actions of the Company. And, as has been stated, there are a few thousand dollars worth of replacement power costs that were put into question. And, as is stated in the Agreement, PSNH agreed to forgo recovery of these power costs, in an effort to reach settlement agreements, and it is not an admission of any imprudence on the outages or management decisions that were made.

In addition to the review of those
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[WITNESS PANEL: Baumann~Smagula~White~Cannata]
specific actions or those specific outages, a number of recommendations have been identified in the agreements. I think there's a total of 12. And, PSNH generation, to a great extent, is responsible to follow through and conduct studies, to conduct reviews, to modify practices, as a result of them, in an effort to try to further improve and enhance the management of our facilities. And, those actions are being worked on, and will continue to be worked on until they are completed. I believe that summarizes the generation aspect of this Agreement.

MR. FOSSUM: Thank you. And, I guess,
subject to Staff having any direct questions for its witness, the Company's witnesses are available for cross.

CHAIRMAN IGNATIUS: All right. Thank
you. Ms. Amidon.
MS. AMIDON: Just very briefly.

\section*{BY MS. AMIDON:}
Q. In connection with the recommendations that was referenced by Mr. Smagula, is it true that you also reviewed recommendations that you had made in prior reconciliation dockets, to determine whether those activities had been completed or needed to continue to be monitored?
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[WITNESS PANEL: Baumann~Smagula~White~Cannata]
A. (Cannata) Yes. A complete review was done of the open recommendations from previous dockets, and there's two or three. Some were recommended to be closed, and the reasoning is there, and there are a few that are being carried forward or being requested to be carried forward for further review when they become further complete.
Q. Thank you. And, did you have anything else you wanted to add to Mr. Smagula's description of the recommendations that begin at Section D?
A. (Cannata) No. His description was accurate.

MS. AMIDON: Thank you.
CHAIRMAN IGNATIUS: All right.
Ms. Chamberlin, questions?
MS. CHAMBERLIN: Yes, I have a few questions.

\section*{CROSS-EXAMINATION}

\section*{BY MS. CHAMBERLIN:}
Q. I'm going to start by just going more or less in order of the testimony. I just have a few questions for each. So, Mr. Baumann, if I may. You have stated that the Energy Service rate is based on a forecast of PSNH's actual, prudent, and reasonable costs. Is that a fair statement?
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[WITNESS PANEL: Baumann~Smagula~White~Cannata]
A. (Baumann) Yes.
Q. And, in terms of whether a cost is prudent, you look at alternatives? For example, do you check the spot market to check the price on what that would be, compared to running your own generation?
A. (Baumann) So, you're referring to a specific methodology we use to purchase power?
Q. Yes.
A. (Baumann) I think I'll defer that to Mr. White, if that's okay?
Q. Sure. I'll stay with Mr. Baumann for now, though.
A. (Baumann) Oh.
Q. And, then, I'll get to you. Is there, as you're looking at whether or not something is reasonable, is there a cents per kilowatt-hour cost number which, when it gets to that point, it's just unreasonable? Do you have a cut-off point?
A. (Baumann) No. It's based on the costs incurred. Now, you're talking about a rate?
Q. A rate impact, yes.
A. (Baumann) Setting a rate. And, in this docket, we're obviously talking about the actual costs for 2011 as incurred. So, you know, with that respect, these are the actual costs, they're general electric costs that
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata] actual costs. But, for reasons beyond your control, your projection is way off. Is there any moment that the rate impact is so high that you say "you know what, this is unreasonable", even though we're using actual costs?
A. (Baumann) Well, again, in the forecast, you use projected costs. If, during the period -- during the year, there is a midterm adjustment methodology, where you can adjust that rate midterm, if you feel it's appropriate. And, the Commission has chosen to do that on many alternatives.
Q. If you have a very high underrecovery, so you're going to experience rate shock if you implement this, do you have a number in mind that is "rate shock" to you? That you would say "You know what, we need to do something else, because this is just too high"?
A. (Baumann) No, I have never really defined it, a number for rate shock.
Q. So, essentially, it's actual, prudent at the time, no matter what the impact, you believe it's reasonable?
A. (Baumann) No. In numerous -- well, not "numerous", in a few occasions in the past we have had large overand/or underrecoveries that we actually, as a company, have proposed to smooth out the rate impacts. So, we
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[WITNESS PANEL: Baumann~Smagula~White~Cannata]
were presented here. When you're presenting a rate for forecast purposes, again, you put together a parameter and a simulation that has details that will, as accurately as possible, forecast the next year's rate to be recovered -- that would adequately recover costs.

And, a good example is 2011. If you
take out the Scrubber costs, which were a separate item in this filing, there was really only about a \(\mathbf{\$ 2 0 0 , 0 0 0}\) underrecovery, when you compared revenues to expenses for 2011. It's actually the closest l've ever seen it in all my many years being here. So, that's really the objective when you set a rate, would be to forecast the costs as closely as possible to what actual would be, so that you could bill a rate that was as accurate as possible.
Q. And, in this case, it's a \(\mathbf{1 3 . 5}\) million underrecovery, is that approximately correct?
A. (Baumann) It was 13.3 in my testimony, and 13.1 of it was due to the Scrubber costs. But, if you put them aside, which, in effect, we are for recovery purposes in 2011, it was really just \(\mathbf{\$ 2 0 0 , 0 0 0}\), or 0.2 million underrecovery, for the entire year, which is an extremely accurate forecast.
Q. Now, if you -- you make your forecast, you incur your
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata] -- I know, just recently, we had a large overrecovery that we had recommended that would be smoothed. The Commission did not take our recommendation in that respect. That was in the 2012 billing period. We've had large underrecoveries that we've asked to be smoothed in the past. And, I believe, in most of those situations, the Commission did approve a smoothing impact.
Q. So, that would be your proposal, if it reached some undefined, but really high underrecovery, perhaps you would come forward with a delayed mechanism to collect the rates?
A. (Baumann) Well, that would be a consideration, certainly. We have done it in the past. We would certainly consider it in the future. You have to look at the rate structure, the carrying charges, there are a lot of different things you look at. But PSNH has certainly been open to mitigating a one-time rate impact for large overrecoveries or underrecoveries in the past.
Q. And, would you consider simply not seeking recovery of a cost, because you didn't want to burden your customers with it?
A. (Baumann) If a cost was prudently incurred, PSNH would
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[WITNESS PANEL: Baumann~Smagula~White~Cannata]
ultimately seek recovery of that cost.
Q. No matter what? Can't imagine a situation where you wouldn't?
A. (Baumann) Correct.
Q. All right. I was looking at your testimony from the prior year. And, I'm just trying to just get an understanding of some of the differences between the years. The testimony stated that coal generation resources were put into reserve shutdown and alternative market purchases were taken. Is that the same thing that happened this year?
A. (Baumann) Again, I'll have to defer to my --
Q. Okay.
A. (Baumann) -- experts here, probably Mr. White.
A. (White) Yes. It's fair to say, in general terms, that occurred in 2011, yes.
Q. In describing the coal units, this is actually -- I've gone to Mr. White now. You include coal as a baseload unit. Is that still an accurate description?
A. (White) Well, it's -- it would be -- it's duty, when it was built and put into service, was as a baseload unit. And, for the majority of its life, to date, it served that duty. As we've discussed, it is not baseload across all months in a year, in recent years. But I
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[WITNESS PANEL: Baumann~Smagula~White~Cannata] think it would be fair to describe it as "baseload" over given periods of time, perhaps a week, two weeks, a month at a time, such that, when it's on line, it stays on line. And, typically, we'll run at full load across peak hours. We're talking about Merrimack, correct?
Q. Just coal units in general, but Merrimack, that's -- we can get more specific -- l'll get more specific with Mr. Smagula's testimony. Another point from the prior testimony was, when fuel expense for Newington is lower than the cost of purchasing power, that's when the Newington Station runs? Is that statement accurate for this year?
A. (White) Yes. That's correct. And, it's not just -- it doesn't only run when PSNH has a need to serve load. So, you may not be looking at a necessary purchase as an alternative. It may simply be that prices in the market are high, and that value can be gained for ES customers by generating energy from Newington.
Q. And, selling it back into the market, is that what you mean?
A. (White) That's correct.
Q. Okay.
A. (White) And, that would happen when its fuel costs were
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[WITNESS PANEL: Baumann~Smagula~White~Cannata] below market prices.
Q. And, Newington is oil and gas, is that correct?
A. (White) Yes. It can burn either.
Q. Right. Looking at -- you're familiar with the fact that PSNH's generation operates in a regional market, correct?
A. (White) That's correct.
Q. And, it's dispatched by the ISO-New England?
A. (White) That's correct.
Q. And, you've received capacity payments as a discount or as an offset for the Energy Service rate?
A. (White) Yes. PSNH generation sells capacity into the regional market. And, PSNH load pays for capacity in the regional market. So, within the ES portfolio, the two, to some degree, offset.
Q. My recollection is it was \(\$ 45\) million, is that correct?
A. (White) Of revenue --
Q. Of the capacity payment from ISO-New England to NU or PSNH?
A. (White) That sounds correct. I can check, because I believe that number is in testimony, on Page 5, of 45.1 million in revenue in 2011.
Q. Okay. And, that's counting all of your generation. You got credit for all of your units? For instance, \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata you get capacity credit for Newington, whether it runs or it doesn't run?
A. (White) That's correct.
Q. Because it's there?
A. (White) Yes.
Q. Okay. And, have you run a sensitivity analysis, let's say you retied Newington, what impact would that have on your capacity payments?
A. (White) Well, we're aware of what portion of the 45.1 is attributable to Newington.
Q. So, you can run that factor pretty quickly, you just haven't done it yet, or you haven't -- you don't have it in your mind right now?
A. (White) I don't have a number that I could give you right now.
Q. But that can be determined?
A. (White) Because the payments are by resource, and by the capability of each individual unit.
Q. So, if it's running at its maximum capacity, 100 percent, you would have a certain amount of power, and that's what you get paid for, even if you don't actually run it, because your unit is available?
A. (White) Well, we're speaking about the capacity market now. So, as I thought you had stated, even when the \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata]
unit is not generating, it has capacity value and receives payments, even during a month where it may not have generated any energy.
Q. Right.
A. (White) And, those payments are based on "its capability", which is by a rating system used in the regional market. So, you --
Q. Yes. Now, one of the factors that affects the rate impact on customers is the amount of migration of residential/commercial customers from PSNH, as a supplier, to competitive suppliers, correct?
A. (White) That's correct.
Q. And, the migration has been about \(\mathbf{3 6}\) to 38 percent. Is that still correct?
A. (White) During 2011, I believe migration was generally in the low 30s, and increased toward the upper 30s. So, my recollection, the average over the year was 35 or 36 percent.
Q. And, do you have a projection going forward what that might be?
A. (White) I can tell you that our calculation of migration through December 2012 was 41.5 percent. The ES rate setting in December utilized 42 percent.
Q. Okay. Turning to Mr. Smagula's testimony, Page 3, you \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata]
Q. Okay.
A. (Smagula) There are a number of pages. Which ones are you --
Q. Well, we can go backwards.
A. (Smagula) Okay.
Q. We can start with the one entitled "Fossil Plant Graphs - Planned Outages Omitted".
(Court reporter interruption.)
MS. AMIDON: And, just for
clarification, I apologize, I wanted to say that there is
a Bates stamp. I believe 123 and 124.
MS. CHAMBERLIN: Oh. Yes.
MS. AMIDON: Just for the sake of people
who are looking for it. Thank you.
BY MS. CHAMBERLIN:
Q. Okay. I'm on Page 124.
A. (Smagula) Okay. Yes. I have that page.
Q. Okay. And, you've got the dark line with the square, "AVI". Is that average?
A. (Smagula) Yes. That's "Availability 1". It's a certain characteristic of calculating availability with, as the title of the page indicates, with the planned outages omitted. Because the rationale for that is, that if, during the course of a year, a unit \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata]
use the word "availability", "unit availability". That is different from "capacity factor", correct?
A. (Smagula) Yes.
Q. And, can you explain the difference please?
A. (Smagula) Yes. "Capacity factor" is the amount of hours in a given period that the unit -- the megawatt-hours that are generated over a period of time, as compared to the maximum number of megawatt-hours that are generate -- that could be generated. So, that would be the "capacity factor". How much they produced, as compared to the maximum amount they could have produced.
Q. Okay.
A. (Smagula) Whereas, the "availability" is determined by the number of hours that the unit is available to operate, as compared to the total number of hours in that period.
Q. And, at the back of your testimony you have some fossil plant graphs. There aren't any Bates stamps, but they're the last two pages of the document that I have.
A. (Smagula) In the testimony or the appendix?
Q. Well, let's see. I think it's the appendix. Yes, it's the appendix. Last two pages.
A. (Smagula) I have those pages.
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata] has a planned four-week maintenance inspection that's occurred, if you then would assume that the year is four weeks shorter, your analysis is based on, "of all the weeks that the unit was not planned to be unavailable, what would the capacity factor be?" So, one is availability, the blue, and then the capacity factor is the lower value, the lower curve, which, in my sheet, is red.
Q. Okay. And, in mine, it's just lighter, with a triangle on it.
A. (Smagula) Yes.
Q. So, starting at the Schiller Unit 4, the availability stays fairly high, above 90 percent. And, then, if you look at the lower one, at around 2008 it starts to drop down, to 2011 it's way down at the bottom. So, that tells us that it was ready to run, but it just didn't run very often for economic reasons?
A. (Smagula) That's correct.
Q. Schiller 5, that's the unit that is now burning wood, is that correct?
A. (Smagula) Yes.
Q. And, that one, the same two lines, around 2006, it starts going up. Do you recall when you converted to wood?
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata]
A. (Smagula) The conversion began in December 1st, 2006.
Q. A coincidence. And, then, the Schiller 6, similar to

Unit 4, the actual run time, around 2008, starts to drop off significantly. And, --
A. (Smagula) Yes. It drops from the 80s, down into the 50s, right.
Q. And, the Unit 4 and Unit 6, are those both coal units?
A. (Smagula) Excuse me? Yes.
Q. And, would you expect, as units get older, that they will have more planned outages or are there ways to mitigate that impact?
A. (Smagula) There's numerous ways to mitigate that. So, more planned outages is not relevant to age. In fact, with somewhat reduced capacity factors, planned outages have some likelihood of being reduced or conducted at all -- or, not conducted at all.
Q. Now, flipping back to Page 123.
A. (Smagula) Yes.
Q. We have different units, similar drops occurring at 2008, looking at Merrimack Unit 1, capacity factor going down to -- are you saying that the capacity factor of Merrimack Unit \(\mathbf{1}\) is \(\mathbf{7 0}\) percent? In 2011?
A. (Smagula) It was. That's the capacity factor, if you exclude the planned outages.
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata] to stay there.

CHAIRMAN IGNATIUS: So, Pages 121 and
22 [122?]?
MS. CHAMBERLIN: No, 123/124.
CHAIRMAN IGNATIUS: So, without the planned outages?

MS. CHAMBERLIN: I'm sorry, planned outages omitted, yes.

CHAIRMAN IGNATIUS: Okay. Thank you.
BY MS. CHAMBERLIN:
Q. So, looking at Newington, which is the bottom graph, 2006 it goes down to about 10 percent. Since Newington is a gas -- has the option of running on gas, I'm surprised it hasn't run more. Can you explain why it hasn't run more?
A. (Smagula) Newington does not -- is not dispatched on firm gas purchases. As a result, when the economics of the market are such that the unit is -- has some likelihood of running, we look at each fuel that it can burn and determine which would be the lower cost on a given day. And, based on gas availability and gas price, at the price we buy gas, because we're not a firm customer, we would look at the spot market or the intraday market, and we would then determine what the \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata]
Q. Okay. And, if you include the outages, it goes down to, I'm looking at Page 121, you're saying "50 percent"?
A. (Smagula) I think it's in the 50s.
Q. Okay. And, then, unit two starts to drop in 2009, without -- with planned outages, it's down to 40, between 40 and 50, is that correct?
A. (Smagula) In which curve are you looking at?
Q. Well, I'm looking at Page 121, "Unit 2 Historic Performance Data", it's the middle graph.
A. (Smagula) Yes. I think it's in the high 40s. Is that what you indicated? Yes.
Q. I think so, yes. And, looking at Newington, does -CHAIRMAN IGNATIUS: Can I ask,
Ms. Chamberlin, you've moved between two different ways of depicting this, "with planned outages" and "without".
And, which -- are you sticking with the 123/124 pages or are you now in 121/122?

MS. CHAMBERLIN: Well, I've been comparing, as you noticed, the planned outages and the planned outages omitted. I'm trying to grasp the impact of the way it was calculated. I can understand the concept, but I'm trying to coordinate the numbers. So, I will go -- I will go back to the planned outages, and try
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata price of the unit would be to be dispatched on a given day. Whether it be a very -- a warm day or a hot day or a cold day, and we then would bid our unit in accordingly, in order to make sure that we would be reimbursed for our fuel purchase. And, then, the ISO would determine, based on the market conditions, whether that unit would be picked up or not. So, it's not a easy answer. It's just not based on what we can go buy gas on, because that's a dynamic situation. For example, gas prices at the moment are very high, because there is a high demand, due to energy needs of residential customers and the limitations of the transportation system to bring gas into New England. New England doesn't have much storage of gas. So, we're kind of subject to the transportation market.
Q. So, is it a fair summary that Newington isn't running not because gas is inexpensive, essentially, but that it's not available to the Newington unit, for a variety of reasons?
A. Oh, no, gas would be available, but it's the price that the gas would be available. And, if the price is extremely high, or higher than would allow us to bid the unit in economically and it's not picked up. So, there are a number of variables that are factored into \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata]
a decision on what to bid the unit in on any given day. And, then, the market determines whether the unit is picked up. For example, there was a situation a few weeks ago where gas was available at an extremely high price. The market was at an extremely high price. And, we bid the unit in on oil, and the unit was picked up on oil, and provided significant value to customers, versus what we otherwise would have had to buy the energy in the daily market.
Q. So, when you look at --
A. (Smagula) So, there is flexibility on the fuel, but it's a dynamic situation on a weekly or, in fact, daily basis.
Q. Okay. And, if Newington didn't run at all, would that cause you to bid in other plants in a different way, if you retired it?
A. (Smagula) Newington is bid in every day. The market consumption and projected consumption, the market needs then dictate which units run in New England. So, we bid the unit in every hour of every day, and we do that daily.
Q. Now, recognizing that this is not the planning document [docket?], do you at any point say "This plant just isn't running very much, it would be more economic to \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata] for other products that it possesses in the ISO-New England market.

\section*{BY MS. CHAMBERLIN:}
Q. So, the benefit is for the whole ISO-New England market, not specifically New Hampshire?
A. (Smagula) No, it's for PSNH customers directly. There's value there for the unit in the way it operates right now.
Q. And, would you say there is also value to the ISO-New England region as a whole?
A. (Smagula) Yes, there is. And, that's why we are reimbursed for capacity, with capacity payments and other things. So, yes, it's a benefit for the region, and that benefit flows to our concerns.
Q. So, when you're doing this snapshot, you're doing a projection, and then you're doing this reconciliation, you don't make the analysis at that point which would be less expensive, going to the spot market or retiring the plant?
A. (Smagula) Well, we make a determination as to which is more beneficial to customers, either procuring energy or running Newington. We do that on a daily basis, and bidding the unit in on a daily basis. Retiring the plant is not something we do on a daily basis. That's \{DE 12-116\} \{01-16-13\}

\section*{[WITNESS PANEL: Baumann~Smagula~White~Cannata]} shut it down"?

MR. FOSSUM: I guess I would, before going on, I would ask, I mean, the question was prefaced by the statement "this isn't the planning docket". So, I guess I would, in this particular docket, I would question what that question is trying to elicit.

CHAIRMAN IGNATIUS: Ms. Chamberlin. MS. CHAMBERLIN: I'm trying to look at, when they -- the alternatives, when they are making a prudent choice, what are they looking at? And, if you say, "it's not my job, I just bid in the plants", you know, fine, that's the answer. But I'm interested to see where the decision-making happens, and, if it happens, in what way?

CHAIRMAN IGNATIUS: I think that's fair.

\section*{Mr. Smagula.}

\section*{BY THE WITNESS:}
A. (Smagula) You know, I think there are studies that have been made that are on file with the Commission that illustrate that Newington provides value to customers, even with the capacity factors that are demonstrated on this sheet. And, that has to do with its overall value to customers in providing energy, which is limited, but also in its capacity value and its benefit to customers
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata]
done -- that's a broader issue, and I think it is relevant to the integrated least cost docket. And, I believe there is information there, which on -- with regard to Newington, may assist you. But I think the summary that I provided, that there is net value to customers with the Newington station running and existing with the current capacity factors, is correct.
Q. So, in your daily prudence analysis, you don't think "well, are we going to shut it down today?" You assume that you're going to -- that the plant is operational, and your choices are among bidding it in for oil or gas or the price that you bid it in, that's how you make your alternatives?
A. (Smagula) We bid the unit in at the lowest price we can, based on fuel price. And, then, the ISO-New England determines whether the unit runs for energy in the subsequent day.
Q. Just a final comment on the Schiller Unit 5, the wood conversion. Out of these six graphs, that's the only one that is not going down. That's actually going up. And, is that due to the availability of wood?
A. (Smagula) No. It has nothing to do with wood. There has been a consistent availability of wood and a very consistent price for wood, over the last four to five \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata]
years. The reason the availability is going up, and I'll say it is due to the engineering work and operations work being done at Schiller Station, based -- in order to eliminate carriers and pieces of the unit that had been identified causing small amounts of outages and small amounts of reduced capacity factor, through targeted maintenance and targeted modest capital investments, the unit's reliability has continued to climb. In fact, it made more power in 2012 than it had in any other prior year, and ran in its longest duration of 155 days without an outage in 2012. So, the performance of the unit continues to grow. And, you'll see that, in next year's docket on this issue, that the amount of generation will, in fact, climb further.
Q. Okay. I have a couple questions for Mr. Cannata. On Page 5 of your testimony, you discuss -- you say that the -- let me get the exact words. That "PSNH's filing is an accurate representation of the capacity and energy purchases." And, then, down on Lines 9 and 10, you say that the purchases are "consistent with its 2010 Least Cost Plan." Are you referring to the filed 2010 plan?
A. (Cannata) There was a document, I believe it was in \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata] Commissioner Harrington, questions?

CMSR. HARRINGTON: Yes. Good morning.

\section*{BY CMSR. HARRINGTON:}
Q. Let's just kind of follow up with some of the issues that we were just discussing, having to do with the availability factors and capacity factors. I'll be dealing with those same, 121, 122, and so forth pages. And, in your last answer on Schiller, Mr. Smagula, you were talking about various improvements, and I don't know if it was design changes or modifications, but that that's what led to the higher capacity factor. But that doesn't seem to match, if you look at the Merrimack unit, for example, Merrimack 1, which has an availability factor extremely high, yet its capacity is going down. So, it would seem as if improvements in operation and design, whatever, may increase the availability factor, which, of course, could increase the capacity factor, but the main thing driving the capacity factor is cost, isn't it?
A. (Smagula) Yes. That's correct. I think in my comments were primarily associated with Schiller 5 , which was the area of focus in the last set of questions.
Q. And, one of the biggest reasons that Schiller 5 has better cost figures and a higher capacity factor is
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata] September of 2010, which updated PSNH's Least Cost Plan. My review of PSNH's actions during 2012 were consistent with that document.
Q. So, you're aware that the document has yet to be approved by the Commission?
A. (Cannata) My understanding was that the 2010 document was approved, and there is an additional document pending to be approved by the Commission, which is going to be the 2012 Least Cost Plan.
Q. Well, we can leave that. Your recommendation is that approximately \(\$ 2,000\) will not be recovered in this reconciliation, is that correct?
A. (Cannata) That is correct.
Q. Do you have a cents per kilowatt-hour, you know, 0.0002 impact analysis of what that is?
A. (Cannata) On customer rates?
Q. Yes.
A. (Cannata) No.
Q. No. Thank you.
A. (Cannata) It would be small, though.
Q. It would be small.

MS. CHAMBERLIN: Thank you. That's all
I have.
CHAIRMAN IGNATIUS: Thank you.
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata because it's able to qualify for RECs under the Renewable Portfolio Standard, --
A. (Smagula) Yes.
Q. -- which the other units are not.
A. (Smagula) And, there's also a federal tax credit.
Q. Okay. And, there was a lot of discussion on Newington and bidding, and just tell me if I'm wrong here. Basically, each, on the day before, you bid -- I'm assuming you bid into the day-ahead market with Newington?
A. (Smagula) Yes.
Q. So, you put in a bid based on your going forward cost, where you biggest variable from day-to-day is the cost for fuel?
A. (Smagula) Correct.
Q. Okay. And, then, that either clears the day-ahead market or it doesn't clear, based on what happens in all the rest of New England, is that correct?
A. (Smagula) Yes. That's correct.
Q. So, the going forward cost on Newington are mostly driven by the cost of gas, and potentially oil, as you mention, in some cases, because, if gas spikes on a particular cold day, then oil may be cheaper and may actually be dispatched, is that correct?
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata]
A. (Smagula) That is correct, yes.
Q. And, you were talking -- you were asked about Newington and how often it ran and so forth. And, you did a lot of discussion on availability of gas and so forth. But isn't it correct that Newington is I guess what you call a "thermal gas plant", and it's not a combined cycle gas plant?
A. (Smagula) Yes.
Q. So, it is inherently much less efficient than a modern combined cycle gas plant?
A. (Smagula) It is. And, it has a different heat rate, a higher heat rate. That's correct, yes.
Q. And, so, what would you rate the thermal efficiency of the Newington plant to be approximately, either in heat rate or percentage?
A. (Smagula) Just under 11,000. So, about ten eight.
Q. So, what does that come out to be? Somewhere --
A. (Smagula) 10,800 .
Q. -- about around 30 percent efficient?
A. (Smagula) About 35 percent efficient.
Q. Thirty-five percent, okay. As compared to a modern combined cycle gas plant, which it's now approaching, looks like they're in the 60 percent range?
A. (Smagula) That could be. I'm not sure what the plants \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata] said something, that "there was no indication of any imprudent management decisions." Would you limit imprudency to only PSNH management actions, or, if an operator or a mechanic did something incorrect, would that be considered imprudent as well?
A. (Smagula) Yes. I think my statement was a reiteration of a statement that existed in the Settlement

Agreement. But, in fact, on Page 4, at the top
paragraph, which is a general statement, but, in response to your question, yes. An "imprudency" discussion could relate to a management decision or an employee action.
Q. Okay. I just wanted to --
A. (Smagula) Or any number of things that could occur, a wrong part, anything.
Q. I just wanted to make sure we weren't trying to limit it only to management actions?
A. (Smagula) No.
Q. Okay. Maybe I misunderstood.
A. (Smagula) No, and I didn't intend that. I was just trying to reiterate the language in the Agreement.
Q. One thing that's been kind of a new phenomenon in our electric markets here is that we're actually seeing higher electric prices on the wholesale level in the \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata] in the region are, based on their age.
Q. Okay. And, on Page 123, when talking about Merrimack 1, and the capacity factor, the last block there appears to be -- I'm trying to get this -- does that triangle show up in the middle of 2011, the end of 2011, or the beginning?
A. (Smagula) It's intended to be for that calendar year.
Q. Okay. So, for the calendar year 2011, the capacity factor was 70 percent?
A. (Smagula) With the planned outages omitted.
Q. With the planned outages omitted, okay. And, --
A. (Smagula) 2011, if you recall, is our tie-in year with the Clean Air Project. So, both Merrimack 1 and Merrimack 2 had outages associated with that, but those are excluded in this case. So, that's right. This would be outside of those planned outages.
Q. Okay. So, for including the planned outages, we go to 121, that would be somewhere in the --
A. (Smagula) Yes.
Q. -- in the high 50 s .
A. (Smagula) And, that's why those units took a dip in that year, because of the Scrubber tie-in work.
Q. You had made a statement earlier, in talking about the prudency, and this is, again, Mr. Smagula, and you had \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata] wintertime now. And, historically, even though we have a summer peak on load, we've always had a summer peak on price to go along with that. But, due to our large dependency on natural gas, we're actually seeing electric prices on the wholesale level become higher in the winter than they have been in the summertime, and that's, obviously, because the price of gas has spiked, as you mentioned, and you were able to actually have Newington run and be dispatched on oil for a few days. What action have you taken to account for the fact that your fossil units are now going to be running more in the wintertime than they would in the summertime, which is sort of a reverse of what we expected in the past?
A. (Smagula) There is no specific action that we take in order to enhance our reliability and our unit operations in the winter. Our units are ready to run at any given time during the year. I will say, though, that in the winter, with cooler water, our efficiency is incrementally improved, based on condenser back pressure, and that improves the efficiency of the thermodynamic cycle a bit. But, other than that, we don't take any special precautions. Our units are designed and able to run in any weather.
Q. Well, I wasn't meaning so much for special precautions
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata]
to make sure, but more like in scheduling of outages and maintenance?
A. (Smagula) Oh. Excuse me, yes. Thank you for clarifying to me what you were seeking. Yes. Our units, we manage our fleet in concert with wholesale marketing and bidding, in order to maximize benefit to customers. And, we always take our planned maintenance inspections or overhauls during what's often referred to as the "shoulder months", or those months of the year when demand is lower, because we're in a transition. We're not in the dead of winter with high demand and we're not in the summertime period with high demand. We try to take them in the spring or the fall. And, that practice continues now. And, in fact, if we do have any other reason to take an outage, such as a piece of equipment should be repaired, we will defer that action to take the unit off line for a week or two, and if we see the weather breaking. For example, a few weeks ago Merrimack 1 needed to come off line to do some maintenance, it is now back on line. But we did it during that warm period last week, when demand was down, prices were down, and so that it could be available and, in fact, is on line now, because the prices have gone back up.
\{DE 12-116\} \{01-16-13\}
Q. Because you're not going to run, you're buying power in
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata]
and away from the winter, --
A. (Smagula) No.
Q. -- given that you have a higher chance of running in the winter?
A. (Smagula) No. We would want our plants to always be available in the summer period. So, any type of planned maintenance would be in the spring or the fall.
Q. Okay.
A. (Smagula) Sometimes we do now, in order to assist us in reducing our cost, take our outages during these lower load/lower price periods, and we may extend the length, which what might have been a three-week inspection, we may use five weeks, for example, or, in the case you quoted, six weeks. We do that, because the extended period of time still does not subject our customers to any incremental cost. And, what it allows us to do is do the work on a straight-time basis, rather than work double shifts, seven days a week, which had been the case in the past. We lengthen that now, use our own employees to a greater extent, and work it on straight-time. So, our reduction in availability isn't causing our customers any more costs, in fact, is saving our customers money.
[WITNESS PANEL: Baumann~Smagula~White~Cannata] So, not only our planned outages, where we have to schedule occasional contractors or other specialty technicians to assist us, that's often in the spring or the fall. But, otherwise, during the year, we're doing that same thinking, continuously working in concert with wholesale marketing to determine what's best, and at the lowest cost.
Q. And, I guess -- I guess what I'm trying to get at is that there has been rather a quantum change here in the New England market. Such as, for example, I don't remember the exact date, but sometime last June or July there was a -- I think a front page article in the Union Leader about the Merrimack Station was going to be closed for six weeks or something during the summer, and there was a lot of speculation you were closing the plant down, which was obviously incorrect. But that is something that would have never been thought of doing a few years back, because during the summer months is when the demand was highest and the prices were highest. But l'm just wondering if you made a management change, such as with personnel scheduling vacations, scheduling any type of maintenance, or even activities that would have a higher probability of taking the plant off line, moving those towards summer,
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata] the market regardless?
A. (Smagula) At a lower price, yes.
Q. Okay. Let's see. I'm just going to ask a few different questions now, and whoever is most appropriate to answer them. I guess this would be for Mr. Cannata. In your -- in the Settlement Agreement, it states that "Mr. Cannata reviewed PSNH's capacity and energy transactions and concluded that PSNH's capacity factor projections used in 2011 were reasonable." The reason I ask this question is, because during the recent least cost planning docket, we were basically told that Public Service doesn't really make capacity projections, that they just assume that the -- like, the Merrimack plant is a baseloaded plant, it would run like a baseloaded plant. And, as we've seen by these statistics, it's been -- the capacity factors have been going down. So, what were the projections for capacity factors that you, obviously, were able to have access to?
A. (Cannata) What you say, Commissioner, may have been true in the past, but the current process, which is the same process, does not make that global assumption, that the Merrimack units and Schiller units are baseloaded, and, therefore, no reduction. They are put \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata]
into the monthly analysis, and there is a number that comes out that projects the economic reserve shutdown periods for that month. And, what I referred to was is that the prices that PSNH was using to meet those projections, in preparation for its December 10 filing, and its update the following July, were reasonable.
Q. Okay. So, what you're saying is that there is a method, that wasn't explained to us previously, I guess, but that where, on a monthly basis, Public Service looks ahead, and I assume at future gas prices, availability of other plants, transmission outages, etcetera, and projects what they believe the capacity factor will be for each of their fossil units?
A. (Cannata) Yes. And, I'm going to refer you to a data request, which might even help make that clearer. And, it's Staff 1-13 and Staff 1-14, and I'Il get you the page numbers here.
Q. And, that's in your --
A. (Cannata) In my testimony.

MR. MULLEN: And, if I could, if it
helps somewhat, Mr. Cannata, if you -- there's a chart on Page 52 of your testimony, that includes the projected capacity factors?

WITNESS CANNATA: Yes.
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata]
A. (Cannata) When they ran their monthly models, and I believe this is for the filing, for the December 10 filing as noted, for the ES filing, that it showed that there would be 377 hours for Merrimack 1 of reserve shutdown during that month.
Q. Okay. So, everybody's clear, could you define the term "reserve shutdown" please.
A. (Cannata) The unit is ready to run, but is not needed because -- or, it does not run because of economics.
Q. So, what you're saying is that, in all other months, other than May, it would run, if it was actually available?
A. (Cannata) That is correct.
Q. Okay. And, then, the next one, where it talks about -and, again, I'm trying to follow this. Let's just start at the beginning. "Megawatt-hours per hour"?
A. (Cannata) Yes.
Q. What does that mean, "megawatt-hours per hour"?
A. (Cannata) Unit 1 is rated, and I'll just take the month of January for talk purposes, Unit 1 is rated as 114 megawatts in the month of January for its capacity. If it runs for one hour, it would generate 114 megawatt-hours in that one hour.
Q. So, that's a seasonal claimed capability that you're \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata] MR. MULLEN: If that helps the
discussion.
WITNESS CANNATA: Sure.

\section*{BY THE WITNESS:}
A. (Cannata) Yes. It's actually Staff 1-9 and Staff 10,
and that is at Page 141. If you look at the Attachment to Staff 1-9, this was their projected -- the analysis that I just spoke of. And, in there --

BY CMSR. HARRINGTON:
Q. I'm sorry, did you say " 141 " or 142?
A. (Cannata) The attachment would be Page 142, yes.
Q. Okay.
A. (Cannata) You can see that there was some economic reserve shutdown hours modeled in the projected capacity factors.
Q. And, maybe you can just walk us through these. Let's just use Merrimack 1. And, the first column, obviously, we have is the date, then we have megawatt-hour --
A. (Cannata) Yes. It's the rating of the unit, if you will. And, this is just a summary of, okay, when they ran their models, their monthly models --
(Court reporter interruption.)
CONTINUED BY THE WITNESS:
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata] reflecting?
A. (Cannata) Yes, monthly. It's like a monthly claimed capability, yes, Commissioner.
Q. Okay.
A. (Cannata) And, based on that, if we go to "May", the analysis done by PSNH said that there would be "377" hours in which "114" megawatt-hours would not be available.
Q. Would not be produced?
A. (Cannata) By that, yes.
Q. Okay.
A. (Cannata) Produced by Merrimack 1, because of economic reserve shutdown.
Q. And, in the other -- the last column, where it says "Actual", what does that exactly mean?
A. (Cannata) That jumps ahead to the actual time period. Remember, we are using data that was probably compiled for a fuel forecast in the Fall of 2010, --
Q. Okay.
A. (Cannata) -- to make the filing in December of 2010, to get the projected model number. The number in the other column is actual May 2011 actual data.
Q. Okay. So, I'm just trying to get this straight now.

If the -- if we, let's just say, for example, in the
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata]
modeled one, that the month of May, the " 377 ", was also zero. Would that imply, if the unit was able to run, it would be running at \(\mathbf{1 0 0}\) percent capacity?
A. (Cannata) Yes.
Q. Okay. And, so, what they modeled was the only time that it would not be economical to dispatch the unit was for 377 hours in the month of May?
A. (Cannata) Yes.
Q. And no other time?
A. (Cannata) Correct.
Q. And, what was unique about May?
A. (Cannata) Well, May is traditionally the lowest load period of the power year period. It's the lightest load. And, generally, that's when you will have the lowest costs on an ISO basis. The prime driver of the economic reserve shutdown would be the price of gas. And, in your earlier conversations, you talked about some things that affect the price of gas. And, as a wholesaler, like if you have a warm winter, all of a sudden you don't have demand for gas in the following summer to fill your caverns, and the price of gas drops. And, that did happen in 2012, which has other ramifications. You don't know that, when you're making the projections.
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata]
Newington, it actually ran a little bit more than what was projected, is that correct? The actual on this?
A. (Cannata) Yes.
Q. Yes. Okay. But, overall, especially for Schiller, the Schiller 4 and 5 and Merrimack 1 and 2, their estimate was off by a substantial amount?
A. (Cannata) With the data they used, --
Q. Schiller 6 and 4 , I'm sorry.
A. (Cannata) -- the actual results were much lower, yes.
Q. Okay.
A. (Cannata) And, if we could go back to -- maybe to Page 52 of the testimony, just take a quick look at that chart. And, along the same line, what this chart shows is capacity factors historically, and they would be replicative of the charts you were just discussing, you know, through time. And, we have a projected capacity factor. That projected capacity factor, on the right-hand side of that table, is the number that was generated in the December ES filing, you know, with the data we were just discussing. And, if we go to look on the next page, on Page 53, we can see what those projected reductions were in capacity factor on the right-hand column, and what they actually were in the " 2011 " column. And, you can see that there is a \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata]
Q. So, in this case, they projected that it would not be economic to dispatch it for a total of 377 hours, and, in fact, it was not economical for 952 ?
A. (Cannata) That is correct.
Q. But, jumping to "Merrimack 2", they projected that it would be -- it would be economic to dispatch any hour of any month that it was available. That's the zeros?
A. (Cannata) Yes.
Q. Okay. But, in fact, it wasn't economic to dispatch it " 2,331 " hours?
A. (Cannata) That's correct.
Q. Okay. And, going across to "Schiller 4", we have the same thing. The projection was a little over a thousand; the reality was over 4,000 . "Schiller 5", I'm not quite sure why it shows zeros in both columns?
A. (Cannata) Because it's a wood plant. It's not based on coal. And, as was discussed with the REC credits, in the economics, it becomes basically economic as long as it runs.
Q. Okay. So, it runs -- basically, with that, it runs all the time?
A. (Cannata) Yes.
Q. Okay. And, then, Schiller 6, we have " 1,488 " projected; and the actual was "4,682". And, in
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata significant difference.
Q. So, I guess my question would be then, given those significant differences, and that, for the most part, they overestimated the amount of time that their plant would be economic to dispatch, you still conclude that these projections were reasonable?
A. (Cannata) Because of the data that was available at the time, yes. It's the price data, Commissioner.
Q. And, the biggest variable was the price of natural gas?
A. (Cannata) Yes.
Q. Okay. And, Mr. Cannata, again, on Page 5 of your testimony, on Lines 16 and 17, and I'll give you a second to get there. And, this may be answered by anybody on the panel. But, on Line 16, it says "The net cost of supplemental energy service decreased from \$217 million in 2009 to \(\$ 81\) million in 2010 and \(\$ 91.4\) million in 2011." Can you tell us exactly what you mean by "supplemental energy service"? And, this, for example, the difference between the 2009 and 2011 is \(\$ 125\) million. But where does that manifest itself?
A. (Cannata) Okay. When I say "net cost of supplemental energy", that's the total net cost as seen by customers. Public Service buys energy, sells energy, they have excess energy on their system. And, whatever
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata] they do with those purchases and sales comes to the net
cost to customers.
Q. Excuse me just one second, so I'm clear on that. When you say that, so, if the -- the energy that they produce at their own plants and use to serve their own load is not included in this?
A. (Cannata) Yes, it is.
Q. It is. Okay. So, this is all energy, whether they produce it or they -- or they buy it?
A. (Cannata) Use it for myself, or sell it on the market, whatever has happened, you put it all together and you come up with a net number, and that's what these numbers represent.
Q. Okay. All right.
A. (Cannata) In 2000 -- and, I'll do this as we go on, in 2009, there were many long-term contracts that Public Service had entered into, I believe it was in 2007, they were "must take" contracts, and they were extremely more expensive than what was available in the market. But PSNH was not able to reduce their cost, because they were locked into these long-term contracts. And, if we go back to that docket, this is where we start talking about focusing more on the shorter term values, because there was a tremendous \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata]
[WITNESS PANEL: Baumann~Smagula~White~Cannata] value being lost by customers. As the contracts cranked out, to 2010, some of -- I believe three out of the five dropped off in 2010, and two remained, two 50-megawatt long-term contracts remained in 2011, the so-called "legacy contracts". Those contracts ended in 2011.

So, in determination -- or, excuse me, in addition to the change in the price of the fuels that took place during that time, the loss of the long-term obligation at fixed prices was the main reason why these numbers fell.
Q. All right. Thank you.
A. (White) If I could clarify one item?
Q. Yes.
A. (White) Those purchases being referred to as the "legacy contracts", the purchases were made in 2008. And, it's been discussed in other dockets. They were made at market prices at that time. They weren't overpriced at the time they were made. And, that they were determined to be prudent purchases for those years, 2009 and '10, for that reason. That was the market price at the time we entered into those purchases. As it turned out, by the time the delivery year occurred, the market had dramatically changed, due \{DE 12-116\} \{01-16-13\}
to the economic collapse across the country, and, as we're seeing more and more now, an influx of gas supply. So, the landscape changed, and has contributed to these numbers. I just want to make that clear for the Commission.
A. (Cannata) And I would agree with that.
Q. Okay. And, Mr. White, would you agree then that, with Mr. Cannata's statement, that "the net cost of supplemental energy service", which you're saying is the net cost of buying and selling and producing, whatever, "decreased from 207 [217?] million in 2009 to 91 million in 2011"?
A. (White) Yes. We provided a lot of the data to Mr. Cannata that leads to these figures.
Q. And, that's a rather huge decrease in net cost of supplemental energy service, wouldn't you agree?
A. (White) Yes, I would.
Q. And, where does that savings show up? How does it manifest itself? We're talking about an over 50 percent decrease.
A. (White) Well, the "savings" flow to ES customers. It's a result of the volume of purchases made for delivery in year 2009 was a much greater volume than in 2010 or '11.
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata
Q. Okay.
A. (White) That, coupled with migration, drove more of those purchases surplus, and sold into a lower-priced market. There was just a greater volume in 2009 than in either ' 10 or ' 11 . As Mr. Cannata indicated, the volume decreased through those three years, to zero in 2012, but the largest volume was in 2009.
Q. Okay. So, the combination of the economic slowdown and the migration led to just actually producing and buying less energy, so the net cost went down?
A. (White) Yes.
Q. Okay.
A. (White) That contributes. Yes.
Q. Okay. I had a few questions on some of the things that came out of the Settlement Agreement, and I guess what's in there and what's not in there. So, I was quickly going to go through some of my questions. This is on Mr. Cannata's testimony, Exhibit 2. I guess I'm just going to start from the beginning and walk through it. So, I'm on Page 8, in the middle of the page, Line 10, I just want to make sure I'm not getting the wrong idea here. Just let me know when you're there, Mr. Cannata.
A. (Cannata) I'm there.
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata]
Q. Okay. This is talking about the tripping of breakers. Where someone was doing some cleaning, and apparently they inadvertently opened a breaker and caused an inadvertent trip. And, you state in here about "Dusting left to right is possible if it is performed lightly, but this method increases the chance of opening a breaker...Dusting panels vertically will virtually eliminate the possibility of an inadvertent breaker [trip?]. An operator with a reasonable understanding of the breaker panel function...would recognize this." I just want to make it -- get clear here. You're not stating that it was the way the person was cleaning that makes this outage cost prudent or not prudent, but is it simply the fact that an inadvertent action, for whatever reason, by a Public Service employee or contractor caused the outage and, therefore, it's not prudent?
A. (Cannata) I think I'm saying both, Commissioner. And, you know, think of a breaker panel in your home, where the breakers fold in when they're on. If you clean -if you were dusting your breaker panel going side-to-side, there would be a possibility of opening the breaker, if you caught the breaker and hit it hard enough, but there is a resistance to do so. Wiping \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata
A. (Cannata) All right. It would probably not be imprudent. Imprudence is always tied back to management. Always. Only management can be prudent or imprudent. And, if the operator did something he wasn't sure, did management have the proper training program for them? Did management conduct proper training? And, so that, what I try to do is tie that all back to management's actions. You know, did management provide the proper form?
Q. Just so I'm getting this, because this morning I want to try to establish what we're using here as a threshold. If somebody just happened to go [indicating], and leaned back against the panel, just not thinking, and they caused the plant to trip, you would say that that would not -- that the ratepayers should pay for that cost associated with that?
A. (Cannata) Not necessarily, no. I mean, an operator should be aware of their -- of their actions, no matter what they're doing. And, in my testimony over the years, I refer that to "operator inattention". And "operator inattention" means "in space".
Q. And, if there's a policy, you know, "Don't touch panels inadvertently", and somebody touched them inadvertently, because of whatever reason, I'm trying \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Canna
vertically, it's virtually non-existent to have that probability. The fact that the breaker was tripped meant to me that there was too much pressure applied when cleaning and popped the breaker. And, I did not see that a person that was functional in their job, knew their job parameters, would apply such pressure, if they had a real knowledge of what they were doing.
Q. Okay.
A. (Cannata) And the consequences of it.
Q. I guess what I'm trying to establish is your threshold for what you just decided was prudent and wasn't prudent. Let's just say, in this example, instead of the person dusting caused the breaker to open inadvertently, the person tripped over their shoelace or slipped on something on the floor, and put their hand forward and hit the breaker and opened it by mistake. Would you consider that "prudent" or "imprudent", the resulting costs?
A. (Cannata) And, I don't mean to be hard to pin down here, but, if somebody had left a tool box in contradiction to safety rules and procedures, that was in a manner which caused that accident for that person to trip, it may still be imprudent.
Q. What if he just tripped, there was no tool box?
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata to determine, would you consider that prudent or not prudent, the costs associated with that outage?
A. (Cannata) I would want to look at all the details, and see what management puts forward as their response to the reason why it happened, what procedures were involved, what procedures weren't involved. It isn't something that's just cut-and-dry. And, that's why I look at every single outage with that perspective, Commissioner.
Q. Okay. Well, let's look at --
A. (Cannata) And, unfortunately, sometimes we look at outages that have very little cost associated with it, but it's the principle of the thing on how you run your organization.
Q. Okay. Well, let's look at a couple.
A. (Cannata) Sure.
Q. I've got another question on Page 13. Because I'm going to go through these as they come, and basically just the order of pages. The bottom of Page 13, starting with Line 19, it talks about a recommendation to Schiller Station regarding two outages. It says "In these events, PSNH experienced a reverse relay problem with Unit 4. PSNH secured and installed a used relay from its electrical contractor. The problem persisted.
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata]

Investigation found that, although the relay was functionally tested, full tasting was not performed."

Now it appears that the lack of full testing is what
caused the additional outage. Am I reading this correctly?
A. (Cannata) That's correct.
Q. Okay. And, would you say, in that case, that it was imprudent of Public Service not to properly test the relay?
A. (Cannata) Public Service took a relay that was given to them as functioning properly, as being tested. And, that's why the recommendation is such that, if you're going to be dealing in used parts, and you most likely will as your units get old, because they're not in a new form or from the manufacturer, that you establish some type of a knowledge of testing. What has this relay -- what does it say to us? And, the problem here was is that incorrect information was being interjected into the analysis of tracking down what the problem is, because it's like putting in a brand-new spark plug in your car that's bad, and you've still got your skip, and you start to go into that mode of very difficult to find it. Public Service did the correct things, in terms of tracking it down. That they got into that
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata] manufacturer's warranty, because you're probably buying this without any warranty or whatever, you don't know exactly where they have been, what they have been through. But, if you don't take the proper steps to do the proper test to make sure that that part's going to work, I would think that that would be -- any cost associated with that lack of testing would be borne by the utility and not the ratepayers.
A. (Cannata) Well, we're not comparing apples-to-apples in our analogy here. First of all, the mechanic that worked on your car performed no testing of the new parts. He just installed them, making the assumption that they were good. Public Service did have the relay tested for functionality to make sure it worked before it was installed.
Q. But the testing was inadequate?
A. (Cannata) But the testing was beyond what is normally done for used equipment.
Q. Okay. All right. I think we've covered that. We can just continue to move on then.

CMSR. HARRINGTON: I have quite a few more questions.

CHAIRMAN IGNATIUS: I think we have many more questions to go. So, let's take a break right now, \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata] mode and starting questioning it, and they finally dragged it out, "hey, the relay is bad." And, then, when the full manufacturer's testing was done, which is not normally done to functionally test a relay, right? When the full manufacturer tested, they found it was bad, but it worked properly on functional testing.
Q. Well, let me -- I'm going to use your analogy, and maybe we can come to a closer meeting of the minds here. I take my car into a mechanic because it has a problem, a skip or whatever. He says "well, you need new spark plugs." He puts the new spark plugs in, I drive it home, the same problem shows up. Now, I go back and say "It's still there. The problem didn't go away." So, he takes out one of the spark plugs and does a closer inspection on it, and says, "you know, there's a crack on the insulation on this spark plug. It's no good." Who pays for that? I don't pay for it, for the replacement spark plug. The person who did the inefficient repair pays for it.

> So, if we're saying that, because of lack of testing and lack of knowledge, when you're buying used or refurbished parts, which I know, from my own experience, that you obviously have to look at those a lot closer than you would new parts under a \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata] and go off the record.

(Brief off-the-record discussion
 ensued.)

CHAIRMAN IGNATIUS: We'll take a break
now for 15 minutes, and resume at five minutes of 12:00 Thank you.
(Recess taken at 11:43 a.m. and the hearing resumed at 12:01 p.m.) CHAIRMAN IGNATIUS: All right. We're back on the record. And, continue with questioning from Commissioner Harrington.

CMSR. HARRINGTON: Thank you. BY CMSR. HARRINGTON:
Q. Again, referring to Exhibit 2, Mr. Cannata's testimony Page 54. And, again, I'm just going to follow numerically my questions through the pages, so they will tend to jump around a little bit. So, let me know when you arrive at Page 54, Mr. Cannata.
A. (Cannata) Okay. I'm there, Commissioner.
Q. Okay. On the top of this page, it says "With regard to migration, Accion" -- how do you pronounce that?
A. (Cannata) "Accion".
Q. -- "Accion Group concluded that it is not difficult to do realistic forward looking market purchases when
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann \(\sim\) Smagula \(\sim\) White \(\sim\) Cannata \({ }^{73}\)
A. (Cannata) Yes.
\{DE 12-116\} \{01-16-13\} existed in 2011." I'm a little confused by that that.
A. (Cannata) The qualifier is with the low market prices --

\section*{CONTINUED BY THE WITNESS:} and go, the lean side was, they wouldn't.
BY CMSR. HARRINGTON:
Q. Okay. I see. they stayed. only?
approximately 35 percent of the load to be served can
come and go at will with the low market prices that statement. It almost sounds as if you would be saying that "it is difficult to do with the fact that the load can come and go at will." But maybe you can comment on

\section*{(Court reporter interruption.)}
A. (Cannata) The qualifier is with the low market prices that existed. Gas prices went very low in 2011, which actually, although customers had the ability to come
A. (Cannata) So that the value was very steady. So, one can claim you had customers coming and going, but that, in fact, was not what's been going on. They went and
Q. Because of the low prices, it was a one-way migration
[WITNESS PANEL: Baumann~Smagula~White~Cannata] ladders on the door for whatever reason, and, in fact, it resulted in a design change by moving it. Why wouldn't this be considered imprudent on Public Service's part?
A. (Cannata) The installation of the transformer was a turnkey operation. The transformer was bought on bid, installed, according to an RFP, to whatever performance that it had to make. It made that -- it made its performance requirements.

In the meantime, during that, as you say, a sudden pressure relay, which is normally mounted on a very solid surface, was mounted on the thin panel of the door, which could vibrate, even by operation of the transformer. And, it's not uncommon to have to use a ladder to get at these different relays, sight bulbs, to see what the oil level is, and at the bushings, check readings on the transformer, ladders have to be used. I have never seen a sudden pressure relay mounted on a cabinet door in my life. They're always mounted to the base of the transformer on the outside. And, you know, it's only there to detect a sudden increase in pressure internal to the unit signifying a change in gas pressure. And, think of it this way, Commissioner. If I had an old transformer, you know, \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata]
Q. Okay. Thank you. Going to Page 58, and this is in the -- so, I understand what we're talking about here, this has to do with the Merrimack 1 outages for 2011, and it's identified as "K".
A. (Cannata) Okay.
Q. On 9/30/11. And, it talks about how there was a trip, because an operator was taking a transformer reading, and so he placed a ladder against a cabinet door. "When the ladder was placed against the door, the sudden pressure relay activated, tripping the CAP and the unit." And, it goes on to say "Investigation found that the sudden pressure relay was mounted on a thin metal cabinet door and the placement of the ladder must have jolted the relay, causing its operation. Such [sudden?] pressure relays are usually mounted on the transformer itself and are outdoor installations. PSNH relocated the relay to an area in the back of the cabinet where vibration would not be an issue."

Now, this doesn't -- this doesn't appear
on that list, so I'm assuming this is one that you felt was a prudent outage. And, it seems to me as if we have a question of a possibly improper design, where the relay was mounted on a thin cabinet door, and then people resting ladders up against the door, banging
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata] with a 2 -inch casing on it, nice and solid. And, I put that reverse -- or, that pressure relay there, when that gets a spurt of pressure on the inside of the transformer, it will register it. But, mounting it on a thin material that can vibrate, because it only has to be as physically thick as needed to function and close the door, it can operate the relay. And, that's what happened.
Q. I understand what happened. But, I guess, the first one I'd say, "why would they be leaning ladders up against thin metal cabinets?" That would seem to me that would be a improper maintenance practice. But, clearly, what you're saying is there's a design flaw here. Now, the fact that the design was done by a subcontractor, again, it's Public Service's plant, it's their RFP. They must do some inspection or qualification of the person. It sounds like they used someone who come up with a bad design. And, what you're saying is, because of that, the ratepayer should pay for this outage?
A. (Cannata) Well, it goes back to my definition of "prudence". As to, what did PSNH do that was imprudent? They went to qualified manufacturers. I'm sure -- and they took out bids, and they did an
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata]
assessment. They put in performance requirements of the package, and installed it. And, the thing -- the package was inspected and accepted.
Q. Well, okay. Let me make my point with maybe a little more extreme example. Let's say they had a qualified person, qualified manufacturer, qualified vendor, and they came in and they installed something backwards or whatever, such that it blew up a whole extremely expensive transformer and took the plant down for six weeks. Would that be then a prudent -- who should pay for that?
A. (Cannata) That would come out in the performance testing, the acceptance testing of the unit. You check your connections and that type. And, so, I would expect something like that, if that did not get included in the inspection testing, that would be something that more than likely would be considered imprudent. If you didn't do testing that would connect -- that would detect improper connections.
Q. But you don't think a visual inspection, which would have, as you said, you've never seen this type of thing mounted to a thin metal cabinet before, that someone on Public Service should have looked at it and said "hey, this doesn't make sense. Why is this on this thin
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata] on all gas, saving that \(\$ 40,000\). And, what this was was an iterative process on bringing that mechanism through all gas. And, at this particular point there was a slight surge, where they had to add a different burner in there to reduce the pressure. So, they found something that was wrong, and then, when they changed the requirement on the number of burners, they are now successful to be able to start the unit on all gas, no oil, and pass that \(\$ 40,000\) of savings to customers.
Q. So, this was a -- you might say a "start-up test" that was being done to determine the proper procedure to use?
A. (Cannata) R\&D, or, you know -- yes.
Q. Okay. I guess I wasn't clear from reading this, but you clarified it with your statement. Thank you. Okay. Moving along to Page 84, and this is -- trying to figure out which plant we're in here. I guess its still Newington, I don't see a change. And, this is starting on Page 83, and going onto 84. Again, there's another outage here, and I'm going to, for time, I'm not going to read the whole thing. But it talks about start-up and trip, start-up and trip, start-up and trip repetitive times. "After a one-hour pause, a fifth attempt was made to start the motor and was successful.
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata] metal door?"
A. (Cannata) Right. Correct.
Q. Okay. All right. Well, I'll move on. Okay. Moving ahead to Newington outages for 2011, Page 68. And, this is "B". And, I'm not going to read the whole thing, but it talks about there was a problem with a breaker, and resulting -- caused the unit to trip. And, says "During the conversion to an all gas start-up, PSNH configured the start-up procedure to use two gas guns", and goes on and on. And, then, basically, it concludes that PSNH made -- a change to the procedure was made, and "no further incidents have occurred during start-up." So, it appears the problem here was a problem with a PSNH procedure. Again, why is that not imprudent, if their start-up procedure needed to be changed to prevent the incident from occurring again?
A. (Cannata) PSNH had a start-up procedure to start the Newington unit on oil. PSNH also had a start-up procedure to start up the unit on gas, but it was not an all gas start-up procedure. It required quite a bit of oil, something on the order, I think, of \(\$ 40,000\) worth of oil to start the unit. PSNH decided to determine what is required to be able to start the unit
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata Investigation found that new motor protection relays installed during the spring overhaul had a more conservative-than-necessary overload curve built into the start logic. With vendor assistance, PSNH then modified the logic to be less conservative." And, then, it goes on to say, as a result, "the unit has sustained a delayed phasing to the system. PSNH also counseled the operator." So, I don't know exactly what they counseled the operator on, but it sounds like there might have been some operator mistake. And, there was also a incorrect either design or purchase of a part resulting in this "more conservative-than-necessary overload curve being built into the start logic." Why is that the ratepayers' responsibility to pay for?
A. (Cannata) The particular process that was taking place was, like I said, starting the induced and forced draft fans, which have been replaced. Now, when they were replaced, the logic and starting logic was changed on what they were able to do by starting the fans. The window -- and the procedure does not say that, "when your induced draft fans hit 17.2 pounds, you press this button, and, when it hits 18 , you press this button." It's more of a, not the correct words, "trial and
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata]
error", but it's a process -- historical process. You
get an amp, you know, so long as it's above five, so, okay. And, the reason why the operator was counseled, it was probably cut a little bit close on the low end.
I'm not able to verify whether the button was pushed at
5 or 4.9 and caused the problem. Public Service had concern with that, so they counseled the operator.
Q. But you still felt that there was no imprudency on their part, even though they had to counsel their operator?
A. (Cannata) Well, if I cannot make a case that shows imprudency, I tend not to recommend it.
Q. Okay.
A. (Cannata) And, I would agree with you, there was an operator issue there. And, they changed the procedure and counseled the operator.
Q. Okay. Let's -- moving ahead to Schiller 5, and this is on Page 77. And, I have to admit, I'm having a little trouble following what's going on here. But it starts out on May 21st, and it talks about there was a plant trip. "PSNH found a previous logic update it made was incompatible with the Emerson controller format installed during the overhaul." Then, a few days later, on \(5 / 30\), we have "The furnace draft was acting
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata] compatible with their update and the system reverted to default settings. Emerson states that because of this incompatibility with the new update logic version, updates to this controller need to be made manually."

And, then, goes on "Public Service has held discussion with Emerson...and the process for future updates has been changed to reduce...similar occurrences."

So, it appears that there was a
reoccurring problem here that, for at least the first three times, it was just "We don't know what's going on. Let's just start up again." And, whoops, it causes a trip. "We don't know what's going on, let's return to service. Whoops, we tripped. We don't know what's going on. Our investigation revealed no cause, and returned to service."

So, it took, like, one, two, took the fourth outage before they actually did a thorough investigation of this. So, again, I'm somewhat concerned why -- why that has to happen before they took the time to investigate what was causing the problem. And, you know, the root cause of the problem here, it appears to be some settings that were set wrong by somebody. And, again, I'm not quite sure why \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata] erratically and tripped on the high furnace" -- no, I'm sorry, that's not -- "high furnace pressure". Then, \(6 / 20\), "the furnace draft was acting erratically", again, the same thing, "(up and down) and finally tripped on the high furnace pressure. Investigation revealed no cause and...returned to service." So, that happened on \(5 / 30\) and on \(6 / 20\). On 6/26, "the furnace draft was acting erratically (up and down)" again, "finally tripped on low furnace pressure." So, the same issue now has taken the plant off line, the \(5 / 21\), \(5 / 30,6 / 20\), and \(6 / 26\), each -- and from various timeframes.

And, then, it kind of concludes down
here, Emerson, which is the -- I guess the vendor, said that the -- it said that PSNH found among -- let me start with the beginning. "Investigation revealed that the lag time air demand signal was too long and reduced it. PSNH also found that the boiler bias time master... needed setting changes. The changes were made, PSNH found similar setting changes were made in May 2010, and were transferred to Emerson for DCS upgrade during the Spring 2011 overhaul."
"Emerson investigation found that the logic control updates made by Public Service were not \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata that wasn't imprudent on the part of Public Service?
A. (Cannata) Okay. These two units use an immense amount of logic controls, which are just computers. You know, they have settings, and, when they hit those settings, they do what they're told to do. And, what we had here was, as it was traced later on, that there was not enough lag to the trip. Each -- when we start off, we have an indication, that an alarm comes in, if its indicated, we have an alarm. And, if it stays in alarm long enough, it will go to a trip. Well, the trip is done either upon the indication, and what Public Service did is they found that to trip, as stated, and you're exactly correct as you go through your logic, and the tripping should not have been taking place, because the indication was incorrect. They were getting incorrect indication, which was leading to it. So, they disconnected the trip circuit, and they still had the alarm circuit, "Is there a problem? Let's go investigate."

Once these settings are made, these settings are change all during the year, two years, or between the updates of the controller logic. Emerson came in, even though they had -- even though Public Service said, "okay, on such and such, we found this to \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata] be a problem. We changed it to this to correct it, and
now it's working again." Because there are different
problems here, it's the same issue, but different problems.

They passed them onto Emerson. It was internal to Emerson's control logic that those changes were not compatible. So, their logic controller reset them back to the settings that were causing the trips. So, after they come in through with the annual overhaul above, in the large outage above, these trips started to come out, when Public Service had already researched and put proper settings in a year earlier. And, there was -- I don't know if it was completely a communication problem internally with Emerson, but the recommendation was to make sure that these things get done, and a manual system had to be done to ensure that those changes get done, so they don't have similar interruptions to operation, because these were solved problems. The logic was being changed back to old settings.
Q. Okay. Well, when did it get set back to old settings, prior to the \(5 / 21\) outage?
A. (Cannata) Yes, during the annual overhaul. What

Emerson does, it will come into its controller and
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[WITNESS PANEL: Baumann~Smagula~White~Cannata]
A. (Smagula) You know, some discussions occurred with Emerson regarding their services, but there was no replacement power compensation that was discussed. And, there is no contractor that would do business with a utility that would have that type of clause in any agreement.
Q. Well, were there any replacement cost recovery for any of the extra work and so forth done by Public Service, not just -- and forgetting the replacement power costs for a second?
A. (Smagula) I don't recall at this time.
Q. All right. Thank you. Moving along, to Page 79. This one, I'm just -- it's listed at the bottom of the page, and it says " O ". And, the very last couple of words there, after explaining what happened, it says "See Outage P below." But I don't have an "Outage P". You know, so, I just -- I don't know if there is something wrong with my package or --
A. (Cannata) Do you have a Page 80?
Q. No. Oh, that's why. I'm missing some pages. That's why. Okay. So, --

CHAIRMAN IGNATIUS: Yes. I was missing some of the other pages you were talking about for some reason.
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[WITNESS PANEL: Baumann~Smagula~White~Cannata] perform a master update. Take all the changes that have been made to all the settings, so that you start out with like a new base case, if you would.
Q. Uh-huh.
A. (Cannata) And, then, you make additional changes to keep track of that. Well, when they made this base case update, they reinserted, you know, I don't know how many settings incorrectly, that were already hunted down by PSNH and corrected.
Q. So, prior to the outage, I assume it would be April --
A. (Cannata) It would be the annual --
Q. -- the outage that started in April, Public Service made adjustments to these settings that such that this problem wouldn't occur. And, then, Emerson came in during the outage, and, as part of their work during the outage, reset the settings such that caused the problem to occur?
A. (Cannata) It was automatically reset, yes.
Q. Okay. And, was there any attempt by Public Service in order to receive compensation or recover costs from Emerson on this?
A. (Cannata) They generally do. But I would like to defer to Mr. Smagula, where he could say exactly what they had out with Emerson on that.
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata] BY CMSR. HARRINGTON:
Q. Okay. Well, let's forget about that one. That was just blind, anyway. So, I -- I wasn't sure what the big issue was there. Okay. Let's move up to Page 86. And, this is more of a comment. Since this is a public document, I was kind of surprised to see, on the bottom of Page 86, that, and since I don't think it's -- it's no longer the case, but when you -- it's already been made public, "Unit 1 and Unit 2 at Amoskeag have black start capability", I didn't think the naming of black start capable units was issued -- was released to the public, just for security reasons. So, kind of surprised to see that in here.
A. (Cannata) Is that something the Commission wishes? We have --
Q. Well, I believe it's ISO-New England's policy that they don't identify black start capable units, because they're so critical to restoring the grid if an entire grid crashed. But, I also, and without asking for an answer to the question, I also think there's probably a good start that these units are no longer black start, or will not be shortly, because of the change in ISO policy, where they're going to much larger black start units.
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[WITNESS PANEL: Baumann~Smagula~White~Cannata]

On Page 89, and we're dealing with
Amoskeag Station. And, at the very top of the page, it talks about an outage. And, it took three more days than originally planned, which could happen for a lot of reasons. But, in this case, it seems that "PSNH diverted manpower at other location where outage timing was more important. PSNH's approach increased the time of the outage to perform the work scope." Can you just give us some more information on that?
A. (Cannata) Sure.
Q. I mean, was this bad planning on their part or --
A. (Cannata) In order to be thorough, rather than just look at planned outages of the large units, we take a look at the planned outages of the smaller units also. And, what this paragraph reflects is that the outage was planned to be done in four days. Could have been done in four days, but there was no water to run all the units. So, PSNH reassigned their people working on this particular outage to another station, and it could have been Hooksett, or something like it, where it has only one unit, where that extra effort would bring a unit back quicker and produce savings to customers. And, I just wanted to point out that, yes, it overran its time, but there was virtually no cost to customers \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata]
reinforce", "agrees to review", that type of thing.
But, my question to the utility, first is, is do you
have an idea what the cost will be to implement the Settlement Agreement?
A. (Smagula) At this point, as I recall the issues, we will enact a group of people to perhaps study an issue and come up with specific recommendations. The recommendations may result in hardware changes, may result in procedural changes. It may result in a letter being issued to ISO-New England. I don't think -- I see this as part of our normal work, and not additional huge cost. There was some issue here having to do with consider replacing some switches, some Mercoid switches. There may be a cost there. But, if it's an action that results in improved reliability, then it would be an appropriate thing to do. So, I don't see a huge cost here in these activities. If there was, then I think there would have been further discussion in the development of the Settlement Agreement. But I see these as all reasonable things to proceed with.
Q. Okay. So, can I get you to say for the record that you, only if you agree, obviously, that you believe that the -- if you did a cost/benefit analysis, the
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata] in doing so, and there was actually savings at another station.
Q. That's fair enough. I just wasn't sure from the explanation.

CMSR. HARRINGTON: That's all the
questions I have at this time. Thank you.
CHAIRMAN IGNATIUS: Thank you.
Commissioner Scott.
CMSR. SCOTT: Good afternoon. I want to
-- I will preference -- preface, excuse me, thanks, Steve, my questions with, I just want to make clear, obviously, we recognize that there is a balance to be made between investigations and how thorough we go, compared to the efficiencies of the Company and the cost/benefit, basically, of what we do here at the Commission and the utilities. So, that's my preface. So, I just want that in the context of my questions.
BY CMSR. SCOTT:
Q. So, when I look at the Settlement Agreement, I see the agreements, in some respects, it's kind of what the utilities agreed to do, and uses language such as, in many cases, "will review", "will look at", "will make clear to ISO-New England". There's some language on Page 5 about "appropriate and economical", "agrees to \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata] benefit of anything that came out of the Settlement Agreement exceeds the cost of what goes into that?
A. (Smagula) Yes. I would agree with that statement.
Q. And, again, I didn't mean to imply that, by signing this, you weren't agreeing to that, but I wanted to hear that on the record. So, thank you.

Similarly, again, in the context of balance, obviously, Mr. Cannata did, I think, to use your words, Mr. Smagula, I think you used the word "extremely" thorough, is that fair?
A. (Smagula) Yes. That was the most superlative adjective I could think of at the moment.
Q. And, again, maybe l'll put you in an unfair position. Clearly, Mr. Cannata's job is to find "were you prudent", and to do a good analysis of your operations. Do you feel that that level of thoroughness was warranted?
A. (Smagula) I think, well, I won't -- I think the level of thoroughness that was employed was, I'm assuming, consistent to what the Commission and Staff wanted, and there was a very thorough review. And, if that's what was sought, then that's what was clearly received. But it was lengthy and detailed. And, as you can see from the report, a lot of information was shared openly.
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[WITNESS PANEL: Baumann~Smagula~White~Cannata]

And, whether it was warranted is for someone else to judge. I just know that it was a very thorough job. And, if that's what the Commission wanted, they certainly got it. And, I think, you know, it's -- we look at these investigations, they're a lot of work for us. But I believe what occurs is that the Commission has a third party to look at how we operate, what decisions we make, actions we take. And, if you look over time, I think, in general, and I'll give you my opinion, I think it demonstrates that we do a pretty good job trying to do the right thing for our customers. And, where there's an opportunity for us to learn or to improve, we grab on to those. We do that ourselves internally. But, if you have an external set of eyes and ears, that's a different perspective that I think, again, benefits us and our customers. So, it's thorough, and there's value there.
A. (Cannata) And, if I could comment along that line, if I may? From about 2000 to 2007, 2008, before the market started to change, when the units were baseloaded, the increased output in energy at these stations increased by about 30 percent. Because a lot of the -- you know, we don't just go through looking "you did this wrong" or "you did that wrong." "You could do this better."
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata an internal audit group that audits our environmental activities. And, I am the first one to go down to that group, it's based in Connecticut, to solicit their review of all of our facilities each year. Our personnel in our stations know I'm going to do that every year, they would just as soon have a year off and not have a prudency or a very thorough investigative review, but I think it ends up being better for us. So that, should there be an agency review, such as EPA or a DES review, that we are that much better, we are that much more prepared. And, we find very few problems, violations in place, whether it be with any type of audit.

So, I enjoy and look forward to reviews and audits. Certainly, here, with the Commission, I have exposure, financial exposure, more than I do with others. But I still think there's benefit.

CMSR. SCOTT: Thank you very much.
That's all I have.
CHAIRMAN IGNATIUS: Thank you. A couple of questions about terms in the Settlement Agreement that I need interpreting.
BY CHAIRMAN IGNATIUS:
Q. If I look at Page 5, Number 4, I read the words, but I \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata
They take it back, evaluate it, because only they really have all the information they need to run the company. They take it back and they make improvements. And, a lot of times we see things, as we go through these, details that are inconsistent, they find out they're making changes as we're doing this, I don't call it an "investigation", it's more like a "review". There's a level of a review. And, so, we have a review, they see something, and they're continually trying to improve their operations. They will take the recommendations and come out and try to improve their operations based on those.
Q. That's fair enough. Thank you. No, that's helpful. Thank you. Do you feel moving forward that the same level of review is needed or is there a better way to do things on that end?
A. (Smagula) Are you asking me?
Q. I'm looking at you. So, I guess I am.
A. (Smagula) I think our customers gain value. I guess it would be up to the Commission and Staff to determine whether the same level of detail is needed. But we've become accustomed to the level of detail that occurs. And, I think -- I think there's value in it, so. We have a similar approach, that we have \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata confess I don't really follow what it means. And, whether someone from PSNH or, actually, since PSNH has agreed to take a step in making clear this issue to ISO, it would be interesting to hear how PSNH interprets what this sentence means: "That all requested unit starts that are shorter than committed start-up times are made on a best efforts basis only" and then here's the part that I don't get, "and it's not responsible if the start-up time requested is less than the committed startup time." Not responsible to who, for what?
A. (Smagula) When a unit gets a request to go on line from ISO-New England, we have documents on file that say that, if the unit is in a cold condition, that it will take a certain number of hours. And, also, for a given unit, we say that, if the turbine is in a hot condition, it's a shorter period of hours, because there's already some heat in the equipment.

There are times, however, when we get a
call and say "can you get the units on as fast as possible?" That's occurred a number of times in the last few days with Schiller Units 4 and 6. And, they were in a hot condition. And, they said "could you get them on as fast as possible?" Now, if our hot start-up
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata time is -- I'll just, I don't recall exactly what it is, but let's say it's four hours, we may say "yes, we think we can get it on in three hours." If -- you could interpret that communication as a "commitment" that we will be on in three hours. This agreement states that we need to make it clear that, when we communicate that to ISO-New England, that we'll say "we have a four-hour hot start. We will make "best efforts" to get it on in three, but we won't give you that commitment." So that there's no contractual or penalty that could then be, in fact, enforced upon us for being -- not meeting a three hour opinion or verbal commitment. And, I think that's what this is about. Is to make sure that, when we make a statement that we could be on sooner, in concert with a sooner request, that it will be on a "best efforts" basis, and that we are not, the person at the station or any other employee of Northeast Utilities is not making a formal commitment. And, we say that verbally now. We've already instituted these actions. But we will consider what's appropriate to put on record for them.
A. (Cannata) The outage in question, Commissioner, was just that. It was an eight-hour start-up time, they asked for it in something like six hours, Public
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata] I can be corrected here, but I don't believe there was any undoing on whatever that harm was for that outage.
A. (Smagula) I don't recall.
Q. That wasn't a financial penalty, it was just changing the data on availability?
A. (Smagula) I don't recall the specifics of this case.
A. (Cannata) In my opinion, everything gets translated to money somehow. If it goes into a database, you know, you hear about it, and it affects something in some minute way. I'm not sure we could track, it might be like looking at the rate impact of the \(\$ 2,200\) in forced outage reduction. It's that type of a thing. But, it's in there, and it's in there because of that reason. And, that's why we're trying to bring it, because there is a harm that will come back.
Q. Just below that, in Number 5, there is a recommendation based on things that were found in this docket's review. And, then, when you get to the -- following the format of every other recommendation, what PSNH agrees to do, it says to turn to "2012, Number 10", which is on the next page. So, is it fair that the response to Number 5 is that PSNH is agreeing to -- I'm not even sure \(I\) understand what the Accion
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata]
Service got the unit on in six and a half hours, and got dinged, because they didn't make start-up. You see, there's a penalty that fall back to customers. And, what this was was an effort to be able to prevent the ISO from hurting our customers, working in the best interest of the ISO.
Q. But this term in the Settlement doesn't in any way change what ISO-New England does, does it?
A. (Cannata) No.
A. (Smagula) No.
Q. So, it's merely a request that the communications be absolutely clear that, if PSNH says "we'll do everything we can to get it up in the timeframe you'd like, but we still are committed to nothing more than the traditional start-up time"?
A. (Smagula) Correct.
Q. In the case that you just described, Mr. Cannata, where PSNH came in ahead of the committed time, but not quite on target with the requested time, and you said "ISO dinged them for it", was that explained and any sort of penalty undone?
A. (Cannata) I believe it flows through the availability data, you know, when they keep track of that. Because a unit gets complex credits and costs through there, it \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata] recommendation is, so, it's a little hard to say what it is that's being agreed to. Maybe we should step back a bit, before we turn to the following page, just on 5 alone. "Accion recommended that if the over trip outages are found to be systemic", after the analysis, "the system reliability design incorporate the unit over trips into system design criteria on a local basis, only if other economic remedies are not available." Can you describe what all of that means, because it's not sinking into my brain?
A. (Cannata) Okay. Could I answer that question?
Q. Sure.
A. (Cannata) PSNH has on their system areas of the system which trip generators that should not trip for the particular fault. Usually, a fault will isolate the element that has the fault on it. These trips were occurring 10 miles away. So that it's due to the system dynamics, the transient stability of the system, these type of things. And, in at least two locations, it appears, with what's been done to date, they're not going to be able to fix it. And, their design criteria requires, for the 34 kV system, that the system be designed to withstand a contingency with one generator out of service on peak load. If you get an over trip,
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White \(\sim{ }^{101}\)
you wind up with two generators out of service, which would allow you to overload something, which you're designing the system not to overload. What this says is, if you can find something economic to fix it, you do it. Otherwise, incorporate that over trip into your design, so that your system is capable of withstanding the contingencies that you're designing it to. In other words, include the effects of the over trip in the design.
Q. But, none of that deals with the problem that started that doesn't seem to be solved, it's just trying to work around it, is that true?
A. (Cannata) This recommendation has been in the books since 2009. It's one of the more harder ones to implement. It requires a lot of work. And, Public Service has agreed to do that. So, you know, that is not an issue. This came out as part of the system investigation and the faults that we're seeing. Why should this unit over here trip for a fault in Manchester? It's just wrong, all right. And, when you look at the system, it's really the system impedences, the electrical tightness of the system. It's weak. Either you rebuild the entire system much stronger to correct that or you incorporate it in the design. And, \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata]
it, start it up within a short period of time, but you still have more likelihood of that. It's different than one of our fossil facilities or a facility that's larger and more -- and not as remote. But the actions that we need to undertake are clear in our mind. There have been numerous technical discussions internally, there have been numerous technical discussions with Mr. Cannata. So, the expectations of the Company are clear. We need to have competent people who can learn and understand how to run these analytical models of the system, the electrical system, in order to determine whether there are transient problems or not. And, if there are problems, then, as Mr. Cannata indicated, what solution path is prudent to follow and at what cost. And, then, we'll make some determinations, and we'll provide a report and information. So that, in future reviews, we'll further try to resolve these complex, but lingering, issues.
Q. So, for the next -- or, how long do you think those studies will take?
A. (Smagula) Well, we had changes in personnel, we had changes in the software. I think we have internal resources that were focused on it. I think our intention would be to place a high focus on that this \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata]
what that would do is, if you have to include the over trip, you may have to build the line a few years earlier, because it's loading a little bit heavier, but your system is meeting its reliability criteria. Right now, Public Service's 34 kV design criteria is not being met. They cannot say that these over trips are not going to cause overloads if they have the outages. And, all this says is, "well, if you can't fix it, make sure they do, and do the most economic of the two. If you can fix it, well, do it. If not, incorporate it into the design criteria. Whichever is cheapest."
Q. And, from PSNH, whoever wants to field this one, is that your -- what is your understanding of the next steps required, looking at both Number 5 and Number \(10 ?\)
A. (Smagula) I believe we will be making sure that we have a person in our company who is familiar with running these analyses, and that the analyses get done. And, perhaps I would say a more pointed focus associated with the generating facilities, such as is the case that we are working -- talking about, has to do mainly with hydros that are at the end of a long line. And, that line, any impacts to the reliability of that line or any transients that occur on that line have a more likely risk of the unit being tripped. We would reset
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[WITNESS PANEL: Baumann~Smagula~White~Cannata
year. So, I'm afraid the people who do this work don't work for me, it's something I'm familiar with and can discuss, but it's not an area of my direct familiarity or responsibility. So, I'm reluctant to make a commitment. But I think our interest is to try to get a lot of this work done this year. I'm not sure how long it will take.
Q. And, so, the first step is the analysis, and then some sort of design, in response to what you've learned, and consultation, after that's been developed with the Staff, or filing something or just installation and we see what happens?
A. (Smagula) You run an analysis, you look at the information, and then you have decisions and options to consider. And, then, you make a decision to do something or not. And, if you do decide to do something, do you make a modification with the equipment at the facility? Do you want to make a modification on the line? Etcetera.
A. (Cannata) And, to be clear, there's more than one generating station involved. That PSNH has targeted their analysis to the most "susceptible" that they're going to be working on first. But, then, after you tackle those, the idea is to go back to the others that
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann \(\sim\) Smagula \(\sim\) White \(\sim\) Cannata] may still have issues, but are less pressing, and go back and correct whatever needs to be corrected there.
Q. I know, Mr. Cannata, you had testified that you reviewed the decisions PSNH had made in light of the contents of the 2010 Least Cost Plan, which has not yet been ruled on by the Commission.
A. (Cannata) A little update on that? Okay. What I called the " 2008 Least Cost Plan" -- or, the "2010", was the Plan that was submitted in 2008, but not really approved until 2010. Prior to that, the previous approved plan was in the Fall of '07, I believe. Currently, there is a plan that was filed in 2010 that is still, I used "2012", but the year has slipped by. And, so, that might be what I would call the "2013 requirements".
Q. All right. So, what you reviewed, and in your testimony stated that you found the decisions to be consistent with, was the Plan that was last approved by the Commission in 2010?
A. (Cannata) That is correct.

CHAIRMAN IGNATIUS: I have no other
questions. Commissioner Cannata, another question? Or, excuse me.

CMSR. HARRINGTON: You just got a new \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata]
[WITNESS PANEL: Baumann~Smagula~White~Cannata] job, Mike.
CHAIRMAN IGNATIUS: Harrington.
(Laughter.)
CMSR. HARRINGTON: I guess I should just
walk out now.

\section*{BY CMSR. HARRINGTON:}
Q. A couple questions on the Settlement Agreement. On Page 6, at the bottom of the Page 5 and the top of Page 6, you're talking about the "Mercoid switches". Is there some -- I'm assuming that these Mercoid switches are, obviously, they have been made illegal by the state, so they can't be replaced in kind, so the replacement is now some type of the Reed switch. And, again, I'm making assumptions based on what's not written here, I guess. There was no periodic or time based change-out for the Mercoid switches, they would just change them out when they failed?
A. (Cannata) Correct.
Q. Okay. And, now, the suggestion is that we come up with some type of a scheduled replacement of the Reed switches. Is this due to something about the Reed switches, that they have a known service life, and this is to anticipate --
A. (Cannata) If it says "replacement of the Reed
\{DE 12-116\} \{01-16-13\}
switches", that's incorrect.
Q. Okay. I'm sorry.
A. (Cannata) It should be "replacement of the Mercoid with Reed switches".
Q. Right. That's what I meant.
A. (Cannata) Okay.
Q. Replacement of the Reed -- what we're saying is that, so, the schedule is -- let me back up a little bit. Why do we need a time-bounded program for the replacement of the Mercoid switches? Or is there any particular reason? I mean, in the past, when they were legal, they would be replaced on failure. And, is there something associated with that law that they have to be removed from the plant by a certain time or is it just removal on failure a replacement with something that doesn't contain mercury?
A. (Cannata) Removal on failure would be fair, but they're problematic. They're always causing problems. Some of these switches, when they get replaced, they require new sensors in the inside of the generators or the water wheels, because the bearing temperature. Those can only be changed during times when you have the units apart, which might not be for five years. So, when that says "time based", it's a flexible term, to \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata allow them to work it into a planned schedule. It may not occur for five years.
Q. So, this isn't a attempt to more rapidly get rid of Mercoid switches, it's an attempt to upgrade the design by replacing them with Reed switches, which you're saying -- sounds like is a better choice of action, whether or not mercury was outlawed by the State or not?
A. (Cannata) That's correct.
Q. Okay. All right. Just trying to get that clear. And, just sort of a general statement on a lot of these conditions. I felt that some of them were kind of surprising. On Page 4, which I don't know which numbers to use, l'll use the "2012-1" number, which is "1". It says that "there are now situations that may exist that could result in failures of both Merrimack units." So, there's some type of a common mode of failure that could take them both out. And, PSNH agrees to review this. I find that rather surprising that they hadn't already done that as just good utility practice. And, rather than -- I'll give you a chance to comment on the end here in a second.

The next one down, "2012-2", talks about assumptions that were used to -- in the planning
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann \(\sim\) Smagula White \(\sim\) Cannata]
process for an outage schedule that weren't verified.

And, now, "PSNH agrees to review planned outage
schedules to detect assumptions that need to be
verified." I would think that basic to making an assumption -- a schedule for an outage that you would, if you were making assumptions, you verify that they were accurate.

On the next one, "2012-3", this is the testing we already talked about, and "PSNH agrees to add the testing performed on used or refurbished parts to the part's history documentation." Again, if you're using used or refurbished parts, I would think that that would be, just again, good utility practice.

Skipping over to Page 6, where it says
"2012-8, "PSNH agrees to reinforce to employees the importance of understanding and confirming the appropriateness of a replacement that is not in kind." Again, if you're not putting the same thing back in that you took out, that's just basic Power Plant 101. That people should understand and make sure that the replacement one that's not in kind is going to, in fact, perform the job of the original one. And, you're not making an unanalyzed design change to the plant.

The next one down, "2012-9, "PSNH agrees
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata] questions were raised in discussions, and, as compared to debating the need to go and double-check, the need to go and review again, we determined that, if there was a discussion with the Commission's consultant, that arguing that case and trying to win it on the merits of our technical position that we believe that this has already been done, when, in fact, the discussion continued on, we determined that it was reasonable for us to go back and double-check, to go back and do it. It's not an admission that it wasn't done. It's an admission that there's nothing ever wrong with going back and reviewing something again, because you could learn something, you could find something, and it is not an indication that there is an error.
Q. That makes me feel much better.
A. (Smagula) Well, I could go down each one of these --
Q. No, that's not necessary, if that's your --
A. (Smagula) -- with a similar dialogue. But we would not enter into an agreement on something that we felt as though indicated that we were in error. And, we feel as though these recommendations, as has been the case in prior years, that debating the fine points of it are not necessarily providing value in the time and the effort of the Commission's consultant or in our staff,
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannat
to review changes in the compatibility of material used in interface connections and to strengthen its training." Again, if you're going to put materials together for interface connection, I think the first thing you would look at is the compatibility of the materials, to make sure that they work together. So, and I will give you, obviously, a chance to comment on this, it strikes me that most of these recommendations are good utility practice that Public Service should have been practicing all along. I find it kind of hard to believe you entered into an agreement saying that "we don't do this, but we will."
A. (Smagula) I don't believe that's what the Agreement indicates, Commissioner. And, when you indicated that you don't believe that these things aren't in place now, I'll comment that they are all in place. That I believe, in every case, whether it looks at Item 1 where "Accion recommends that we review, possible failure conditions and to determine need for spare parts", I think the key part of the sentence there is "if it has not already done so". We have done this, in rigorous detail, with our own engineers, with the engineers from the equipment suppliers, with their engineers from United -- with URS. I think, however, \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata or on our customers' behalf. But, in fact, there is nothing ever wrong with going back and double-checking practices, procedures, spare parts, large capital spare parts. Over the years we've done a lot of these things. And, through the course of it, I would say the great majority of efforts we've made have resulted in the fact that we were comfortable and we were very with what we had done, and we can demonstrate that in a subsequent year's review that something we had been asked to do was done appropriately, and that we've reviewed it again.

There are times, however, when we do find that, yes, there is a refinement, there is an enhancement to a procedure, there is a modification to a spare parts process. There is -- it is always appropriate to look at our planned outage activities before the outage and say, you know, "we know what our scope of work is, we know exactly what the resources are to complete that scope of work, we know what parts are needed, we know what workforce is needed." However, there's nothing wrong with saying that, a week before the outage, "have we learned anything different in the prior few weeks, as compared to when we set our schedule three weeks or four weeks earlier, has
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann \(\sim\) Smagula White Cannata]
anything been different that we could make a smaller adjustment in our schedule, a small adjustment in our workplan?" And, I'm hard-pressed to say "No, we're perfect. We did it four weeks before the outage. We're good. We don't have to do it." But I think this is saying, "as you get closer to the outage, see if there's more information that's crept in. Make sure you do a double-check. So that, when you initiate your outage, your scope is that much more tuned with regard to resources that are needed."

So, hard for me to say "no, we don't need that incremental tuning." So, yes, while it may give an indication that there's something wrong, I read it as though "you can always do a little bit better perhaps". And, that's what we are committing to on each of these, in order to get that much more better based on a recommendation here.
Q. Thank you. That makes me feel a lot better.
A. (Smagula) Yes.
Q. But I think you can understand how some can read it the other way.
A. (Smagula) I mean, I'm -- yes, I can understand it. And, as you were going through these, I was very concerned about how they were being read. And, I'm \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata
A. (Cannata) That's correct.
Q. Is that the plan that you were referring to that was approved by the Commission in 2010?
A. (Cannata) Yes.

MR. MULLEN: Okay. Thank you. Just one other thing. Staff would like to recognize that I believe this is Mr. Baumann's last time appearing before the Commission, as he will be retiring very shortly, along with that, Mr. Puzio, who is sitting at the second table on the other side of the room. Staff just wants to express its thanks for their work on this case, as well as the many other cases they participated in over the years.

CHAIRMAN IGNATIUS: Thank you. Is that true? Is this really it? Last time --

WITNESS BAUMANN: That's true.
CHAIRMAN IGNATIUS: Last time he said that you said "No, no, I'm coming back."

WITNESS BAUMANN: No, I'm not coming back. I will miss some of the work, and I will miss all of the people.

CHAIRMAN IGNATIUS: Well, that's nice. You have always been extremely thorough and forthright on the stand, and always, my sense, has always tried very hard to come up with good answers to questions, even when \{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata] very thank you for your question. Because, if you didn't ask it, I would be concerned that other people may read it the same way. And, thank you.

CMSR. HARRINGTON: Okay. Thank you.
That's all the questions I had.
CHAIRMAN IGNATIUS: That concludes our
questioning. Mr. Fossum, redirect to your witnesses?
MR. FOSSUM: No, I don't have anything.
CHAIRMAN IGNATIUS: Ms. Amidon, redirect
to Mr. Cannata?
MS. AMIDON: Yes. With your permission,
Mr. Mullen has a few questions.
CHAIRMAN IGNATIUS: That's fine.
MR. MULLEN: Just quickly.
REDIRECT EXAMINATION
BY MR. MULLEN:
Q. Mr. Cannata, could you turn to Page 54 of your testimony.
A. (Cannata) I'm there.
Q. And, you just had a discussion with Chairman Ignatius in relation to the Least Cost Plan. If you look at the last paragraph on Page 54, it says that "PSNH's actions were consistent with its least cost plan as modified on March 28, 2008."
\{DE 12-116\} \{01-16-13\}
[WITNESS PANEL: Baumann~Smagula~White~Cannata
we weren't always sure what we were asking. So, I appreciate that.

WITNESS BAUMANN: Thank you. CHAIRMAN IGNATIUS: Wish both of you all the luck in the world. I guess you're excused, and we're going to have an opportunity for closings. Before we do that, can I just ask, because there's a weird ringing going on, if anyone's got a cellphone, a computer near the microphone, that may be what's causing it.

CMSR. HARRINGTON: Or, if you're not using it, just turn it off. Sometimes that helps as well.

CHAIRMAN IGNATIUS: Just talking about it made it better. All right. So, anything other than striking identification -- well, actually, before we do that, is there any objection to striking the identification and making these full exhibits?

MS. AMIDON: No.
CHAIRMAN IGNATIUS: Seeing none, we'll do that. Anything else to address before closings?
(No verbal response)
CHAIRMAN IGNATIUS: There is none. If you're okay staying there, why don't you just, if it's easier, stay where you are.

So, let's ask first for Ms. Chamberlin, \{DE 12-116\} \{01-16-13\}
closing argument?
MS. CHAMBERLIN: Thank you. PSNH is
authorized under RSA 369-B:3 to collect from Default
Energy Service customers the actual, prudent, and reasonable costs. I submit to the Commission that collecting from residential customers the carrying costs of generation in economic shutdown is not reasonable. If PSNH believes that there is value to these plants, then they should carry the costs. Whatever value there may be is to the system as a whole, and does not come directly to PSNH's residential customers, who make up the majority of the Energy Service, the base through which the Energy Service gets collected.

Looking at the evidence presented, the
Newington plant is an obvious candidate for retirement. It operates the fewest number of hours, it is a thermal plant, it's an old plant. It simply is there. It's no longer operating as a baseload plant, it's operating essentially as a peaking plant. Again, which is a benefit to the ISO region, perhaps, but not a particular benefit to New Hampshire's residential customers. I submit that this plant could be easily replaced with other capacity that is either on line or about to be on line.

PSNH has the authority to seek
\{DE 12-116\} \{01-16-13\}
defined set of costs or all of the costs of keeping the plants available, in the event they need to be run?

MS. CHAMBERLIN: All of the costs
keeping the plants available.
CHAIRMAN IGNATIUS: So, staffing, equipment, maintenance?

MS. CHAMBERLIN: Yes.
CHAIRMAN IGNATIUS: Thank you. Ms.

\section*{Amidon.}

MS. AMIDON: Thank you. As you know that this docket is conducted own an annual basis to allow investigation of the prior calendar -- of a prior calendar year to determine whether the costs incurred by PSNH are the actual, prudent and reasonable costs of operating their -- of providing Default Service pursuant to 369-B:3, IV(1)(A).

We believe that the investigation conducted by Staff's consultant and the resulting Settlement Agreement supports the conclusions in the Settlement Agreement that the costs were reasonable and actual costs incurred by the Company. And, we think that the Settlement Agreement is a just and reasonable solution -- resolution of the issues in this docket, and is in the public interest pursuant to the Commission's Rule Puc
\{DE 12-116\} \{01-16-13\}
retirement any time it wants under 369-B:3-a, the Commission has to make a finding, but PSNH has the authority to make that request. As PSNH has chosen not to do so, I submit that they should carry the costs of these uneconomic generation. If they have -- if their concern is future capacity, they want to keep these things on line maybe they will be valuable, and maybe they will prevent -- that there's a backstop for the volatility of the gas prices. All of those things, they may be prudent decisions, but they do not result in reasonable costs to New Hampshire's residential ratepayers. And, for that statute to have meaning, it's not just "actual", it's not just "prudent", but it's "actual, prudent, and reasonable". And, at this level, we've come to the point where these costs are no longer reasonable to be borne by the default customers.

\section*{And, it would be a fairly}
straightforward calculation to determine what were the carrying costs, what were the capacity payments that were the benefit, offset that, identify the number, and disallow it from recovery. And, that's what I would submit to the Commission should be done in this case.

CHAIRMAN IGNATIUS: And, when you refer
to "carrying costs", are you referring to a particular
\{DE 12-116\} \{01-16-13\}
203.20(b).

And, to comment on the OCA's suggestion, while I understand, and we have seen this thing throughout many of PSNH's cases, that there are issues with the cost of generation resulting from myriad issues in the market, and other sources of energy being at a relatively lower price, I respectfully suggest that, in this proceeding, that's not what the Commission should be looking at. That the suggestion may be more appropriate for a planning docket or a prospective docket.

But, I think, where this proceeding concerns the operation of these plants in 2011, the Commission should approve the Settlement Agreement. And, if the judgment is to pursue this issue, to do in a -- to do that in a prospective manner, and not in a retrospective manner. Thank you.

CHAIRMAN IGNATIUS: Thank you.

\section*{Mr. Fossum.}

MR. FOSSUM: Thank you. I'd like to begin by actually referring back to the Commission's Order 25,375, issued on June 18, 2012 in this docket. And, in that order, the Commission set or described the purpose and the scope of this proceeding. Noting that it's an annual filing by PSNH to reconcile revenues and expenses
\{DE 12-116\} \{01-16-13\}
through all of the detail contained in the filing. Thank
(Whereupon the hearing ended at 1:09
you. We're adjourned.
p.m.)
appropriate, and are beyond the scope of the instant
\{DE 12-116\} \{01-16-13\}
associated with stranded cost recovery and power generation and supplemental power purchases, and this case
is for calendar year 2011. And, that these filings allow
PSNH to compare its estimated revenues and expenses with those actually incurred in the prior calendar year. And, either credit an overrecovery back or include an underrecovery amount in rates. The Commission also reviews the planned outages and associated power purchases to determine if PSNH acts -- acted prudently regarding those purchases and activities. And, the Commission determines the extent to which cost claims should be recovered by customers and reviews plant performance, plant outages, replacement power purchases, and other purchases of power and capacity, as well as the prudence and reasonableness of PSNH's incurred capital costs, and whether it has appropriately accounted for and reconciled Energy Service and stranded costs and any offsetting revenues. This Commission specifically noted that issues regarding PSNH's planning process or forecasts of power needs, costs or related factors are considered in the context of PSNH's Least Cost Integrated Resource Plan, and will be considered in the context of the LCIRP docket or in a future Energy Service rate setting docket, as \{DE 12-116\} \{01-16-13\}
proceeding.
So, keeping in mind that scope, the
Staff's consultant reviewed the issues as defined by the Commission. And, as noted in the Settlement Agreement filed on December 26th and presented today, Staff, through its consultant, concluded that PSNH acted prudently and reasonably. Staff did recommend that PSNH not recover certain outage costs, and PSNH has agreed to not seek those costs from customers in the interest of the Settlement. PSNH has also agreed to implement certain recommended changes regarding operation and maintenance on a going forward basis. And, in these circumstances, and in light of the scope of this case, PSNH has acted prudently and reasonably with respect to the operation of its plants, its power purchases, and the accounting of its costs and revenues.

And, therefore, PSNH would ask that the Commission accept and approve the Settlement Agreement in this case, with the understanding that issues about plant retirement or the like are not appropriate for this docket. Thank you.

CHAIRMAN IGNATIUS: Thank you. All
right. With that, we will take the matter under advisement. And, appreciate everyone's work in going \{DE 12-116\} \{01-16-13\}
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