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1                   BEFORE THE WASHINGTON UTILITIES AND  
2                   TRANSPORTATION COMMISSION  
3   WASHINGTON UTILITIES AND           )  
4   TRANSPORTATION COMMISSION,       )  
5                   Complainant,        )DOCKET NO. UG-040640  
6                   vs.                    )DOCKET NO. UE-040641  
7                   PUGET SOUND ENERGY, INC.,   )Volume V  
8    )Pages 607-798  
9                   Respondent.            )  
10                   \_\_\_\_\_  
11   In the Matter of the Petition       )  
12   of PUGET SOUND ENERGY, INC.,     )  
13   For an Order Regarding the         )  
14   Accounting Treatment for            )DOCKET NO.  
15   Certain Costs of the Company's     )UE-031471  
16   Power Cost Only Rate Filing,       )  
17   \_\_\_\_\_  
18   In the Matter of the Petition       )  
19   of PUGET SOUND ENERGY, INC.,     )  
20   For an Accounting Order             )  
21   Authorizing Deferral and            )DOCKET NO.  
22   Recovery of Investment and         )UE-032043  
23   Costs Related to the White         )  
24   River Hydroelectric Project.        )  
25   \_\_\_\_\_)

16  
17           A hearing in the above matter was held on  
18   December 15, 2004, at 9:30 a.m., at 1300 South  
19   Evergreen Park Drive Southwest, Room 206, Olympia,  
20   Washington, before ADMINISTRATIVE LAW JUDGE DENNIS  
21   MOSS and CHAIRWOMAN MARILYN SHOWALTER and  
22   COMMISSIONER RICHARD HEMSTAD, and COMMISSIONER  
23   PATRICK OSHIE.  
24  
25   Deborah L. Cook, RPR, CSR  
26   Court Reporter

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1

PROCEEDINGS

2

3

JUDGE MOSS: Good morning, everybody.

4

We're here to commence day three of our

5

evidentiary hearing, and Dr. Dubin is our first

6

witness; is that correct?

7

MS DODGE: Yes.

8

JUDGE MOSS: Did I get that right? Is it

9

"Dr." or "Mr."?

10

THE WITNESS: "Dr." is fine.

11

12

JEFFREY DUBIN, Ph.D.,

13

produced as a witness in behalf of The Company,

14

having been first duly sworn, was examined and

15

testified as follows:

16

17

JUDGE MOSS: Please be seated. Thank

18

you. Go ahead.

19

20

DIRECT EXAMINATION

21

22

BY MS. DODGE:

23

Q Dr. Dubin, do you have before you your

24

testimony and exhibits in this matter, which have

25

been identified as Exhibits 111 through 127?

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1 A I do.

2 Q And were your testimony and exhibits  
3 prepared by you or under your direction?

4 A They were.

5 Q Do you have any additions or corrections  
6 to make to any of that testimony at this time?

7 A I do.

8 Q Would you please explain those to us?

9 A I have one errata correction to make at  
10 page 26.

11 Q Of Exhibit --

12 A 111. And that is at the answer to the  
13 question at line 7, there's a number, 696.2. It  
14 should be 755.2. And when you are ready, I will  
15 continue with the others.

16 JUDGE MOSS: Let's pause there for a  
17 second. But for some reason, I don't have any  
18 page after 25. Wait a minute. Were there some  
19 revisions?

20 MS. DODGE: There was a revision to 25,  
21 and then 26 continues.

22 JUDGE MOSS: That explains it. I turned  
23 to the end, and I do have 26. I apologize.

24 MS. DODGE: It's page 26, line 9.

25 THE WITNESS: The change is to 755.2.

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1           JUDGE MOSS: All right. Thank you. All  
2 right. Dr. Dubin, go ahead. Thank you.

3           THE WITNESS: And then within Exhibit 125,  
4 which is my prefiled rebuttal testimony, if we  
5 could look at page 22. And I am revising the  
6 question and answer starting at line 7. And I  
7 would like to strike the question and answer. I  
8 would be happy to explain the reasons why if  
9 anybody is interested, but I prefer to just  
10 strike it at this time.

11           But I would like to move the footnote,  
12 which is at page 23 of 27, footnote 12, I would  
13 like to move that to the end of the answer at  
14 line 5 of page 23 to preserve the footnote. And  
15 I have one more correction.

16           JUDGE MOSS: Go ahead.

17           THE WITNESS: Page 24 of the same exhibit,  
18 at line 16, I would like to strike the word -- or  
19 change the 46 percent to 42 percent. This is an  
20 errata. And also at line 18, change the 600,000  
21 to 541,000.

22           Q BY MS. DODGE: Dr. Dubin, with those  
23 changes, are the answer to the questions in  
24 Exhibits 111 through 127 true and accurate to the  
25 best of your knowledge?



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1 A Yes.

2 MS. DODGE: Your Honor, we offer Exhibits  
3 111 through 127 into evidence, and present  
4 Dr. Dubin for cross-examination.

5 JUDGE MOSS: Apparently being no  
6 objection, those will be admitted as marked.

7 (EXHIBIT 111 to 127 RECEIVED.)

8 JUDGE MOSS: I have ICNU down for 15  
9 minutes, and Public Counsel, 15, and Staff down  
10 for 20. Is there any preference on order?

11 Mr. Cedarbaum, why don't you proceed.

12

13 CROSS EXAMINATION

14

15 BY MR. CEDARBAUM:

16 Q Hello, Doctor. I turned my mic on. My  
17 questions concern the issue that exists between  
18 the Company for your testimony, and the Staff  
19 witness, Dr. Mariam, over the price of natural  
20 gas to be used in the power gas analysis. And is  
21 it correct that in the Company's direct case it  
22 proposed a price of \$4.39 per MMBTU based on 10  
23 day forward market price strips for the period  
24 12/22/2003 through January 8, 2004?

25 A I don't recall. It sounds approximately

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1 correct.

2 Q You would accept that subject to check?

3 A Yes.

4 MS. DODGE: That's in the record, Your  
5 Honor, so the witness ought not be asked to check  
6 it.

7 JUDGE MOSS: Well, the witness needs to  
8 accept it subject to check, or acknowledge it so  
9 the questions that follow will make sense. So  
10 that's fine. It's a standard of procedure to  
11 check it, and then he can check the testimony and  
12 confirm that.

13 MS. DODGE: My concern is that the subject  
14 to check seems to have expanded from what is  
15 meant to be clearly a witness appropriate to the  
16 subject checking a calculation, versus being  
17 asked to somehow admit evidence that exists in  
18 the record, and so it simply could be referred  
19 to.

20 He could be asked to assume that that is  
21 correct and go forward, but I don't think the  
22 burden should be shifted to a witness to check  
23 something that is or is not in the record.

24 JUDGE MOSS: I don't see it in the same  
25 fashion that you do. To me, it's simply an

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1 acknowledgement of the fact, and if the witness  
2 is uncomfortable accepting it subject to check  
3 they can then -- we can find some other way to  
4 verify it by referring him to a point in the  
5 record and doing that on the stand.

6 It's merely an expedient way to let the  
7 questioning go forward on detailed information  
8 that the witness may or may not be fully aware  
9 of.

10 MS. DODGE: Your Honor, the difficulty is  
11 that the rules place the burden on the witness  
12 once the check is accepted to come back and file  
13 an affidavit with the Commission if there's  
14 something incorrect. So it's a tremendous burden  
15 placed on the witness.

16 I think the expedient thing to do would be  
17 simply to say, "assuming that's correct," and go  
18 forward.

19 JUDGE MOSS: That will work fine, too.

20 MR. CEDARBAUM: I didn't mean to cause  
21 this problem. I was trying to get some context  
22 to the issue that I'm going to discuss with  
23 Dr. Dubin so.

24 MS. DODGE: I have no objection to the  
25 question if it's on an assumption basis, rather

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1 than a subject to check.

2 MR. CEDARBAUM: Okay.

3 Q BY MR. CEDARBAUM: So, Dr. Dubin, let's  
4 assume, for the sake of this discussion, that the  
5 Company's direct case was as I characterized it.  
6 Okay?

7 A Okay.

8 Q And in rebuttal, which now we're shifting  
9 to your testimony, the Company proposes \$5.60 per  
10 MMBTU price for gas using the three-month average  
11 Nymex forward prices for the period ending  
12 September 30, 2004; is that right?

13 A Again, I don't recall the specific figure.

14 Q You are not sure, sitting here today, what  
15 the Company's proposed gas price is for the power  
16 cost analysis?

17 A I don't recall the specific dollar amount,  
18 no.

19 Q They used your analysis for that purpose,  
20 didn't they?

21 A They used my analysis, in part, to justify  
22 a three-month average.

23 Q Do you know, would you agree that the  
24 Company's proposal on the three-month average is  
25 a modification to the Staff study, which

0619

1 calculated a \$4.69 MMBTU gas price based on a  
2 three-month rolling average for price quotes from  
3 December 2003 through April 2004?

4 A I don't know if it's a modification of  
5 what Staff did or not. It's a three-month  
6 rolling average that the Company decided to  
7 employ.

8 Q Your testimony as presented in response to  
9 Dr. Mariam's; is that right?

10 A Yes.

11 Q Do you understand what Dr. Mariam did?

12 A Yes, I do.

13 Q Did he use a three-month rolling average  
14 price quote for the period December 2003 through  
15 April 2004?

16 A He used many averages, including a  
17 three-month rolling average. Yes.

18 Q Do you understand -- you understand that  
19 Staff's proposal is the \$4.69 price?

20 A That's derived by taking a three-month  
21 rolling average of various forward prices, and  
22 employing a simple average after eliminating a  
23 certain period of time. It's a complex analysis,  
24 and the Company's analysis is somewhat different  
25 than that.

0620

1 Q So you do understand that Staff's analysis  
2 is based on a three-month rolling average price  
3 quotes for December 2003 through April 2004?

4 A Staff's, yes.

5 Q Is it correct that in your analysis you  
6 used forward gas prices to forecast spot gas  
7 prices during the rate year?

8 A I wouldn't characterize my analysis that  
9 way, no.

10 Q You use forward gas price in your  
11 analysis, don't you?

12 A I do.

13 Q For what purpose?

14 A To examine the issue of strip length,  
15 which is the averaging period in question, to  
16 respond to Dr. Mariam's analysis. In other  
17 words, my analysis used forward prices to analyze  
18 the question of cohesion or coherence with spot  
19 prices, and to examine the issue of how to form  
20 an average over a certain lengths of time as one  
21 is farther out from the rate year in question,  
22 and to choose which forward average period would  
23 be the best.

24 Q And is it your testimony that you believe  
25 the forward gas prices are the best analytical

0621

1 tool for doing that process that you just  
2 described?

3 A The best analytical tool for doing what  
4 process? I don't follow your question.

5 Q I was just asking you, you described what  
6 you did?

7 A Yes.

8 Q And I am asking you, is it fair to draw  
9 from that that you believe the forward gas prices  
10 are the best predictor or tool to use for the  
11 purpose that you used them?

12 A Well, my analysis was analysis of forward  
13 prices as they relate to spot prices. So I don't  
14 know how I could avoid or say that they were the  
15 best, or they were the only prices that apply to  
16 future spot periods in the context in which I  
17 studied them.

18 Q In your use of the gas forward gas prices,  
19 as you discussed, were you basing your analysis  
20 on the assumption that the market for natural gas  
21 is an efficient market?

22 A I looked into that issue, but I did not  
23 assume that the market was efficient. Nor did I  
24 conclude that it wasn't efficient.

25 Q So you didn't study that the efficiency of

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1 the market was not relevant to your analysis?

2 A Well, actually the efficiency of the  
3 market was something I did subsequently study,  
4 but it was not the issue that I analyzed in my  
5 rebuttal testimony in the main.

6 Q If you could turn to what has been marked  
7 for identification as Exhibit 128.

8 A (Complies.)

9 Q And looking at the first two pages -- and  
10 I am, for purposes of the record, I am counting  
11 the pages from the handwritten ones in the bottom  
12 right-hand corner. It's actually the same as the  
13 typewritten pages for the first two pages.

14 But do you recognize the first two pages  
15 of Exhibit 128 as your response to Staff's Data  
16 Request 293?

17 A Yes.

18 Q And the remaining pages, handwritten pages  
19 3 through 19, is the -- consists of the third  
20 document that you list on page 1 of the exhibit;  
21 is that right?

22 A I don't have those remaining pages in  
23 front of me.

24 Q Is this the article by Mazighi?

25 A Yes.



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1 Q Yes. I believe we did provide that to  
2 counsel as part of the cross exhibit exchange  
3 last week.

4 MS. DODGE: Just a minute. (Handing  
5 documents.)

6 THE WITNESS: Yes, I have it in front of  
7 me now. Thank you.

8 Q BY MR. CEDARBAUM: So the article that you  
9 reference under item three on page 1 is the  
10 attachment to the exhibit, to the best of your  
11 knowledge?

12 A Yes.

13 MR. CEDARBAUM: Your Honor, I would offer  
14 Exhibit 128.

15 JUDGE MOSS: If there's no objection, it  
16 will be admitted.

17 (EXHIBIT 128 RECEIVED.)

18 Q BY MR. CEDARBAUM: Dr. Dubin, in your  
19 rebuttal testimony there's a lot of discussion of  
20 statistical analysis between of the relationship  
21 between forward prices and spot prices. And as a  
22 general matter, would you agree that in  
23 performing statistical analysis that the data  
24 should be cleaned of what are outliers or  
25 aberrations?

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1 A That's a complex question.

2 Q Maybe you can answer "yes" or "no," and  
3 give an explanation. That would be fine.

4 A I guess the general answer would be no, I  
5 would not recommend cleaning outliers. Some  
6 statisticians believe that it's necessary to  
7 check for outliers in data. Once you discover  
8 that the outlier is present, you should go back  
9 and question why that outlier is present, whether  
10 it's a data error or data entry error, something  
11 that has happened in the market that has led to  
12 you to miss something in an econometric model,  
13 that sort of thing. But as a rule, one does not  
14 automatically clean outliers. One makes  
15 adjustments for them.

16 Q Would one of the adjustments be to remove  
17 them once you have done the analysis, look at  
18 them, as you say?

19 A One could remove them if that were  
20 appropriate in a given context, yes.

21 Q And one would remove them because keeping  
22 them in might negatively affect the conclusions  
23 that you would draw from a statistical analysis?

24 A It all depends on the statistical model  
25 that is being examined. As I said before, if you

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1 discover an outlier you have to learn something  
2 from it. You have to ask the question, why does  
3 the model think that that point is an outlier.

4 It could be a data transcription error, a  
5 research assistant made an incorrect number, or  
6 it could be that the model has failed to pick  
7 something up. And depending on what the analyst  
8 finds in that circumstance, the response of the  
9 analyst will be different.

10 Q Okay. But my question was directed to  
11 what you would do after you have looked at the  
12 outlier, tried to understand it, and have come to  
13 the conclusion that it should be removed.

14 A If one comes to the conclusion it should  
15 be removed, then I suppose one should remove it.

16 Q And if one does not remove it from the  
17 statistical analysis, the conclusions that would  
18 be drawn from that statistical analysis might be  
19 adversely affected?

20 A Not necessarily. I could give you an  
21 example, if you like.

22 Q My question was, it could. Is your answer  
23 "yes" or "no"?

24 A Anything is possible. It depends on the  
25 situation at hand.

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1 Q So your answer would be "yes"?

2 MS. DODGE: Your Honor, asked and  
3 answered.

4 MR. CEDARBAUM: I don't think I got the  
5 answer I was looking for.

6 MS. DODGE: Maybe not --

7 JUDGE MOSS: Let's let the witness answer  
8 "yes" or "no," if he can, or he can say so if he  
9 can't.

10 THE WITNESS: Yes, it's possible.

11 Q BY MR. CEDARBAUM: If you were to look at  
12 page 16 of your rebuttal testimony --

13 A (Complies.)

14 Q And that's Exhibit 125. You begin the  
15 discussion of the statistical analysis that you  
16 performed for the relationship between forward  
17 prices and spot prices; is that correct? That's  
18 the beginning of that discussion?

19 A Yes.

20 Q And you indicate that you relied upon  
21 Nymex data from April of 1990 to October 2004 for  
22 forward contracts, and the Nymex data from  
23 January 1991 to October 2004 for closing spot  
24 prices. Do you see that?

25 A Yes.

0627

1 Q The period of time that we have the 1990  
2 to 2004 and 1991 to 2004 period would include the  
3 Western Power Crisis of the 2000-2001 period?

4 A Yes.

5 Q If you flip to your rebuttal testimony at  
6 page 20 -- and this will get, to some extent, the  
7 reason for your deletions on page 22 that you  
8 have discussed this morning.

9 But on page 20, you begin a criticism of a  
10 Staff decision to use forward prices for the  
11 months of December 2003 through April 2004, but  
12 then excluding the period May to July of 2004 in  
13 order to forecast rate year spot prices; is that  
14 correct?

15 A Yes.

16 Q And then at the top of page 22, again with  
17 respect to this issue concerning Dr. Mariam's  
18 exclusion of those later months, you refer to his  
19 calculations as a normality. And then you say,  
20 did not report the results in any testimony. Do  
21 you see that?

22 A I see that.

23 CHAIRWOMAN SHOWALTER: What line is that?

24 MR. CEDARBAUM: I am sorry. Right at the  
25 top. It would be lines 4 through 6 in answer to

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1 the question on line 2 on page 22.

2 CHAIRWOMAN SHOWALTER: Thank you.

3 Q BY MR. CEDARBAUM: If you could turn to  
4 page 29 for identification.

5 A (Complies.)

6 Q Do you recognize this as the Staff  
7 response to Company Data Request No. 43 with  
8 reference to this issue that we're talking about,  
9 about the exclusion of May through July months  
10 for 2004?

11 A Yes. This was an exhibit prepared by  
12 Staff that attempts to answer that issue.

13 Q These were workpapers that were provided  
14 to you during the discovery phase of this case;  
15 is that right?

16 A Yes.

17 Q So you had these workpapers in your  
18 possession when you prepared the rebuttal  
19 testimony?

20 A Yes.

21 Q If you could look at the handwritten page  
22 of the exhibit, it's No. 1, but it's actually the  
23 second page of the exhibit.

24 A (Complies.)

25 MS. DODGE: Your Honor, for the record,

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1 does Exhibit 129 now contain the cover page, the  
2 first page to the Data Request Response?

3 JUDGE MOSS: It does. It was distributed  
4 to the bench this morning. I assumed counsel had  
5 it as well.

6 MS. DODGE: We do have it, and that would  
7 be --

8 MR. CEDARBAUM: That was an oversight on  
9 our part, which I discussed with Ms. Dodge this  
10 morning, and we hoped that would clear that up.

11 Q BY MR. CEDARBAUM: So looking at the  
12 second page of the exhibit with the handwritten  
13 note at the bottom, this page is, as you  
14 understand, is Dr. Mariam's analysis of normality  
15 for the period May 3, 2004 to July 16, 2004 all  
16 related to the rate year; is that right?

17 A The first page relates to the period May 3  
18 to July 16. Did you say July 16?

19 Q That's what I meant to say, if I did not.  
20 You are right. It's July 16.

21 A Subject to that, this is Staff's analysis  
22 on that issue, yes.

23 Q And then flipping to the next page, this  
24 is Staff's analysis of normality for the period  
25 December 22nd, 2003 to April 30, 2004; is that

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1 right?

2 A I have it as December 22, 2003 through  
3 April 30, 2004. Is that what you said?

4 Q Again, maybe I am -- that's what I meant  
5 to say.

6 A Okay. Well, subject to that, that is what  
7 this exhibit is.

8 Q And the third page is the Staff analysis  
9 for the period December 22, 2003 to July 16,  
10 2004?

11 A Yes.

12 CHAIRWOMAN SHOWALTER: Dr. Dubin, can you  
13 use the microphone a little closer, or maybe  
14 position it so you are more often speaking into  
15 it?

16 THE WITNESS: Okay. Thank you.

17 CHAIRWOMAN SHOWALTER: Thanks.

18 Q BY MR. CEDARBAUM: And if you were to now  
19 turn back to the second page of the exhibit,  
20 there's a line four lines up from the bottom  
21 labeled "Probability." Do you see that?

22 A I do.

23 Q And those are probability values that  
24 Dr. Mariam used to test for normality of forward  
25 gas prices?



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1 A I don't know if Dr. Mariam used them or  
2 not. He didn't refer to them.

3 Q That's what they are. They are  
4 probability values testing normality of forward  
5 gas price data.

6 A I haven't been able to find the  
7 documentation that explains what those are, but  
8 they are, in fact, probability values for the  
9 Jarqu-Bera test, yes.

10 Q And if you look at -- again, I'm on the  
11 second page of the exhibit. The forward prices  
12 quoted for May, for the dates in May before that  
13 we discussed through July that we discussed. All  
14 but the month of October show values of less than  
15 5 percent; is that right?

16 A In the probability row, yes.

17 Q Right. And does that mean that at a  
18 confidence level of 95 percent for the months  
19 where the value is less than 5 percent, does that  
20 mean that that confidence level of 95 percent,  
21 there's a less than 5 percent chance of  
22 occurrence that the data -- excuse me. Let me  
23 restate that.

24 At a confidence level of 95 percent where  
25 a value of less than 5 percent appears, that

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1 means at most there's a 5 percent chance of  
2 rejecting the hypothesis that one is testing?

3 A I don't know. That was pretty garbled to  
4 me. I would say it differently; that these  
5 passed the normality test, except October, at the  
6 95 percent confidence level. In other words, you  
7 would not reject normality for these forward  
8 prices for these rate year months in all but in  
9 one case.

10 Q Is it correct that a result with less than  
11 a 5 percent chance of occurrence means that the  
12 data is not normally distributed?

13 A It would depend on how you set up the  
14 test.

15 Q Under what circumstances would my  
16 statement be true?

17 A Well if we set up an acceptance region for  
18 a statistical test, we could be looking at one  
19 tail or another. There's a whole variety of  
20 things that we could be doing here. Part of the  
21 problem I had in my understanding of this chart  
22 in the beginning was the word probability didn't  
23 trigger in my mind a specific result or test.

24 I can now reinterpret these statistics for  
25 you in a different way. But at the time when I

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1 was writing about this, I misinterpreted these  
2 results because there was no documentation I  
3 could find about them.

4 Q Well, let me ask you, then, maybe to cut  
5 to the chase here. This morning you deleted  
6 a portion of your testimony on page 22?

7 A Yes, I did.

8 Q Why don't you explain why that happened?

9 A Well, as I just said, one of the things  
10 that I did in preparing rebuttal testimony was to  
11 study the workpapers of Dr. Mariam. And while  
12 Dr. Mariam had not referred to these workpapers,  
13 I discovered them and I looked at them.

14 And I looked in particular at the  
15 Jarque-Bera test, and I misinterpreted the  
16 significance of the results. I looked for  
17 documentation within the Excel program for this  
18 particular test, and didn't find it.

19 The word probability in that row is  
20 nonstandard in statistics. And without further  
21 research I couldn't really tell what these  
22 statistics were doing. And, in fact, I just  
23 guessed wrong, and was flat out wrong about it.  
24 When I later had a chance to find the literature  
25 on this particular test, the Jarque-Bera test,

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1 and read the paper by Jarqu and Bera, I found  
2 this was a fairly nonstandard test for normality  
3 because of certain restrictions in the test.

4 But nevertheless -- and I had my inference  
5 from it backwards, so that's why I deleted the  
6 question and answer.

7 Q When you say you discovered this, you mean  
8 you walked into your office and there it was?

9 A I am sorry?

10 Q You say you discovered these workpapers.  
11 They were provided to you in response to a Data  
12 Request, weren't they?

13 A Well, sure. But lots of workpapers were  
14 provided in the response to Data Requests. And I  
15 pored through all of them and came across these.

16 MS. DODGE: Could I just object to the  
17 prior question? I think it misstated Dr. Dubin's  
18 prior answer on what he discovered.

19 Q BY MR. CEDARBAUM: I thought you said that  
20 you discovered these workpapers?

21 A I thought I discovered my error that I  
22 made.

23 Q I misheard you.

24 JUDGE MOSS: I think the record is now  
25 clear.

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1 MR. CEDARBAUM: Your Honor I would offer  
2 Exhibit 129.

3 JUDGE MOSS: No objection. Those will be  
4 admitted.

5 (EXHIBIT 129 RECEIVED.)

6 MR. CEDARBAUM: Those are all of my  
7 questions. Thank you.

8 JUDGE MOSS: Let's go around the room,  
9 then. Mr. ffitch, do you still have questions  
10 for Dr. Dubin?

11 MR. FFITCH: No questions for Dr. Dubin.  
12 Thank you, Your Honor.

13 JUDGE MOSS: That will bring us to Mr. Van  
14 Cleve.

15 MR. VAN CLEVE: We have no questions,  
16 either, Your Honor.

17 JUDGE MOSS: Does the bench have questions  
18 for Dr. Dubin?

19 CHAIRWOMAN SHOWALTER: I think my problem  
20 is I am not sure I grasp enough of the fine  
21 points to know what questions to ask, and I will  
22 probably have to study the testimony more.

23

24

25

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1 EXAMINATION

2

3 BY CHAIRWOMAN SHOWALTER:

4 Q One issue here seems to be, all things --  
5 all other things being equal, your position seems  
6 to be more data, more years, is better than  
7 fewer. Am I right so far?

8 A That's pretty close. It depends on the  
9 issue we're talking about. With respect to  
10 water, for instance, my analysis was a 40-page  
11 detailed statistical analysis of hydro conditions  
12 in the Pacific Northwest.

13 And I concluded that based on the  
14 geological properties and the statistical  
15 properties of those series, the best way to form  
16 a long-term average was use all the available  
17 information. In fact, I would say as a  
18 statistician, it's always appropriate to use all  
19 the available information.

20 However, you have to contrast that with  
21 gas, and we have two polar opposites here. In  
22 the gas situation, we're talking about  
23 forecasting what is going to happen in the rate  
24 year. And there's an issue about how far back  
25 one should go to look at information. When you

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1 have a forward market at your disposal, a forward  
2 market that is not too thinly traded and where  
3 there's evidence of efficiency, then it's  
4 appropriate to look at the most current  
5 information, because it's not stale.

6       It's like predicting the presidential  
7 election. The survey done three years ago about  
8 whether Bush would win was not as interesting as  
9 the one done before, the week before the  
10 election. So in some cases you should use the  
11 complete historical record. In other cases, when  
12 you have an active futures market, as you are  
13 making a forecast you should use the most recent  
14 information because other information that you  
15 could bring into play becomes stale, and is not  
16 interesting, and actually will introduce bias  
17 into a forecast.

18     Q    So in the case of hydro conditions we're  
19 dealing with a natural phenomenon, and there is  
20 no market, I suppose, or potentially forecasts  
21 about future hydro conditions depending on the  
22 jet stream, or something like that. But in  
23 general, you are saying that's a natural  
24 phenomenon as distinct from an artificial or  
25 financial phenomenon for which there is actually

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1 data in the future?

2 A We -- yes. There's not an active, that I  
3 know of, futures market that's forecasting what  
4 water conditions are going to be. That doesn't  
5 mean one couldn't have one. In fact, futures  
6 markets have been set up to forecast the election  
7 because as soon as money is on the line, the  
8 financial interest and the invisible hand  
9 phenomenon comes into play. And when money is on  
10 the line the forecast or implicit forecast become  
11 quite good.

12 But there's no futures market developed  
13 for hydro. And all the studies that I have read  
14 in hydrology, and all of the various arcane  
15 fields that deal with water, suggest that there's  
16 limited ability to forecast the weather. Maybe  
17 we can do it through satellite looking two or  
18 three days in a row, or I can tell you it's  
19 always going to rain here.

20 But more generally you need a long  
21 geological record to know or to make a forecast  
22 for weather. Water is going to be in the future,  
23 and the best you can say about it is the long-run  
24 average will tell you where you are going to be.  
25 And maybe the little tiny bit of information on



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1 what happened last year, but that's about it.

2 With respect to the gas, however, I'm not  
3 really interested in what the market was saying  
4 two years ago, four years ago, about the future  
5 spot prices. I am most interested in what is  
6 going to happen, what information I have today,  
7 and how those futures markets are trading with  
8 respect to the near term future.

9 Because the market participants are  
10 revising that information constantly, and putting  
11 in their best information about where future gas  
12 prices are going to be. So it is the difference  
13 exactly between a financial market, a derivative  
14 market, a market derived from economic forces and  
15 one derived from geology.

16 Q Well, one question on the geology that is  
17 probably a lay-type of question is, what about  
18 global warming? That is, if it were true, and I  
19 doubt there's evidence in this record that it is  
20 or isn't, but then would you then want to take a  
21 more recent set of years, done -- the full set of  
22 years that you might have at your disposal, or  
23 are we talking about geological time that is way  
24 longer than 60 years anyway?

25 A That's a very good question, and perhaps

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1 we should get a geologist to speak to it. But my  
2 understanding in reading this literature is  
3 science is pretty unclear about weather  
4 phenomenon, and whether we're in certain types of  
5 cycles. And it's very difficult to say, absent a  
6 very long geological record, whether something  
7 that appears to be happening in the short term  
8 is, in fact, a longer term trend.

9       So with respect to global warming, I think  
10 the evidence really isn't complete yet. So we  
11 just don't know.

12       Q    So for purposes of this proceeding on  
13 hydro conditions, you are back to just saying  
14 more years is better, basically?

15       A    Well, I am back to saying that there was  
16 never any reason to exclude a period from 1928 to  
17 1948 because those periods of time were  
18 abnormally low.

19       And what I am saying in this proceeding  
20 and in my testimony, and I think while you may  
21 think it deserves further study, I think I can  
22 put it to you quite simply: it's my opinion that  
23 there were some failings in the original analysis  
24 by Public Counsel's witness. And based on the  
25 failings and those analyses, the Commission at

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1 the time adopted a 40-year water rule, which I  
2 think is a disastrously bad rule.

3 And there's absolutely no reason that a  
4 60-year record cannot be employed to make a  
5 forecast of water. And specifically the reason  
6 is looking at earlier water years, the '28 to  
7 '48, period is very good geological evidence of  
8 something that has occurred, and may occur again,  
9 and may be occurring right now.

10 And as I wrote in my testimony, there's no  
11 reason to look at this as an outlier, or to  
12 conclude that it's an outlier and therefore  
13 delete it. It's part of what happened in nature,  
14 and we should give it some weight and some  
15 credence.

16 The worst case scenario is the geological  
17 record says one-third of the time that we have  
18 seen we were in a period of dry years, and  
19 two-thirds of the time we were in a period of  
20 wetter years. If you combine that, you get the  
21 average, the 60-year average, which is the  
22 average I'm advocating to the Commission to  
23 adopt.

24 I think it's an error to adopt a 40-year  
25 rolling average, or any sort of rolling average.

0642

1 And the reason for that is a technical one, but  
2 it's my understanding that Public Counsel's  
3 witness at the time examined the hydrological  
4 record and began a series of missteps that led to  
5 a bad outcome.

6 And the first misstep in that process was  
7 to say there's a lot of noise in this series.  
8 What I am going to do is apply a five-year  
9 average, moving average to that data to smooth  
10 it. And when I first saw that I was kind of  
11 dumbfounded, because that was a mistake that we  
12 teach our graduate students over and over not to  
13 make.

14 It was a mistake that was pointed out by a  
15 famous Russian statistician, Slutsky -- I will  
16 spell it for you later. And this statistician  
17 observed -- and I brought some articles about the  
18 point. He observed that if you take a completely  
19 random series like water, and do a moving average  
20 to it, you will produce a cycle in the data that  
21 is not really there.

22 And the consequences of that was that  
23 Public Counsel's witness, in examining that water  
24 record, applied a moving average process to that  
25 data, therefore introducing cycles that were

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1 never present in the first place. And as a  
2 consequence of that went on to say, well, now in  
3 the presence of cycles, we should use a 40-year  
4 moving average.

5         It was a series in my opinion, of missteps  
6 that led the Commission at the time to, based on  
7 the evidence that it had, adopt a rule that is  
8 needlessly -- not needlessly, but a bad rule and  
9 one that is going to produce a series of bad  
10 outcomes from this and other companies in the  
11 future.

12         Q Now, moving to the financial side, it  
13 seems almost contradictory to our discussion on  
14 the natural side. But when I think about the  
15 energy crisis, the Western Energy Crisis, it's  
16 very clear -- I think it's becoming increasingly  
17 clear that there were some highly unusual  
18 situations that were going on.

19         Now, of course, that can repeat itself in  
20 the future. But that was somewhat of an  
21 artificially induced situation. And I am trying  
22 to figure out how that should or shouldn't play  
23 into our thinking. Do we -- is that like the  
24 presidential election two times ago, and it's  
25 really not an issue any more? We simply look

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1 forward.

2 A Well, there is an issue there. And the  
3 issue is one that Mr. Cedarbaum raised with me,  
4 which is the question about if you look at the  
5 historical relationships between futures prices  
6 and spot prices, and you look for quote outliers,  
7 an outlier in a statistical setting is a point in  
8 time or an observation that is completely  
9 different than anything else that you see.

10 If you look at the statistical analysis  
11 and ask the question of the statistics are there  
12 outliers in the data, which is something that I  
13 did, there were two data points that were  
14 outliers in the analysis period, I believe it was  
15 December of 2000 to January of 2001, at a time  
16 when spot prices went through the roof. Only two  
17 data points.

18 Now, Mr. Cedarbaum alluded to the fact  
19 that one procedure for dealing with that is to  
20 remove those data points. Another procedure is  
21 to, like I said before, think about what caused  
22 that and ask the question, should they be left in  
23 or should they not be left in.

24 Staff had also sort of pointed me in this  
25 direction by asking me to do a series of analyses

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1 to remove a much broader period of time in the  
2 middle. I discovered two outliers, but Staff  
3 asked me to take out maybe a 10-month period. I  
4 can't recall.

5 And I did two sensitivity analyses with my  
6 statistical work. One sensitivity I did was to  
7 remove the two outliers that I discovered,  
8 December of 2000 to January 2001, where those  
9 spot prices were extraordinarily high. And the  
10 answer was, in terms of my exhibits was that the  
11 numbers changed a little bit. The key  
12 coefficients and T statistics at R squareds, and  
13 all the other things I referred to in the  
14 testimony changed a little bit. But the broad  
15 conclusions I reached were exactly the same about  
16 the prediction of forward prices.

17 And, also, when I removed the period of  
18 time that Staff had indicated in their Data  
19 Request might be something to look at, I removed  
20 those 10 months. And I found, again -- and I  
21 prepared those tables and brought them with me if  
22 the Commission would like to see them -- they  
23 look exactly like the exhibit material to my  
24 rebuttal report. They are exactly the same  
25 format.

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1           One removes two points in time because of  
2 outliers. And the other removes the period of  
3 time that Staff indicated in their Data Request.  
4 And, again, I concluded that the models fit  
5 almost exactly the same way with the 10-month  
6 period deleted.

7       Q    What 10-month period is that, so we know?

8       A    Yes. I can get that for you. Staff had  
9 asked kind of pointedly to do some tests around  
10 the period without June of 2000 through April  
11 2001.

12           Now, mind you, I had discovered -- and  
13 I will use the word "discovered" again. I  
14 discovered through my statistical analysis that  
15 there were two outlier points in time, and I  
16 previously removed them to do a sensitivity.  
17 Those were December of 2000 and January of 2001.

18           Staff had asked, why don't you do a test,  
19 something called a chow (ph) test to remove a  
20 longer period of time. And, again, when I did  
21 that test, I produced almost identical results.  
22 I mean, coefficients and T statistics, things  
23 were minorly different than my broad conclusions  
24 about how long an averaging period to use, the  
25 efficiencies of the market, whether or not



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1 Dr. Mariam had done a correct analysis, none of  
2 that changed as a result of excluding either that  
3 entire period of time, or those two observations.

4 Q All right. Now, I don't quite understand  
5 the use of the term "efficiency" here. I  
6 understand if there's a liquid or illiquid  
7 market, that is, I think the more liquid the  
8 market you have, the more it can be relied upon  
9 for making predictions about it. But where does  
10 the term and concept "efficiency" come in?

11 A Well, I am glad you asked. Give me a  
12 chance to tell you a little bit about efficiency.  
13 Market efficiency is the one of the key results  
14 in economics and finance. It's the proposition  
15 that the prices are set using the full available  
16 information in the marketplace; that in a world  
17 of perfect knowledge prices reflect everything  
18 that traders know, and all the information that  
19 is possible to be known at that time.

20 Now, we know the world isn't quite that  
21 perfect, but it goes to the old joke about the  
22 economist walking down the street, looking down  
23 and seeing a \$20 bill, and he didn't pick it up,  
24 because the economist believes that if it was  
25 really a \$20 bill, it wouldn't be there. Those

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1 rents, those arbitrage possibilities would be  
2 gone.

3         Now, markets are not perfectly efficient.  
4 And economists have come up with ways to test  
5 efficiency. Efficiency in this context means, do  
6 the futures market provide an unbiased predictor  
7 of the spot market in the future?

8         So what is the future market? It's a  
9 transaction today about a transaction in the  
10 future. It's a contract we enter into at a price  
11 that will prevail some time period into the  
12 future. And the question is, when the future  
13 actually comes up, were we correct on average?  
14 Did we hit it on average?

15         And economists have actually tested market  
16 efficiency in this literature, and in other  
17 literatures. It started with the literature of  
18 the agricultural products that we know have  
19 active futures markets, grains and corns and cows  
20 and cattle, and those sorts of things.

21         But economists have also looked for market  
22 efficiency in the energy futures market. And you  
23 are absolutely right. Markets that have very few  
24 trades, which we call thin markets, don't reflect  
25 a lot of information. But markets in which

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1 there's a lot of active trading, and I can  
2 discuss that more if you like, do reflect  
3 efficiency.

4 Now, what I did in response to the Data  
5 Request that Mr. Cedarbaum had asked me about was  
6 I had read the paper by Mazighi called the  
7 Efficiency of Natural Gas Futures Markets that  
8 was published in a journal I never heard of  
9 called the OPEC Journal, but I still had never  
10 heard of it. But I also collected other articles  
11 and read a lot of literature and refreshed myself  
12 on the literature, including papers cited by  
13 Dr. Mariam.

14 And Dr. Mariam's citations were quite  
15 helpful in this regard because he cited papers,  
16 but -- I am going to give you a bunch of names  
17 that we will go through later -- Guttomsen, Chinn  
18 LeBlanc, Herbert, Bopp & Lady, Crowder, Mazighi,  
19 Brenner and Kroner, and a paper by Peroni that I  
20 found myself.

21 And it took awhile to sift through this  
22 literature, because the literature was a little  
23 bifurcated. Some economists were finding that  
24 the market was efficient for futures in the gas  
25 market, which would say that you could use the

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1 futures market to make a good forecast of gas  
2 prices into the future.

3 Many others were saying it wasn't. The  
4 paper cited by Dr. Mariam, for instance, said  
5 that the market was not efficient. But one thing  
6 that I learned in reading all the papers that  
7 were cited by Dr. Mariam, not just this  
8 particular paper, and some of the other papers,  
9 was that there was a big intellectual  
10 breakthrough in the early '90s.

11 And the intellectual breakthrough was that  
12 previous studies had made mistakes statistically,  
13 and there was only emerging one correct way to  
14 test for efficiency. And a whole lot of studies  
15 had done it right, and a whole lot had done it  
16 right. I don't know if it's a coincidence. I  
17 don't think it's a coincidence. But the paper I  
18 cited about the market, a paper by Walls (ph),  
19 was one of the papers that had done the test  
20 correctly.

21 The articles by Brenner and Kroner and  
22 Peroni explained how previous studies had it  
23 wrong, and did the wrong econometric test. The  
24 paper I cited happened to do it right. And, in  
25 fact, what I learned was that all the papers that

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1 adopted the more recent econometric methods for  
2 doing tests that fixed the previous problems, the  
3 noninformative tests, had concluded efficiency.  
4 And all the papers like Mazighi, which used  
5 deprecated techniques and made erroneous  
6 assumptions about stationarity and other  
7 technical things, had it wrong.

8 Q Is there consensus now about what is the  
9 right methodology, or is this your opinion that  
10 this group did it right, and another group did it  
11 wrong?

12 A No. I believe the consensus is emerging,  
13 and the consensus is found in the paper cited by  
14 Dr. Mariam. Those papers, if you read them  
15 straight through from one end to the other, they  
16 are technical arguments, but they repeatedly  
17 explain that the older papers, not necessarily  
18 all the older papers, but many of the papers that  
19 got the technology wrong were getting the wrong  
20 answer.

21 In fact, some papers even went so far as  
22 to say we would expect that in using the  
23 deprecated econometric techniques that authors  
24 would conclude a lack of market efficiency when,  
25 in fact, it's present. And that's exactly the

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1 trap the Mazighi in the journal I never heard of  
2 came through.

3 Q So to get back to my level of  
4 understanding, what I hear you saying is that in  
5 your view, and you think in the view of others  
6 who are respected, that there is, in fact, a  
7 tight correlation or a useful correlation between  
8 forward prices and later spot market prices -- I  
9 am just trying to get to my question.

10 A I am sorry. I jumped on you. Go ahead.  
11 I am very sorry.

12 Q But what pops into my mind is the Western  
13 Energy Crisis, when I am very aware from our  
14 direct experience that the forward prices were  
15 going through the roof, and then various events  
16 occurred, FERC actions and others things, that  
17 dropped the spot prices.

18 And I am wondering how that figures in.  
19 Is that sort of anomalous period that can be  
20 counted or cannot be counted, but isn't really  
21 what matters in the future, or was there still  
22 some kind of correlation? How do I fit forward  
23 prices during the Western Energy Crisis to  
24 subsequent spot market prices that were quite a  
25 bit lower, I believe?

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1       A    Well, the evidence seems to find that  
2    despite the run-up in prices, that what investors  
3    were looking at -- what investors were seeing  
4    when the markets were sort of in disarray was  
5    more of a temporary phenomenon.  And looking into  
6    the future stability was deemed to reign once  
7    again.  At least that's how the statistics seemed  
8    to be playing out.

9       Q    In other words, that the forward prices  
10   themselves anticipated a more stable future?

11      A    I think that's the case.

12      Q    And what about now?

13      A    Well, I have seen no evidence in this  
14   later period, including today, that says we're in  
15   an inefficient period.  For instance, the data  
16   seems to suggest that the markets are bearing  
17   good cohesion for the future.

18      Q    And one last question on this.  If the  
19   market is efficient, does it mean that the  
20   forward prices were, in fact -- in fact  
21   accurately predicted spot prices later, or that  
22   there's a correlation of whatever the forward  
23   prices happen to be, and some other set of spot  
24   market prices that correlate?

25      A    Right.  Well, we're going to make a

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1 prediction about the future, and we're not going  
2 to get it right, but -- we're not going to get it  
3 100 percent right on the penny.

4           What efficiency in this context means is  
5 we want to be on average correct. We don't want  
6 any bias. We don't want to be systematically one  
7 direction or the other, and that's the conclusion  
8 in this particular marketplace. We're on average  
9 correct, and that's the best we can hope for. We  
10 don't have a crystal ball about the future, but  
11 we can be on average correct.

12           And the data analysis that Dr. Mariam had  
13 done, the data analysis that I had done, both  
14 found that kind of not only correlation, but also  
15 an unbiasedness.

16           Now, what I talk about in my testimony is  
17 when you start to forecast farther and farther  
18 into the future, things become murkier. That  
19 shouldn't be too surprising. But there's a  
20 phenomenon in this particular market that  
21 requires that there be further adjustment for  
22 risks as we're going farther and farther into the  
23 future, and the econometric results seem to  
24 support that in a very nice way.

25           JUDGE MOSS: Let's take our morning



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1 recess, and come back at a quarter before the  
2 hour.

3 (Brief recess.)

4 JUDGE MOSS: Back on the record. And I  
5 believe Chairwoman Showalter had completed --

6 CHAIRWOMAN SHOWALTER: No, I haven't.

7 Q BY CHAIRWOMAN SHOWALTER: On the question  
8 of using forward prices, is this correct that the  
9 Company has proposed using a three-month set of  
10 data of forward prices; is that correct? Just  
11 answer "yes" or "no."

12 A Yes.

13 Q And is it also correct that the Staff has  
14 proposed using a three-month set of data, but  
15 it's a different three months?

16 A They have. Staff has proposed forming  
17 three-month averages over almost a full year, and  
18 then taking an average of all of those, but  
19 excluding some later months of the year. So it's  
20 a different procedure.

21 Q And I guess my question is, if there's a  
22 difference in result of those two methodologies,  
23 doesn't it suggest either that you need -- that  
24 more, a longer time period is better, or that for  
25 some reason, and you could tell me what it is,

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1 the Company's three-month period is a better  
2 three-month period or somehow more accurate than  
3 a longer set of data?

4 A There's a couple of issues there. As I  
5 understand what Dr. Mariam did was he did some  
6 analysis, regression analysis, and came to a  
7 conclusion that averaging periods up to two  
8 months would be appropriate. At least, that's  
9 what I seem to believe is supported by his  
10 regression analysis, and that's what it says in  
11 his testimony.

12 He then formed three-month averaging  
13 periods for a longer period of time, many  
14 three-month averaging periods. And then took an  
15 average of all of those.

16 Now, the rationale behind that, as best I  
17 can tell, is Dr. Mariam said we're in a position  
18 now where we're quite a number of months away  
19 from the rate year. So to compensate for being  
20 seven months, or five months away from the rate  
21 year, I'm going to go backwards in time seven  
22 months and take an average of all of three-month  
23 periods, which come I think are appropriate. I  
24 know it's confusing --

25 Q Why wouldn't you take an average of the

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1 last eight, nine, 10 months? In other words, I  
2 realize this isn't your calculation, but I will  
3 ask you the question.

4 If you were interested in a longer span of  
5 data, why wouldn't one simply take the average of  
6 all of them, 10 months divided by 10, or 12  
7 months divided by 12?

8 A I think it's quite curious, actually,  
9 because the one thing we learned from the  
10 statistical results, and the one thing Dr. Mariam  
11 had said is the more recent information is the  
12 best information for the futures market. And his  
13 statistics seem to point to -- his analysis,  
14 which I think he has some technical problems,  
15 seems to point to a two-month averaging period.

16 Now, I think it's not quite logical to  
17 compensate for being farther away from the rate  
18 year to go backwards in time. On top of that, by  
19 forming a simple average of a bunch of  
20 three-month averages, when you unwind all of  
21 that, by which I mean you kind of write down  
22 what, in fact, that does, it produces a very  
23 funny looking average.

24 And I could draw you a picture with my  
25 fingers, but there won't be a record of it. What

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1 it does is it tends to give very little weight in  
2 the beginning time to the forward prices from,  
3 let's say, December of 2003, and then more weight  
4 in the middle to prices, and less weight in the  
5 end. So, in fact, the calculations that  
6 Dr. Mariam ends up doing, which I think had  
7 reasonable grounds, I think there was a rationale  
8 behind it, in fact ends up producing a funny  
9 average which incorporates a lot of stale  
10 information, I think.

11 And to go back to our polling example,  
12 your question is why not take an average going  
13 farther and farther back. And the answer is when  
14 markets are efficient to nearly efficient, the  
15 right answer is to take the most current  
16 information, not information from before.

17 Q All right. So are you saying that if  
18 there is an efficient market, then the sample you  
19 want is the most recent time period, that is also  
20 robust enough -- if that is the right word -- to  
21 constitute a sample?

22 A I would think that is a good way to say  
23 it. You don't want too few observations. And I  
24 did some analysis of what too few observations of  
25 contracts were traded, the illiquidity issue is

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1 all about, but you don't want to have too few.

2 But I think the answer Dr. Mariam reached  
3 is a reasonable one, and I think the Company has  
4 adopted that position as well, that a three-month  
5 average has a certain virtue to it. It's not too  
6 short or too long.

7 If it were longer it would incorporate  
8 stale information, and the longer we go back, the  
9 more additional adjustment up we need in the  
10 forecastd price. Three months, on the other  
11 hand, is a good compromise. And both the Company  
12 and Dr. Mariam reached the position that three  
13 months is a good average.

14 It's in the implementation that Dr. Mariam  
15 slipped a little bit where he excluded some  
16 periods toward the end of the year where prices  
17 were higher. And then to compensate from being  
18 farther away from the rate year, he went back  
19 farther in time. And I don't think that's quite  
20 logical.

21 Q So is it your view, then, that the best  
22 data is the most recent three-month period  
23 available?

24 A In the context in which we're speaking, I  
25 think that would be my conclusion, that the most

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1 recent three-month information that we have is  
2 going to be a good way to form a going forward  
3 basis, a prediction or forecast of spot prices in  
4 the future.

5 Q Is there any variation that is seasonal?  
6 For example, that people buy up their year's  
7 supply in the fall, and so the fall months might  
8 be more reliable than April, May, June. And I am  
9 not assuming any of those are facts, I am  
10 positing it as a question.

11 A It's been asserted, and the markets in  
12 futures prices, like the markets in spot prices,  
13 will reveal some seasonality. The real question  
14 is how far off is the futures price as a  
15 predictor of the spot price, and does that have  
16 any seasonality to it?

17 In fact, one of the papers that was cited  
18 by Dr. Mariam, one of the papers that Dr. Mariam  
19 cited referred to another paper in the literature  
20 by Bopp & Lady, in Energy Economics, 1990.

21 And that paper -- the title of the paper  
22 was A Comparison of Petroleum Futures Versus Spot  
23 Prices As Predictors Of Prices In The Future.  
24 And this was a paper cited by one of the authors  
25 that Dr. Mariam cited.

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1           And this paper said that futures prices  
2     anticipate the seasonal patterns and spot prices.  
3     And that's exactly the statistical conclusion I  
4     reached as well. Even though there's seasonality  
5     in the prices, and one could see some  
6     seasonality, that the difference between the  
7     futures and the spot doesn't reveal any residual  
8     seasonality to it.

9           CHAIRWOMAN SHOWALTER: Thank you.

10

11                           EXAMINATION

12

13     BY COMMISSIONER HEMSTAD:

14     Q     If 60 years is a desirable time period for  
15     you, in other words, longer is better than  
16     shorter, then why don't we use longer still, and  
17     go back with data for all of the 20th Century?

18     A     Well, there's two answers to that. One is  
19     that such data doesn't exist; that there is a  
20     good geological record for water in this region  
21     that goes back 60 years, at least for the  
22     Mid-Columbia River.

23           Prior to that, I don't believe there is an  
24     existent record. So there is the issue there  
25     about whether or not the BPA and the various

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1 authorities have been able to process the  
2 geological information going back farther in  
3 time.

4         The second answer is that there is more  
5 data available than 60 years. In fact, I  
6 analyzed 70 years, because I was able to look at  
7 a more recent 10 years of information. So the  
8 answer to your question is I would use all the  
9 information that is available.

10         I was able to pick up more information  
11 more recently, another 10 years, and analyze 70  
12 years of water. And my conclusions about 70  
13 years were no different than 60; that the period  
14 of time was a very normal period that did not  
15 reflect trends. It did not reflect significant  
16 outliers. It was a stationary period.

17         And interestingly, these are exactly the  
18 same conclusions that Dr. Mariam reached when he  
19 analyzed the same information.

20         Q    Why didn't you use 70?

21         A    I did, sir. I relied on 70 in my analysis  
22 for water. But there's an extra step for  
23 generation, where there are further adjustments  
24 that have to be made to the water to turn natural  
25 flow into regulated flow, and those are complex.



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1           And apparently the powers that be haven't  
2 reached a conclusion about the sanctity of the  
3 70-year information at this time. But from a  
4 statistical point of view, the 70-year water  
5 average confirms everything I concluded about 60.

6       Q    If one is concerned about the issue of,  
7 over time, changing conditions, why wouldn't a  
8 rolling average that randomly drops one year and  
9 adds another year, whatever length or period of  
10 time -- why wouldn't that lead to the same  
11 result? For example, if you used a rolling  
12 60-year average?

13       A    Well, the first issue is that whatever  
14 kind of average that we adopt should be the  
15 result of a conclusion from a statistical study.  
16 We shouldn't just pick it at random. We  
17 shouldn't just decide that a four-year average is  
18 the right thing to do, or a 60-year average. We  
19 should conclude it from the information.

20           And the information at hand supports a  
21 long-run average, not grouping any beginning  
22 periods or dropping any ending periods.

23           That's the first point. The second point  
24 is the technical point that I referred to by this  
25 familiar economist, Slutsky, born in 1880 and

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1 died in '48 -- and I will read you from this  
2 piece of paper, it says, "The famous Slutsky Yule  
3 Theorum" --

4 Q It's not so famous to me.

5 A Well, it really is to economists. And  
6 I will explain what it says again. He says, "The  
7 famous Slutsky Yule Theorum, which is that the  
8 moving average, an average you are talking about,  
9 of a random series, like water, may generate  
10 oscillatory movement when no oscillations exist  
11 in the original data was laid out by Slutsky in  
12 1927."

13 So what happens when you talk about --  
14 it's not really randomly dropping a year and  
15 adding one at the end. It's purposely dropping  
16 one and adding another one, is that by forming  
17 moving averages, you actually create something  
18 that has correlation, because every average that  
19 you form has a little bit of the old information.

20 So even though water could be random to  
21 begin with, by the time you apply a moving  
22 average to it, you produce a pattern to it.  
23 Slutsky noticed this, and roundly criticized the  
24 Nobel winning economist who had studied data by  
25 forming averages.

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1           And we teach this to our students, that  
2 one of the steps you don't want to do is form a  
3 rolling or moving average unless there's a  
4 compelling reason to do it. And in this  
5 instance, I don't think there's anything that  
6 compels such an outcome.

7       Q    With regard to the gas futures issue,  
8 ultimately I am surprised at what seems to be a  
9 significant difference in the end price. Again,  
10 the Company's position is -- correct me if I am  
11 wrong here -- is the \$5.60 price, and the Staff  
12 is \$4.69. Is that your understanding?

13       A    As I said to Mr. Cedarbaum, I don't  
14 remember the exact figures, but I will take your  
15 word for those.

16       Q    I don't recall, either. But anyway, a  
17 measurable difference in the two positions. In  
18 forming a quite generalized overview, having  
19 listened to this discussion and perused your  
20 testimony, how would you characterize the nature  
21 of that difference as relating to technique as  
22 against timing?

23       A    No. I think the answer is completely a  
24 consequence of what is happening in the market  
25 today. And I think one way to look at that is to

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1 ask what has happened to forward prices since the  
2 rebuttal testimony has been filed. In other  
3 words, what has been happening since the Company  
4 put in a number, as of, I think it was ending in  
5 September. What has happened more recently?

6 And as I understand it, forward prices or  
7 futures prices have continued to increase,  
8 peaking even further, and then they have gone  
9 back down to levels that are more similar to the  
10 three-month average that the Company had formed.

11 Q I was about to say, my impression is that  
12 the forward prices have been falling.

13 A More recently they have, and back down to  
14 the level, I believe, that is more similar to the  
15 three-month average formed at the time the  
16 Company made the latest revision.

17 Q Well, if you were to apply your analysis  
18 as of today, say as of last Friday, what would be  
19 the consequence or your estimate of how that  
20 would change your conclusion about the forward  
21 price?

22 A Well, I'm going to throw in a subject to  
23 check, but I'm told by Puget's people that if you  
24 were to do that analysis, which I haven't done,  
25 but it's a simple matter of looking up the most

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1 current rates and Ms. Ryan can do it in her  
2 testimony, and perhaps if she does do it, someone  
3 else can bring this information to you. But my  
4 understanding is even the forward prices continue  
5 to rise and peak.

6 Now, when you form a three-month average  
7 using the most current data, we're back down to a  
8 number that is very similar to what the Company  
9 had put in their latest revision.

10 Q And back to my earlier question, this  
11 issue of timing versus technique, I take it from  
12 your answer that the primary driver of the  
13 difference is timing?

14 A Well, I guess I would phrase it slightly  
15 differently, because I'm not sure if we're  
16 talking about the same kind of timing.

17 Technique is the least important aspect in  
18 the sense we're not talking about a very  
19 disparate methodology. The Company originally  
20 had looked at a 10-day period, 10-day average in  
21 forming the most recent 10 days of information  
22 that they had. That probably, in retrospect, was  
23 a little on the thin side.

24 Dr. Mariam did a very useful starting  
25 analysis. He analyzed the question of the

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1 relationship between averages of various lengths  
2 and future spot prices, and reached the  
3 conclusion that I don't particularly disagree  
4 with, that three months has some virtue to it.

5 It's not too short, because that would give you  
6 too few transactions. On the other hand, it's  
7 not too long where you pick up stale information.

8         So we're not at a technique point in time.

9 So you are left with a timing question. And  
10 timing to me means we're trying to make a  
11 forecast about the future, and it's actually this  
12 point in the near future. And you either trust  
13 the markets where people have money on the line  
14 and are making decisions every day about what is  
15 going to happen in the near term, or you don't.

16         And what I can tell you is that an  
17 efficient market, and the closer you get to the  
18 end the more efficient things become -- an  
19 efficient market is one where the information is  
20 reflected, and on average you are correct.

21         And so what the market is telling you  
22 right now is that gas prices in the near term, in  
23 the rate year, are going to be higher than Staff  
24 maybe believes, according to their analysis.

25         That's what the consequence of looking at

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1 the forward markets today, or even at the time  
2 the Company put in the number is.

3 COMMISSIONER HEMSTAD: Thank you. That's  
4 all I have.

5 EXAMINATION

6

7 BY COMMISSIONER OSHIE:

8 Q Dr. Dubin, I want to ask a follow-up, I  
9 suppose, on questions that were asked about  
10 the -- by both Commissioner Hemstad and the  
11 Chair, Madame Showalter.

12 The issue that I would like to discuss is  
13 how your analysis of the average water years took  
14 into consideration the differential, if you will,  
15 if it exists, between river basins on the west  
16 side of Washington, that being the Baker River  
17 system and the Snoqualmie River system. And you  
18 are talking about the Columbia system, and they  
19 are not connected in any way.

20 And the generation from the west side is  
21 significant. I mean it's roughly 20 plus percent  
22 of the total hydro generation that is purchased  
23 from the Columbia PUDs. So how did you take into  
24 consideration the differences between the basins,  
25 if any exists, in your analysis?

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1           All I have heard so far and what I read is  
2   that you were looking at end streamflows within  
3   the Columbia River basin. I didn't read anything  
4   in your testimony, that I can recall, about your  
5   analysis of end streamflows in the Baker River or  
6   Snoqualmie, or others in western Washington, and  
7   whether that would have any effect on your final  
8   opinion, your conclusion.

9       A   Well, it may be just a lack of clarity in  
10   my presentation, but I think I could find it in  
11   my testimony. But I did separate the ownership  
12   of generation interests from plants on the  
13   Mid-Columbia from those the Company has on the  
14   other system.

15       Q   Did you do the same analysis on the Baker  
16   River system as you did for the Columbia, looking  
17   at historical end streamflows and calculating  
18   what the average generation may be from that  
19   system?

20       A   Well, at some point I combined the two.  
21   But I looked at the relationship between  
22   generation on one river with respect to the flow  
23   on the river separately. And then at some point  
24   I combined them.

25           And I also, at some point, did a



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1 statistical analysis of a longer 70-year period  
2 for the Grand Coulee flows, and separated that  
3 analysis in my workpapers, at least from the  
4 generation and water flows on the other rivers.  
5 The Company has the ability to track water levels  
6 and water flows on both rivers, and I was able to  
7 keep that separate.

8 COMMISSIONER OSHIE: Thank you. No other  
9 questions.

10 JUDGE MOSS: I have a couple of clarifying  
11 questions.

12

13 EXAMINATION

14

15 BY JUDGE MOSS:

16 Q Both in your oral testimony and in your  
17 written testimony I understand that there are  
18 points of agreement and points of disagreement as  
19 between you and Dr. Mariam. And indeed, for  
20 example, on page five of your direct testimony,  
21 you stated at the conclusion of the early  
22 discussion of the hydro matter that "Dr. Mariam's  
23 position with respect to the statistical use of  
24 water flows, and the use of data for forecasting  
25 is, for all intents and purposes, the same as

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1 mine."

2           And there are another statements, but what  
3 I want to get to is what will no doubt be  
4 abundantly clear on brief, but is it the result  
5 of your analysis that you believe that Staff is  
6 overstating hydro generation in its analysis of  
7 power costs, or understating it, or getting it  
8 just about right? What are the differences in  
9 practical outcome?

10       A    This is page 5 of my rebuttal testimony.  
11 But to answer your question, let me characterize  
12 it in this fashion. Dr. Mariam did his own  
13 independent analysis of water flows and  
14 generation separate from mine. And he reached  
15 the same statistical conclusions as I did.

16           So now we have got at least the two of us,  
17 and possibly a third from a professor at the  
18 University of Washington, who is not here to  
19 testify, who has looked at this in a deep  
20 statistical way, and concluded that water is  
21 stationary. It's normal, it's trendless, it's  
22 not forecastable very far into the future.

23           Where Dr. Mariam differs is on a  
24 nonstatistical point. What Dr. Mariam says is  
25 that -- he says the last 10 years that I analyzed

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1 of water, and of generation has not been  
2 processed in the way the Northwest Power Pool, or  
3 whoever the appropriate authority does it, in a  
4 way that everyone has agreed on.

5         So he says that because of the run-off  
6 curves and things I don't quite understand, that  
7 there's a 10-year period at the end which he  
8 would recommend not adopting. But he says, "But  
9 I have got no reason to exclude anything in the  
10 beginning. And in fact, 50 years of the 60 years  
11 that Dr. Dubin looked at is fine."

12         So I would say to you that on a  
13 statistical grounds, at least, you should use all  
14 the data that is available. And I don't think  
15 Dr. Mariam disagrees on statistical grounds. He  
16 finds fault with using a more recent 10-year  
17 period. And the Company has basically, in  
18 a point of compromise, said, "Okay. We will go  
19 with that. We will adopt the 50 year, too, if  
20 that's the best we can do."

21         I happen to believe the difference would  
22 be marginal, and one should look at the 60-year  
23 period, because the adjustments that are being  
24 discussed are out in the minutia. But I can't  
25 swear to that. It's my belief in talking to

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1 Company people about what the adjustments are,  
2 but I'm not in a position to testify to that  
3 issue.

4 Q Okay. You have answered my question.  
5 Thank you.

6 The other question I have -- and I  
7 apologize for my earlier miscitation. I'm in  
8 your rebuttal testimony, and I am looking at page  
9 16. And we had some earlier discussion about the  
10 question and answer at the top of that page  
11 concerning the differences between the Staff  
12 samples, I guess, I will say, that were  
13 studied -- that you studied as opposed to  
14 Dr. Mariam. And so you studied a longer period,  
15 as I understand it, nine years more information.

16 My question is simply, are you implying  
17 here that Dr. Mariam's -- is "sample" the right  
18 word? Sample or data?

19 A Whenever you don't use all of the data,  
20 you can call it a sample.

21 Q Are you implying that Dr. Mariam's sample  
22 was inadequate for purposes of this type of  
23 analysis? I'm not sure what to make out of this.

24 A Well, the answer to that is yes, to some  
25 degree. It's always better to use more

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1 information. And I think that Dr. Mariam, in  
2 fact, had more information at his disposal.

3 At least according to my review of his  
4 workpapers, he had information going back at  
5 least to 1999, and chose not to use it. At least  
6 that's my understanding in following through his  
7 work.

8 I see no reason not to go all the way  
9 back. His futures Nymex market has been studied  
10 by many researchers going back to 1990, and the  
11 relationship between futures and spot prices is a  
12 subject for analysis, using all of that  
13 information.

14 Now, in terms of adequacy of the period of  
15 time that Dr. Mariam employed, I'm not saying  
16 that shorter period biases his answers or  
17 anything like that.

18 What I am pointing out, though, is  
19 Dr. Mariam analyzed a question that was not  
20 exactly, I think, germane to the proceeding in  
21 the sense that he asked whether looking into the  
22 immediate future, let's say we're one month away  
23 from the rate year, how much averaging should we  
24 do going back? Should we go back one month, two  
25 months, three months when we're going to look one

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1 month into the future? That's the question he  
2 asked statistically.

3           And the question I thought was relevant  
4 was the question that, in the world we live in,  
5 is when you are sitting in a rate case two years  
6 away from the rate year, or at the present time  
7 when we're on average about eleven months away,  
8 or we're about five months from the beginning  
9 now, and 17 months, whatever it is, you want to  
10 look at historical examples of what the  
11 relationship of futures and spot prices were when  
12 you were forecasting much farther away in time.

13           And I'm note sure that Dr. Mariam analyzed  
14 the short period of time because he used a  
15 shorter data set. But I will tell you if you  
16 want to look at the relevant question of  
17 forecasting far into the future, you need a lot  
18 more data going back, because otherwise you run  
19 out of that information.

20           You don't have enough examples of cases  
21 where you are two years, or 17 months away from  
22 the forecast. If you are looking at a very short  
23 period of time, you can ask the question what  
24 happens when you are only one month away from the  
25 rate year? But do we really care? That's a good

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1 question.

2           It's a question that has been analyzed in  
3 the literature when economists have tested  
4 efficiency. That's not a world we're in today.  
5 We are in a world where we have to forecast  
6 farther into the future, and that requires a  
7 longer data set.

8       Q    Can I take from that, then, that looking  
9 at the three months, the recent three months of  
10 data for purposes of considering what the price  
11 might be 12 months hence is not particularly  
12 going to yield particularly reliable results? As  
13 I understand what you are saying, it would yield  
14 reliable -- fairly reliable results for the next  
15 month, but maybe 12 months out not so?

16       A    Well, I analyzed that question. The  
17 Company asked me to analyze the question. They  
18 asked me to analyze how are we doing forecasting  
19 five months into the future by using this  
20 technique? How are we doing forecasting 17  
21 months into the future, which is the end of the  
22 rate year period? And in future cases what kind  
23 of shape will we be in when we have to forecast  
24 two years into the future?

25           And the answer was that there was good

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1 cohesion in the markets, good correlations, even  
2 when you were looking two years into the future.  
3 So the answer about the most recent three-month  
4 period is it would probably provide a pretty good  
5 forecast for looking five to 11 to 17 months,  
6 maybe even two years into the future.

7           So I'm not that worried about this  
8 three-month average for future months forecasts.  
9 That's what the statistical results showed.

10           JUDGE MOSS: Any follow up?

11

12                           FURTHER EXAMINATION

13

14 BY CHAIRWOMAN SHOWALTER:

15       Q    As a result of some of the questions and  
16 answers up here, it occurred to me that we might  
17 want a bench request of the most recent three  
18 months that -- under your methodology.

19           But then I am a little confused by the  
20 question and answer just now. I would have asked  
21 for it on the basis that I thought your answer to  
22 me was, well, yes if we're going to look at  
23 what's the most accurate forecast for the rate  
24 year, we would do best to take the most recent  
25 reasonable time period, which I am going to



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1 assume it's three months. So we should get the  
2 most recent three months.

3 Then I was a little unclear, maybe because  
4 I wasn't listening fully, as to what this last  
5 exchange was about. But in your opinion, if we  
6 get the most recent three months, is that a  
7 better three months than the other sets in this  
8 record?

9 A Here's the confusion. I think if you look  
10 at the most recent three months, it has activity  
11 in it which pertains to the rate year, number  
12 one. That activity is going to be a good  
13 indicator of what is going to happen in the rate  
14 year. No question.

15 It also has other activity in it, the most  
16 recent three months, where traders are looking a  
17 year or two into the future. Not the rate year,  
18 but a year or two into the future. That may be  
19 interesting for people who are thinking about gas  
20 prices a year or two into the future, but it's  
21 not the rate year.

22 And I believe Your Honor was asking about  
23 how good is this three-month information about  
24 forecasting two years into the future. I'm not  
25 sure that is as important to us as -- excuse me,

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1 how good the three months is for forecasting the  
2 rate year, which I think is pretty good.

3 Q Well, we can ask for other things at  
4 different times, but we would like to have that.

5 A It's possible Ms. Ryan has that all ready  
6 to go, the updated three-month average.

7 JUDGE MOSS: That will be bench request  
8 seven.

9 (BENCH REQUEST NO. 7.)

10 JUDGE MOSS: When do you think we might be  
11 able to have that, Ms. Dodge? If you can consult  
12 with your client.

13 MS. DODGE: We could have it tomorrow  
14 morning.

15 JUDGE MOSS: Excellent. Thank you.

16 COMMISSIONER OSHIE: Judge Moss, I have a  
17 question.

18

19 FURTHER EXAMINATION

20

21 BY COMMISSIONER OSHIE:

22 Q That's what happens when you have a lot of  
23 time in between. But I want to go back to the  
24 question that Commissioner Hemstad asked you,  
25 because it deals with the period in which you

0681

1 looked at hydrological information to come up  
2 with your conclusion.

3 But recently, more recently than the last  
4 five years or so, if I'm not mistaken, there have  
5 been studies done by the University of Washington  
6 looking at paleogeologic information data that  
7 looked at the end streamflows of the Columbia  
8 River basin back to 1858.

9 I'm not sure how they derived that  
10 starting date for the period, but I would assume  
11 the information gets a lot stronger and gets to  
12 be harder, if you will, as you approach year  
13 period of 1928.

14 And I understood your answer that you  
15 thought the information was just too soft to go  
16 back any farther, and especially particularly  
17 back to the 1860s, 1870s. But there's certainly  
18 information that was compiled before the planning  
19 stages of Grand Coulee.

20 So assuming that, I guess I want to go  
21 back, then, to your answer that there were  
22 certain calculations that were made that -- so  
23 even though the information might be soft, you  
24 then made calculations as to what the available  
25 generation would be.

0682

1           And I don't have any idea what that  
2   calculation would look like, but you go back to  
3   1928 -- I'm trying to figure out why 1928, when  
4   there is no hydroelectric projects on the  
5   Columbia River. So you would have to apply  
6   whatever calculations you made to river  
7   conditions at that time to derive some type of  
8   average of million acres feet average, and then  
9   combine it with your calculations to determine  
10  generation.

11           So there's certain -- I guess my question,  
12  going back -- you can go back to 1928, look at  
13  that when there are no hydro generation  
14  facilities on the river. Why can't you go back  
15  to 1920 or 1918, or 1900? Or is it just a  
16  function that you think the information is too  
17  soft on which to base some analysis? And if so,  
18  doesn't it form your final conclusion?

19           A   Well, first of all, I myself did not do  
20  the generation estimation. That's done by the  
21  Company and the Company's consultants.

22           But I think the answer to your question is  
23  the Army Corps of Engineers, who are the people  
24  who measure for the government the flows, may not  
25  have been meshing flows back before 1928.

0683

1           All I can tell you, and maybe I'm wrong  
2 about this -- and if I am, I will be happy to  
3 amend my answer -- but my understanding is there  
4 is no water information for these rivers before  
5 1928.

6           Now, with respect to the paleogeographic  
7 information, if we're talking about tree rings,  
8 or how much dinosaurs were growing, I think there  
9 is some useful information there, and that  
10 information does not -- millions of acres feet of  
11 water measured in a standardized way.

12           I think you are correct that water on the  
13 Columbia River in the '20s, when there were no  
14 projects yet sited, receives the least  
15 adjustments. Because as we go forward in the  
16 current situation, we have to sort of take out  
17 the siting of projects and the use of water, go  
18 back to a natural water state, which is one  
19 estimation. And then we apply the current  
20 regulatory rules to that water to get some  
21 information about what the world would have  
22 looked like in flow and generation in 1928 had  
23 the plants been there in 1928.

24           Those are complicated calculations. But I  
25 think the fundamental problem is a lack of

0684

1 measurement in a consistent way before 1928.  
2 Again, if I am wrong about that, my standard  
3 operating procedure in a project like this is to  
4 get everything. And I remember going to the Army  
5 Corps of Engineer's website and looking, and  
6 looking backwards in time. I know there were  
7 some rivers in this area that have water flow  
8 measurements that go back farther that are not  
9 geologically hydrologically associated with the  
10 Mid-Columbia or the Baker area.

11 But my understanding is there's no  
12 measurements that go back before 1928. And if  
13 there were, I would say let's look at them and  
14 let's adopt them. But it's not because I made a  
15 determination that the 1927 data was squishy or  
16 soft, or not useable. It was just not there.

17 COMMISSIONER OSHIE: Are you waiting for  
18 me? No more questions.

19 JUDGE MOSS: Yes. I should have looked.  
20 Any follow-up, Mr. Cedarbaum?

21 MR. CEDARBAUM: I did have a couple of  
22 questions.

23

24

25

0685

1                                   REXCROSS EXAMINATION

2

3   BY MR. CEDARBAUM:

4       Q   Dr. Dubin, on the issue of the outliers  
5   you indicated that you removed two data points in  
6   your analysis during the period of time that was  
7   covered by the Western Power Crisis. I think  
8   that was your testimony. Can you just specify  
9   what those two data points were? Were they days?  
10   You refer to December and January of that winter.  
11   But I'm assuming you meant days in those months?

12       A   Well, actually, by the time the  
13   statistical analysis was done, both Dr. Mariam  
14   and I were focused on months. We were looking at  
15   average spot prices in a month, and we were also  
16   looking at average futures prices pertaining to  
17   that month.

18           So we made the decision independently to  
19   examine periods of times that were months in  
20   length on average. So I actually removed two  
21   months. Now, the statistics show those two  
22   months were, quote, outliers, so I did not focus  
23   on days.

24       Q   And what were the gas prices that you  
25   removed for those two months?

0686

1 A You want numbers?

2 Q Yes.

3 A I don't recall. I mean, I remember graphs  
4 of Dr. Mariam that had very, very enormous spikes  
5 in them, but I don't recall exactly how tall the  
6 spikes were.

7 Q You don't recall a range of the prices?

8 A They were really big. I mean, they were  
9 much different than the rest of the data. But  
10 without looking at an exhibit, I couldn't tell  
11 you.

12 Q What information would you be looking at  
13 to find those numbers?

14 A Dr. Mariam has presented some graphical  
15 analysis, I believe, which covers that period of  
16 time. And I know that the same material appears  
17 in one of my book chapters in a recent book I  
18 wrote about the California Energy Crisis.

19 I was looking at that, and I saw the same  
20 run-up in prices. I just didn't bring the book,  
21 and I don't recall what the numbers were.

22 MR. CEDARBAUM: Thank you. That's all.

23 MR. FFITCH: Your Honor, given the wide  
24 ranging nature of the discussion this morning,  
25 and the reference to Public Counsel's witnesses



0687

1 -- or witness, I would like to ask a couple of  
2 follow-up questions, if I may.

3 JUDGE MOSS: All right.

4

5 RECROSS EXAMINATION

6

7 BY MR. FFITCH:

8 Q Good morning, Dr. Dubin. I'm Simon  
9 ffitch, from the Public Counsel office.

10 First of all, following up on the  
11 questions that Commissioner Oshie just asked  
12 about historical water information, were you  
13 aware that in the 1984 Washington Water Power  
14 Company case that the Commission was presented  
15 with a 105-year study of the Columbia River  
16 drainage at The Dalles, Oregon?

17 A Yes.

18 Q But you didn't discuss that in your  
19 testimony?

20 A I think no, I didn't, because I thought  
21 the Commission's ruling on that made some sense.  
22 I think the Commission ruled that that area was  
23 hydrologically disassociated from the area of  
24 interest of the Company.

25 And even though it was a longer record, it

0688

1 wasn't a germane record. I think the Commission  
2 got it right on that one.

3 Q You didn't discuss that, the 105-year  
4 study that was available for the entire Columbia  
5 River drainage in your testimony in this case?

6 A No, I didn't.

7 Q And you didn't even refer to it in your  
8 answer to Commissioner Oshie with regard to what  
9 kind of water information is available, did you?

10 A Well, I thought we were talking about,  
11 with all respect, kind of relevant water. And I  
12 didn't think that was relevant based on what the  
13 Commission had said at the time.

14 Q Now, you were referring earlier to your  
15 critique of Public Counsel's witness and  
16 testimony in the last Puget Sound case, UE  
17 921262, correct?

18 A I don't remember the case citation, but  
19 I will assume that that is correct.

20 Q And that citation is found in your own  
21 testimony.

22 A Okay. Then I will assume it's correct.

23 Q And that is the last Puget Sound general  
24 rate case, correct?

25 A Yes.

0689

1 Q Do you know who the Staff witness was in  
2 that case?

3 A I believe it was Dr. Blackman -- Staff  
4 witness, I think he was Public Counsel's witness.  
5 I don't know the Staff witness. Did you ask  
6 Staff or public?

7 Q I asked Staff. Do you know who the Staff  
8 witness was in that case?

9 A I think it might have been Mr. Wintergaard  
10 (ph.), but I don't recall.

11 MR. FFITCH: Can I approach the witness,  
12 Your Honor?

13 JUDGE MOSS: For what purpose?

14 MR. FFITCH: To show him a copy of the  
15 order in that case.

16 (Discussion on the bench.)

17 MR. FFITCH: Your Honor, I am handing the  
18 witness a copy of the Eleventh Supplemental Order  
19 in docket UE 921262, the last Puget Sound general  
20 rate case that you were just discussing.

21 JUDGE MOSS: Let me make sure the record  
22 is clear. That is not the most recent Puget  
23 Sound rate case. When you say it's the last  
24 case, I'm not sure what you are saying.

25 MR. FFITCH: I stand corrected. The last

0690

1 fully litigated general rate case that went to  
2 hearing. I realize we have had an intervening  
3 case that was settled in 2002.

4 MS. DODGE: And a merger in between.

5 JUDGE MOSS: I think we're clear now.

6 Q BY MR. FFITCH: I would like you to read  
7 the paragraph on page 43, at the top of the page.

8 MS. DODGE: That's actually a lengthy  
9 paragraph, and perhaps Mr. ffitch could  
10 paraphrase or ask a question rather than having  
11 him --

12 JUDGE MOSS: Let's don't have the  
13 witness -- you can cite it and discuss it in your  
14 brief without having the witness read it into the  
15 record. If you have a question about the  
16 paragraph or about the proceeding or the order,  
17 that's fine.

18 MR. FFITCH: Your Honor, the witness has  
19 been on the stand for three hours. This will  
20 take probably one minute, and I think will shed  
21 some light on the discussion, and then I might  
22 have a follow-up question or two.

23 CHAIRWOMAN SHOWALTER: Can't you  
24 distribute a copy of that page to all of us, and  
25 then we can read it, and then ask a question

0691

1 about it? It's very hard to listen to long  
2 paragraphs read, and we will get more out of it  
3 if we see it.

4 MR. FFITCH: Thank you, Your Honor.

5 Q BY MR. FFITCH: Dr. Dubin, have you read  
6 the Commission's eleventh supplemental record in  
7 docket UE 921261?

8 A Is that the document you just showed me?

9 Q Correct.

10 A I glanced at it a second ago. I think I  
11 have read that, yes. It's not in front of me  
12 now.

13 Q And would you accept that the Commission's  
14 decision in that case was based upon the  
15 acceptance of the Commission Staff's position  
16 with regard to the 40-year rolling average for  
17 water?

18 A I would actually like to see the document  
19 again. And it sounds like it calls for a legal  
20 conclusion. I don't know, but I will do the best  
21 I can if you let me see it. (Reading document.)  
22 "Commission accepts the Commission Staff's  
23 position."

24 Q So do you now accept my question -- the  
25 answer is "yes" to my question?

0692

1 A I mean, it says what it says.

2 Q Have you reviewed the testimony of the  
3 Staff witness or witnesses in that proceeding?

4 A Yes.

5 Q And did you discuss that in your testimony  
6 as you discussed the testimony of the Public  
7 Counsel witness?

8 A No, I didn't.

9 Q Are you aware that in that docket -- are  
10 you aware of what the Company proposal was in  
11 that docket with regard to this issue?

12 A I believe the Company advocated a  
13 cumulative averaging using all available data,  
14 but I'm fuzzy on that.

15 Q How is that different than your  
16 recommendation here, or is it essentially the  
17 same recommendation, the use of all available  
18 data on a cumulative rather than a rolling basis?

19 A I think it's the same position. I mean, I  
20 would like to see again that particular witness's  
21 analysis to be sure of what the Company was  
22 advocating. But I recall it being a cumulative  
23 average, which in my terminology would be a  
24 average that would be available to use.

25 Q And the Slutsky Yule Theorem that you

0693

1 mentioned in your testimony was announced in  
2 1927, and significantly in advance of this  
3 proceeding, the 1992 proceeding?

4 A Yes.

5 Q Dr. Dubin, it's my understanding from your  
6 testimony, and correct me if I am wrong, that the  
7 impact of your recommendation that the Commission  
8 abandon its 40-year rolling average treatment of  
9 the water issue results in an increase in the  
10 Company revenue requirement of \$11 million; isn't  
11 that correct?

12 A That's the Company's estimate, yes.

13 Q And my last question -- just give me a  
14 moment. Can you just state the total amount of  
15 your billings to Puget Sound Energy for your  
16 testimony in this case through October?

17 A For my testimony, you mean, sitting here  
18 today?

19 Q No. I mean the entire amount of billings  
20 from your firm for your testimony in this  
21 proceeding on the hydro issues.

22 A And you wanted that through November or  
23 through October?

24 Q If you have it through November, that  
25 would be preferable.

0694

1       A    Yes.  I can tell you the work that was  
2 done on hydro that began in March of 2004 came to  
3 about \$124,000, according to my assistant -- and  
4 as you say, subject to check -- my assistant's  
5 pulling of the figures.

6           And the gas analysis, which began in  
7 October, was maybe \$87,000 through November.

8       Q    BY MR. FFITCH:  Okay.  Thank you.  I don't  
9 have any further questions, Your Honor.

10       JUDGE MOSS:  Is there any redirect?

11

12                   REDIRECT EXAMINATION

13

14       BY MS. DODGE:

15       Q    Just briefly, Dr. Dubin, you discussed in  
16 response to some questions from Commissioner  
17 Oshie how one takes into account the fact that we  
18 have had developments in the Columbia River  
19 system, including dams and various things that  
20 mean that you have to adjust observed flows back  
21 to -- I may get the terms wrong -- back to  
22 natural flows.

23           And I wanted to ask, were those  
24 adjustments something you did, or were they done  
25 by others?



0695

1       A    I think, as I recall -- let me just check  
2 my testimony on this.  But, yes, it's the  
3 Northwest Power Pool that makes those  
4 adjustments.  I say this at page 7 of my  
5 testimony, "Approximately every ten years the  
6 Northwest Power Pool estimates the water flow  
7 that would have been existent absent the siting  
8 of dams or any water restrictions on the water."

9           That gets to natural flow.  And then at  
10 that point rule curves and more recent regulation  
11 has to be applied, and that's a function that the  
12 Company does -- or maybe not the Company, but the  
13 Northwest Power Pool does through  
14 Mr. Chillengarian.

15           MS. DODGE:  That's all.

16           JUDGE MOSS:  All right.  It appears,  
17 Dr. Dubin, that we have had all the questions  
18 that we will have.  And we appreciate your being  
19 here to give your testimony.  You may step down.

20           THE WITNESS:  Thank you, sir.

21           JUDGE MOSS:  We have Dr. Mariam next, I  
22 believe.  And about 20 minutes of cross indicated  
23 for him.  We will take that immediately after  
24 lunch, and so we will go ahead and take our  
25 recess until -- so we will come back at 1:30.

0696

1 (Lunch recess taken.)

2 JUDGE MOSS: Let's be on the record.

3

4 YOHANNES K.G. MARIAM,

5 produced as a witness in behalf of The Staff, having

6 been first duly sworn, was examined and testified as

7 follows:

8

9 JUDGE MOSS: Thank you. Please be seated.

10

11 DIRECT EXAMINATION

12

13 BY MR. CEDARBAUM:

14 Q If you could please state your full name.

15 A Yohannes Mariam, Y-o-h-a-n-n-e-s, K, dot,  
16 G, dot, Mariam, M-a-r-i-a-m.

17 Q And, Dr. Mariam, you are part of the Staff  
18 witness presentation in this proceeding?

19 A Yes.

20 Q If I could have you turn to what has been  
21 marked as Exhibit 451. That would be Exhibit  
22 YKGM-1T. Do you have that?

23 A (Complies.) Yes, I do.

24 Q And is that your direct testimony in this  
25 proceeding?

0697

1 A Yes, it is.

2 Q And if I could also turn your attention to  
3 Exhibits 452 through 463. Are those exhibits  
4 that you prepared to accompany your direct  
5 testimony?

6 A Yes, they are.

7 Q And with respect to all of your exhibits,  
8 451 through 463, are those exhibits true and  
9 correct to the best of your knowledge and belief?

10 A With exception of one correction, yes.

11 Q Why don't you go ahead and slowly and  
12 carefully explain what that correction is, and  
13 specifically direct us to the particular exhibit  
14 where the correction needs to be made.

15 A The correction has to do with Tenaska  
16 Disallowance contained in Exhibits 452, 459, 460  
17 and 462. All of them has to do with power cost  
18 (undistinguishable) testing. And the particular  
19 line is the Tenaska Buyout Disallowance.

20 CHAIRWOMAN SHOWALTER: Can you give us an  
21 exhibit number first?

22 THE WITNESS: Exhibit 452. The bottom of  
23 the table, there are three lines, Tenaska Buyout  
24 Disallowance, and Tenaska Prudence Disallowance,  
25 and March Point 2 Prudence Disallowance.

0698

1           The first line is influenced by changes in  
2 fuel price. And so when I change the Company's  
3 proposed fuel price, it carries through the  
4 spreadsheet.

5           CHAIRWOMAN SHOWALTER: I am sorry, but are  
6 we going to just get a correction to the table  
7 here?

8           MR. CEDARBAUM: Yes, Your Honor.

9           CHAIRWOMAN SHOWALTER: Can you give us  
10 what we should strike out and put in on these  
11 lines?

12          THE WITNESS: I don't have the exact  
13 number yet.

14          MR. CEDARBAUM: That was the problem we  
15 had, was we haven't had a chance -- we know  
16 there's an error there. We're not sure what the  
17 correct numbers would be.

18          Those need to be run, and the proposal  
19 would be to have those errata pages filed with  
20 the Commission and provided to all parties by the  
21 end of this week, and then make some arrangement,  
22 also, for the Company to contest them if they  
23 need to be contested. But I think these are just  
24 calculation errors, and not controversial ones.

25          CHAIRWOMAN SHOWALTER: So now we put a

0699

1 question mark on them. Are we getting an  
2 explanation of something, or just an alert that  
3 something is coming later?

4 MR. CEDARBAUM: You are getting an alert  
5 that a correction is coming later, because the  
6 hearing might close today or tomorrow, and an  
7 explanation as to what that correction entails.

8 And I think it's -- we're trying to do the  
9 best thing we can to make sure the record is  
10 correct, given that we haven't had the time to  
11 actually run those errata sheets yet.

12 COMMISSIONER OSHIE: Would you repeat the  
13 Exhibit Nos. that are affected? I have 452, and  
14 4 --

15 THE WITNESS: 459, 460, and 462.

16 COMMISSIONER OSHIE: Thank you.

17 MR. CEDARBAUM: Commissioners, if there is  
18 a better way to do this, we're open to it.

19 JUDGE MOSS: Let's be off the record.

20 (Discussion off the record.)

21 JUDGE MOSS: We have had some  
22 off-the-record discussion about optional  
23 procedures for having Dr. Mariam's testimony  
24 cross-examined and the issue of some corrections  
25 he has indicated that need to be made.

0700

1           And think the resolution we have hit upon  
2   is to go ahead with the examination today.  He  
3   will provide any necessary corrections to the  
4   four exhibits he's identified as soon as he can,  
5   and we will determine at that point in time if  
6   any further process is required.

7           So with that, Mr. Cedarbaum, I don't think  
8   we need a great deal more, if any, other  
9   explanation today.

10          MR. CEDARBAUM:  No, I think we're done  
11   with the explanation.  I was going to offer the  
12   exhibits, and then offer Dr. Mariam for  
13   cross-examination.

14          JUDGE MOSS:  So you wanted to offer 451  
15   through 463?

16          MR. CEDARBAUM:  With the understanding  
17   that there will be errata sheets coming.

18          JUDGE MOSS:  Any objection?  Hearing none,  
19   those will be admitted as marked.

20                         (EXHIBITS 451 to 463 RECEIVED.)

21          MR. CEDARBAUM:  I was offering him for  
22   questioning, that's all.

23          JUDGE MOSS:  I have, on my sheets,  
24   indicated that ICNU has 10 minutes for this  
25   witness, and the Company has 10 minutes.  Do you

0701

1 still have questions for Dr. Mariam, Mr. Van  
2 Cleve?

3 MR. VAN CLEVE: Yes, Your Honor.

4

5 CROSS EXAMINATION

6

7 BY MR. VAN CLEVE:

8 Q Good afternoon, Dr. Mariam.

9 A Good afternoon.

10 Q Would you please refer to page 5 of your  
11 direct testimony, which is Exhibit 451.

12 A (Complies.)

13 Q In footnote 2 on that page it refers to  
14 the Aurora model, and it says it is a fundamental  
15 based model?

16 A Yes.

17 Q Can you give us your understanding of what  
18 Aurora model is?

19 A It is a production cost model that tries  
20 to estimate the variable components of how much  
21 it would actually cost to produce units of power.

22 Q And what does it mean to characterize it  
23 as a fundamentals based model?

24 A It actually searches for the cheapest  
25 possible resource in producing a unit of

0702

1 electricity across the Northwest within the data  
2 base. It compares both supply and demand side,  
3 and the price among the bases that are actually  
4 included in the data base.

5 Q And does the Aurora model predict the  
6 price of power?

7 A Yes.

8 Q Is the Aurora model used to calculate base  
9 line power costs in Puget Sound Energy's rates?

10 A Yes.

11 Q And is it your position in this case --

12 A With one caveat. It only determines the  
13 variable component of power cost.

14 Q And is it your position in this case that  
15 natural gas costs should be determined using an  
16 average of Nymex futures prices?

17 A For the time being, yes.

18 Q And can you explain why it's appropriate  
19 to use a fundamental model to predict what power  
20 prices will be, but to use futures prices to  
21 predict what gas prices will be?

22 A The Aurora model has got a basic price,  
23 gas price data base for the Northwest region.  
24 And it also has electricity prices, and a number  
25 of other factors.



0703

1           When you go to gas prices, the natural gas  
2 market, which essentially tried to relate forward  
3 prices with spot prices. You can do a  
4 correlation between the two price series, which  
5 are only two series. And one cannot identify the  
6 relationship of forward and spot prices being  
7 fundamental in a sense that it incorporates all  
8 of the level information that influences spot  
9 prices.

10           And so -- and also, the natural gas  
11 market, forward market price, has been extremely  
12 volatile since the California Power Crisis. Not  
13 necessarily because supply and demand has  
14 departed so much from the long-term trend, but  
15 rather because of other extraneous factors. So  
16 it's -- you can't use fundamentals model for gas  
17 prices. You would use fundamentals model to  
18 produce forecast of variable costs, variable  
19 power costs for electricity.

20       Q    Have you evaluated the correlation between  
21 forward prices for electricity and spot prices  
22 similar to what you did with gas prices in this  
23 case?

24       A    I haven't, but I have read literature on  
25 it.

0704

1 Q And is there a futures market for  
2 electricity?

3 A Yes, there is.

4 Q And do you think it would be appropriate  
5 to set rates based on electric futures prices?

6 A I don't think so, primarily because the  
7 two are very different. One is forward and the  
8 other is not. It makes a huge difference in  
9 terms of using one price to forecast forward  
10 electricity price to forecast what forward spot  
11 price might be for electricity.

12 Q So is there some -- is there some  
13 distinction between the gas commodity market and  
14 the electric commodity market that says one  
15 should be priced based on a fundamentals market  
16 and one should be priced based on a futures  
17 market?

18 A There is a fundamental difference. This  
19 morning Dr. Dubin actually testified on the  
20 efficient market, which presumably recently the  
21 most recent literature seems to support that  
22 there is, in fact, efficiency in electricity  
23 market as opposed to natural gas market. Because  
24 there is an instantaneous exchange of  
25 information, because the commodity itself is not

0705

1 storable. It's either use it or lose it. That's  
2 a very fundamental difference between gas markets  
3 and electricity market price.

4 Q So does that mean that it's more  
5 appropriate to use a fundamentals model when the  
6 market is efficient?

7 A Not necessarily. I think you are kind of  
8 mixing -- the fundamentals model you started with  
9 is not really to forecast electricity price per  
10 se, but rather production cost. Which only takes  
11 into account the variable component of it.

12 Whereas when you essentially talk about  
13 fundamentals model, you have more than mere  
14 relationship of two price series. You do have to  
15 have causative factors of supply and demand side,  
16 and plus other factors.

17 And so I can't -- I hesitate to say that  
18 you cannot simply level the relationship between  
19 spot price and forward price as opposed natural  
20 and electric as being fundamental.

21 Q Are you aware of any fundamentals models  
22 that project the price of gas?

23 A Yes. The Energy Information  
24 Administration Section, or Department of DOE,  
25 Department of Energy, plus other tradition based

0706

1 institutions have fundamentals model to forecast  
2 gas prices for --

3 Q I would like to turn to another topic.  
4 Could you refer to page 33 of your direct  
5 testimony?

6 A (Complies.)

7 Q And on line six you state that the PCA  
8 mechanism expires on June 30, 2006?

9 A Yes.

10 Q Can you explain what you mean by that?

11 A Having read the order from the previous  
12 Court case, or probably before that, the  
13 mechanism that exists in terms of protecting the  
14 Company from extreme lows in cash flows, if you  
15 like, from extreme fluctuations of weather or  
16 price, limits the cash flow, if you like, up to a  
17 certain amount. And that cap is supposed to  
18 expire in June of 2006. I stand to be corrected,  
19 but I think that's what it is.

20 Q Would you agree that it's the \$40 million  
21 cumulative cap that expires in June 2006?

22 A Yes.

23 Q And that the mechanism itself doesn't  
24 actually expire?

25 A I'm not certain of that.

0707

1 Q And that same paragraph at line 10 you  
2 state your recommendation that your proposed gas  
3 price should be effective only until June 30,  
4 2006?

5 A Yes.

6 Q And can you explain why you recommended  
7 that?

8 A Because the Company has to file, pursuant  
9 to the PCM mechanism, they have to file the  
10 report to the Commission, at which time Staff has  
11 the time to audit gas prices.

12 There is -- I suggest that beyond the June  
13 2006, if the mechanism expires, or if the Company  
14 does not actually submit a report to the  
15 Commission, there is no way of finding out what  
16 the Company paid for gas prices. And, therefore,  
17 I commented that whatever gas price I actually  
18 suggest would be effective only until June 2006.

19 Q And is the practical effect of that that  
20 the Company either needs to file a power cost  
21 only rate case, or a general rate case before  
22 that time in order to have a new base line power  
23 cost in effect by June 2006?

24 A I don't know about that. What I do know  
25 is from the previous order the mechanism, if it

0708

1 expires on June 2006, then my suspicion is the  
2 compliance filing may not be continuous, and  
3 therefore there is no way of auditing the gas  
4 purchase prices. And that's the only basis for  
5 my recommendation.

6 Q Well, I guess, considering hypothetically  
7 if your recommendation was accepted and the  
8 Company didn't file the new gas prices, what  
9 would happen in June 2006?

10 A I don't know, because my recommendation is  
11 only up to June 2006. Because if we can't be in  
12 a position -- we're trying to determine what the  
13 average price, gas price might be during rate  
14 year at times when market prices are so volatile.

15 And, therefore, depending on which  
16 direction gas prices move, the rate payers may be  
17 hurt or the Company. And, therefore, I do not  
18 intend to recommend that this price of \$4.69 per  
19 MMBTU be followed beyond June 2006.

20 MR. VAN CLEVE: Thanks. I have no further  
21 questions.

22 JUDGE MOSS: Mr. Van Cleve, thank you.

23 Ms. Dodge, do you still have about 10  
24 minutes of questions for this witness?

25 MS. DODGE: No. Mr. Van Cleve covered

0709

1 several of mine, but a follow up on that same  
2 point.

3

4

CROSS EXAMINATION

5

6 BY MS. DODGE:

7 Q I was going to ask exactly at this point  
8 in your testimony about some of those same items.  
9 If the PCA mechanism itself does not expire in  
10 June 2006, assuming that that were the case such  
11 that the Company were still coming in every year  
12 with a PCA -- annual PCA report, then does your  
13 concern -- would your concern have been  
14 addressed?

15 A In part, yes, and in part, no, because  
16 events in 2004 have become different than what  
17 has been observed, at least in the natural gas  
18 market. And, therefore, it's up to anybody's  
19 guess where gas prices might move.

20 So my recommendation is, in fact, if  
21 possible, to be make our allegiance to those  
22 prices.

23 MS. DODGE: I have no further questions.

24 JUDGE MOSS: Thank you. Yes, Mr. ffitch,  
25 you had not indicated a need for any cross.

0710

1           MR. FFITCH: Well, Your Honor, I had  
2 attempted to do so. But apparently I didn't, for  
3 some reason, didn't communicate that to you. My  
4 handwritten notes back from the office had five  
5 minutes down for this witness. If I may request  
6 permission to ask one or two questions.

7           JUDGE MOSS: I think we can indulge you.

8           MR. FFITCH: I just didn't get the "X" in  
9 the box on the e-mail to you. I apologize.

10

11                           CROSS EXAMINATION

12

13 BY MR. FFITCH:

14       Q    Good afternoon, Dr. Mariam.

15       A    Good afternoon.

16       Q    You testify in this case, among other  
17 topics, about weather normalization for both the  
18 electric and gas, correct?

19       A    Yes, I did.

20       Q    And do I understand your testimony  
21 correctly to endorse the use of a 30-year period  
22 of observations for normal temperature adopting  
23 the World Meteorological Organization standard?

24       A    Yes.

25       Q    And that 30-year time period is updated at



0711

1 the end of every decade, correct?

2 A Yes.

3 Q Is it correct to describe that as a  
4 30-year rolling average?

5 A You might say that, yeah.

6 Q I have the same question with regard to  
7 the gas weather normalization testimony. And  
8 it's my understanding that -- and it's not as  
9 clear to me from reading the testimony what the  
10 time period is, but it's my understanding that  
11 for weather normalization for gas purchases --  
12 excuse me, gas purposes, Puget Sound Energy has  
13 been using a 20-year rolling average, correct?

14 A Yes.

15 Q And perhaps you could just -- and your  
16 testimony continues to support the use of a  
17 rolling average for gas weather normalization, I  
18 believe, of some type. And you can explain how  
19 it may differ from Puget's current approach? Let  
20 me rephrase the question.

21 What is your recommendation for gas  
22 weather normalization?

23 A The same as electric. And the same  
24 recommendations have been made for other gas and  
25 electric utilities also regulated by this

0712

1 Commission for as long as I am working here --  
2 since I started working here.

3 Q So if gas weather normalization that  
4 would --

5 A 30 year --

6 Q 30-year rolling average --

7 A We watch -- the National Oceanographic  
8 Atmospheric Administration produces 30-year  
9 normal temperature every 10 years, and that's the  
10 standard I have actually recommended.

11 Q And just to confirm, you are referring to  
12 the NOAA, or National Oceanic Atmospheric  
13 Administration?

14 A Yes. Yes.

15 MR. FFITCH: Thank you, very much. I  
16 don't have any other questions.

17 JUDGE MOSS: Are there any question from  
18 the bench?

19

20 EXAMINATION

21

22 BY CHAIRWOMAN SHOWALTER:

23 Q Yes. I have a question first relating to  
24 water data. If -- or hydroelectric data. If all  
25 of your data are of the same caliber and

0713

1 reliability, and are sufficient for purposes of a  
2 forecast, in that case, in your view, is it  
3 better to have 50 years than 40 years, and better  
4 to have 60 years than 50 years? In other words,  
5 if all the data is of the same caliber, are more  
6 years better than fewer years?

7 A Before I answer, let me make a distinction  
8 between a pure data analysis, such as streamflow  
9 analysis. On that basis alone, yes. But if the  
10 intent is to relate streamflow data as an input  
11 to hydro (inaudible) link, no.

12 Q To relate it to hydro what?

13 A Hydro generation models. And my answer is  
14 no. There the reason being I tend to use  
15 statistics to support my recommendation. And  
16 oftentimes when my recommendation has got real  
17 impact on rate payers, I want to support my  
18 statistics with theory, with logic, and other  
19 information that may not be directly subject to  
20 statistical analysis.

21 In this case, I did the same analysis as  
22 Dr. Dubin did. If I was to examine only the  
23 statistical properties of streamflow data, I  
24 would use all of them. But if I was to use  
25 streamflow data as an input to hydro generation

0714

1 models, I would use 50 years. The reason being  
2 hydro generation models have got several inputs,  
3 one of which is flood control.

4 The Columbia Basin use of water has become  
5 increasingly impacted by hydro use, nongeneration  
6 use of the water. And what it implies is the  
7 flood control curves have to account for  
8 fluctuations of the use of the water for various,  
9 often conflicting, purposes.

10 And so in the past, the flood control  
11 curves, at least the way it has been used by the  
12 Army Corps of Engineers, or by Puget, are based  
13 on the assumption that flood controls, run-off  
14 volumes have got to be accurately predicted as if  
15 it's perfect foresight. And that I don't  
16 support. Because it's very difficult to predict  
17 what the use of the water is going to be in rate  
18 years, because of the multitude of uses of hydro  
19 generation activities.

20 I recommended that we have to rely on  
21 estimate run-offs, which would account for some  
22 uncertainty in the use of the water, and that's  
23 why I actually decided to supplement my  
24 statistics of using all data by the logic of why  
25 we have to risk it at 50 years.

0715

1 Q And I think I followed you pretty much up  
2 to the point where you said it leads to 50. In  
3 other words, what I heard you are saying is that  
4 there are naturally occurring phenomenon that  
5 we're calculating. And if that's all we were  
6 doing, more years would be better than fewer  
7 years because of this nontrend aspect to that  
8 data. But you say that's not all we're doing.  
9 We're also bringing into play the whole hydro  
10 system with its nonelectric uses, as well as its  
11 electric --

12 A Yes. Yes.

13 Q I have got that far. So it sounded to me  
14 as if we need to exercise judgment, or maybe some  
15 other set of information to apply. But it's  
16 right there where I have lost you as to why,  
17 then, we get to 50?

18 A Okay.

19 Q Is it because there's another set of data  
20 that is limited to that time, or some other  
21 aspect?

22 A Okay. The US Army Corps of Engineers uses  
23 observed run-off so far as if it's going to hold  
24 through to the future, which means you have  
25 perfect foresight. Whereas the Power Council, as

0716

1 well as the BPA, uses estimated run-offs, which  
2 means there is some margin of error. So by using  
3 estimated run-offs, you would allow for some type  
4 of uncertainty in your results in terms of  
5 forecasting what the run-off would be in the rate  
6 year or beyond from the purpose of hydro  
7 modeling.

8         And because of those distinctions run-off  
9 based to an estimated flood control curves based  
10 on estimated run-off based on observed actual  
11 run-offs, and we cannot have -- when you have  
12 conflicting use of the water, it's very difficult  
13 to say that what is observed in the past is  
14 exactly what will happen in the future.

15         In order to avoid that, we use estimated  
16 run-offs, which would allow for some uncertainty  
17 because you are not assuming perfect foresight.  
18 And that's the main reason I recommend 50 years.

19         Q    I am still having trouble with how you get  
20 to the 50. Are you lopping off a set of years  
21 which leads you to 50, or is there something  
22 magical about 50?

23         A    Yeah. The CPS, the Northwest Power --  
24 Conservation Power Council have estimated run-off  
25 volumes, of which current curves are derived.

0717

1 They do not have roll curves based on estimates  
2 for the 60 years. Only for the 50 year.

3 Q So you are limited by what the Power  
4 Council has produced?

5 A Yes.

6 Q So that's the reason?

7 A That's the reason. As soon as they  
8 produce roll curves and estimated flows for 60 or  
9 70 years, I have no problem of using that.

10 Q So if we were sitting here 20 years from  
11 now, and we all had the same kinds of  
12 information, which is probably not going to be  
13 the case, but then you would be fine with 70 in  
14 that case?

15 A Yes.

16 Q So it really does get back to the quality  
17 of the information or data that we have, that you  
18 think it is limited to 50 years, not more. And  
19 that's the reason for picking the 50?

20 A Yeah. The supplementary -- they call them  
21 critical curves, there are many of them. One of  
22 which is including the low hydro year in  
23 modeling. And so those are critical inputs --  
24 have to be in the model in order for the Power  
25 Planning Council or BPA to infer the likelihood

0718

1 of generation that would be available to the  
2 Northwest for a year or two years down the road.

3 Q Do you agree with Professor Slutsky -- or  
4 I'm not sure what his title was -- that if you  
5 do have random information, it's inappropriate to  
6 have a rolling average of it?

7 A Yes.

8 Q So for looking at hydro data, it sounds to  
9 me as if you do not recommend a rolling average  
10 for reasons ala Slutsky; is that correct?

11 A That, and plus additional information that  
12 I may forward is in the statistic, when you test  
13 for a distribution, if you found it to be normal,  
14 there is no reason whatsoever to move away, to  
15 come up with rolling average or moving average,  
16 because you already have what is considered to be  
17 a normal solution.

18 So you must have other justification to  
19 smooth the data, or create something, a  
20 fabrication of the actual data. So besides the  
21 Slutsky Theorem, justifying normality implies  
22 that you don't need to go beyond that to come up  
23 with rolling average.

24 Q But then that leads naturally to the  
25 question about these 30-year kinds of rolling



0719

1 averages that Mr. ffitch was just asking you  
2 about. I was thinking they wouldn't roll very  
3 easily if you lop off 10 years every 10 years.

4 But in any event, is that simply because  
5 that's the information that exists out there, or  
6 if possible, would you have 60 years of  
7 information there, too, if it were all the same  
8 quality?

9 A The history of 30-year rolling average for  
10 normal temperature, which is adopted by the  
11 meteorological in many countries was based on the  
12 assumption that climatic changes may not be  
13 observed, there may not be significant climate  
14 changes within a decade. So you have -- by  
15 having the average every 10 years, you tend to  
16 capture any variability that may exist.

17 And more importantly, NOAA calculates  
18 normal in a way that is different from the usual  
19 calculations that account for a number of factors  
20 that influence local temperature, including cloud  
21 cover, abnormal events that may take place close  
22 to the observation sites. And we can't -- we  
23 don't have the ability to do -- to derive the  
24 kind of -- or to implement the kind of methods  
25 that NOAA implements.

0720

1           So we rely on NOAA because, it's a neutral  
2 kind of agency that has -- that actually tries to  
3 come up with what is actually normal, regardless  
4 of who uses it. And that same temperature is  
5 used by the traders and the stock market and  
6 Nymex. And so we recommend only NOAA, because of  
7 that very factor.

8           That's only the -- the only data that we  
9 have that will, you know, clearly come up with a  
10 normal that removes every kind of nuisance, if  
11 you like, in the data.

12        Q    It seems that would lead naturally back to  
13 the question, why, on the water side, don't we  
14 lop off 10 years every 10 years, especially if  
15 it's climate -- maybe climate related?

16        A    Well, in fact, that's exactly why I  
17 recommended in my testimony that we need to set  
18 up some kind of working group to come up with  
19 what is considered to be normal. Because there  
20 are too many uncertainties, or lots of people can  
21 actually raise a number of issues related to what  
22 is normal, because the Pacific Northwest is  
23 affected by oscillations, El Nino, and other  
24 climatic factors.

25           And, therefore, depending on which weather

0721

1 the number of years includes, has PDO, or Pacific  
2 decadal oscillation, or other climatic events,  
3 you may come up with a different normal as far as  
4 the weather is concerned. So having a working  
5 group might be an avenue that would be useful to  
6 the Commission to consider.

7 Q It sounds to me if as if Professor Slutsky  
8 would say, if he's a professor, that it's better  
9 to lop off 10 years every 10 years than to have a  
10 yearly rolling average, because you -- because 10  
11 years is a longer period of time to catch the  
12 random quality, and a shorter period of time  
13 would overemphasize what you were dropping and  
14 what you were adding on; is that correct?

15 A Yeah, probably.

16 Q He's not here to verify --

17 CHAIRWOMAN SHOWALTER: Thank you. I have  
18 no further questions.

19

20 EXAMINATION

21

22 BY COMMISSIONER HEMSTAD:

23 Q If I heard Dr. Dubin correctly this  
24 morning, I recall that he said that he was  
25 prepared to accepted use of 50 years, also. I

0722

1 didn't quite understand that. But what is  
2 your -- now your understanding of the difference  
3 between your position and Dr. Dubin's position on  
4 length of years to be supplied?

5 A Dr. Dubin's position is based primarily on  
6 the statistical ground on which I and Dr. Dubin  
7 actually performed similar analysis. And our  
8 results confirm that, in fact, the streamflow  
9 data as NOAA distributed, you cannot detect any  
10 trend. And, therefore, if you are going to come  
11 up with a normal, quote, unquote, then you  
12 cannot -- or you don't have to exclude any  
13 observation.

14 But the distinction is, when I tried to  
15 recommend an issue of this significance, then I  
16 have to rely on not only on the statistics, but  
17 also beyond the statistics, and see what other  
18 relevant information can I actually supplement my  
19 analysis with.

20 So I tried to find out literature on what  
21 are the impacts to hydro models. And one of  
22 those is not subject to statistical analysis, and  
23 a way in which we can actually infer about what  
24 is normal hydro weather years by allowing for  
25 some kind of error or uncertainty, because we

0723

1 can't see the future perfectly. And so that's  
2 the distinction. I supplement my analysis with  
3 additional information, and he relied on  
4 statistics.

5 Q So we're left with the differing views,  
6 yours being 50 years with your responses to Chair  
7 Showalter's questions, that reflecting the data  
8 available from the BPA and the Northwest Power  
9 Conservation Council?

10 A Yes. Yes. You are correct.

11 Q And 60 years based upon the available data  
12 on streamflow going back to 1928?

13 A Yes.

14 Q Do you have Dr. Dubin's testimony  
15 available?

16 A No, I don't.

17 Q I think it would be helpful if he could  
18 see a copy of that.

19 JUDGE MOSS: Mr. Cedarbaum, can you  
20 provide the witness with a copy -- or the Company  
21 is volunteering to do so. That's very helpful.  
22 Thank you.

23 MS. DODGE: Direct or rebuttal?

24 COMMISSIONER HEMSTAD: This is rebuttal.

25 And I am looking at pages 2 and 3. Can you see?

0724

1           MR. KUZMA: This is an extra, so here you  
2 go.

3           COMMISSIONER HEMSTAD: Exhibit 125 T.

4       Q    BY COMMISSIONER HEMSTAD: At the bottom of  
5 page 2, beginning at line 18 and proceeding  
6 through line 4 on page 3, Dr. Dubin asserts that  
7 your methodology in your gas price analysis  
8 quoted here had, quote, several logical and  
9 methodological errors, end quote.

10           And then it goes on to describe what they  
11 are. Of course, you haven't had a chance to  
12 respond to this written testimony. What is your  
13 response to his criticisms of your logic and  
14 methodology?

15       A    First of all, there were some arithmetical  
16 errors that were subsequently corrected. But the  
17 fundamental results of my analysis, even after  
18 making the change to a spreadsheet formula, would  
19 not change.

20           And so in the statistics, there is a  
21 characterization of an estimate as being based by  
22 an unbiased estimator. Even if one actually  
23 concludes a highly correlated observation in the  
24 analysis, the magnitude of those estimates would  
25 not change significantly.

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1           And in my analysis, I was merely trying to  
2 relate the length of forward prices with the  
3 corresponding spot prices. And so in the end,  
4 even after making the changes, my result would  
5 stay the same.

6           Number two, Dr. Dubin also criticized on  
7 the issue of curtailing, or at least cutting part  
8 of the data that I have. As I indicated earlier,  
9 if I was to make a recommendation based only on  
10 statistical analysis, yes, I would probably  
11 include a number of data points. But oftentimes  
12 I do supplement with other forms of analysis,  
13 including review of literature, visual or graphic  
14 analysis.

15           And so when I examined gas prices, I  
16 looked at -- I graphed, I pulled the graph of  
17 data from December 22, '03 to July. And what I  
18 observed was since approximately May of 2004,  
19 there is a hike, significant increase in forward  
20 prices.

21           And when I explored why the demand for gas  
22 has not changed significantly, the supply has not  
23 changed significantly, and, therefore, there must  
24 be other factors that has caused such a huge  
25 increase. So what I found was, in fact, since

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1 2001 there is an increasing number of speculative  
2 traders that actually profit by speculating the  
3 price movement, and they have nothing to do with  
4 the use of gas.

5         And as a result, the market is, according  
6 to some literature they had is actually in  
7 trouble, because the price that was expected to  
8 reflect the fundamentals of supply and demand  
9 doesn't anymore.

10         And because of that, based on my graphical  
11 analysis, I also did normality tests which  
12 Dr. Dubin removed from his testimony, as you  
13 heard in the morning, in which I tried to  
14 compute -- determine whether or not the  
15 distribution of gas prices for forward gas price  
16 from December 2003 to July was actually normal.

17         And what I found in large part, it is not.  
18 So I decided to divide the things into two,  
19 December 2003 to April 2004, and then May 2004 to  
20 July. And the first part of the data was  
21 actually normal, and the other is not. The May  
22 2004 to July was not normally distributed.

23         Having that fact, and comparing to  
24 historical prices, which normally during the  
25 months of May to July are actually a period of



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1 usually low prices and utilities purchase gas  
2 during those time periods, so that was unusual.

3           And having read the literature on the  
4 problems related to speculative trading, the  
5 impact it has on forward prices, I decided to  
6 remove the data from May 2004 to July 2004,  
7 because I have a shorter time period which is  
8 December 2003 to April 2003 (sic). I tried to  
9 take the average, essentially it was three-month  
10 rolling average of -- now the interesting part,  
11 even the cumulative average and the three-month  
12 rolling average averaged over the entire period  
13 from July -- I'm sorry, December '03 to April are  
14 almost close to the same, which is about \$4.69  
15 MMBTU.

16           And so I base my decision on not only the  
17 statistics, but also visual analysis and reports  
18 from the marketplace, especially the impact of  
19 speculative traders. And so I -- while  
20 Dr. Dubin's criticisms may be correct as far as  
21 the formula that was used in Excel to compute the  
22 various links of prices, the end result will not  
23 change significantly.

24       Q   Well, I take it from your comment, then,  
25 that it was your conclusion, at least for part of

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1 the time, the forward market was not efficient?  
2 Is that the appropriate economic term?

3 A Well, Dr. Dubin extensively discussed  
4 efficiency this morning. Efficiency of the  
5 marketplace, or the so-called action market  
6 hypothesis was historically or conventionally  
7 being attributed to storable commodities as  
8 indicated, like grain and corn and livestock.

9 But in this case, natural gas is a storage  
10 constrained commodity, which means there are  
11 limited opportunities for storage, unlike grain  
12 or livestock. And, therefore, that puts that  
13 particular commodity in a different context  
14 compared to the traditionally action market  
15 hypothesis being applied to.

16 And the other aspect of it is the natural  
17 gas market has become extremely volatile. In  
18 fact, the literature on it that support  
19 efficiency was based on the data prior to 1999.

20 Since 1999 there has been, at least to my  
21 knowledge, no support of the efficiency of the  
22 natural gas market. And, therefore, the idea of  
23 using forward market as a best tool to infer  
24 about forward spot prices during this time is  
25 really questionable, and one needs to supplement

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1 whatever statistical analysis is being used by  
2 other information. And so --

3 Q Well, thank you, for that response. Is it  
4 your view that the current spot market is  
5 efficient?

6 A No, it's not.

7 Q So neither the forward market, nor the  
8 spot market, is efficient?

9 A Yes. I have tried to do some analytical  
10 work on that area, and those preliminary -- so  
11 far my conclusions are there is inefficiency in  
12 that market. It's not efficient.

13 Q So am I correct in concluding that you  
14 would respond to the question I asked Dr. Dubin  
15 this morning about the difference between your  
16 ultimate price here of \$4.69, I believe it is --

17 A \$5.60.

18 Q And the Company's price of what, of \$5.60,  
19 goes both to the question of timing and of  
20 technique?

21 A Yes. Well, I would say timing, because  
22 efficiency is normally associated with a time  
23 period. You can have a market that is efficient  
24 within a period of say a one month, a two month,  
25 a three month or one year. Some example, if you

0730

1 take commodities, such as coffee or tea, which  
2 are perennials of an extended -- a longer life  
3 span, if you like, the efficiency of that market  
4 is longer than other commodities, which is being  
5 used to plan long term productions.

6       Whereas in this market, the natural gas  
7 market, it's possible that you might find  
8 efficiency if you look at two weeks or three  
9 weeks time window that one has to infer.

10       But the moment you go beyond that length,  
11 which is three months or six months after, or  
12 whatever, it's very unlikely from my reading that  
13 you will find efficiency. So efficiency is in  
14 which time period you are trying to relate a  
15 forward prices with spot prices.

16       Q    This morning we asked Dr. Dubin what would  
17 be the result if a new analysis were done with  
18 the most recent data. Is that something with  
19 your approach you can do easily?

20       A    That can be done, but the question is,  
21 what I tried to do is in the interest of what was  
22 best interest of the rate payers, given the  
23 presence of the PCA mechanism, can we come up  
24 with an average gas price, in which the rate  
25 payers will not be impacted significantly by

0731

1 allowing them onto deferral, nor the Company will  
2 not be short fall, because of cash flow in case  
3 gas prices hike.

4         So I tried to take a balanced approach in  
5 terms of determining what average price might be  
6 likely possible -- might be actually observed  
7 during the rate year. And so even if we take the  
8 last three months, they may not necessarily be  
9 that price that would exist in a rate year. And  
10 as a matter of fact, I don't think, based on two  
11 series of observations, forward and gas prices,  
12 one can actually predict even close what gas  
13 prices would prevail during a rate year. It's  
14 very, very difficult.

15         And so a compromise has to be reached in  
16 terms of what would be -- what would be the  
17 average, or close.

18         Q     So can I conclude from your response that  
19 an update wouldn't necessarily, from your  
20 perspective, lead to a more recently accurate  
21 result?

22         A     No. Especially when a rate reports that  
23 gas market prices are being really significantly  
24 impacted by nonmarket factors, such as  
25 speculators, then one would wonder what is the

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1 average price of gas, and so whether or not the  
2 forward prices are really a good predictor of  
3 forward spot price during rate year.

4           So yes, we can come up with a higher  
5 average forward prices, but is that the price  
6 that would prevail during rate year? I don't  
7 know.

8       Q    One final question. If, in your view, the  
9 forward market is not efficient and the spot  
10 marked is not efficient, the Company still is  
11 left in a position that it has to buy a spot  
12 market.

13           So what is one to make of -- how do we  
14 evaluate a price -- the ultimate question is,  
15 what will the Company have to pay to buy gas?

16       A    Good question. In fact, similar to the  
17 water year recommendations that I put in my  
18 testimony, I also suggested that the Company, or  
19 this Commission could actually recommend that  
20 there be kind of a working group to see how  
21 well -- what kind of information can we use from  
22 forward markets to try and come up with an  
23 average gas price to be used in rate case.  
24 Because it's possible that this may not be the  
25 first case that the Commission has received as

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1 far as determining what average rate price may  
2 prevail during the rate year.

3 So while I have no problem using the last  
4 three months or whatever, the question has to be,  
5 what price year are we on? Because it's quite  
6 possible that it's difficult to predict or at  
7 least infer because of the fluctuations.

8 COMMISSIONER HEMSTAD: Well, that working  
9 group may be a good tool going forward. The  
10 problem is we have a rate case in front of us to  
11 decide. That's all I have. Thank you.

12 COMMISSIONER OSHIE: I don't have any  
13 questions, Dr. Mariam. Thank you.

14 CHAIRWOMAN SHOWALTER: Well, I have some  
15 follow up. I had forgotten to ask about the gas  
16 issue.

17

18 FURTHER EXAMINATION

19

20 BY CHAIRWOMAN SHOWALTER:

21 Q If the market were efficient, then would  
22 you agree that the most recent three months is  
23 better than some other three months?

24 A Yes.

25 Q So the issue we're dealing with is not

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1 timing so much as the real world imperfections of  
2 the market?

3 A Yes.

4 Q I thought I heard you say -- it sounded as  
5 if you were saying in trying to make a judgment  
6 about where to set our prices, you were looking  
7 back at the PCA and looking at how a risk would  
8 be assigned.

9 And I don't want to put words in your  
10 mouth, but it sounded to me as if we were  
11 beginning -- or you were beginning with a  
12 regulatory structure, and seeing how a price  
13 would fit into it, which doesn't seem like a very  
14 good idea, although I'm not sure what the better  
15 one is if we can't predict prices.

16 A I think the only inference that I make to  
17 the PCA mechanism is that because there is a  
18 mechanism that limits losses to the Company if we  
19 set prices too low, as the Company's original  
20 filed case, given the current prices are so high,  
21 the rate payers would be hit by a huge deferral.

22 On the other hand, if the prices we set  
23 are too high, then the issue is the Company will  
24 benefit, obviously because the market price might  
25 go down. So somehow the price has to be



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1 somewhere in between the high case, which is, in  
2 recent situation, would be the most recent  
3 prices, versus what the Company filed in the  
4 early or interim filing case.

5 So the presence of the PCA might reduce  
6 the impact of price fluctuations on both rate  
7 payers and the Company. That's the inference I  
8 tried to make.

9 Q But do you agree that what we're trying to  
10 do, if we possibly can, is predict accurately if  
11 we were able to?

12 A Yes, if we were able to. But because of  
13 the market situation, it's very difficult to make  
14 an accurate forecast. You can do that maybe  
15 within a three-month window, but you have a  
16 rate -- a price that is supposed to prevail for  
17 the -- during the rate year, which means during  
18 the rate year if you are going to be really close  
19 to reality, you have to recompute average price  
20 every three months during the rate year.

21 Q Is that a bad idea? That is, well first  
22 of all, is it the case that the closer we get to  
23 the rate year, or the time period we're concerned  
24 about, the more accurate strip prices are likely  
25 to be?

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1       A    Yes.  I mean that's essentially what you  
2   are saying, is more market information is being  
3   reflected in the most recent prices than the  
4   price at far distances.  And, therefore, if you  
5   use more recent prices, they are better  
6   predictors of prices that may prevail say, one,  
7   or two, or three months down the road.

8       Q    And what if it's as far as 15 months out?  
9   Is that more of a problem?

10      A    It is a problem, because we are using  
11   mainly two series of data, forward and spot  
12   price, and the market that I criticized as not  
13   being efficient.  So I hesitate to -- I can't --  
14   I can't -- I could suggest using forward price  
15   would be a good way to estimate price that may  
16   prevail 15 months down the road.  No.

17      Q    And then I suppose Commissioner Hemstad  
18   already asked you this question.  If we believe  
19   that the markets are not efficient, that is to  
20   say, they are unpredictable, how do we predict  
21   prices during the rate year, especially if the  
22   reason they are unpredictable is potentially  
23   artificial manipulation, for lack of a better  
24   word, but lawful or unlawful manipulation?

25      A    Yeah, that's a good question.  But I don't

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1 have a perfect answer to that, because ideally if  
2 prices are actually influenced by fundamental  
3 supply and demand, and if markets were  
4 functioning the way they should, and traders  
5 making rationale speculations, market information  
6 is being available to all participants, then it  
7 would have been easier at least to use forward  
8 prices to infer what forward spot price might be.

9 But under this situation where prices are  
10 being influenced by nonfundamental factors,  
11 extraneous information, it's hard to tell  
12 whether -- how much emphasis do we put on forward  
13 prices.

14 Q One last question. You said that in  
15 examining the prices -- I thought I heard you say  
16 demand had not changed, and supply had not  
17 changed, but the price had gone up. And,  
18 therefore, that looked as if there were something  
19 unusual going on.

20 I was surprised when you said demand had  
21 not changed. The conventional wisdom is there's  
22 a lot more demand for gas because of all the gas  
23 plants. Is that the case or not?

24 A Compared to 2003 calendar year, the  
25 reports that I have seen from the marketplace is

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1 that you may have changed a little, but not  
2 significant enough to have caused such a huge  
3 increase and fluctuation in gas prices.

4 Analysts could not explain when the Energy  
5 Information Administration of the Department of  
6 Energy data shows that there hasn't been very  
7 discernible significant change in supply or  
8 demand. Why would prices fluctuate and increase  
9 to such an extent? Going back to the California  
10 crisis period, some of the prices that we saw, \$7  
11 MMBTU seems to be close to that time period.

12 So we don't have a crisis, but rather some  
13 other information or fact that may have  
14 influenced that. And what they found from the  
15 record of the official market is that speculative  
16 trading may be responsible for such huge  
17 fluctuations.

18 CHAIRWOMAN SHOWALTER: Thank you.

19 JUDGE MOSS: That completes the questions  
20 from the bench. Let me ask those who did  
21 cross-examination whether the bench's questions  
22 require any follow up from your perspectives.  
23 Mr. Van Cleve?

24 MR. VAN CLEVE: No, Your Honor.

25 MR. FFITCH: No, Your Honor.

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1 JUDGE MOSS: Ms. Dodge.

2 MS. DODGE: I have a couple of items. One  
3 is that we had not preidentified certain Data  
4 Request Responses of Dr. Mariam. But given his  
5 testimony today, I would just want to offer his  
6 responses to the Company's Data Requests No. 40,  
7 41, and 42 to Staff. I am sorry. I don't have  
8 those all prepared and printed out, but we can  
9 certainly do that this evening.

10 JUDGE MOSS: Mr. Cedarbaum, would you have  
11 any problem with considering these with  
12 Dr. Mariam not on the stand, as to whether you  
13 might have any objection?

14 MR. CEDARBAUM: I would consider that. I  
15 have got them here, and could look at them -- it  
16 looks like we might be close to a break. I could  
17 do more after the break.

18 JUDGE MOSS: Let's do that at the break.  
19 We may have to recall him, but -- so you just  
20 wanted to offer those?

21 MS. DODGE: Yes. And it may be one of  
22 them has very extensive data behind it, and we  
23 can agree on sheet --

24 JUDGE MOSS: Well, you two get together at  
25 the afternoon recess, and then we will have

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1 further conversation about that. Is there any  
2 redirect?

3 MS. DODGE: I am sorry. I had a couple of  
4 more.

5 JUDGE MOSS: I'm sorry.

6

7 RE CROSS EXAMINATION

8

9 BY MS. DODGE:

10 Q Dr. Mariam, I don't recall if it was  
11 Commissioner Hemstad or Chairwoman Showalter that  
12 asked about getting an update of your analysis  
13 given the most recent data, much like the bench  
14 request that was issued to the Company. But  
15 given -- it's my understanding that you excluded  
16 the most recent four months of data as of around  
17 the time you were doing your analysis because of  
18 this trend that you saw that seemed unusual  
19 toward higher prices?

20 A Yes. Yes.

21 Q And since then we have had four more  
22 months go by. And it's true, isn't it, that  
23 during that time prices went even higher, and  
24 then now have come back down, but not below  
25 around where they were in the September time

0741

1 frame?

2 A That may be true. I haven't checked the  
3 most recent gas prices.

4 Q If that were true, wouldn't that suggest  
5 that this trend that you saw was not abnormal,  
6 but rather was, say, a more lasting trend?

7 A No, I don't think so, because I went back  
8 to see what the price looks like, especially  
9 coming out of the winter months. And, also, as I  
10 indicated earlier, I tried to see what other  
11 forecasters or market information are saying  
12 about the movement in the prices.

13 And so it's a combination of factors that  
14 I have actually seen, in addition to statistics  
15 to exclude those data.

16 Q Now, you mentioned that you have some  
17 concern that if the price for gas is predicted to  
18 be too high in this proceeding, and then it falls  
19 during the rate year, you know, what then?  
20 Doesn't the PCA also flow through any lowered  
21 power costs to the customers?

22 A It does. But for the time being,  
23 customers -- I mean, if the gas price is set too  
24 high, it becomes low, the Company will benefit,  
25 because essentially you are charging a customer

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1 at the higher rate when, in fact, you purchase at  
2 the lower rate. So eventually it would flow.

3 But in the meantime, the Company would  
4 benefit. So an ideal situation would be to  
5 protect both rate payers and the Company.

6 MS. DODGE: That's all I have.

7 JUDGE MOSS: Any redirect?

8 MR. CEDARBAUM: Just a couple of quick  
9 questions.

10

11 REDIRECT EXAMINATION

12

13 BY MR. CEDARBAUM:

14 Q Dr. Mariam, you were asked some questions  
15 on the 50 versus 60 year water issue, and that  
16 had to do with your statistical disagreement  
17 between you and Dr. Dubin. But for purposes of  
18 this proceeding, in terms of the actual rate  
19 making in this proceeding, is it your  
20 understanding that the Company is agreeable to  
21 your 50-year water analysis?

22 A Yes.

23 Q And we would find that in the testimony of  
24 Ms. Ryan?

25 A Yes.



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1 Q And the second area I have relates to your  
2 discussion with Commissioner Hemstad about your  
3 decision to remove the months of May through  
4 August?

5 A July.

6 Q July of 2004, and your gas price  
7 analysis -- and if you need this in front of you,  
8 I can provide you my copy, but you can probably  
9 go from memory.

10 In Exhibit 129 we discussed with Dr. Dubin  
11 your workpapers that involve your test for  
12 normality on that issue, and I discussed with him  
13 the line involving probability and the values  
14 that are there. Just relating to the question  
15 you got from Commissioner Hemstad, can you just  
16 discuss the significance of that portion of the  
17 exhibit?

18 A What it tells me is when I examined the  
19 distribution of gas prices from December 2003 to  
20 July, for most of the months the distribution of  
21 gas price are normal, which means I can simply  
22 take average of those old data points to infer  
23 about price that may prevail during rate year.

24 And so then I went back and plot -- make a  
25 graph of the price series, and see what went

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1 wrong, and what's the difference. And I see a  
2 spike, or at least a significant jump in prices  
3 around May. And what I did, then, was actually  
4 test for normality of the data, gas price data  
5 from December 2003 to April 30, 2004, and from  
6 May of 2004 to July.

7       And for the first part it's really pretty  
8 much normally distributed. For the second part  
9 it's not. And then I came to conclusion, well,  
10 at least the first part it is normally  
11 distributed. And, therefore, I can fairly assume  
12 that I can derive average using all those time  
13 periods from December 2003 to April. So  
14 that's -- I didn't report that analysis in my  
15 testimony, but that's why I used them.

16       Q   And my question is geared toward the  
17 specific values that show up on that probability  
18 line. The values appear to be either above or  
19 below 5 percent, and I wanted you to explain the  
20 significance of that.

21       A   In general, when a confidence level is set  
22 at 95 percent, or a ratio of 90 to 1, the  
23 conventional conclusion is that if the value on  
24 the probability is less than 5 percent, then the  
25 affirmative hypothesis of normality will be

0745

1 rejected.

2 Q So that would mean if, at 95 percent  
3 confidence level, at 5 percent or less  
4 probability value, that those data would not be  
5 normally distributed?

6 A Exactly.

7 MR. CEDARBAUM: Thank you. That's all I  
8 have.

9 JUDGE MOSS: Let's take our afternoon  
10 recess before we release Dr. Mariam from the  
11 stand. And then we can take up the issue of the  
12 three exhibits after the break, and then move to  
13 Mr. Story. So we will take the recess and come  
14 back at five after the hour, please.

15 (Brief recess.)

16 JUDGE MOSS: Let's come back to order,  
17 please. We're on the record.

18 I had some conversation with Mr. Cedarbaum  
19 during the recess. He indicated to me that he  
20 had spoken with you, Ms. Dodge, and that it was  
21 agreeable that we would admit the three Data  
22 Request Responses you identified earlier. I  
23 believe it was PSE Data Request 40, 41, and 42 to  
24 Staff.

25 MS. DODGE: That's correct.

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1 JUDGE MOSS: And I have marked those as  
2 Exhibits 464, 465 and 466, respectively. And  
3 they will admitted with those numbers.

4 (EXHIBITS 464 to 466 RECEIVED.)

5 JUDGE MOSS: And you are going to furnish  
6 copies?

7 MS. DODGE: Yes. Tomorrow morning.

8 JUDGE MOSS: Okay. Fine. And with that  
9 we're ready for Mr. Story, who I think is ready  
10 for us as well.

11

12 JOHN STORY,  
13 produced as a witness in behalf of The Company,  
14 having been first duly sworn, was examined and  
15 testified as follows:

16

17 JUDGE MOSS: Please be seated. Thank you.

18

19 DIRECT EXAMINATION

20

21 BY MS. DODGE:

22 Q Mr. Story, do you have with you today your  
23 direct testimony and rebuttal testimony in this  
24 case, as well as exhibits to your testimony which  
25 have been preidentified as Exhibits 231 through

0747

1 241 C?

2 A Yes, I do.

3 Q Do you have any additions or corrections  
4 to make to any of that testimony or exhibits at  
5 this time?

6 A Yes, I do. On Exhibit 237 on page 7, line  
7 3, there's just an extra dollar sign that should  
8 be removed. So it's right before the 29.7.

9 And on page 14, line 15, the words "and  
10 as" should be struck so it reads, "electric usage  
11 and hydro generation."

12 And on page 13, line 17, there's a  
13 paragraph in my testimony where I talk about the  
14 Cam West Petition that hadn't been issued at the  
15 time we had done rebuttal. That order has been  
16 issued now, and the order directs that the issues  
17 of Cam West be addressed in the next PCA. So  
18 this testimony should be struck.

19 JUDGE MOSS: What exactly should be  
20 struck?

21 THE WITNESS: The testimony says that  
22 we would address this after the order, and could  
23 adjust our power cost for the cost of the Cam  
24 West. And now it's going to be addressed in the  
25 PCA filing.

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1           So this paragraph really could go away,  
2   and the Cam West is not included in the power  
3   cost as it stands now. So there's no adjustment  
4   needed to any of the other numbers.

5           JUDGE MOSS: So we should strike the  
6   paragraph from line 17 and carrying over to page  
7   14, line 2?

8           THE WITNESS: Just line one.

9           JUDGE MOSS: Just line one. Okay.

10          Q   BY MS. DODGE: Mr. Story, with those  
11   changes, are the answer to the questions in  
12   Exhibits 231 through 241 C true and accurate to  
13   the best of your knowledge?

14          A   Yes.

15          Q   And I just ask that you pull the  
16   microphone up, and make sure it's on.

17          A   Okay.

18          MS. DODGE: Your Honor, we offer 231  
19   through 241 C into evidence, and offer Mr. Story  
20   for cross-examination.

21          JUDGE MOSS: Apparently there's no  
22   objection, so those will be admitted.

23                         (EXHIBITS 231 to 241 C RECEIVED.)

24          JUDGE MOSS: And let's see, I have an  
25   indication that ICNU appears to have the most

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1 cross-examination, and I have been letting the  
2 party with the most go first.

3 So unless counsel has some other  
4 preference, Mr. Van Cleve will be first.

5 MR. VAN CLEVE: Thank you, Your Honor.

6

7 CROSS EXAMINATION

8

9 BY MR. VAN CLEVE:

10 Q Mr. Story, could you turn to page 14 of  
11 your rebuttal testimony, please?

12 A I have it.

13 Q And the paragraph at the bottom that  
14 begins on line 14, you are taking issue with  
15 Mr. Schoenbeck's suggestion that all power costs  
16 should be normalized; is that correct?

17 A I am taking exception with his  
18 determination of pricing under his definition of  
19 normalized, yes.

20 Q And when you say this was not the intent  
21 of the PCA settlement, what do you mean?

22 A The PCA settlement was designed to set  
23 prices so that when you are out in the rate year  
24 for the PCA, you would have an equal chance of  
25 earning under or over on your power cost.

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1           And to do that, you have to set the prices  
2 in such a way that there is as close to what you  
3 would expect in the rate year as possible. Some  
4 of this has been discussed this morning on gas  
5 prices, and this afternoon.

6       Q    Okay. As that paragraph carries over to  
7 the next page, 15, you talk about using the best  
8 available information for coal prices and spot  
9 prices at the Mid-Columbia. And can you explain  
10 how, for electric market prices, how that is  
11 reflected in the power cost rate?

12       A    Yeah. These were examples -- I will get  
13 to the question. I just want to make sure you  
14 understand, these were examples of where we buy  
15 power and where our power comes from. But the  
16 person that would be best to address the issue of  
17 pricing at the Mid-C would be Ms. Ryan.

18       Q    So in the sentence where you state, at  
19 line 2, page 15, that "PSE's use of forward  
20 market information to price the normalized  
21 electricity projected to be used during the rate  
22 year is exactly what the PCA requires," do you  
23 know how forward market information for electric  
24 prices is reflected in the power cost rate?

25       A    Yes. It's a workpaper provided by



0751

1 Ms. Ryan. And it uses the Aurora model that was  
2 discussed with Dr. Mariam, and the -- some  
3 adjustments are made for the nonvariable type  
4 costs for the rate year.

5       Once we have the rate year prices, they  
6 are brought back to the test year based on a  
7 production factor. It's a relationship between  
8 the delivered loads between the rate year and the  
9 test year.

10 Q So this forward market information that  
11 you refer to in line 2 comes from the Aurora  
12 model?

13 A Yes.

14 Q Okay. If you could refer to Exhibit 235.  
15 That's your Exhibit 235?

16 A (Complies.) I have it.

17 Q I heard some testimony from Mr. Reynolds  
18 and Mr. Baldwin yesterday to the effect that  
19 shareholders absorb the first \$40 million under  
20 the PCA mechanism, and that was thrown out as one  
21 of the reasons that the Company's financial  
22 performance was below the authorized ROE.

23       Now, assuming I am accurately  
24 characterizing that testimony, is that an  
25 accurate reflection of how this mechanism works,

0752

1 that the Company bears the first \$40 million?

2 A No. What they were talking about is the  
3 overall cap, and that extends beyond years. The  
4 way the mechanism works is that there's several  
5 layers, which are explained on the bottom of the  
6 page 1 of this Exhibit 235.

7 So the first band is the 20 million. The  
8 Company absorbs 100 percent of the first \$20  
9 million of the power cost.

10 And the second band, between 20 and 40,  
11 the Company absorbs 50 percent. And the third  
12 sharing band is 40 to 120 million.

13 And you will see there's an overall cap.  
14 It's the third bullet item on page 2 of 25. And  
15 this is what they were discussing, that ever  
16 since the inception of the PCA, the Company has  
17 absorbed \$40 million. That's a cumulative amount  
18 of dollars, and it absorbed most of that in  
19 probably the 2003-2004 pricing.

20 Q So has the \$40 million cap been met?

21 A It was met in the late fall of 2003 with  
22 the write-down on Tenaska, the cap was -- it went  
23 down below the cap again. And we expect to be  
24 over \$40 million cap by the end of the year.

25 Q So is there actually a balance currently

0753

1 in the PCA account which is chargeable to  
2 customers?

3 A Yes, there is. But another provision of  
4 the PCA is that that won't be charged to  
5 customers until it hits a \$30 million cap. And  
6 it's not close to \$30 million at this time. We  
7 have nothing in this case that would be a flow  
8 back of the PCA deferral.

9 Q So how much is that balance at this point?

10 A I don't have that number with me.

11 Q Is that basically a reflection of the  
12 second sharing band, the 20 to 40 million where  
13 there's 50/50 sharing?

14 A No. The PCA is now in its third period,  
15 so the Company -- you know, the first three bands  
16 that are identified on the bottom of page 1, top  
17 of page 2, those start over again every July.

18 So in the first year, I don't recall the  
19 numbers exactly. So this is an example. We may  
20 have hit \$20 million. The Company would have  
21 absorbed that \$20 million. Nothing deferred to  
22 the customer.

23 Period two, there could have been another  
24 \$20 million. Nothing for the customers. That  
25 would be \$40 million. That would be the overall

0754

1 cap. I don't have the numbers with me, to tell  
2 you exactly how that has happened, but it's been  
3 a combination of those bands, not just any  
4 particular one.

5 Q Let me ask you hypothetically, once the  
6 \$40 million cap has been reached, after that  
7 point, 99 percent of the excess power costs, the  
8 costs above the base line are charged to  
9 customers?

10 A That's correct.

11 Q So when you gave the example that the  
12 intent of the PCA was to set the base line at  
13 that point where there was an equal chance of it  
14 being equal over and under, that was your  
15 testimony, right?

16 A That's correct. That should not change  
17 just because the \$40 million band has been hit.  
18 You still want to set the PCA properly. If you  
19 go down below \$40 million, \$40 million is  
20 cumulative again. If the customers were to get  
21 money back, say we were deferring \$40 million,  
22 and then you have a month where you would  
23 actually get a credit back against PCA, that  
24 would be credited back to the customers in the  
25 same relationship.

0755

1           To say that now we can set the prices  
2 anything we want, because we're at this \$40  
3 million cap, is a real error in the determining  
4 of power costs, I would say. It's -- all you are  
5 doing is deferring a very large cost to later  
6 customers.

7       Q    But if, for instance, gas prices turned  
8 out to be substantially lower than what the base  
9 line was set at, wouldn't this potentially -- the  
10 second sharing band kick in that was a 50/50  
11 sharing?

12       A    Yes.

13       Q    So doesn't that mean that once you are in  
14 at the cap, that if the price is higher,  
15 customers pick up 99 percent of that, but if it's  
16 lower, they only get 50 percent of that benefit?  
17 Doesn't that seem like an asymmetrical sharing?

18       A    That's not the way it works. If you are  
19 over the \$40 million cap, you are going to trap  
20 that cap first. So if the prices were lower,  
21 anything above the \$40 million that had been  
22 deferred to the customers would be reduced in the  
23 deferral.

24           And then you start looking at the caps. I  
25 mean, it's a two-piece process as we track the

0756

1 costs. So they would get their money back.

2 Q So you are saying the entire \$40 million  
3 would -- if the gas costs were lower, the first  
4 \$40 million would go entirely to customers before  
5 the 50/50 sharing kicked in?

6 A No. I thought you were talking about when  
7 they were above \$40 million. If we were above  
8 \$40 million, you would still be dealing with that  
9 cap. If you get down below \$40 million, you do  
10 fall into these sharing bands.

11 Q Okay. I would like to ask you about a  
12 different topic. And this is the adjustment  
13 2.18, which is the rate case expense adjustment;  
14 is that right?

15 A Just one moment. I have a lot of books  
16 here. That's correct.

17 Q And it's my understanding, from reading  
18 your testimony, that this adjustment to the test  
19 year as you originally filed it in your initial  
20 case had three components. One, there was the  
21 amortization of the remaining expense from the  
22 2001 rate case. There was the amortization of  
23 the costs of the PCORC case, and then there was  
24 the amortization of the current case; is that  
25 a fair summary?

0757

1 A That's correct.

2 Q And can you explain for each of those  
3 three categories what the accounting treatment of  
4 those costs has been?

5 A Yes. Taking the PCORC first, we expense  
6 the legal costs during the time of the hearings  
7 as we had filed a petitions to have those costs  
8 deferred. But they were still an expense.

9 The cost associated with the 2001 case had  
10 been deferred during the proceeding, and they  
11 were -- the costs were approved at that rate --  
12 at a certain rate for amortization. And they  
13 have been amortized at that rate since the rates  
14 became effective for both gas and electric.

15 And then the costs for the current case  
16 have been deferred in the same manner. And this  
17 is based on an estimate of the -- I think the  
18 rebuttal number updated estimate as to what we  
19 think will be the cost for the total case. And  
20 we're asking to the amortization of those costs  
21 over three years.

22 Q Okay. What happens to the unamortized  
23 balance of these costs that get -- deferred costs  
24 that get amortized?

25 A They are sitting in an account on the

0758

1 balance sheet, I believe, 182.3. It's the series  
2 of accounts.

3 Q And is that the account that regulatory  
4 assets are booked in?

5 A Well, the 182 series is a series of  
6 accounts where regulatory assets are booked.  
7 182.3 is a less restrictive type of regulatory  
8 asset account.

9 Q And so does the amortized balance have a  
10 carrying charge or rate of return?

11 A It's included in working capital.

12 Q And both the 2001 and this current rate  
13 case are both in the same account?

14 A No. We keep them in separate accounts.

15 Q But they are both treated as regulatory  
16 assets?

17 A They are in the 182 accounts. We're  
18 asking for this current case to be set up as a  
19 regulatory asset, and to be amortized. It is not  
20 in working capital, because it wasn't during the  
21 test year. Only the costs with the last case are  
22 in the test period. So they would be included in  
23 working capital.

24 Q In Mr. Russell's testimony -- do you have  
25 that with you?



0759

1 A Yes, I have it.

2 Q Okay. If you can refer to page 19?

3 A (Complies.) I am there, yes.

4 Q Okay. As I understand it, Mr. Russell  
5 is -- and this is referring to your original  
6 proposal in this case, that you're proposing that  
7 the PCORC expenses be both deferred and expensed,  
8 and that could result in double recovery. Is  
9 that a valid criticism?

10 A I believe so. It wasn't intended to be  
11 double recovery. We should have indicated those  
12 costs should have been removed if they were to be  
13 deferred. It's kind of a nonissue at this point,  
14 because we have agreed with Mr. Russell.

15 Q And can you explain -- and you are talking  
16 with respect to the PCORC case?

17 A Yes.

18 Q And that was -- you filed a deferred  
19 accounting petition, and it was consolidated into  
20 this case, correct?

21 A I believe so, yes.

22 Q And it's my understanding that there's a  
23 debate that's been going on about whether these  
24 kinds of costs should be normalized, or treated  
25 as a regulatory asset and deferred and amortized;

0760

1 is that right?

2 A No.

3 Q What is the debate?

4 A The debate is on the general rate case  
5 type of costs, the PCORC costs we filed a  
6 petition for. It was a new type of regulatory  
7 proceeding where there was no history on what to  
8 do with those types of costs. That's why we  
9 filed a petition. The debate now is whether you  
10 normalize or defer and amortize the general rate  
11 type costs, which have been allowed since the  
12 early '80s.

13 Q And your position on the general rate  
14 costs is to continue this deferral and  
15 amortization?

16 A Yes. It's a better matching of revenues  
17 and expenses. It's more accurate on tracking the  
18 costs.

19 Q But on the PCORC expense you are agreeing  
20 with the Staff's position to normalize the  
21 expense of PCORC cases?

22 A Yes.

23 Q And why should the PCORC cases be treated  
24 in a different way than the general rate case  
25 costs?

0761

1       A    They are generally not as expensive.  I  
2   mean, it was new to us.  The last case was fairly  
3   expensive.  We had costs that we're now  
4   performing in that are a little less than what  
5   that case added up to.  But it's -- I would say  
6   it's just the magnitude of the dollars and the  
7   matching of revenues and expenses.

8            The PCA or the PCORC type costs with the  
9   current addition of new assets are most likely  
10  going to fall in this range.  So it's --

11       Q    You referred to two numbers, one being  
12  what the 2003 PCORC case was, and the other being  
13  what you are performing into rates.  Do you have  
14  those two numbers available?

15       A    I don't understand the question.

16       Q    What the cost of the 2003 PCORC case is  
17  compared to what you are assuming for PCORC  
18  cases.

19       A    The assumption that Mr. Russell made was  
20  about \$1.3 million to be normalized over two  
21  years.  I do not have the total of the 2003 PCORC  
22  with me.  Wait just a moment, and let me check  
23  something here.

24       Q    Sure.

25       A    No.  I don't.

0762

1 Q And so I think what you described as \$1.2  
2 million to normalize, that you are dividing by  
3 two, basically?

4 A \$1.3 million divided by two.

5 Q And so that assumes you are going to have  
6 a PCORC case every two years?

7 A That's the assumption behind  
8 normalization, and that's one of the problems we  
9 have with a general rate case making that kind of  
10 assumption. But it's something that will have to  
11 be trued up in the future if that proves not to  
12 be true.

13 Q And do you have any current plans to file  
14 a PCORC case?

15 A We have plans on filing cases. As to  
16 which type of case, that hasn't been finalized.  
17 It depends on the timing of the asset coming in.  
18 With the wind power coming on, there's a good  
19 likelihood that could be a PCORC, but I wouldn't  
20 guarantee it. It could be a general rate case,  
21 depending on time.

22 Q Would that be 2005?

23 A The current schedule is that the wind  
24 power could be available by the end of 2005, yes.

25 Q I would like to turn your attention to

0763

1 Exhibit 247 C.

2 A (Complies.) If I can take a minute to  
3 clear some of these books out of the way. I have  
4 it, yes.

5 Q This Data Response to ICNU 5.02 provides  
6 the billings for the expenses incurred in this  
7 case; is that correct?

8 A To date, yes.

9 Q And on page 5 of that exhibit, that's a  
10 summary of those costs as of August 25th of this  
11 year; is that correct?

12 A Correct.

13 Q And on page 5 of that exhibit is a  
14 Supplemental Response from December 8 that  
15 provides additional invoices; is that correct?

16 A Did you say November 8 or December 8?

17 Q December 8.

18 A Yes.

19 Q And if you could turn to Exhibit 249 C.

20 A (Complies.) I have it, yes.

21 Q This is a spreadsheet that Mr. Schoenbeck  
22 prepared to update the spreadsheet that was on  
23 page 5 of page 247 with the new information that  
24 you provided in the supplemental response. Have  
25 you looked at this exhibit?

0764

1 A Yes, I have.

2 Q And does it accurately reflect the  
3 billings to date on this case?

4 A No, it doesn't.

5 Q And in what regard is it incorrect?

6 A It missed one of the invoices, so it's  
7 actually a little low.

8 Q Can you tell us where that fits in at?

9 A I can tell you the amount. I can't tell  
10 you where it fits in at. It's about \$106,000.

11 Q And who was that an invoice from?

12 A EEG.

13 Q And what month was that for?

14 A I just gave you all the information I  
15 have. I am sorry. I would imagine it's for one  
16 of those three months since August 25th.

17 Q And are there any other invoices that  
18 aren't reflected, that you have received that  
19 aren't reflected on this exhibit?

20 A Yes. When we sent this out it was  
21 actually based on a run that was done on 12/1, I  
22 believe. And we have since put together another  
23 Supplemental based on 12/10, which would make  
24 these costs about \$700,000 higher. And I believe  
25 that's either ready to go out, or has gone out.

0765

1 Q So have you prepared a spreadsheet which  
2 has all of those invoices on it, and has the  
3 correct number that is similar to this?

4 A No.

5 MR. VAN CLEVE: Your Honor, I am wondering  
6 whether, as a Record Requisition Request we could  
7 have the Company basically update the summary on  
8 page 5 of Exhibit 247 that it provided of the  
9 total expense for this case.

10 JUDGE MOSS: And didn't I just understand  
11 that Exhibit 249 updates that through a fairly  
12 recent period?

13 MR. VAN CLEVE: What I understood was  
14 there is \$700,000 of costs that we haven't seen  
15 the invoices for.

16 JUDGE MOSS: And my question is, do we  
17 need the invoices, or can we rely on Mr. Story's  
18 testimony and do the simple addition?

19 MR. VAN CLEVE: Well, I would like to know  
20 where they break down for the various categories.

21 JUDGE MOSS: That seems reasonable.

22 THE WITNESS: The new Data Response will  
23 do that. We're filing Supplementals all the  
24 time.

25 MS. DODGE: That may be on our chairs as

0766

1 we speak, so we're happy to provide the  
2 supplement. It's a question of whether the  
3 invoices come through and they get rolled  
4 through.

5 JUDGE MOSS: What would you propose? Is  
6 it for your information or part of the record?

7 MR. VAN CLEVE: I would like it to be part  
8 of the record, Your Honor.

9 JUDGE MOSS: Should we make it part of  
10 Exhibit 249, or should it be a separate exhibit?

11 MS. DODGE: We were prepared to object to  
12 249, because it wasn't accurate, but we're happy  
13 to work with counsel to get an accurate 249 that  
14 we wouldn't object to, that had the summary.

15 JUDGE MOSS: That would include the  
16 corrections Mr. Story has testified to?

17 MS. DODGE: Yes.

18 JUDGE MOSS: Is that satisfactory?

19 MR. VAN CLEVE: Yes.

20 JUDGE MOSS: That's what we will do. And  
21 we could have that as early as tomorrow morning,  
22 or perhaps even today?

23 MS. DODGE: I don't think so.

24 JUDGE MOSS: I thought you said it might  
25 be available now?



0767

1 MS. DODGE: In Bellevue. I have other  
2 chairs normally.

3 JUDGE MOSS: Well, that will be  
4 satisfactory, won't it?

5 MR. VAN CLEVE: Yes, it will. I don't  
6 have any other questions.

7 I would like to move to admit 247 C, and I  
8 guess, as well as 249, as it will be corrected.

9 JUDGE MOSS: And I understood the only  
10 objection was it needs some correcting, and we'll  
11 have the Company solve that. So there's no other  
12 objection.

13 249 will be admitted, and no objection on  
14 247 C. It will be admitted.

15 (EXHIBITS 247 C and 249 RECEIVED.)

16 JUDGE MOSS: Do you wish to offer the  
17 other exhibits you have identified?

18 MR. VAN CLEVE: No.

19 MS. DODGE: We would suggest that the next  
20 supplemental would be added to 247, unless --

21 MR. VAN CLEVE: That would be fine.

22 JUDGE MOSS: Rather, have it be part of  
23 247 than 249?

24 MS. DODGE: Well, 249 is the overall  
25 summary, and 247 is the detailed backup.

0768

1 JUDGE MOSS: So which is it?

2 MS. DODGE: Both.

3 JUDGE MOSS: So we will have some  
4 supplemental material in 247 and 249, and you  
5 understand I'll need eight copies. And that  
6 completes Mr. Van Cleve's questions.

7 So, let's see, we have just been going  
8 around here. Mr. ffitch, you had about 15  
9 minutes -- I'm sorry, wrong witness -- 15  
10 minutes, yeah, for this witness.

11 MR. FFITCH: Thank you, Your Honor I don't  
12 have that much. But let me do what I have here.

13

14 CROSS EXAMINATION

15

16 BY MR. FFITCH:

17 Q Good afternoon, Mr. Story.

18 A Good afternoon.

19 Q I'm not sure if you are the right witness  
20 for this question, so straighten me out if I am  
21 wrong.

22 What it is the Company's proposal for  
23 storm damage in the case? Is that something that  
24 you are able to testify about, just the  
25 methodology?

0769

1 A Actually that was Ms. McLain.

2 Q Okay. I was, as I indicated, unsure about  
3 that. The only other matter I have is that we  
4 had a question deferred to you regarding the  
5 cumulative impact of various rate changes for the  
6 Company.

7 MR. FFITCH: And I wanted to indicate to  
8 the bench that we have been having discussions  
9 with both Mr. Story and counsel about the  
10 response. They have prepared a couple of  
11 spreadsheets for me to look at.

12 As far as I can tell, it's not what I was  
13 looking for, and it doesn't put the information  
14 together in the sort of format that I had asked  
15 for. And what I had proposed with the Company  
16 was that my consultant, Mr. Lazar, will be back  
17 tomorrow, and I wanted to confer with him and  
18 then probably with the Company again, sort of ask  
19 the question in a technically correct way, which  
20 I wasn't able to do as a lawyer, and take a look  
21 at what they have provided and see if we can  
22 frame our question in a proper fashion. And then  
23 present it by way of Response to a Record  
24 Requisition to the bench.

25 JUDGE MOSS: Company agreeable to that

0770

1 process?

2 MS. DODGE: Actually we would propose that  
3 Mr. Story be permitted to answer the question  
4 that was deferred by two witnesses to him. I  
5 don't believe Mr. Ffitch likes the answer. If he  
6 would like additional opportunity to ask  
7 Mr. Story about the data and the question once he  
8 has his expert with him, we don't object to that  
9 for tomorrow.

10 JUDGE MOSS: I have a sneaking suspicion  
11 that it will come out on redirect. So let's  
12 finish our cross-examination. Or if Mr. Ffitch  
13 wishes to put the question to the witness, he  
14 can. I'm not suggesting that you need to.

15 MR. FFITCH: I am just asking if we can  
16 defer -- we had originally proposed this could be  
17 done by Records Requisition, because I don't have  
18 a consultant to work with on these spreadsheets.  
19 I'm not -- you know, I'm really not in a position  
20 to ask detailed questions about what I have been  
21 given.

22 I will say that I did ask for the impact  
23 on an average typical residential customer who  
24 uses both gas and electric, and what I have is  
25 two separate spreadsheets, one for electric and

0771

1 one for gas rate changes. It doesn't really put  
2 it in terms of a customer bill.

3 And I'm not really in a position to deal  
4 with this in any kind of useful way  
5 at this point. So I am asking for an opportunity  
6 to confer with the Company after I have my  
7 consultant here, and see if we're asking the  
8 right question, and if they are answering the  
9 right question.

10 JUDGE MOSS: If we need to recall  
11 Mr. Story, then you can certainly ask for that  
12 tomorrow. I think tomorrow will be our last day.  
13 So you can confer with Mr. Lazar and see what  
14 needs to be done. I'm not sure what else you are  
15 asking of me at this point, if anything.

16 MR. FFITCH: I'm asking if we can, you  
17 know, have a Records Requisition placeholder to  
18 the Company so we can confer with them tomorrow,  
19 and have them produce an answer to the right  
20 question.

21 But what I've got right now doesn't appear  
22 to be responsive. And if we get this into the  
23 record, we will be creating more work by trying  
24 to reframe it, undo it, amend new material  
25 tomorrow.

0772

1 JUDGE MOSS: When you are prepared to  
2 state your Records Requisition, why don't you do  
3 that. And you don't need a placeholder for a  
4 Records Requisition. It's directed to the  
5 Company, not to a specific witness. And whoever  
6 in the Company is best equipped to provide the  
7 answer will do so. So let's review that tomorrow  
8 when we have the information that you need.

9 MR. FFITCH: Thank you, very much.

10 JUDGE MOSS: Does that complete your  
11 questioning?

12 MR. FFITCH: Yes. Thank you.

13 JUDGE MOSS: Mr. Cedarbaum, you had  
14 indicated 20 minutes for this witness. Do you  
15 still have questions?

16 MR. CEDARBAUM: Yes, I do.

17

18 CROSS EXAMINATION

19

20 BY MR. CEDARBAUM:

21 Q And, Mr. Story, in my first series of  
22 questions I will be asking you to look at  
23 Exhibits 56 and 54. 54 is already in the record;  
24 56 is not. Maybe if your counsel could provide  
25 you copies, that would be helpful.

0773

1       A    I believe I have Exhibit 56.  I do not  
2   have 54.

3       Q    54 is the annual report that we discussed  
4   with Mr. Reynolds, and as you know, 56 is a Data  
5   Request Response.

6            JUDGE MOSS:  And it was originally part of  
7   Mr. Reynolds, for those who haven't rearranged  
8   their books.

9            THE WITNESS:  I have it now.

10       Q   BY MR. CEDARBAUM:  By turning -- to get  
11   some context here, in your Exhibit 237 C, which  
12   is the rebuttal testimony, at page 4, on line 9,  
13   you answer a question with respect to the \$72  
14   million deferred tax issue.  Do you see that  
15   general discussion?

16       A    This is the question that says, "Would you  
17   please discuss the Commission Staff adjustment?"

18       Q    Yes, with respect to deferred taxes.  And  
19   it's specific to that \$72million figure.

20       A    Yes.

21       Q    Turning to Exhibit 56 for identification,  
22   do you recognize this as the Company's Response  
23   to Staff Data Request 3 of 3?

24       A    Yes.  That's correct.

25       Q    And in the Data Request we asked the

0774

1 Company to provide revised Commission base  
2 reports for electric and gas operations for 2002  
3 and 2003 year-ending, giving effect to not only  
4 the \$72 million deferred tax item, but all of the  
5 other deferred tax items that you reference in  
6 your rebuttal case.

7 And then you also associated working  
8 capital calculation revisions; is that correct?

9 A That is right.

10 Q And then turning to the third page of the  
11 exhibit, this is the 2003 portion of the response  
12 for the electric side of the business, right?

13 A That's correct.

14 Q And in the middle column, the bottom  
15 line -- so it's the middle of those three numbers  
16 on the bottom line, the actual results of  
17 operation giving effect to the conservation trust  
18 for 2003 produced a rate of return of 8.56  
19 percent?

20 A That's correct.

21 Q And then on page 4, a comparable number  
22 for the gas side of the business is 7.70 percent;  
23 is that right?

24 A That's correct. I believe that number is  
25 wrong. I noticed on another exhibit I was



0775

1 looking at last night when you divide 82 point --  
2 \$82,184,876 by the rate base it actually comes  
3 out to 7.9.

4 Q Okay. So 7.7 should be 7.9? Is it  
5 possible through the information on pages 3 and 4  
6 of the exhibit to calculate a combined rate of  
7 return for 2003 actual results of operations,  
8 total company?

9 A That would be accurate based on the rate  
10 base that is normally allowed for rates, yes.

11 Q Do you know what that number is?

12 A No.

13 Q We would derive it, though, by adding up  
14 the net operating income for electric and gas,  
15 and dividing by the rate base for electric and  
16 gas, if you do that math?

17 A Yes.

18 Q I believe in some discussions with Mr. Van  
19 Cleve you indicated that there were 2003 power  
20 costs that the Company absorbed. Do you recall  
21 that general discussion?

22 A Yes, I believe it was an example that I  
23 was giving. Like I said, I don't have those  
24 numbers with me, so I don't know exactly what  
25 they are.

0776

1 Q But there were 2003 power costs. You may  
2 not be sure of the specific number, but  
3 generally --

4 A Yes. Yes.

5 Q Are those power costs reflected in Exhibit  
6 56, if you know?

7 A This states actual results of operations,  
8 so it should include those power costs.

9 MR. CEDARBAUM: Your Honor, I would move  
10 the admission of Exhibit 56.

11 JUDGE MOSS: It will be admitted.

12 (EXHIBIT 56 RECEIVED.)

13 Q BY MR. CEDARBAUM: On Exhibit 54,  
14 Mr. Story, the last page which is page 9, do you  
15 have that?

16 A I'm sorry?

17 Q We're on Exhibit 54 now.

18 A Okay. (Complies.)

19 Q Turning to the last page, there's -- the  
20 third number down is associated with a line that  
21 says, "Percentage Colder or Warmer Than Average."  
22 And for 2003 there's a negative 6 percent. Does  
23 that -- am I reading this correctly to read that  
24 that means 2003 was 6 percent warmer than normal?

25 A I'm not familiar with this report, but

0777

1 based on the way the signs are in the titles on  
2 the left I would say, yes, that's warmer than  
3 normal.

4 Q Is it true that, generally speaking,  
5 warmer than normal temperatures adversely affect  
6 a company's earnings, everything else being  
7 equal?

8 A I think it sort of depends on time of  
9 year. When you are looking at an annual number  
10 like this, that's probably correct.

11 MR. CEDARBAUM: I am done with 54 and 56  
12 so we can set that aside.

13 Q BY MR. CEDARBAUM: And going back to the  
14 \$72 million deferred tax amount that you discuss  
15 on page 4 of your rebuttal. That amount is  
16 associated with tax deductions that the Company  
17 has claimed, but for other tax payers is being  
18 reviewed by the IRS; is that correct?

19 A It's actually -- everyone is on notice  
20 that it's being reviewed.

21 Q And you are agreeable with the Staff on  
22 the \$72 million amount, but you are asking the  
23 Commission that if the IRS were to later disallow  
24 these deductions, that the Commission allow the  
25 Company to adjust its rates to recover any

0778

1 revenue loss as a result of applying this rate  
2 for rate making purposes?

3 A Could you direct me to the exact testimony  
4 you are looking at?

5 Q We're on page 6, lines 18 to 21.

6 A Yes. Yes.

7 Q And you are also requesting that the  
8 Commission give you preauthorization to include  
9 recovery of any IRS assessed interest?

10 A Basically that would be equivalent to  
11 revenues, correct.

12 Q Has the IRS acted upon this issue, as far  
13 as you know, for any of the tax payers that are  
14 under review?

15 A No. The way the IRS works on a review  
16 like this is you have to have all other issues  
17 within a tax year resolved. So this is a fairly  
18 new issue with the IRS. And so until somebody  
19 has a clean return, other than this issue it  
20 won't be acted on and taken any further. But  
21 that could happen at any time.

22 Q But the issue is currently unresolved?

23 A It's currently unresolved, and there's no  
24 indication from the IRS -- I've not talked to the  
25 tax department recently, but last time I talked

0779

1 to them, exactly which way they were going to go.  
2 But it's looking like more and more they are  
3 going to take it to court.

4 Q You can't be sure which way they are going  
5 to go, or when they are going to go, whichever  
6 way they go?

7 A When they indicate they are going to take  
8 something further, and it's in the national  
9 office, it's going to go further.

10 Q The result of all of that is  
11 unpredictable, both in terms of substance and  
12 timing?

13 A Anything that goes to court is, yes.

14 Q Turning to a different topic on page 10,  
15 you discuss the storm damage adjustment. And  
16 then if you look at page 31 of Exhibit 238,  
17 that's where the adjustment appears; is that  
18 correct?

19 A Could you give me the second reference?

20 Q Page 31 of Exhibit 238 C.

21 A That is correct.

22 Q This is your storm damage adjustment?

23 A Yes.

24 Q Can you point to me on the page which  
25 dollar amount the Company proposes to amortize in

0780

1 the rate year for storm damage costs?

2 A It's on line 11. That's the six-year  
3 average of the storm expense that would be used  
4 for normalization.

5 Q I guess I'm not clear, then. What is the  
6 amount on line 21 that says three-year  
7 amortization for rate year?

8 A That's the 18 million 497 on line 19  
9 divided by three years. That's the catastrophic  
10 storms that have already been deferred.

11 Q So that's the amount that the Company's  
12 proposing to amortize over three years for  
13 catastrophic storms?

14 A Under the old definition, yes.

15 Q I had a few questions for you about tree  
16 watch which you we discuss at page 16 of your  
17 rebuttal. And you indicate that the Company and  
18 Staff are in agreement about including a \$2  
19 million expense amount for that program; is that  
20 right?

21 A That's correct.

22 Q My question basically goes to the ability  
23 of the Company's accounting system to track those  
24 expenses.

25 So I guess my first question is, do you

0781

1 have an accounting system in place that is  
2 capable of tracking that system on a going  
3 forward -- tracking those costs on a going  
4 forward basis?

5 A Yes. What we can do is set up a project  
6 that they can be tracked whether they are charged  
7 to O&M or construction.

8 Q Does the Company have any objection if the  
9 accounting tracking system were ordered by the  
10 Commission?

11 A I don't believe so, no.

12 Q And would the Company object to working  
13 with Staff, or at least advising Staff on what  
14 was to be done, and how to do that?

15 A That would be fine.

16 Q If you could turn to page 19 of your  
17 testimony, you discussed property taxes.

18 A That's correct.

19 Q And then at lines 11 to 12 you say that  
20 the Company had proposed, and is proposing, to  
21 amortize the payment of this assessment over  
22 three years?

23 A That's right.

24 Q Make sure I have the right page for you.  
25 If you could go back into Exhibit 238 C, page

0782

1 2.11?

2 A I have it, yes.

3 Q Actually, I guess that -- I guess it  
4 should be page 16, as well, but my particular  
5 copy doesn't say page 16.

6 A This is one of the revised exhibits that  
7 came in, and it looks like the page numbering is  
8 missing.

9 Q So we could add a page 16 to that?

10 A Yes.

11 Q This shows your property tax adjustment,  
12 your proposal to spread the Oregon property tax  
13 payment, and specifically that is shown at line  
14 5, which has a three-year proposal for spreading  
15 that cost; is that right?

16 A That's correct.

17 Q And your adjustment is to divide the  
18 amount on line 5 by three years to determine an  
19 average amount to include in rates; is that  
20 right?

21 A Well, that's not quite how the adjustment  
22 is working, but the three million eight was  
23 included in the test year. And to get the right  
24 amount to be included in the test year, we're  
25 adjusting one year away from that, and then



0783

1 taking the remaining two years out of the test  
2 period.

3 Q So are you saying that -- I guess I  
4 thought that line 6 was line 5 divided by three?

5 A That's correct. But I thought what you  
6 were saying is we were putting one year in.  
7 We're actually taking two years out.

8 Q Is the amount on line 5 expensed on the  
9 test period?

10 A That's correct.

11 Q And is it true that for financial  
12 reporting purposes you are not proposing to  
13 restore the amount on line 5 to earnings, or  
14 create a regulatory asset for that item; is that  
15 right?

16 A No. This would be an adjustment to rates.

17 Q So your answer is, yes, you are not  
18 proposing to restore that amount to earnings or  
19 create a regulatory asset for that amount?

20 A My answer was, no, we're not planning on  
21 doing that. Double negative.

22 Q Too many double negatives. Let's talk  
23 about the rate case expense adjustment, and  
24 there's already some evidence in the record that  
25 Mr. Van Cleve offered on this point. But if you

0784

1 could turn to Exhibit 251.

2 A Could you tell me what the other --

3 Q It's Data Request 314.

4 A (Complies.) I have that.

5 Q Okay. We asked you to provide the amounts  
6 expended so far as of the date of this response  
7 for the services of Dr. Cicchetti for this  
8 proceeding, and you indicated that as of the end  
9 of October for both Dr. Cicchetti and Dr. Dubin,  
10 the amount was just over \$427,000?

11 A That's correct.

12 Q And am I correct that what Mr. Van Cleve  
13 discussed with you in Exhibit 249, and the  
14 updates that will come in for 247 and 249, will  
15 be able to give us an accurate update for the  
16 amount that is shown on the exhibit that you and  
17 I are discussing?

18 A That's correct.

19 Q And the costs for the Pacific Economic  
20 Group are the amounts that are reflected in your  
21 rate case adjustment for this particular case?  
22 You are including the costs of Pacific Economic  
23 Group in your rate case adjustment in this 2004  
24 rate case?

25 A Yes. But not based off of invoices that

0785

1 are coming to date. Right.

2 Q I think it's already been covered, but the  
3 rate case costs to this case are currently being  
4 deferred by the Company?

5 A That's correct.

6 Q And the same is true -- that is true both  
7 for outside consultants and outside counsel  
8 costs; is that right?

9 A That's correct. And some services that  
10 would normally not be incurred that are also  
11 outside that wouldn't normally be called  
12 consulting or legal.

13 Q On page 22 of your rebuttal testimony you  
14 refer to some Commission orders in support of the  
15 Company's position to defer and amortize, versus  
16 Staff's position to normalize.

17 And is it the Company's position that the  
18 express language of these orders authorizes the  
19 Company to amortize and defer rate case costs?

20 A Well, within that order they approve the  
21 accounting that is within the code of amortizing  
22 those costs. And you would have to defer them to  
23 amortize them.

24 Q So it's your testimony that the express  
25 language of the orders in their totality in

0786

1 dealing with rate case costs authorize the  
2 Company to defer rate case costs?

3 A It is our understanding that that is an  
4 allowable practice. I'm not sure --

5 Q I am trying to understand whether you base  
6 that understanding on the express language of the  
7 Commission orders or not?

8 A Yes.

9 Q And in doing so, are you -- are you taking  
10 from the Commission orders the notion that  
11 amortization implies deferral?

12 A Yes. In accounting I don't know how you  
13 would amortize anything without having it on the  
14 balance sheet.

15 Q Can you tell me, either with respect to  
16 Puget Sound Energy, or its predecessor Puget  
17 Sound Power & Light, when the Company first began  
18 to defer rate case costs?

19 A I know it had them in 8238, and I believe  
20 it had them in 8010, and maybe 7846. Those are  
21 the docket numbers. I'm not sure what followed  
22 in front of them back in those years.

23 Q So it's on the basis of the orders from  
24 those early 1980s cases that the Company --

25 A Actually this has been true in every

0787

1 general rate case we have had. We deferred the  
2 costs and amortized them --

3 Q I'm sorry. Go ahead.

4 A -- that I'm familiar with.

5 Q And I'm trying to understand what  
6 Commission order it was, or orders, that the  
7 Company first interpreted those orders to  
8 allow -- to authorize amortization of deferral.  
9 And I think you said you gave some docket numbers  
10 from the '80s, and that's fine if those are your  
11 understanding.

12 A Those could have been the first ones, but  
13 the orders we have had ever since then have had  
14 the same type of language. So every order  
15 creates its own new way of doing it.

16 Q Has the Company currently, or its  
17 predecessor, ever filed an accounting petition  
18 with the Commission asking for authority to defer  
19 rate case costs?

20 A For the PCORC we did, but not for the  
21 general rate case, no.

22 Q Just a couple of more questions on rate  
23 case costs. On page 25 of your testimony you  
24 talk about FERC order 552.

25 A That's correct.

0788

1 Q And then on line 4 you reference some  
2 indications from FERC Staff. Were those  
3 indications oral indications, or anything  
4 written?

5 A Actually it's both. The PDI has a liason  
6 group that meets with FERC Group Staff. We have  
7 a letter from that group explaining a meeting  
8 they had where FERC Staff expressed 182.3 is the  
9 preferred account. 186 is probably all right.  
10 If the Commission wants to approve a 186 account,  
11 they are not going to take exception to it.

12 Q You didn't provide any written  
13 documentation of those communications?

14 A I don't believe we were asked to.

15 Q It's your rebuttal testimony. You didn't  
16 include those documents in your rebuttal  
17 testimony?

18 A I didn't include a lot of documents in my  
19 rebuttal testimony that I relied on for the  
20 rebuttal.

21 Q And is it the Company's interpretation of  
22 FERC order 552 that the order specifically  
23 addresses the topic of deferring rate case costs?

24 A No. It addresses the setup of 182  
25 accounts.

0789

1 Q I am done with rate case costs. I just  
2 have a couple of remaining questions on  
3 market-to-market accounting, so a big change of  
4 gears here.

5 A I beg your pardon, market-to-market  
6 accounting?

7 Q Yes. Are you familiar with  
8 market-to-market accounting for the energy  
9 industry?

10 A Yes.

11 Q Is it correct that there are certain  
12 exemptions for regulating utilities from the  
13 financial and accounting standard board's  
14 market-to-market accounting requirements with  
15 respect to physical and financial hedges entered  
16 by the utility to serve native load?

17 A You are talking SAF 133?

18 Q I believe so, yes. Well, I guess, let me  
19 clarify. I guess I'm asking if that's -- if  
20 that's where those exemptions exist, then that's  
21 what I would like to know. I would like to know  
22 if the exemptions exist, and if they do, where  
23 they are. If you are telling me that's where  
24 they are, that's fine.

25 A That's kind of a difficult question. SAF

0790

1 133 is the derivative accounting pronouncement  
2 that came out probably -- I don't know the exact  
3 date, but four or five years ago. It has a lot  
4 of interpretations and guidance associated with  
5 it. That would most probably duplicate the paper  
6 that is in this rate case.

7           So I'm not sure exactly what you are  
8 looking for, but that would be the area I would  
9 go to to determine the exemptions.

10 Q Are there exemptions?

11 A Well, I did just use the term exemptions.  
12 I wouldn't call them exemptions. It's kind of  
13 complex, and it's been awhile since I looked at  
14 SAF 133.

15           What happens -- actually I don't want to  
16 get into it, because I'm not that familiar with  
17 it. But that's where you would find it.

18 Q If you are not comfortable speaking about  
19 it, that's fine.

20           MR. CEDARBAUM: Your Honor, that completes  
21 my questioning. I would only offer Exhibit 251,  
22 and I will not offer 250 based on the correction  
23 Mr. Story gave this afternoon.

24           JUDGE MOSS: Hearing no objection to 251,  
25 it will be admitted.



0791

1 (EXHIBIT 251 RECEIVED.)

2 MR. FFITCH: Your Honor, Mr. Story, in the  
3 event, did discuss storm damage. And I believe  
4 we might not have been communicating. I think he  
5 may well know the answer to the question I have.  
6 He actually addressed the very topic I was going  
7 to ask him about.

8 JUDGE MOSS: Well, ask your storm damage  
9 question, then.

10

11 RE CROSS EXAMINATION

12

13 BY MR. FFITCH:

14 Q Mr. Story, you just testified that the  
15 Company uses a six-year average for their storm  
16 damage normalization?

17 A That is correct.

18 Q Is that a rolling average?

19 A No. Well, it's not what I would call a  
20 rolling average like in statistics. I mean, we  
21 use the last six years to determine an average  
22 price for what we would consider storms going  
23 forward.

24 Q But at any point, you go to the  
25 immediately preceding six years?

0792

1       A    As they are adjusted to catastrophic  
2   storms, that's correct.  It's just an accounting  
3   convenience for coming up with a rate.  You have  
4   to have something to base a rate on, and it's not  
5   uncommon in accounting to use historical numbers  
6   to come up with an average.

7           MR. FFITCH:  All right.  Thank you.

8           JUDGE MOSS:  Are there questions for  
9   Mr. Story from the bench?  Apparently not.

10

11                               EXAMINATION

12

13   BY JUDGE MOSS:

14       Q    I have one clarifying question, Mr. Story,  
15   and I am looking at page 15 of your rebuttal  
16   testimony.

17       A    (Complies.)  Yes.

18       Q    There at line 10 you say the sales for  
19   resale are projected to be 27,538,684.  When I  
20   looked over at Exhibit 238, I am not sure about  
21   the page numbering here, but it's about the  
22   fourth page in, the 2.04 adjustment.

23           Do you see that?  These are the summary  
24   sheets at the front of the exhibit.

25       A    Yes.  Yes.  Right.

0793

1 Q Now, as I was toying with the math, which  
2 is always a dangerous thing for a judge to do, it  
3 appears that the 27 million some odd figure was  
4 the difference between the sales for resale shown  
5 in the column marked 2.04, and the actual results  
6 of operations.

7 Is that what the 27 million represents, or  
8 is that the actual projected amount of sales for  
9 resale?

10 A That is the actual projected. Line 3  
11 shows what was the actual sales for resale during  
12 the test period. And then on line 3 the  
13 difference is shown for the adjustment, the 171  
14 million.

15 JUDGE MOSS: Okay. I just wanted to  
16 clarify that one point. And there may be some  
17 redirect.

18 MS. DODGE: Yes. Thank you, Your Honor.

19

20 REDIRECT EXAMINATION

21

22 BY MS. DODGE:

23 Q Mr. Story, you were asked about Exhibit  
24 56.

25 A Yes.

0794

1 Q Which contains Commission basis reports?

2 A It's the summary sheet for Commission  
3 basis reports. That's correct.

4 Q And you were directed to the rate of  
5 return information on those sheets, on those  
6 Commission basis report summary sheets?

7 A Yes.

8 Q Would you please describe what Commission  
9 basis reports are, and how they do or do not  
10 relate to the Company's actual financial  
11 performance?

12 A Well, the column that is -- that  
13 Mr. Cedarbaum was talking about actually is the  
14 actual results of operation. It's before any  
15 adjustments.

16 The total adjustments are shown in the  
17 second to last column, and then the adjusted  
18 results are shown in the last column. So the  
19 last column is a regulatory report that has been  
20 adjusted for restating adjustments, and no  
21 proforma adjustments.

22 Q What does that mean?

23 A You use selected adjustments to adjust  
24 your actual results of operation, and it provides  
25 you a sort of a pseudo result of operation.

0795

1 Pseudo from the accounting sense is that it's not  
2 really been adjusted entirely for rate making.

3 It's trying to take some of the restating  
4 adjustments out of the period to give you an idea  
5 of what would happen if some of the non-recurring  
6 type items were adjusted out of the operations.

7 Q Have you had an opportunity to review the  
8 question that was asked of Mr. Reynolds and  
9 Mr. Gaines about the percentage increase in rates  
10 for residential gas and electric customers since  
11 2002?

12 A Yes, I have.

13 Q And what is the answer to that question?

14 A For the gas customers, cumulative change  
15 is a negative 4.46 percent, taking into  
16 consideration any margin related change, and gas  
17 cost changes since the end of 2001. That would  
18 have included the time period for the last  
19 general rate case.

20 For the electric residential customer,  
21 depending on the starting point, if we were to  
22 use 2001, the same as the gas, it would have been  
23 a minus 2 percent cumulative change. And the  
24 major reason for that was the BPA credit exchange  
25 increasing.

0796

1           MR. FFITCH: Your Honor, I guess this is  
2 not exactly an objection, but this is  
3 represented, I believe, by Puget's counsel and  
4 the witness as a response to the question that we  
5 asked.

6           This is the subject of the Records  
7 Requisition that we were just discussing, and I  
8 would just like to note for the record that it is  
9 our -- we do not agree that the testimony that  
10 was just given answers the question that we  
11 asked. And we will continue to present our  
12 question to the Company in a Records Requisition  
13 and seek an answer to that, and present that at a  
14 later time.

15          JUDGE MOSS: So noted. Do you have any  
16 more questions, Ms. Dodge?

17          MS. DODGE: Just one.

18          CHAIRWOMAN SHOWALTER: Can I ask a follow  
19 up on that one before we leave. Was that stated  
20 in nominal dollars? It was stated as a  
21 percentage, but was it stated as nominal dollars?

22          THE WITNESS: It's not been adjusted to  
23 present value.

24          CHAIRWOMAN SHOWALTER: Thank you.

25          Q BY MS. DODGE: Mr. Story, yesterday

0797

1 Mr. Hill brought up the tax benefit on Rainier  
2 receivables and whether it's passed through to  
3 rate payers or not.

4 A Yes.

5 Q Could you please describe any tax benefit  
6 on Rainier receivables and how it's treated?

7 A The way Rainier receivables is treated for  
8 rate making is we do consolidate the balance  
9 sheet and income statement with the utility's  
10 balance sheet and income statement. And Mr. Hill  
11 was correct on that.

12 He was incorrect on stating that then  
13 rolled up to PSE any benefits to Rainier. The  
14 way the benefits pass through to the rate payers,  
15 is that -- Mr. Gaines' capital structure takes  
16 into consideration the cost of the Rainier  
17 receivables as short term debt. That becomes an  
18 embedded interest rate cost that we use in the  
19 proforma interest calculation. And the proforma  
20 interest is applied against rate base that is  
21 being built in for both the gas and the electric.

22 Any tax benefit associated with that  
23 proforma interest is passed through to the rate  
24 payer.

25 JUDGE MOSS: Subject to the possibility of

0798

1 recalling Mr. Story, that would appear to  
2 complete our questions for you so. For the time  
3 being, you may step down, and we thank you very  
4 much for your testimony.

5 We're going to take an early recess. And  
6 we clearly cannot finish Mr. Russell, and we have  
7 Mr. Schoenbeck and Ms. Ryan tomorrow, anyway. So  
8 we will come back in the morning at 9:30. And we  
9 will discuss then what order would be best from  
10 the party's perspective. I would guess we  
11 dispense with Russell and move on, but we will  
12 talk about that.

13 We're in recess. Enjoy your evening.

14 ENDING TIME: 4:30 P.M.

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