

COMMONWEALTH OF PENNSYLVANIA

PUBLIC UTILITY COMMISSION

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Pennsylvania Public Utility Commission,  
et al. versus Philadelphia Electric Company.  
Investigation into a requested \$660 million  
annual rate increase.

:  
:  
: Docket No.  
: R-850152

Further hearing

: **RECEIVED**

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Pages 255 through 453

Hearing Room 3  
North Office Building  
Harrisburg, Pennsylvania  
SECRETARY'S OFFICE  
Public Utility Commission

DEC 17 1985

Thursday, December 12, 1985

Met, pursuant to adjournment, at 10:10 a.m.

BEFORE:

JOSEPH MATUSCHAK, Administrative Law Judge

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**DOCKETED**  
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C O N T E N T S

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NUMBER

FOR IDENTIFICATION    IN EVIDENCE

OCA Exhibits

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✓ No. 23 (IR-OCA-6-5) ✓

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Governor's Energy Council Exhibit

✓ No. 1 (IR-GEC-2-2) ✓

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P R O C E E D I N G S

1 ADMINISTRATIVE LAW JUDGE JOSEPH MATUSCHAK: This  
2 is the time for further hearing in the matter of the  
3 Pennsylvania Public Utility Commission versus Philadel-  
4 phia Electric Company at R-850152, with the consolidated  
5 complaints.

6 Are we ready to proceed?

7 MR. MacGREGOR: Yes, Your Honor.

8 MR. RAINEY: I have one preliminary matter, Your  
9 Honor, before we get started.

10 JUDGE MATUSCHAK: Very well.

11 MR. RAINEY: I would just like to state that in  
12 conversations with the company, they have stated that they  
13 will make Mr. T.P. Hill available to the City of Philadel-  
14 phia at a later date if it so desires.

15 This is as a result of the company's response to  
16 the City's interrogatories dealing with financial computer  
17 runs having to do with cost benefit analyses for Limerick I.

18 Only yesterday did the City of Philadelphia receive  
19 that response, and that response referred to an OCA  
20 interrogatory response.

21 JUDGE MATUSCHAK: We understood that that witness,  
22 although he testified yesterday, will be available for  
23 further cross-examination.

24 MR. MacGREGOR: That's correct, Your Honor.  
25

1 MR. RAINEY: Very good, Your Honor.

2 JUDGE MATUSCHAK: Any other preliminary matters?

3 MR. RAINEY: Your Honor, one other thing along  
4 those lines. I was wondering if we might make it as  
5 policy with respect to discovery, that any time the com-  
6 pany, in response to a party's interrogatory, refers to a  
7 response given to another party, that it provide that  
8 information unless it is aware that it has previously pro-  
9 vided that information to the party.

10 JUDGE MATUSCHAK: Yes; that is understood.

11 MR. RAINEY: Very well, Your Honor. That's the  
12 only comment we would have.

13 JUDGE MATUSCHAK: I think that is understood gener-  
14 ally; yes.

15 Any other preliminary matters?

16 (No response.)

17 JUDGE MATUSCHAK: You may proceed.

18 MR. MacGREGOR: Thank you, Your Honor.

19 The company calls, as its next witness in this pro-  
20 ceeding, Mr. Guy A. Sileo, who is manager of the company's  
21 Taxes Division.

22 Whereupon,

23 GUY A. SILEO

24 having been duly sworn, testified as follows:  
25

1 JUDGE MATUSCHAK: You may proceed.

2 MR. MacGREGOR: Your Honor, I have previously dis-  
3 tributed to the parties and to the court reporter and to  
4 Your Honor copies of a document entitled "Direct Testimony  
5 of Guy A. Sileo, Tax Levels and Tax Adjustments," and I  
6 would ask that it be marked for identification purposes as  
7 PECO Statement No. 23.

8 JUDGE MATUSCHAK: So marked.

9 (Whereupon, the document was marked  
10 as PECO Statement No. 23 for  
11 identification.)

12 DIRECT EXAMINATION

13 BY MR. MacGREGOR:

14 Q Mr. Sileo, do you have before you a copy of a  
15 document that has been marked for identification as PECO  
16 Statement No. 23?

17 A Yes, I do.

18 Q Is this document in fact a copy of your direct  
19 testimony in this proceeding?

20 A Yes, it is.

21 Q Was this document prepared either by you or under  
22 your direct supervision?

23 A Yes.

24 Q Mr. Sileo, if you were asked the same questions  
25 contained in Statement No. 23 again today, would your  
answers be the same as those contained therein, and would

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1 they be true and correct to the best of your knowledge?

2 A. Yes.

3 Q. Mr. Sileo, do you have any corrections to make  
4 to Statement No. 23 at this time?

5 A. I have one correction. The last line of page 1  
6 and the first line of page 2 are identical, and one should  
7 be deleted; it was a repeat. So either the last line of  
8 page 1 or the first line of page 2, delete one of those  
9 lines.

10 Q. Thank you, Mr. Sileo.

11 MR. MacGREGOR: Your Honor, I would ask that the  
12 document that has been marked for identification as PECO  
13 Statement No. 23 be admitted as evidence in this proceeding,  
14 subject to any timely motions to strike or other objections.

15 JUDGE MATUSCHAK: Subject to those conditions, the  
16 motion is granted.

17 (Whereupon, the document marked as  
18 PECO Statement No. 23 was received  
in evidence.)

19 MR. MacGREGOR: Thank you, Your Honor. Mr. Sileo  
20 is available for cross-examination.

21 JUDGE MATUSCHAK: Very well. Staff.

22 CROSS-EXAMINATION

23 BY MR. DELANEY:

24 Q. Good morning, Mr. Sileo. My name is Dan Delaney.  
25 I represent the Trial Staff. I have some questions on your

1 direct testimony.

2 Initially, Mr. Sileo, did you respond to a data re-  
3 quest that the Staff filed some time ago, which was labeled  
4 DR-Staff-RBC-3?

5 A. Yes.

6 Q. That data response was prepared under your super-  
7 vision or by yourself?

8 A. Yes, it was.

9 Q. Is the information contained therein true and  
10 correct to the best of your knowledge, information and  
11 belief?

12 A. Yes, it is.

13 MR. DELANEY: Your Honor, I would like to have marked  
14 for identification as Staff Exhibit 2 the data request  
15 numbered as RBC-3.

16 JUDGE MATUSCHAK: Very well.

17 (Whereupon, the document was marked  
18 as Trial Staff Exhibit No. 2 for  
19 identification.)

20 BY MR. DELANEY:

21 Q. Do you have a copy of that, Mr. Sileo?

22 A. Yes, I do.

23 Q. On that data request, Mr. Sileo, we asked you to  
24 identify how the company computed the actual tax payments,  
25 and made a list of the taxes we were interested in.

A. The column under "1984" were the totals per the

1 actual returns. Under "1985" they were six months actual  
2 and six months budget. Under the "1986" column they were  
3 budget numbers.

4 Q Let me ask you concerning each of the taxes  
5 listed on the second page of that schedule which you pro-  
6 vided, and you can indicate the detail I am looking for.

7 First, the federal income tax; am I correct that  
8 PECO estimates its tax year liability and then pays 90  
9 percent of that amount on a quarterly basis during the tax  
10 year?

11 A. Yes.

12 Q So the quarterly payment would be 22.5 percent  
13 of projected liability each quarter; is that correct?

14 A. That's correct.

15 Q I understand the remaining tax liability is then  
16 paid the following March 15.

17 A. The final payment would be March 15, yes.

18 Q For the gross receipts tax, your answer on the  
19 data request indicates that PECO pre-pays 90 percent of the  
20 current year on April 15?

21 A. That's correct -- no; I'm sorry. We pre-pay 90  
22 percent of the estimated tax.

23 Q Does this mean that PECO bases its pre-payment on  
24 90 percent of the tax year's estimated tax liability?

25 A. No. It is on the prior year.

1 Q The prior year's tax liability?

2 A Yes. Ninety percent is paid in April, and then  
3 the make-up payment of ten percent would be made subsequent  
4 to April.

5 Q Moving to the corporate net income tax, your  
6 response indicates that PECO pre-pays 90 percent in quarterly  
7 installments.

8 A That's correct.

9 Q This would be 22.5 percent of what amount  
10 quarterly? And, again, how would it be calculated?

11 A I'm sorry; I didn't hear you.

12 Q This would be 22.5 percent of what amount  
13 quarterly; the estimated tax year liability; the prior  
14 year's actual tax liability?

15 A No. This would be of the estimated current  
16 year's tax.

17 Q Moving to the Pennsylvania Public Utility Realty  
18 Tax, it is my understanding from your response that that is  
19 also pre-paid quarterly at 22.5 percent installments; is  
20 that correct?

21 A Currently, that's right.

22 Q Again, of what amount are these installments  
23 made? Is it the estimated tax year liability or the tax  
24 year's tax rate based on the prior year's tax basis?

25 A The PURTA tax is actually based on the prior

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year's plant, but it is for the current year tax.

Q So it would be the tax year's tax rate based on the prior year's tax basis; would that be a correct statement?

A That would be correct.

Q Finally, the Pennsylvania capital stock tax. Now, it is my understanding from your response that it will be pre-paid on April 15, 1986, at 85 percent.

A That's right.

Q Again, what would that be, what amount? Would it be the tax year's estimated basis, the prior year's basis, or the actual two years prior tax basis?

A The capital stock is based on the year preceding the prior year, and under the new change would be 85 percent instead of 90 percent.

Q Could you repeat the thing you said initially?

A It was the year preceding the prior year.

Q The tax basis from the prior year; would that be correct? Maybe I'm asking you to repeat what you just repeated.

A It is based on the year preceding the prior year. At the time the payment is made, the return for the immediate prior year has not even been filed, so it is based on the year prior to that.

Q Mr. Sileo, turning to page 6 of your testimony,

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1 on that page you indicate that in the present case the com-  
2 pany has annualized the amortization of the investment tax  
3 credit to reflect a test year-end level; is that correct?

4 A. That's right.

5 Q. As I understand your testimony, this adjustment  
6 is detailed on Schedule D-20 of TPH-2. Could you turn to  
7 that schedule, please?

8 A. Yes. I have it.

9 Q. As I understand that schedule, at the bottom it  
10 indicates the effect of this adjustment is to increase the  
11 investment tax credit amortization for the test year by a  
12 figure of \$10,313, at the bottom of the schedule; is that  
13 correct?

14 A. Yes.

15 MR. MacGREGOR: Excuse me, Your Honor. I believe  
16 it is \$10 million.

17 MR. DELANEY: Correct.

18 BY MR. DELANEY:

19 Q. Half-way down on the schedule it details an  
20 amortization on the \$134,646 plant in service portion of  
21 the total \$187,323 investment tax credit carryover at  
22 6/30/86. Do you see where I'm reading?

23 A. That's right.

24 Q. Would I be correct that the difference between  
25 the \$134,646 number and the \$187,323 number reflects plant

1 not in rate base? Would that be correct?

2 A. That's right.

3 Q. I note there is an asterisk at the bottom of the  
4 schedule. The asterisk says, -- there is a figure that is  
5 \$9,037,000 that the asterisk indicates "Assumes full rate  
6 increase is granted, therefore, it is subject to change if  
7 a portion of the increase is disallowed."

8 Do you see what I'm reading there?

9 A. Yes.

10 Q. Can you indicate to me how much of the revenues  
11 requested by the company in the present case would have to  
12 be disallowed before the amount of the amortization on  
13 this schedule would be affected? Do you have any idea.

14 A. We would have to calculate it. I could furnish  
15 that information for you.

16 MR. DELANEY: Could I request, Mr. MacGregor, that  
17 the company provide that information to us as an on-the-  
18 record data request?

19 MR. MacGREGOR: We will provide it.

20 BY MR. DELANEY:

21 Q. Mr. Sileo, the Consumer of Advocate has asked  
22 you a series of interrogatory questions about the company's  
23 use of investment tax credits; and what I am referring to  
24 are OCA Interrogatories Set 2, No. 30, Set 2, No. 31, and  
25 Set 2, No. 32.

1 Do you have copies of those in front of you?

2 A. Did you say 30, 31 and 32?

3 Q. Correct.

4 A. Yes; I have those.

5 Q. Mr. Sileo, were these prepared by you or under  
6 your supervision?

7 A. Yes, they were.

8 Q. Is the information contained therein true and  
9 correct to the best of your knowledge, information and  
10 belief?

11 A. Yes.

12 MR. DELANEY: Your Honor, I would like to have these  
13 three interrogatory responses, which are OCA-2-30 marked --  
14 the first one I would like to have marked as Staff Exhibit  
15 3, the second, which is OCA-2-31, marked as Staff Exhibit  
16 4, and the third, which is OCA-2-32, marked as Staff Exhibit  
17 5, for purposes of identification.

18 JUDGE MATUSCHAK: So marked.

19 (Whereupon, the documents were marked  
20 as Trial Staff Exhibits Nos. 3,4  
and 5 for identification.)

21 BY MR. DELANEY:

22 Q. Turning to what has now been marked as Staff  
23 Exhibit 3, which is OCA-2-30, you were asked where to pro-  
24 vide the total investment tax credits for all operations  
25 actually utilized in the company's tax returns for the last

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ten years.

Do you see what I am referring to?

A. Yes.

Q. You have indicated that these numbers on that interrogatory response are true and correct?

A. Yes.

Q. The second interrogatory question asks you to indicate the total unused investment tax credits for the last ten years.

Do you see where I am reading?

A. Yes.

Q. And you previously indicated the numbers contained therein are true and correct?

A. Right.

Q. Finally, on Staff Exhibit 5 you were requested to indicate the total investment tax credit carryforwards for the last ten years, as of -- well, your response is as of December 31, 1984.

And the numbers contained in that interrogatory response you previously indicated were true and correct?

A. That's correct.

Q. Could I ask you to turn to Schedule B-16 of TPH-2, Mr. Sileo?

A. I have it.

Q. The schedule that is contained on B-16 summarizes

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1 the accumulated deferred taxes on the company's balance sheet  
2 as of June 30, 1986, and it breaks it down by division.

3 A. That's right.

4 Q. For the Electric Division, the first line of the  
5 chart -- do you see where I am reading?

6 A. Yes.

7 Q. It indicates a figure, what I understand to be  
8 in thousands, of \$526,166, to be the accumulated deferred  
9 taxes including allocated common of the Electric Division  
10 per the balance sheet of the company; is that correct?

11 A. That's correct.

12 Q. We would like to ask you, as an on-the-record-  
13 data request, Mr. Sileo, if you can indicate to us what  
14 part of that amount are previously deferred state income  
15 taxes.

16 A. Okay.

17 MR. DELANEY: Mr. MacGregor, do you --

18 MR. MacGREGOR: We can provide it. I had thought  
19 that was in a prior interrogatory response, that we pro-  
20 vided a break-down of that number.

21 If we have not, we will provide it.

22 MR. DELANEY: We did ask that. I don't know if you  
23 have answered it. I am just reinforcing it.

24 BY MR. DELANEY:

25 Q. Mr. Sileo, could I direct you to page 7 of your

1 testimony?

2 A. I have it.

3 Q. Half-way down that page you indicate that in the  
4 current claim the company has not included the amortization  
5 and rate base deduction for the Salem 2 tax benefit trans-  
6 fer ordered in the company's last rate case; is that  
7 correct?

8 A. That's correct.

9 Q. To your knowledge, at the conclusion of the  
10 company's last rate case, did the company make the Commis-  
11 sion's direct adjustment in its compliance filing filed  
12 after the decision in the case? Do you understand the  
13 question?

14 A. I believe we did; yes.

15 Q. You are not certain?

16 A. No; I am not certain.

17 MR. MacGREGOR: I can confirm that. I am certain  
18 that we did, and I will otherwise if I am wrong. Our com-  
19 pliance filing was in compliance with the Commission's  
20 order, and, to the best of my knowledge, made that adjustment.

21 I will confirm that with the company and get back to  
22 you if I am incorrect.

23 BY MR. DELANEY:

24 Q. Assuming that that adjustment was made in the  
25 compliance filing, the effect of that would be that that

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adjustment is currently reflected in the company's rates,  
the rates now in effect.

A. That's right.

MR. DELANEY: That's all the questions I have for  
this witness, Your Honor.

Thank you, Mr. Sileo.

JUDGE MATUSCHAK: Very well. Consumer Advocate.

CROSS-EXAMINATION

BY MS. WESTON:

Q Good morning, Mr. Sileo.

A Good morning.

Q My name is Susan Weston. I am with the Office  
of Consumer Advocate.

Mr. Sileo, I would also like to turn to page 7 of  
your testimony, please.

A I have it here.

Q I would like you to review the section of that  
testimony that begins on page 7 at line 12 and runs through  
page 9, line 22.

(Witness complying.)

A Okay.

Q Does that portion of your testimony deal with  
the December 1981 sale of certain tax benefits associated  
with Salem 2 to Hercules Corporation?

A That's correct.

1 Q. Did the \$129 million yielded from that sale in-  
2 clude \$6.9 million which you have referred to as a "make  
3 whole" payment?

4 A. Did you say the \$149 million?

5 Q. \$129.7 million yielded by that sale; did that in-  
6 clude \$6.9 million which you have referred to as a "make  
7 whole: payment?

8 A. Of the \$54 million in proceeds, there was \$6.9  
9 million.

10 Q. That is sufficient.

11 In the rate case at R-842590 -- that is the last  
12 case -- did the Public Utility Commission order the company  
13 to return that \$6.9 million to the ratepayers over a period  
14 of 15 years?

15 MR. MacGREGOR: Your Honor, I believe Mr. Sileo just  
16 answered that question in response to a question of  
17 Mr. Delaney.

18 I don't know if we have to repeat it again.

19 JUDGE MATUSCHAK: There is some misunderstanding on  
20 my part, too, with his response. We will overrule the  
21 objection.

22 MS. WESTON: Thank you, Your Honor.

23 BY MS. WESTON:

24 Q. Mr. Sileo, did the Commission so order?

25 A. Yes, we did.

1 Q In that same rate case, did the Commission also  
2 order the company to deduct the unamortized portion of that  
3 amount from rate base?

4 A I believe they did, and we did.

5 Q Has the company appealed that order to Common-  
6 wealth Court?

7 A No, they have not, to my knowledge.

8 Q Has there been any change in the applicable law  
9 since that order was issued?

10 A Not to my knowledge.

11 MS. WESTON: Your Honor, the Office of Consumer  
12 Advocate would now like to move to strike the portion of  
13 Mr. Sileo's testimony which we have now been referring to;  
14 that is, from page 7, line 12, to page 9, line 22.

15 The Commission has decided this issue and ordered an  
16 amortization. It is not proper for any party to relitigate  
17 such an ordered amortization in this way when no law has  
18 changed and there has been no appeal of the Commission's  
19 order.

20 MR. MacGREGOR: Your Honor, if that rule applies,  
21 then I would suggest that about half of the adjustments  
22 that the Consumer Advocate will propose in this case will  
23 be subject to the same rule.

24 Parties routinely relitigate issues from prior  
25 Commission rate orders with which they disagree. It is a

1 common practice; it happens in every rate case I have ever  
2 been involved in.

3 The company has stated fully and clearly in the  
4 testimony what the Commission did in the last rate pro-  
5 ceeding.

6 The company has explained why we wish the Commission  
7 to reconsider its decision and to adopt a different result.  
8 There is nothing improper about that; it is standard in  
9 every rate case I have ever been involved in.

10 MS. WESTON: If I may respond to that, Your Honor.  
11 In this case amortization is different from relitigating  
12 other rate case issues. In this case we deal with an  
13 amortization which is a specific procedure dealing with a  
14 specific sum.

15 The Commission has ordered what is to be done with  
16 that, and that is a 15-year process.

17 What the company is now asking is to not comply  
18 with an order given in a case.

19 MR. MacGREGOR: That is not correct, Your Honor. We  
20 have complied with the order. The order in the last case  
21 directed the company to make this adjustment. We complied  
22 with that order, and we are today in full compliance with  
23 that order; and the amounts are being amortized today to  
24 ratepayers and will continue to be amortized unless that  
25 result is changed by Commission order in this case.

1 We are asking the Commission to reconsider that amor-  
2 tization. We have not refused to comply with the amortiza-  
3 tion; and, as I have stated, we are in fact in full com-  
4 pliance with the Commission's order.

5 MS. WESTON: Your Honor, if I might say just one  
6 further word. The Commission has made a final order on this  
7 issue, which is final under Section 316 of the Public  
8 Utility Code. This is not an issue, therefore, which can  
9 be relitigated in the manner proposed.

10 MR. MacGREGOR: Your Honor, that is an argument  
11 that they can make in their belief.

12 JUDGE MATUSCHAK: We don't have to dispose of that  
13 at this time. You can argue that in your brief, and we  
14 can dispose of that in the final decision in this matter.

15 MS. WESTON: Thank you, Your Honor.

16 JUDGE MATUSCHAK: We haven't had the privilege of  
17 reviewing the Commission's prior order and so forth, and we  
18 would prefer to rule on that at the conclusion of the  
19 proceeding.

20 MS. WESTON: Thank you, Your Honor.

21 BY MS. WESTON:

22 Q. Mr. Sileo, I would now like to turn to the issue  
23 of income taxes. Does the Philadelphia Electric Company  
24 file a consolidated income tax return?

25 A. Yes, they do.

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Q. Does that return include both Philadelphia Electric Company's Electric and Gas Divisions and other subsidiaries?

A. That's correct.

Q. Do you have before you a copy of Volume II of the company's filing?

What I am looking for is the company's tax return.

A. I have a copy.

MS. WESTON: For others, that is Section D-23c.

THE WITNESS: I have a copy.

BY MS. WESTON:

Q. If you look through that section you will come to a computer print-out page, which is marked "Consolidated Return of Philadelphia Electric Company."

A. Yes.

Q. On that page there are listed across the top the names of the different subsidiaries.

A. That's correct.

Q. So we see Susquehanna Power Company, et cetera.

A. Yes.

Q. Now, on line 30, titled "Taxable Income," at the bottom of that page, we see that there are negative taxable incomes there for Philadelphia Electric Power Company and for Eastern Pennsylvania Exploration Company, Eastern Pennsylvania Development Company and Adwin Equipment Company.

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is that correct?

A. That's correct.

Q. I would like to concentrate on Eastern Pennsylvania Exploration Company. In 1984, Eastern Pennsylvania Exploration's taxable income was negative-\$1,433,555?

A. That's right.

Q. For 1983, was that subsidiary's taxable income a negative-\$496,834?

A. I don't have that in front of me, but I --

Q. Would you accept that subject to check?

A. -- believe it was; subject to check, it was about that amount.

Q. Thank you.

Mr. Sileo, I would like to show you a copy of your 1983 testimony in the 1983 rate case, and I would like you to look at page 4. I think it is open to that page, and there is a bracketed section.

(Document handed to witness.)

A. Yes.

Q. Is it not the case that in 1983 you testified, in the answer at the beginning of that page, that "EPEC is not expected to experience tax losses after 1983?"

A. That was correct at that time.

Q. I would like to continue.

"While the 1983 budget for EPEC projected a negative

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1 current federal tax liability of less than \$100,000, the re-  
2 ports we have received for actual 1983 figures to date indi-  
3 cate that this may actually be a positive number for 1983.

4 "For the next four years we are projecting steadily  
5 increasing taxable income from this project, which will  
6 completely eliminate the tax loss situation upon which  
7 Mr. Knudsen bases his recommendation."

8 Is it correct that you so testified?

9 A. That's correct.

10 Q. Now I would like to show you two sections of  
11 your testimony from the 1984 rate case given in September  
12 of 1984.

13 (Document handed to witness.)

14 Q. On page 15 there, at the bottom of the page,  
15 there is a sentence beginning with the word "Results."

16 A. Yes.

17 Q. Would you review that testimony for a minute and  
18 get the context for that sentence, please?

19 A. Yes.

20 Q. Does that also refer to the Eastern Pennsylvania  
21 Exploration Company?

22 A. Yes, it does.

23 Q. Would you please read out loud the sentence be-  
24 ginning with the word "Results" at the bottom of that page?

25 A. "Results for the second quarter are not presently

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available, but these companies are also projected to continue to generate taxable income during '84."

Q. Thank you. Would you turn to page 17, please?

A. Yes.

Q. Would you read the first full sentence on that page, beginning with the word "Thus"?

A. "Thus, all available evidence demonstrates that EPEC's taxable income for the first half of '84 will continue, and it will not generate tax losses during the future test year."

Q. When it says "EPEC," does that mean Eastern Pennsylvania Exploration Company?

A. Eastern Pennsylvania Exploration Company; that's right.

Q. Thank you. Now, Mr. Sileo, could you tell me: why didn't Eastern Pennsylvania Exploration have positive taxable income in 1984?

A. Well, there were some certain extenuating circumstances during the course of the year that resulted in a loss. But at the time I made those statements, the numbers that were available to us, to the best of my knowledge, we had anticipated that there would have been profitable years.

The trend over the last several years has been decreasing the losses, steadily decreasing the losses; and we still anticipate that perhaps '85 or '86 will be

1 profitable years.

2 But at that time that was the best information  
3 available when those statements were made, and they were  
4 correct at the time.

5 Q I would now like to turn and ask you some ques-  
6 tions about the state tax adjustment clause, also called  
7 the STAC.

8 A Yes.

9 MS. WESTON: Your Honor, I would like to distribute  
10 copies of two documents, and I would like to mark these  
11 documents for identification as OCA Exhibits 12 and 13.

12 JUDGE MATUSCHAK: Very well.

13 MS. WESTON: The document we would like to mark OCA  
14 Exhibit 12 is the answer given to OCA Interrogatory Set 14,  
15 No. 5.

16 The document we would like to mark OCA Exhibit 13 is  
17 the answer to OCA Set 14, No. 6.

18 (Whereupon, the documents were marked  
19 as OCA Exhibits Nos. 12 and 13 for  
20 identification.)

21 BY MS. WESTON:

22 Q Mr. Sileo, could you take a minute to review  
23 these documents?

24 A Yes.

25 (Pause.)

A Okay.

1 Q Looking at OCA Exhibit 12, the document so  
2 marked, that provides the gross revenues that STAC gener-  
3 ates as before state income tax is applied to STAC revenues  
4 themselves?

5 A This document, 14-5?

6 Q Yes.

7 A I'm sorry; again, your question?

8 Q Are the figures shown in that document gross  
9 STAC revenues before you take out the CNI tax on the STAC  
10 revenues themselves, before you remove the gross-up amount?

11 A It appears that way. This document was not pre-  
12 pared under my direction, but it appears to be; yes.

13 Q My apologies, then, for putting in that question.  
14 We will address that to Mr. Hill.

15 Let me ask you a general question about the STAC  
16 then. When you calculate the amount the company needs to  
17 generate through the STAC, you calculate a specific propor-  
18 tion of a set of taxes and then you add a gross-up for  
19 corporate net income tax on the basic amount you need to  
20 generate; is that correct?

21 A For the gross receipts tax, that is correct.

22 Q So there is a gross receipts tax gross-up?

23 A Yes. The STAC does include the gross receipts  
24 tax on the STAC itself, but not for the other taxes that  
25 are made up of the STAC.

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1 Q So that is the only gross-up that you put on  
2 the amount you want to generate?

3 A Yes.

4 Q You are the responsible witness for the document  
5 that shows 14-6, which is Exhibit 13; is that right?

6 A That's right; yes.

7 Q This document shows the company's liability for  
8 the taxes collected through the STAC for 1983 and 1984.

9 A That's right.

10 Q And also the Electric Division's liability for  
11 those taxes.

12 A Yes.

13 Q So the STAC would need to have collected those  
14 amounts for the Electric Division plus that gross-up in  
15 gross receipts; is that right?

16 A That's correct.

17 Q So the revenues couldn't simply be the numbers  
18 shown here; it would have to be a larger number based on  
19 the gross-up?

20 A For the gross receipts.

21 Q I would like now to ask you what portion of each  
22 of the taxes collected through the STAC, the STAC should  
23 collect.

24 For the Public Utility Realty Tax, should the STAC  
25 collect 100 percent of that tax for the Electric Division?

1 A. All the PURTA tax is collected through the STAC.

2 Q. For the gross receipts tax, the STAC collects  
3 2.5 percent of the tax?

4 A. It collects 2.5 percent, plus --

5 Q. Plus the gross-up.

6 A. -- 4.5 percent of the STAC revenue.

7 Q. Let me go back. The STAC should collect 2.5  
8 percent gross receipts tax on the total revenue, plus a  
9 gross-up; is that right, or is that wrong?

10 A. The STAC collects 2.5 mills of the total gross  
11 receipts tax, plus -- 2.5 percent -- plus 4.5 percent of  
12 all the STAC revenues.

13 Q. Is the total gross receipts tax rate 4.5 mills?

14 A. That's right.

15 Q. For the capital stock tax, what is the STAC  
16 supposed to collect?

17 A. It collects 4 of the 10 mills, 4/10ths of one  
18 percent, and the collection is based on the last settled  
19 return.

20 Q. For the corporate net income tax, what does the  
21 STAC collect?

22 A. It collects 2.5 percent of the total 9.5 percent,  
23 and it also is based on the prior year's tax base.

24 Q. Mr. Sileo, is that amount for the corporate net  
25 income tax 2.0 percent or 2.5 percent?

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A. 2.5 percent.

Q. Now, 9.5 percent is the current corporate net tax rate; is that right?

A. That's right.

Q. And for 1983 and 1984 that rate was 10.5 percent?

A. That's right.

Q. So in 1983 and 1984, what did the STAC collect of corporate net income tax?

A. 1983, for CNI -- I don't have that information in front of me.

Q. Mr. Sileo, would you accept subject to check that it would have been 3 percent out of the total 10.5 percent?

A. Subject to check; yes.

Q. If I may, could you tell me, under the current 9.5 percent tax, how much is collected in base rates for the corporate net income tax?

A. Seven percent is what was collected in base rates, of the 9.5, and the remaining 2.5 collected through the STAC.

Q. If we could look at the document marked Exhibit 13, which is 14-6 of OCA interrogatories, I wonder if you could look at the number at the very bottom for the Electric Division for the corporate net income tax for 1983.

A. Yes.

1 Q. When we first received this answer, we wondered  
2 if that answer might have been a typo or something. We  
3 thought it looked a little low.

4 Do you know if that is accurate?

5 A. I don't believe that's a typo.

6 Q. You do think that's a typo. Do you know the  
7 correct number?

8 MR. MacGREGOR: I believe he said it was correct.  
9 The company had virtually no taxable income in  
10 1983, so that number would appear to be correct to me; we  
11 can check it.

12 MS. WESTON: Could you check it one more time? We  
13 just wanted to make sure we weren't working with a typo.

14 BY MS. WESTON:

15 Mr. Sileg, would you turn to page B-18 of TPH-2 and  
16 look at the bottom of that page?

17 A. B-18?

18 Q. B-18.

19 A. Yes.

20 Q. At the bottom of that page there is a summary  
21 of a calculation of the effective income tax rate for base  
22 rate purposes, and I believe that shows, as the statutory  
23 rate for the Pennsylvania income tax, that base rates  
24 should be collecting 7.5 percent.

25 Am I right that that is what that page shows?

1 A. That's right.

2 Q. Would you accept subject to check that that is  
3 the correct number?

4 A. That is the correct number.

5 Q. In that case, does that mean that the STAC  
6 correct number for the corporate net income tax would be  
7 2.0 percent?

8 (Witness perusing documents.)

9 A. I said the STAC collected 2.5 percent; that's  
10 right.

11 Q. You said 2.5.

12 A. That's right.

13 Q. Do you think that is correct?

14 A. I may stand corrected.

15 Q. Would you like to review that and get back to  
16 us?

17 A. Yes, I would.

18 Q. Now, I would like to ask you for two other  
19 things. I suspect these will have to be transcript re-  
20 quests, but I will ask you in case you have them available.

21 Could you tell us what the STAC revenues correspond-  
22 ing to the ones in Exhibit 12 would be net of the gross  
23 revenue tax gross-up, that 4.5 percent tax on the STAC  
24 revenues?

25 A. Exhibit 12 is --

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1 Q Exhibit 12 is the answer to OCA 14-5.

2 A 5; okay.

3 Now, your question was how much --

4 Q My question is: can you tell us what the  
5 revenue figures would be on that table if they were net of  
6 the gross receipts tax gross-up?

7 A I would have to furnish that information.

8 MS. WESTON: We will make that a transcript request  
9 then.

10 MR. MacGREGOR: We can provide it. I believe it's  
11 a relatively simple calculation to provide the numbers.

12 BY MS. WESTON:

13 Q Mr. Sileo, do you think that is a relatively  
14 simple calculation?

15 A It may be.

16 Q If you want to check and look at that, it should  
17 be done.

18 I would also like to request as another transcript  
19 request a statement showing, for each year shown in that  
20 exhibit, the portion of actually collected revenue that  
21 went for the gross revenues tax and the after-tax portion  
22 which is actually applicable to the tax that the STAC  
23 covers.

24 A We will furnish that for you.

25 MS. WESTON: I have no further questions at this

1 time, Your Honor.

2 JUDGE MATUSCHAK: Who wants to proceed next?

3 MR. DELANEY: Your Honor, I think I failed to move  
4 the Staff Exhibits that I had Mr. Sileo identify. I would  
5 like to make a motion to move them at this time.

6 JUDGE MATUSCHAK: Any objection.

7 MR. MacGREGOR: No objection.

8 JUDGE MATUSCHAK: Staff Exhibits 2, 3, 4 and 5 are  
9 admitted at this time.

10 (Whereupon, the documents marked as  
11 Trial Staff Exhibits Nos. 2 through  
12 5 were received in evidence.)

13 MS. WESTON: Your Honor, we would like to move now  
14 the OCA Exhibits 12 and 13 into the record.

15 JUDGE MATUSCHAK: Any objection?

16 MR. MacGREGOR: No objection, Your Honor.

17 JUDGE MATUSCHAK: OCA Exhibits 12 and 13 are  
18 admitted into evidence.

19 (Whereupon, the documents marked as  
20 OCA Exhibits Nos. 12 and 13 were  
21 received in evidence.)

22 JUDGE MATUSCHAK: Who wants to proceed next?

23 MR. KLEPPINGER: I have no questions, Your Honor.

24 MR. ETTNER: No questions, Your Honor.

25 MR. RAINEY: No questions, Your Honor.

JUDGE MATUSCHAK: Any further cross-examination of  
this witness?

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(No response.)

JUDGE MATUSCHAK: Any redirect?

MR. MacGREGOR: Could we take a five-minute break,  
Your Honor?

JUDGE MATUSCHAK: Yes.

(Recess.)

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JUDGE MATUSCHAK: Back on the record.

MR. MacGREGOR: Your Honor, I have two brief questions.

REDIRECT EXAMINATION

By MR. MacGREGOR:

Q. Mr. Sileo, during your questioning by the Office of Consumer Advocate, you were asked certain questions concerning Eastern Pennsylvania Exploration Company, is that correct?

A. That's correct.

Q. Mr. Sileo, are any of the operating expenses incurred by Eastern Pennsylvania Exploration Company reflected in the company's rate claim in this proceeding?

A. No, they are not.

Q. Is any of the investment, in Eastern Pennsylvania Exploration Company reflected in the company's rate base claim in this proceeding?

A. No. All the risk is borne by the shareholders.

Q. Also in questioning by the Consumer Advocate, Mr. Sileo, you were asked certain questions concerning the corporate net income tax and what portion of that tax is recovered in base rates as opposed to the state tax adjustment clause.

Do you have any clarification of your testimony on that matter as to the relative proportions of that tax which are recovered in base rates as opposed to the STAC?



1 MS. WESTON: Thank you.

2 MR. DELANEY: Staff has no recross, Your Honor.

3 JUDGE MATUSCHAK: If there is nothing further of this  
4 witness, the witness is excused.

5 (Witness excused.)

6 JUDGE MATUSCHAK: Do you have another witness?

7 MR. MacGREGOR: Yes, Your Honor. The company would  
8 call as its next witness Mr. John B. Cotton.

9 Whereupon,

10 JOHN B. COTTON

11 having been duly sworn, testified as follows:

12 MR. MacGREGOR: Your Honor, I have previously  
13 distributed to the parties, the court reporter and to Your  
14 Honor copies of a document entitled, "Direct Testimony of  
15 John B. Cotton, Explanation of the Limerick Generating  
16 Station Organization for Operation and Maintenance."

17 I would ask that it be marked for identification as  
18 PECO Statement No. 26.

19 JUDGE MATUSCHAK: It may be so marked.

20 (Whereupon, the document was  
21 marked PECO Statement No. 26  
for identification.)

22 DIRECT EXAMINATION

23 BY MR. MacGREGOR:

24 Q Mr. Cotton, do you have before you a copy of the  
25 document that has been marked for identification as PECO

1 Statement No. 26?

2 A. I do.

3 Q. Is this document in fact a copy of your direct  
4 testimony in this proceeding?

5 A. Yes, it is.

6 Q. Was this document prepared either by you or  
7 under your direct supervision?

8 A. Yes, it was.

9 Q. Do you have any additions or corrections to make  
10 to Statement No. 26 at this time?

11 A. On the first page, lines 15 and 16, my degree is  
12 a Bachelor of Science. It says Bachelor of Mechanical  
13 Engineering.

14 Q. Thank you, Mr. Cotton.

15 Mr. Cotton, with that correction, if you were asked  
16 the same questions contained in Statement No. 26 again today,  
17 would your answers be the same as those contained therein,  
18 and would they be true and correct to the best of your  
19 knowledge?

20 A. Yes, they would.

21 MR. MacGREGOR: Your Honor, I would ask that the  
22 document that has been marked for identification as PECO  
23 Statement No. 26 be admitted as evidence in this proceeding,  
24 subject to any timely motion to strike or other objection.

25 JUDGE MATUSCHAK: With those conditions, the motion

1 is granted.

2 (Whereupon, the document marked  
3 PECO Statement No. 26 was  
4 received in evidence.)

5 MR. MacGREGOR: Thank you, Your Honor. Mr. Cotton  
6 is available for cross-examination.

7 JUDGE MATUSCHAK: Staff?

8 CROSS-EXAMINATION

9 BY MS. SMITH:

10 Q. Good morning, Mr. Cotton. I am Veronica Smith.  
11 I am with Commission Trial Staff.

12 Mr. Cotton, in regard to your position with the  
13 company at the Limerick Generating Station, how far removed  
14 are you from the level of supervisory level? Who do you  
15 answer to?

16 A. I am responsible to the station superintendent of  
17 services, who reports to the plant manager.

18 Q. Now, Mr. Cotton, are you responsible for over-  
19 sight of the efficiency and productivity of any of the  
20 various groups that you have listed on page 4 of your  
21 testimony such as the Technical Engineering, the Operations  
22 group, the Health Physics group, Chemistry group, et cetera?

23 A. My specific responsibilities are in regard to the  
24 Maintenance group, not the Technical group or the Health  
25 Physics group.

Q. So it is that sole item that you are responsible

1 for, is that correct, the maintenance?

2 A. The maintenance area, yes.

3 Q. You do not prepare the budget or estimated  
4 future expenses of the other organizations other than your  
5 maintenance organization?

6 A. That is correct.

7 Q. And you are also not responsible for hiring,  
8 firing, or promoting employees in those other areas?

9 A. That is correct, I am not.

10 Q. During your activities in coordinating actions at  
11 Limerick, are you able to request that other functional  
12 groups change their schedules or procedures to facilitate  
13 completion of certain projects?

14 A. Yes, in regard to specific maintenance tasks  
15 where those groups are necessary for support.

16 Q. Are you responsible for preparing budget or  
17 estimating future expenses for outages at Salem or Peach  
18 Bottom?

19 A. No, I am not.

20 Q. Mr. Cotton, when the NRC reviewed the Limerick  
21 plant organization, did the NRC try to insure that the  
22 organization met certain minimum standards?

23 A. Yes, in regard to the method of organization.  
24 They are not necessarily prescriptive about it, but they  
25 have a general standard that they use that there should be a

1 head of a technical group and a head of the maintenance  
2 group, head of the health physics group, that kind of thing.

3 Q. Does the NRC set any maximum standards in terms  
4 of costs or staffing with the O&M organization of a  
5 nuclear power plant?

6 A. No maximum that I know of, no.

7 Q. Did the NRC review or investigate costs and  
8 make a determination as to what reasonable costs for O&M  
9 might be for Limerick?

10 A. I don't believe they did.

11 MS. SMITH: Your Honor, I have no further questions.  
12 Thank you.

13 MR. WERSAN: No questions, Your Honor.

14 MR. RAINEY: No questions, Your Honor.

15 MR. ETTNER: No questions, Your Honor.

16 MR. MORRIS: No questions.

17 MR. KLEPPINGER: No questions.

18 MS. FERKIN: Your Honor, I do.

19 JUDGE MATUSCHAK: You may proceed.

20 CROSS-EXAMINATION

21 By MS. FERKIN:

22 Q. Mr. Cotton, my name is Zori Ferkin. I represent  
23 the Governor's Energy Council. Mr. Cotton, you are here  
24 today in part to describe the O&M organization employed by  
25 PECO at Limerick, is that correct?

1 A. That is correct.

2 Q. You in your testimony describe the various  
3 working groups within that organization, and you summarize  
4 the organizational structure in Schedule 1 of your testimony,  
5 is that correct?

6 A. That is correct.

7 Q. On page 23 of your testimony, could you I turn  
8 you there for a moment? You were asked what management  
9 controls have been established to insure efficient and  
10 effective operation of Limerick, is that correct?

11 A. That is correct.

12 Q. You mention in your response that you have used--  
13 or we have made extensive use of scheduling and that there  
14 is a daily meeting among the senior staff, is that correct?

15 A. That is correct.

16 Q. At these daily meetings, are daily goals  
17 established?

18 A. Goals and plans, yes, timeliness of completing  
19 certain actions, agreements on the condition or the test to  
20 be performed during that day or the next three days. There  
21 are goals and objectives established.

22 Q. And at the end of the day or the next day's  
23 meeting, is there discussion of whether or not the previous  
24 day's goals have been accomplished?

25 A. Yes, there are.

1 Q Now, to the best of your knowledge, is there any  
2 sort of incentive program in place at Limerick in the event  
3 that for example a goal for the prior day is not accomp-  
4 lished? Is there an incentive program in place which would  
5 insure that when goals are set the next day, that that goal  
6 is accomplished?

7 A The incentive for the complete plant staff is to  
8 operate the plant in a manner that meets those goals, and  
9 to perform the maintenance and support of the goals.

10 There is not a specific incentive or reward in that  
11 aspect of it.

12 Q Is there a bonus program in effect for senior  
13 management related to the accomplishment of goals in the  
14 organization?

15 A Not in the sense that a lot of other industries  
16 establish bonuses, and certainly you are evaluated in the  
17 annual review process on, did you meet goals agreed to for  
18 the following year.

19 MS. FERKIN: Thank you. I have no further questions.

20 JUDGE MATUSCHAK: Any further cross-examination of  
21 this witness?

22 (No response.)

23 JUDGE MATUSCHAK Any redirect?

24 MR. MacGREGOR: No, Your Honor.

25 JUDGE MATUSCHAK: The witness is excused.

(Witness excused.)

1  
2 MR. MacGREGOR: Your Honor, we will be ready to  
3 proceed in just a few minutes with Mr. Carroll, who is the  
4 company's next witness.

5 (Pause.)

6 Whereupon,

7 JOHN J. CARROLL

8 having been duly sworn, testified as follows:

9 MR. MacGREGOR: Your Honor, I have previously  
10 distributed to the parties, the court reporter and to Your  
11 Honor copies of a document entitled, "Direct Testimony of  
12 John J. Carroll, Explanation of Coal and Oil Inventory and  
13 Production Plant Expenses; and Development of Limerick Fuel  
14 Savings."

15 I would ask that it be marked for identification as  
16 PECO Statement No. 22.

17 JUDGE MATUSCHAK: So marked.

18 (Whereupon, the document was  
19 marked PECO Statement No. 22  
20 for identification.)

21 DIRECT EXAMINATION

22 BY MR. MacGREGOR:

23 Q Mr. Carroll, do you have before you a copy of a  
24 document that has been marked for identification as PECO  
25 Statement No. 22?

A. Yes, I do.

1 Q Is this in fact a copy of your direct testimony  
2 in this proceeding?

3 A Yes, it is.

4 Q Was this document prepared either by you or under  
5 your direct supervision?

6 A Yes, it was.

7 Q Mr. Carroll, do you have any changes, additions  
8 or corrections to make to this statement or to other  
9 supporting schedules in the exhibits for which you are  
10 responsible?

11 A Yes, I do. As a result of a recalculation of the  
12 No. 2 oil inventory shown on page C-10 of TPH-2, the quantity  
13 of No. 2 oil which is listed as 263,000 should be changed to  
14 226,000.

15 That correction will result in a correction to my  
16 testimony on page 8, line 15. The 263,000 should read  
17 226,000. On line 16 --

18 JUDGE MATUSCHAK: Just one second. Will you repeat  
19 your correction?

20 THE WITNESS: In my testimony, Your Honor?

21 JUDGE MATUSCHAK: Yes.

22 THE WITNESS: On page 8, line 15, 263,000 should be  
23 changed to 226,000. On page 8, line 16, the 37,000 should  
24 be changed to 74,000.

25 On page 10, line 19, the tabulation of Electric

1 Fuel Inventory, under the column headed "Claim" opposite  
2 No. 2 oil, it should read 226,000.

3 And on the same line, under "Decrease," it should  
4 be changed to 74,000. That is it.

5 MR. MacGREGOR: Your Honor, I would note that this  
6 error was previously set forth in Mr. Hill's supplemental  
7 testimony. We are simply making these corrections to  
8 Mr. Carroll's testimony to conform to PECO Statement No. 18A.

9 BY MR. MacGREGOR:

10 Q. Mr. Carroll, with those corrections, if you were  
11 asked the same questions contained in Statement No. 22  
12 again today, would your answers be the same as those  
13 contained therein, and would they be true and correct to  
14 the best of your knowledge?

15 A. Yes, they would.

16 MR. MacGREGOR: Your Honor, I would ask that the  
17 document that has been marked for identification as PECO  
18 Statement No. 22 be admitted as evidence in this proceeding,  
19 subject to any timely motion to strike or other objection.

20 JUDGE MATUSCHAK: Subject to those conditions, the  
21 motion is granted.

22 (Whereupon, the document marked  
23 PECO Statement No. 22 was  
24 received in evidence.)

24 MR. MacGREGOR: Thank you, Your Honor. Mr. Carroll is  
25 available for cross-examination.

1 JUDGE MATUSCHAK: Staff?

2 MS. CHESTNUT: Your Honor, we understand the  
3 Consumer Advocate has extensive cross for Mr. Carroll, so in  
4 order to perhaps save some hearing time, we will defer our  
5 cross until they have completed theirs.

6 JUDGE MATUSCHAK: Very well. Consumer Advocate?

7 MR. WERSAN: Thank you, Your Honor. For the record,  
8 my name is David Wersan. I am with the Office of Consumer  
9 Advocate.

10 CROSS-EXAMINATION

11 BY MR. WERSAN:

12 Q Good morning, Mr. Carroll.

13 A Good morning.

14 Q I would like to first go to Schedule 11, page  
15 C-10 revised in PECO Statement No. 18-A which you just  
16 talked about in the correction to your testimony. I have  
17 a couple of copies, if you need it.

18 (Document handed to the witness.)

19 BY MR. WERSAN:

20 Q My first question on this, Mr. Carroll, is: you  
21 just gave us a figure for No. 2 oil of 226,000, and C-10  
22 revised has 228,000. Would I be correct that that also  
23 should be 226,000?

24 A To the best of my knowledge, you would be correct.  
25 That would be 226,000.

1 Q. Have you calculated what the inventory cost  
2 would be for No. 2 oil with the change in the number of  
3 barrels?

4 A. \$7,214,000.

5 Q. Staying with the topic of fuel costs and  
6 inventory, and staying with page C-10 revised, am I correct  
7 that what is represented on this page is the development of  
8 the inventory cost for oil and coal for Philadelphia  
9 Electric?

10 A. That is part of what is developed on that page,  
11 yes.

12 Q. And on this page, you have stated the prices for  
13 coal and oil as of June 30, 1986, is that correct?

14 A. I stated our estimate of the prices of coal and  
15 oil as of June 30, 1986, yes.

16 Q. Are these average inventory prices as of that  
17 date, or are they purchase prices as of that date?

18 A. They represent our estimate of what the purchase  
19 price will be as of that date, and because of the inventory  
20 turnaround, we are assuming the inventory price will very  
21 closely match the average purchase price, because of the  
22 turnaround time in inventory.

23 Q. And when you say that, is that because you project  
24 your fuel prices on a quarterly basis, and your turnaround  
25 for inventories is less than the period of one quarter or

1 matches one quarter?

2 A. Yes.

3 Q. Now, is the average inventory price in a  
4 particular month also used to determine the fuel expense  
5 for that month?

6 A. That is correct, yes.

7 Q. Could you tell me when the prices for oil and  
8 coal on page C-10 were developed?

9 A. I don't have with me the date of the letter from  
10 our fuel procurement people that developed these numbers.  
11 It was in the second quarter of 1985.

12 (Document handed to the witness.)

13 I was just handed a copy of the letter, and the date  
14 of the letter is July 15, 1985.

15 Q. So as of the time when these prices were  
16 developed, you had actual data through the second quarter  
17 of 1985?

18 A. No, I don't think that there was any actual data  
19 carried through into the second quarter. I think that the  
20 information used to supply the backup for this and everything  
21 else had actual data through the first quarter of 1985.

22 MR. WERSAN: Your Honor, at this time I would like to  
23 mark for identification and distribute OCA Exhibit No. 14,  
24 which is the company's response to Interrogatory IR-OCA-1-11  
25 with two attachments taken from that answer.

JUDGE MATUSCHAK: Very well.

(Whereupon, the document was marked OCA Exhibit No. 14 for identification.)

BY MR. WERSAN:

Q Are you familiar with this response, Mr. Carroll?

A Yes, I am.

Q And am I correct that Attachment 1-11a is Philadelphia Electric's fuel price estimate that was the basis for your fuel prices on page C-10?

A No.

Q I am incorrect, okay. Let me start then with the attachment that's marked 1-11a.

A I'm sorry, yes, you are correct that this was the basis for the attachment on C-10.

Q We can verify it in fact if we go to the second quarter of 1986.

A Yes.

Q You have a delivered price of coal of \$47.75 for the Philadelphia area, and that's the same on both sheets.

A Yes, that's correct.

Q And it would be the same for oil across the board?

A Yes.

Q And the second attachment, 11b, is an excerpt from a document provided to Philadelphia Electric by Data Resources, Incorporated, is that correct?

1 A. That is correct.

2 Q. And this document is dated May, 1985. And in  
3 your answer on the cover page to 1-11, am I correct that you  
4 state, the fossil fuel price forecast prepared by Data  
5 Resources was used in the development of the company's  
6 forecast?

7 A. Yes, it was.

8 Q. Could you explain to me what you mean by "being  
9 used in the development of the forecast"?

10 A. Our procurement people receive information from  
11 Data Resources based on what they perceive to be the future  
12 prices for coal based on their models, and oil, based on  
13 their models which reflect known conditions and expected  
14 conditions.

15 And then they take that and combine it with what our  
16 own fuel procurement people know and what also they have  
17 heard, have noticed from other industry sources and that  
18 type of thing.

19 And the two of them, Data Resource's input, their  
20 own input, their own prices they see today and their own  
21 communication with their suppliers, results in them putting  
22 out a forecast.

23 It is not DRI's per se. It is a major source going  
24 into their forecast, but it is not necessarily -- that is  
25 what I mean by "used by them to develop their cost."

1 Q. Does Philadelphia Electric hire or purchase  
2 fuel price forecasts from any other company or consulting  
3 group?

4 A. To the best of my knowledge, the answer is no.

5 Q. So, I take it you place great stock on DRI and  
6 their help in developing fuel price forecasts?"

7 A. They place stock. I don't know quite what  
8 emphasis we should put on the word "great."

9 Q. Now, Schedule 11, page C-10 was revised on  
10 November 4, 1985, and on November 25, 1985, Philadelphia  
11 Electric provided the QCA with a revised 1-11a --

12 MR. WERSAN: -- which at this time, Your Honor, I'd  
13 like to mark as OCA Exhibit No. 15.

14 JUDGE MATUSCHAK: Very well.

15 (Whereupon, the document was  
16 marked OCA Exhibit No. 15 for  
17 identification.)

18 BY MR. WERSAN:

19 Q. I assume you are familiar with this document,  
20 Mr. Carroll?

21 A. Yes, I am.

22 Q. I have copied the pages that have the same  
23 information from "the original 1-11a. I would note that the  
24 last page of Exhibit 15 says, "Table A-4," and in Exhibit 14,  
25 it's Table A-3." But as I reviewed them -- and Mr. Carroll  
can correct me if I am wrong -- they actually represent the

1 same information. They just renumbered the table in DRI's  
2 report.

3 A. That appears to be correct to me, yes.

4 Q. If I could refer you to the Attachment 1-11a for  
5 the revised interrogatory response, this would be  
6 Philadelphia Electric's most recent oil and coal price  
7 projections, is that correct?

8 A. That is correct.

9 Q. Can you tell me the period for which actual data  
10 is available and used in the revised 1-11a?

11 A. At least through the second quarter of 1985.

12 Q. When you say "at least," it might be through the  
13 third quarter, but you're not sure?

14 A. There may be some third quarter statistics in  
15 there. It is not complete third quarter statistics.

16 Q. If we compare the second quarter of 1986 for  
17 coal price, am I correct that Philadelphia Electric's  
18 projection for the delivered price of coal has gone down  
19 from \$47.75 per ton to \$45.90 per ton?

20 A. That is correct.

21 Q. And am I correct that the coal we are looking at  
22 here is that coal delivered to what you call Philadelphia  
23 Area Coal stations?

24 A. That is correct.

25 Q. And neither of these pages show anything for

1 Keystone or Conemaugh?

2 A. That is correct.

3 Q. Now, am I also correct that you haven't yet  
4 rolled in your new forecasted price of coal into your  
5 inventory balance analysis?

6 A. No, we have not. That is a standard procedure,  
7 that those prices will be rolled into the final accounting  
8 exhibit.

9 Q. Do you have an updated forecast for Keystone and  
10 Conemaugh prices at this time?

11 A. In discussing with Keystone and Conemaugh, they  
12 did not expect that their prices would change.

13 Q. Is there a relationship between the prices for  
14 coal of Keystone and Conemaugh and the market price for coal?

15 A. To the best of my knowledge, now, there is not.

16 Q. Meaning there may have been in the past?

17 A. In the very beginning of the contracts, when  
18 Keystone and Conemaugh first started, the price paid for  
19 Keystone and Conemaugh coal was a function of the prices  
20 paid by all the owning companies. That's going back into  
21 the initial commercial operation that ran for a while.

22 Then there were separate and unique prices arranged  
23 for those coal delivery companies, because there was enough  
24 experience of what their prices should be and how their  
25 productivity was and everything, that they didn't have this

1 tie-in with what the other companies were paying.

2 Q Do you know what elements make up the price for  
3 Keystone and Conemaugh?

4 A No, but I do know that it has components of  
5 ash, moisture, Btu requirements, with bonuses and penalties  
6 around it and that type of thing. All the exact quantities,  
7 what else goes into it, I don't know.

8 MR. WERSAN: I would like to make a request, Mr.  
9 MacGregor, if you could provide the actual pricing for  
10 Keystone and Conemaugh for 1985, just so that we can see if  
11 it is changing with the market or against the market or on  
12 its own.

13 MR. MacGREGOR: We will provide it.

14 THE WITNESS: You did say the actual prices that we  
15 have experienced so far in 1985?

16 BY MR. WERSAN:

17 Q Yes.

18 Now, if we look at the revised attachment 1-11a for  
19 oil prices and compare that to the original, am I correct  
20 that you have not forecasted any change for the second  
21 quarter of 1986 for your purchase price of oil either for  
22 No. 6 or No. 2?

23 A At the time this latest estimate was put out,  
24 that is correct.

25 Q And if we were to move up the page there to the

1 third and fourth quarters of 1985, we would see for  
2 example, for 1986, for No. 6 half-percent sulphur oil, that  
3 the company has a price in the third quarter of \$26.65 a  
4 barrel, and project a jump to \$27.75 a barrel, is that  
5 correct?

6 A. That is correct.

7 Q. And that jump is also seen for 1 percent No. 6  
8 and for No. 2 oil?

9 A. That is correct.

10 Q. And in fact, you haven't changed your projection  
11 for the fourth quarter for oil prices from that which was  
12 provided in the original 1-11a?

13 A. That is correct.

14 Q. Now, Mr. Carroll, initially, would you think that  
15 the jump in oil prices that the company is projecting from  
16 the third to the fourth quarter of 1985 is in line with  
17 current oil markets?

18 A. In light of the conditions that happened within  
19 the last three or four days, I would say that that is  
20 probably not in line.

21 The basis for the increasing price that was projected  
22 in the fourth quarter was the fact that they expected the  
23 dollar to not be as strong with the foreign currency, and  
24 since oil, crude oil prices are quoted in American dollars,  
25 it meant that in foreign currency, crude oil was extremely

1 high. Although we in America thought it was going down, it  
2 was extremely high there. . They expected the dollar value to  
3 come down, which would make for cheaper oil. . . Therefore,  
4 they had anticipated that the foreign consumption would go  
5 up and it would reduce the surplus. That's the reason it  
6 went up.

7 In light of the OPEC situation and the prices that  
8 came down, it has come down, but the American dollar is also  
9 coming down right now, so that consumption could go up and  
10 it could turn around in a very short time, or it could stay  
11 down. We don't know.

12 Q I have two questions based upon that answer. The  
13 first is, when you say "they projected," who do you mean,  
14 they projected these prices and the strength of the dollar,  
15 et cetera?

16 A There was a discussion within the company, our  
17 field procurement people, looking at the impact, and there  
18 was some discussion with DRI as to what was the reason for  
19 the turnaround.

20 And primarily one of the major reasons for the  
21 turnaround was the American dollar strength. That is today,  
22 you know. I sat in on those discussions. I did not put any  
23 input into it, because it is well out of my field.

24 Q And when are you indicating these discussions took  
25 place?

1 A. Those discussions took place prior to the July  
2 projection, and to the best of my knowledge, the evaluation  
3 was made on the latest projection, and they said they saw  
4 no reason why they should change it, because they still  
5 felt that that phenomenon was going to happen.

6 Q. Mr. Carroll, I'd like to refer you to the DRI  
7 forecast for August, 1985, which is in OCA Exhibit No. 15,  
8 and turn I guess to Table A-1, which is on the bottom marked  
9 page 17.

10 Am I correct, this is DRI's forecast through the year  
11 1988 for the oil types that we have been talking about and  
12 that are included in 1-11a, PECO's forecast?

13 A. Yes, that's correct.

14 Q. And this August, 1985 forecast by DRI shows, for  
15 example if we look at the forecast for No. 6 1 percent oil,  
16 it shows prices considerably lower than you have included in  
17 your company forecast, is that correct?

18 A. That is correct.

19 Q. And it shows declining prices from the first  
20 quarter of 1986 all the way until the third quarter of  
21 1987, is that correct?

22 A. Yes.

23 Q. So, certainly by August of this year, at least  
24 DRI was not projecting that prices would turn back up again  
25 in the end of 1985 and continue rising through 1991?

1           A. The opinion of the DRI model is that it is very  
2 sensitive to immediate conditions, and then will turn, but  
3 it will set a bias in their fuel forecasting model.

4           So that, if current conditions caused a 5 percent  
5 drop in costs for the sake of exaggeration, it would have a  
6 tendency to follow a trend, but ultimately it's liable to  
7 end up a 5 percent drop even though it starts climbing at  
8 some escalation rate into the future, or something less than  
9 getting back on trend.

10           Most of the other projections that have been  
11 reviewed that come out, like the Department of Energy, will  
12 turn around and will change the slope so that ultimately it  
13 gets back to cost.

14           And it's the timing of when that change of slope is.  
15 The company is sensitive to that aspect of the DRI projec-  
16 tions, and does not always carry on with that particular  
17 aspect of the DRI projections.

18           Q. Let me ask you your forecast for oil prices to  
19 the second quarter of 1986, which is when we are concerned  
20 about for inventory prices. Do you still believe that they  
21 will reach the level as stated in page C-10 revised?

22           A. Right now, because of the fact that this  
23 situation happened only within the last few days, and as I  
24 mentioned there is also the situation, as I heard on the  
25 news this morning, of a drastic drop in the American dollar's

1 worth with foreign currency, I don't think there has been  
2 sufficient time to determine what effect these two things  
3 will have on the second quarter 1986 prices, so I can't  
4 answer whether they will be down or up or stay the same  
5 at this point in time.

6 Q. Mr. Carroll, when you developed your oil price  
7 forecast, am I correct that you put in a certain  
8 incremental, I'll use the word inflation factor for growth  
9 over time?

10 In other words, you are starting with a known basis  
11 and then you are inflating that through the quarters,  
12 taking into account the company's use of oil, I guess?

13 A. We are inflating that over time, but it is not  
14 really necessarily the company's use of oil. It is more an  
15 impact of oil in the Philadelphia Harbor area as we look at  
16 the trend within a particular year as opposed to the  
17 company's use.

18 But it's inflated over time with the expected changes  
19 in the price of money over time, yes.

20 Q. And in the original 1-11a company forecast, am I  
21 correct that the incremental change from quarter to quarter  
22 was never more than about 75 cents until you get out to the  
23 end of 1986?

24 A. I'm sorry, let me make sure I've got the right  
25 one here.

(Witness perusing document.)

1 Q. When I say 75 cents, I mean 75 cents a barrel.

2 A. Yes, I think that's true.

3 Q. If you were to apply the rate of change that you  
4 are showing from the original 1-11a to the new, lower  
5 prices, would I be correct that you would not get back up  
6 to a level of \$27 a barrel in the second quarter of 1986 for  
7 No. 6?

8 A. If that same growth rate was applied, we would  
9 obviously not get back to the \$27 and \$26, that is correct.

10 Q. Making another comparison, if we could, between  
11 the original and the revised, in your revised Philadelphia  
12 area coal prices which you have revised down for 1986, you  
13 have also continued that lower price level through the  
14 period 1991 in your forecast as compared to the original  
15 forecast.

16 A. Yes, that is correct.

17 Q. Whereas you have maintained the same forecast for  
18 oil through 1991 in both documents?

19 A. That is correct.

20 Q. Mr. Carroll, for purposes of valuing fuel  
21 inventory, we are only concerned through the second quarter  
22 of 1986, but would I be correct that there are other pieces  
23 of this current rate case where fuel price projections for  
24 the next 20 years or more are important?

25

1 A. There are other periods in this current rate  
2 case where fuel prices for the next 20 years are a factor,  
3 yes.

4 Q. And what I am referring to specifically are two  
5 things. One is the company's forecast of the energy savings  
6 from Limerick 1 over the next two years, which they have  
7 averaged out at \$207 million projected energy savings, and  
8 the second is the long-term production cost model used to  
9 forecast cost and benefits from Limerick 1 over its life,  
10 is that correct?

11 A. That is correct.

12 Q. Are you familiar with the fuel price escalation  
13 rates used in both the two-year and the long-term forecasts  
14 for Limerick 1 energy savings or benefits?

15 A. Specifically the Limerick savings calculation  
16 which is shown on page D-21, D-21a of TPH-2 was developed  
17 on the same forecast as was used for the prices on C-10.

18 Those same prices were originally used in the long-  
19 term, and I forget now whether we revised them. The rate of  
20 escalation is the same. I am not sure whether it has been  
21 revised for a new starting point or not. The rate of  
22 escalation would have been the same.

23 Q. The rate of escalation for the long-term forecast?

24 A. For the long-term would have been the same. It's  
25 a question of whether we ran them with a revised starting

1 point or not. The rate of escalation would have been the  
2 same.

3 Q Are you familiar with those escalation rates?  
4 If I showed you an interrogatory answer showing them, would  
5 you be familiar with them and be able to confirm them?

6 A I probably would be. I won't swear to it at  
7 this date.

8 Q Let's give it a try.

9 MR. WERSAN: Your Honor, at this time I would like to  
10 mark for identification OCA Exhibit No. 16, which is the  
11 company's answer to IR-OCA-16-8.

12 JUDGE MATUSCHAK: Very well.

13 (Whereupon, the document was  
14 marked OCA Exhibit No. 16 for  
15 identification.)

16 BY MR. WERSAN:

17 Q Are you familiar with these escalation rates,  
18 Mr. Carroll?

19 A Yes, I am.

20 Q And these were the escalation rates that were  
21 used in projecting the cost and benefits -- let me change  
22 that, the energy costs in the production cost model used in  
23 the Limerick cost benefit analysis by the company?

24 A That is correct.

25 Q Would I be correct that these escalation rates  
indicate real growth in the price of both coal and oil

1 throughout the period being modeled?

2 A. Yes, they do.

3 Q. Now, if I could have you look at Table A-3 of  
4 OCA Exhibit No. 15, which is the revised 1-11 -- I'm sorry,  
5 it would be Table A-4 in the revised version -- this table  
6 shows DRI forecasted prices through the year 2006, is that  
7 correct?

8 A. That is correct.

9 Q. And it shows those prices in both nominal dollars  
10 and constant 1985 dollars, is that correct?

11 A. That is correct.

12 Q. Would I be correct that for constant dollars, in  
13 DRI's forecast it is actually projecting a decrease in the  
14 price of oil from 1985, decreasing for as long as through  
15 1991 and not getting back up to the 1985 price on a  
16 constant dollar basis until approximately 1998?

17 A. Yes, that is essentially correct, yes.

18 Q. What does it mean when the constant dollar  
19 price actually declines over time as compared to --

20 A. It means you have a negative real growth.

21 Q. And if we were to compare Table A-3 from OCA  
22 Exhibit No. 14 to the table A-4 we are now looking at,  
23 would I be correct that DRI is showing, through the year  
24 2006, lower oil prices, and in fact by the year 2006 the  
25 price differential change in the DRI forecast for say No. 6

1 1 percent sulfur oil is from \$130 a barrel down to \$120 a  
2 barrel, or a \$10 a barrel decrease by that year?

3 A. That's the difference between the two forecasts  
4 by DRI, one made in the second quarter and the other one  
5 made in the third quarter.

6 Q. Mr. Carroll, I would like to discuss with you  
7 the ramifications of decreasing fossil fuel prices over the  
8 next two years and then over the next 30 years as used in  
9 the company's cost analysis for Limerick.

10 Am I correct that the fuel prices are an input to  
11 the production cost model which generates the energy cost  
12 that PECO expects over the next year?

13 A. Over the period of the study that we are running,  
14 yes.

15 Q. And with respect to the savings from Limerick 1  
16 over the next two years, would I be correct that if fossil  
17 fuel prices are lower than were included in that production  
18 cost model, and everything else in the model remains the  
19 same, the energy savings from Limerick 1 will be lower also?

20 A. The total energy cost will be lower in both runs  
21 and the delta between the two which is attributed to Limerick  
22 savings would be of some order of magnitude lower, but it is  
23 hard to say what the total impact would be, but it would be  
24 slightly less, yes.

25 Q. And the basic reason for that is, the generation

1 which you are projecting Limerick to displace, either  
2 interchange purchases or generation from coal or oil units,  
3 that generation will be at a lower price, so the differen-  
4 tial, the delta, will be at a lower value?

5 A. Yes.

6 Q. Now, Mr. Carroll, are you familiar with the  
7 Commission's recent order in the ECR-8 investigation?

8 A. I think I am, yes.

9 Q. And are you familiar with that order as it  
10 relates to the structure of the Energy Cost Rate for  
11 Philadelphia Electric?

12 A. I am familiar with it. I won't say I am an  
13 expert on it.

14 Q. That's fine. At this point, I am not sure who is  
15 Is it your understanding that under the Commission's  
16 order, whereas currently 100 percent of energy costs are  
17 reconciled through the ECR, only 80 percent of energy costs  
18 will be reconciled in the future for Philadelphia Electric?

19 A. Yes, that is my understanding.

20 Q. And therefore, 20 percent of the energy costs  
21 will not be reconciled, and whatever that forecasted cost is  
22 is the amount that will be collected or will be projected to be  
23 collected by the company?

24 A. Whatever -- 20 percent of what our projected  
25 cost will be is what the company will collect.

1 Q If we step again to the energy savings forecast  
2 for Limerick 1 -- actually, let me rephrase that, since  
3 PECO actually works on a total energy cost basis.

4 If in this rate case PECO has projected total  
5 energy costs of some amount, say \$800 million, and  
6 everything in that forecast turned out to be accurate  
7 except that fossil fuel prices were lower than were input  
8 into the production cost model, then PECO's experienced  
9 energy expenses would be lower than its energy revenues, is  
10 that correct?

11 A I am sorry. PECO's experienced energy expenses  
12 would be lower than PECO's energy revenue? For that 20  
13 percent which would be locked in base rates, that would be  
14 correct, yes.

15 Q So, assuming that everything in the forecast  
16 turned out to be accurate, and that 20 percent remained the  
17 same, the company would benefit by having higher revenues  
18 than expenses within that 20 percent block?

19 A Yes, that is correct.

20 Q Now, in addition to the effect of lower fossil  
21 fuel prices on both the amount of energy savings for the  
22 next two years from Limerick 1 as you have projected, and  
23 also any potential effect on reconciliation of costs under  
24 an 80/20, lower fossil fuel prices will also affect the  
25 company's long-term cost benefit analysis of Limerick 1, is

1 that correct?

2 A. That is correct.

3 Q. And will you agree that it is the difference  
4 between Limerick 1's nuclear fuel generation costs and  
5 interchange and fossil fuel -- actually, I guess you have  
6 already agreed to this question. Let me skip it.

7 Starting from the basis that nuclear fuel generation  
8 costs are lower than interchange or fossil fuel generation  
9 costs, will you agree with me that it is that benefit that  
10 will cause the company to spend the additional capital on  
11 the nuclear unit as compared to spending capital on an oil  
12 plant of similar capacity?

13 A. I think there is a timing problem here in  
14 projecting a type of capacity that you would expect to put  
15 in before you even start a capital expansion program.

16 I would agree that yes, the projected deltas that you  
17 would expect in your total fuel and interchange expenses  
18 with one class of generation versus another class of  
19 generation would go to look at whether the additional  
20 capital was justified or not.

21 I am not sure that in the way you have phrased the  
22 question now, it would say that what we were looking at now  
23 would justify the capital which has been spent. I think  
24 the capital expenditure is a projection type of a thing, and  
25 what happens after that could go one way or the other to

1 turn around and increase your savings and therefore further  
2 justify the decision you made, or decrease your savings and  
3 eliminate some of the justification of the decision you made.

4 Q That's fine. That answers my question exactly  
5 the way I had intended to ask it.

6 Do I take it from that answer that if fossil fuel  
7 prices are lower than are included in the company's current  
8 long-term forecast for Limerick 1, that the projected  
9 economic energy benefit of Limerick 1 will be reduced?

10 A Under the present conditions as we see them, and  
11 if those conditions were to continue for the much lower  
12 fuel price, the economic benefits would be reduced, yes.

13 MR. WERSAN: Your Honor, at this time I would like  
14 to mark for identification OCA Exhibit No. 17, which is a  
15 one-page exhibit labeled, "Wharton EFA Projections of PECO  
16 Oil and Coal Costs, 1982 to 1995."

17 (Whereupon, the document was  
18 marked OCA Exhibit No. 17  
for identification.)

19 BY MR. WERSAN:

20 Q Mr. Carroll, I am not sure whether you are  
21 familiar with this. I will state that this was an exhibit  
22 presented by the company in the original Limerick investiga-  
23 tion at Docket I-80100341, and I guess I would ask you to  
24 accept that subject to check.

25 A Yes, I will be glad to take that subject to check.

1 Q Would you agree that the forecasted oil and coal  
2 prices that are presented in this exhibit, which as I have  
3 stated were presented by the company in the original  
4 Limerick investigation, show fossil fuel prices substantial-  
5 ly higher than we are currently experiencing?

6 A Yes, they do.

7 MR. WERSAN: Your Honor, I would now like to mark  
8 for identification OCA Exhibit No. 18, which is an excerpt  
9 from testimony in the Limerick 2 investigation at Docket  
10 I-840381. It contains a cover page for Statement No. 19A,  
11 additional direct testimony of Thomas P. Hill, Jr., with  
12 Attachment 2a, fossil fuel price forecast, Limerick 2 show  
13 cause."

14 (Whereupon, the document was  
15 marked OCA Exhibit No. 18 for  
16 identification.)

17 BY MR. WERSAN:

18 Q I assume you are familiar with this document,  
19 Mr. Carroll, since you were in the Limerick 2 investigation.

20 A Yes, I am familiar with this document.

21 Q And these were the fuel prices that the company  
22 used in the Limerick 2 case for making its economic analysis,  
23 is that correct?

24 A I think that is correct, yes.

25 Q And would you agree that even these prices are  
now above what we are currently experiencing?

1 A. Yes, that is correct.

2 Q. And they are above what DRI is currently  
3 projecting?

4 A. Yes, because DRI is currently projecting some-  
5 thing less than what we are currently experiencing.

6 Q. And also, they are above what Philadelphia  
7 Electric is also projecting for the future?

8 A. (Witness perusing document.)

9 MR. MacGREGOR: Mr. Wersan, when you say "the future,"  
10 I gather you mean through 1991?

11 THE WERSAN: Yes.

12 THE WITNESS: Oh, through 1991?

13 BY MR. WERSAN:

14 Q. Yes. That's the only PECO forecast that we  
15 actually have, is through that date, in the documents I  
16 have given you so far.

17 A. There is a significant difference in the coal  
18 price. There was a very minor difference in the oil price.

19 MR. WERSAN: Your Honor, I am at a point where I am  
20 going to be moving to a different topic, if you'd like to  
21 take a break, or I can keep going.

22 JUDGE MATUSCHAK: We'll take a 10-minute recess.

23 (Recess.)

24

25

1 JUDGE MATUSCHAK: Back on the record.

2 BY MR. WERSAN:

3 Q Mr. Carroll, I would like to turn to the topic of  
4 spent fuel and spent fuel allowance at this time. Are you  
5 familiar with the spent fuel claim being made by Philadel-  
6 phia Electric in this case?

7 A Yes, I am.

8 Q Am I correct that the spent fuel expense is based  
9 upon the cost of one mill per kilowatt hour of gross  
10 generation from Philadelphia Electric nuclear stations?

11 A That is correct.

12 Q I take it that it is your division of the company  
13 that supplies the gross generation levels that go into this  
14 spent fuel calculation?

15 A That is correct.

16 Q And in this case you based that generation on the  
17 capacity factor of 65 percent?

18 A That is correct.

19 Q Now, am I correct that you also provided testimony  
20 on capacity factors and spent fuel allowance in the company's  
21 rate base case at R-822291?

22 A I am not sure on that. I know I did in 84 --

23 Q 2590.

24 A 2590. I'm not sure whether I did in that case.

25 JUDGE MATUSCHAK: What was the number?

1 MR. WERSAN: 842590 was the last case. The one before  
2 that was 822291.

3 BY MR. WERSAN:

4 Q Mr. Carroll, would you accept subject to check  
5 that in the company's base rate case at R-822291 the spent  
6 fuel allowance claim made by the company was based upon  
7 a capacity factor of 69 percent for its nuclear units?

8 A I'll accept that subject to check.

9 MR. MacGREGOR: Is that for all nuclear units, Mr.  
10 Wersan?

11 MR. WERSAN: In that case it would have been for  
12 Salem 1 and Peach Bottom 2 and Peach Bottom 3. Those were  
13 the only nuclear stations in base rates at the time.

14 BY MR. WERSAN:

15 Q And, Mr. Carroll, R-822291 concluded in November,  
16 1983, and the rates were in effect throughout 1984, ending  
17 with the new base rates decision in January of 1985; do  
18 you recollect that time frame?

19 A Yes.

20 MR. WERSAN: Your Honor, at this time I would like  
21 to have marked for identification OCA Exhibit 19, which is  
22 the company's answer to IR-OCA-15-6.

23 JUDGE MATUSCHAK: Very well.

24 (Whereupon, the documet was  
25 marked as OCA Exhibit No.  
19 for identification.)

1 BY MR. WERSAN:

2 Q Are you familiar with what is shown in this docu-  
3 ment, Mr. Carroll?

4 A Yes, I am.

5 Q And would I be correct that for the year of 1984,  
6 in which spent fuel allowance was based upon a 69 percent  
7 capacity factor, neither Salem 1 nor Peach Bottom 2 achieved  
8 a capacity factor of 69 percent?

9 A That is correct.

10 Q And in fact the capacity factors for those two  
11 units were in the 20s?

12 A That is correct.

13 Q So only Peach Bottom 3 exceeded the 69 percent  
14 and on a DER basis design electric rating it was 79.6 per-  
15 cent for 1984?

16 A That is correct.

17 Q And you indicated that you did testify on spent  
18 fuel in R-842590, and am I correct in that case the company  
19 presented a spent fuel allowance claim based upon a 65 per-  
20 cent capacity factor for Salem 1 and Peach Bottom 2 and 3?

21 A I think, if I'm not mistaken, we presented an 85  
22 percent on Salem and an 86 percent on -- I'm sorry; 65  
23 percent and 66 percent on Peach Bottom 2 and 3. I think  
24 there was a 1 percent difference on the two of them.

25 Q Just so it is clear in my mind, the capacity factor

1 you gave me applied to which plants?

2 A Salem I think was 65.

3 Q Salem 1 and 2, or just Salem 1?

4 A I think in the last case -- whatever unit we  
5 presented in the last case at Salem was at 65, and at Peach  
6 Bottom I think it was at 66. We have revised this one so  
7 everything is 65 percent.

8 Q Okay. Do you know the capacity factor for those  
9 units in 1985, to date?

10 A No, I do not. I do not know the exact number. I  
11 know that Salem No. 1 unit is running well into the 90s.  
12 Salem No. 2 unit has been running since its return to ser-  
13 vice well into the 90s, but it was out for the first three  
14 months; I don't know the exact numbers to date.

15 Q But we can get an estimate at least for 1985,  
16 knowing that Salem Unit 2 was shut down until at last mid-  
17 April of 1985; is that correct?

18 A That is correct.

19 Q So for the year 1985 the best it could do would  
20 be --

21 A Approximately 72.

22 Q And that assumes it runs 100 percent for the full  
23 year?

24 A Yes.

25 Q And for Peach Bottom 2 we know Peach Bottom 2 was

1 down from January 1 until mid-July, 1985; is that correct?

2 A That is correct.

3 Q So assuming it ran at 100 percent for the rest of  
4 the year, the best it could do would be approximately 50  
5 percent; is that correct?

6 A That's correct.

7 Q And Peach Bottom 3 shut down in July of 1985 and  
8 won't be back until at least January of 1986, so the best it  
9 could do would be 50 percent?

10 A That is correct.

11 Q The 65 percent capacity factor we have been dis-  
12 cussing is for spent fuel, whereas the basis for the spent  
13 fuel claim was also the capacity factor that the company  
14 used in its production cost model with the caveat that in  
15 fact you input forced outage rates and outage schedules,  
16 resulting in a 65 percent capacity factor; is that correct?

17 A Over an extended period, that is correct, yes.

18 Q And am I correct that Limerick Unit 1 has a  
19 designed electric rating of 1,055 megawatts?

20 A That is correct.

21 Q And for purposes of your production costs run in  
22 this case, you set the capacity of Limerick 1 at that level  
23 of 1,055 megawatts?

24 A That is correct.

25 Q Actually, before I go on with that line, can I

1 make a transcript request for the actual capacity factors  
2 for Peach Bottom units and Salem units for 1985 when that  
3 information is available? You should have that in a couple  
4 weeks for the whole year; right?

5 A I would prefer to say that it's at least one month,  
6 maybe 35 days away.

7 Q Can we get it to date? That would be easier.

8 A Okay.

9 Q Going back to the question of the capacity of  
10 Limerick 1, would you agree that in your -- let me ask it  
11 this way: in your production cost model, do you set the other  
12 nuclear plants in which Philadelphia Electric is involved,  
13 or in the old PJM at their design electric rating capacity?

14 A We set them at their maximum dependable capacity,  
15 which has been a reduction from their design electrical  
16 rating for additions to plant and summer operating conditions.  
17 Limerick No. 1's designed electrical rating is rated on  
18 summer operating conditions; so, therefore, we will not have  
19 a reduction on Limerick No. 1 from its designed electrical  
20 ratings because of summer operating conditions, and we do  
21 not anticipate additions to plant which would require  
22 additional light and power requirements such as the cooling  
23 towers which went into Peach Bottom, which were not in their  
24 design electrical rating.

25 Q I understand the company's position. I'm using

1 the DER -- or setting the MDC and the DER for Limerick.  
2 I would like to review quickly the DER and MDC for Peach  
3 Bottom.

4 A Yes.

5 Q And you would agree that for Peach Bottom 2 the  
6 DER is 1,065 and the MDC is 1,051?

7 A That is correct.

8 Q And for Peach Bottom 3 it is again 1.065 and  
9 1,035?

10 A Yes.

11 Q And the same comparison can be made for Salem 1  
12 and 2, and in both cases the MDC is lower than the DER; is  
13 that correct?

14 A I don't know. I don't remember the Salem DERs,  
15 and I would have to calculate the Salem MDCs because all I  
16 remember on Salem is PE's share, so that I have to go back  
17 and look. I don't have those locked in. I do know Peach  
18 Bottom because that's a unit we operate.

19 Q Just so we can confirm this right now, if I show  
20 you excerpts from the August 1985 NRC Gray Book, as it is  
21 commonly called, then that would show it, wouldn't it?

22 A That should verify it, yes.

23 Salem No. 1's designed electrical rating is 1,090;  
24 their MDC is 1,079. Salem No. 2's designed electrical  
25 rating of the DER is 1,015, and the MDC is 1,106.

1 Q Why don't you hold onto that for a second? Would  
2 you agree with me that Susquehanna Station Units 1 and 2 are  
3 quite similar in design to the Limerick Station?

4 A Yes, I think the word "quite similar" would be  
5 appropriate.

6 Q In that they are both boiling water reactors with  
7 a Mark II design built during the same basic period of time?

8 A Essentially yes.

9 Q And you would agree with me based upon the Gray  
10 Book that the difference between the MDC and the DER for  
11 Susquehanna 1 and 2 is comparable to the other differences  
12 we have been talking about in that in both cases the MDC  
13 is lower than the DER, and those numbers would be 1,065,  
14 DER, and 1,032, MDC, for both units?

15 A That is correct, but I do not know the basis for  
16 Susquehanna's calculation of their DER. I do know the  
17 basis for the DER calculation for Limerick, and it was  
18 specified in calculating and designing the plant that that  
19 plant should be designed for summer conditions, and the  
20 cooling water inlet temperature to the condensor is  
21 designed for 94 degrees, and that's the basis for the DER.

22 Q Now, if we get back to the issue of capacity  
23 factor and your long-term projections, if you will once  
24 again go to OCA Exhibit 19, do you agree with me that neither  
25 of the Salem units or the Peach Bottom units have a lifetime

1 capacity factor of 65 percent on either a DER or an MDC  
2 basis?

3 A Through 1984, that is correct, yes.

4 Q Well, let me ask you this: if we look at Salem,  
5 where you have indicated a much higher capacity factor for  
6 1985, do you think that one year of operation would bring  
7 the lifetime average up from around 45 percent to 65  
8 percent?

9 A No, I do not; but you asked did this show, and I  
10 answered with respect to this.

11 Q Okay, thank you.

12 Do you think that if you added in the 1985 production  
13 from other Peach Bottom units that you would get up to a 65  
14 percent lifetime capacity factor?

15 A At the end of 1995, no, I do not.

16 Q Mr. Carroll, would you agree that one of the  
17 reasons that capacity factors for the company's units have  
18 been less than 65 percent -- or I should say less than  
19 anticipated when they were originally designed -- is due to  
20 the length of outages at those stations?

21 A That is the primary and almost sole reason why  
22 the capacity factors aren't up to where they were expected  
23 to be.

24 MR. WERSAN: Your Honor, at this time I would like  
25 to mark for identification OCA Exhibit 20, which is a

1 transcript data request answer from the ECR-8 investigation  
2 at Docket P-830453.

3 JUDGE MATUSCHAK: Very well.

4 (Whereupon, the document was  
5 marked as OCA Exhibit No. 20  
6 for identification.)

7 BY MR. WERSAN:

8 Q Mr. Carroll, are you familiar with the information  
9 on the refueling outage history that is shown in this docu-  
10 ment?

11 A Yes, I am.

12 Q Just to clear up the record, Mr. Carroll, you  
13 would agree with me that Drew Smith, who is listed on the  
14 second page of this three-page document, was in charge of  
15 the Peach Bottom station outage planning, or Peach Bottom  
16 supervision?

17 A He was either Outage Manager at the -- he was  
18 Outage Manager through most of these outages. Right now  
19 he is Superintendent of Operations at Peach Bottom.

20 Q And am I correct that the table on the last page  
21 shows the history of refueling outages for the first ten  
22 refueling outages at Peach Bottom Units 2 and 3?

23 A That is correct.

24 Q And will you agree that in the first ten refueling  
25 outages at the Peach Bottom station no outage was ever  
concluded on its originally projected schedule?

1           A Yes, that is correct. But based on the philosophy  
2 of scheduling the outage lengths, it is very hard to remain  
3 on an originally projected schedule, and there were some in  
4 there that came in very close to it, when you look at the  
5 fact that we had a 50-day outage and a 39-day outage. But  
6 most of the others were associated with modifications which  
7 caused them to go further and that type of thing, as well  
8 as some unexpected problems during the outages.

9           Q And if we were to update this document for the  
10 outages at Peach Bottom through today, would I be correct  
11 that still the outages have not been concluded within the  
12 originally scheduled time periods?

13           A That is correct.

14           Q And am I correct that this shows a refueling  
15 outage for the fifth refueling outage at Unit 3 that  
16 extended 360 days?

17           A That is correct.

18           Q The reason that it was extended was due to repairs  
19 needed on Peach Bottom Unit 3 to its piping system in that  
20 there were cracks developing in the piping system?

21           A I would modify that to say replacements needed  
22 rather than repairs; replacements needed on the piping system.

23           Q Excuse me, Mr. Carroll. We are in 1983 on Unit  
24 3. Those were weld overlays, weren't they?

25           A I'm sorry; you are right. This is the 1983; that

1 was repairs, correct.

2 Q And while we don't have it as a refueling outage  
3 in the middle of 1983, Peach Bottom Unit 2 was shut down for  
4 an extended period, I think from July through December, to  
5 do similar repairs to its pipes?

6 A That is correct.

7 Q And then bringing that forward through today at  
8 Peach Bottom, in April of 1984 Peach Bottom Unit 2 shut down  
9 to replace its entire piping system, and that outage took  
10 until July, 1985?

11 A That is correct.

12 Q And originally that outage had been scheduled  
13 to go 36 weeks and instead it went substantially longer;  
14 it went some 14 or 15 months?

15 A Yes.

16 Q Finally, finishing it off for Unit 3, once Unit  
17 2 came back on line Unit 3 shut down for a refueling outage  
18 which required it to inspect its pipes and, due to those  
19 inspections, additional repairs have been required and  
20 that plant is still shut down and it is not expected back  
21 this year?

22 A That is correct.

23 Q Would I be correct that for the Salem units there  
24 have also been extended outages, especially in the last few  
25 years, to make repairs for other reasons?

1           A There have been extended outages at Salem. No.  
2 Unit. It has been primarily generator problems. No. 1  
3 Unit has been some generator problems and some other repair  
4 problems, but 2 has been primarily generator problems.

5           Q And you would agree with me that on Salem Unit 2  
6 the original generator that was installed in some way failed  
7 on October 4th, 1984 and had to be replaced with an  
8 entirely new generator and that outage took until April of  
9 1985?

10          A I guess I'm not sure of the date, but that's the  
11 approximate time frame. It did come back in April. I'm  
12 not sure of the exact date of the failure, but that's  
13 approximate.

14          Q And that generator failure followed on the heels  
15 of the generator failure at Unit 1, which occurred in  
16 February of 1984?

17          A Yes.

18          Q And that outage took until the end of October,  
19 1984; is that correct?

20          A It took until mid to late October, yes.

21          MR. WERSAN: Your Honor, at this time I would like  
22 to mark for identification OCA Exhibit 21, which is an  
23 excerpt from the transcript in Philadelphia Electric's  
24 base rate case at Docket R-842590, which is an excerpt from  
25 the cross-examination of Mr. Carroll during that case.

1 JUDGE MATUSCHAK: Very well.

2 (Whereupon, the document was  
3 marked as OCA Exhibit No. 21  
4 for identification.)

5 BY MR. WERSAN:

6 Q Do you remember this cross-examination, Mr.  
7 Carroll?

8 A If you will give me a chance?

9 (Witness perusing document.)

10 Yes, I do.

11 Q Would I be correct that that transcript shows  
12 two pages in which you were being asked questions about  
13 the capacity factor of the Salem station?

14 A Yes, that is correct.

15 Q And am I correct that you gave an explanation as  
16 to one of the reasons why Salem 1 had a low capacity factor  
17 -- and I guess it would be a lifetime capacity factor up to  
18 that date?

19 A Yes, I think that is correct.

20 Q And would I be also correct that your response or  
21 the reason you gave is that "The capacity factor on Salem  
22 is not because of the fact that that once the unit got on,  
23 it fell off.

24 "The capacity factor on Salem is low because you  
25 never get the unit back on after an outage." Is that  
correct?

1 I'm reading at the top of the last page.

2 A Yes, I think that's what the transcript says.  
3 I think it should have said that the unit never comes back  
4 on time after an outage. It obviously gets back on after  
5 an outage. I think there is an omission there.

6 Q At lines 12 to 14 on that same page you say,  
7 "Our problem is getting it back on. Once it comes off for  
8 extended refueling, end of cycle outage, we have a problem  
9 getting it back on." Is that correct?

10 A Yes.

11 Q Mr. Carroll, is the 65 percent capacity factor  
12 that the company projects for Limerick over the next few  
13 years and through its life based upon an assumption that  
14 there will be adequate water to run that unit throughout the  
15 year?

16 A Yes, it is.

17 Q Now I would like to ask you a few questions about  
18 the company's base load plant outages scheduling philosophy.  
19 I assume you are familiar with the --

20 A Yes, I am.

21 Q Would I be correct that as a general rule the  
22 company would prefer to schedule outages of its base load  
23 plants in the off-season or the non-peak season?

24 A The company schedules the outages of its base  
25 load units in consideration of two major -- I guess three

1 major items, the first being the economy, the second one  
2 being the fuel cycle and burn-up conditions on our nuclear  
3 units, and the third one being the manpower considerations  
4 of sufficient manpower to perform the outage and return the  
5 unit to service within a reasonable period of time. With  
6 all of those conditions not causing conflicts, the base  
7 load units are preferable in the valley period of the load,  
8 yes.

9 Q When you talk about burn-up and manpower considera-  
10 tions, would I be correct on burn-up that the issue is if  
11 the plant is actually running out of fuel or is at a  
12 situation where the fuel in the core is getting low, some-  
13 times circumstances will just require you to shut down for  
14 refueling in the summer rather than try to coast through  
15 to the fall?

16 A When we refer to burn-up there is a certain amount  
17 of full power days within a reactor after you refuel. When  
18 you have achieved those full power days you have a choice  
19 of going into a refueling outage or doing what is referred  
20 to as a coast-down. As you do a coast-down, you cause a  
21 change in the fuel costs of subsequent fuel cycles, so that  
22 the economics then is evaluated as to the change in fuel  
23 costs for the subsequent fuel cycles and the economics of  
24 fuel and interchange at the period of time.

25 It usually dictates that you try to take a

1 coast-down, but it depends on how long that coast-down  
2 will be and how low the capacity factor will be, and what  
3 implications that will have on the amount of fuel left in  
4 the reactor, the ability to relicense that reactor with the  
5 NRC, and whether it is resistivity and everything will be  
6 low or high, and whether it can achieve full capacity during  
7 the next cycles.

8 Q Would I be correct that it would be your  
9 preference not to have to decide whether to coast through  
10 or shut down; you would rather be in a position where you  
11 could actually shut down for refueling in the off-peak  
12 seasons?

13 A That is correct.

14 Q And then you talked about manpower considerations.  
15 Am I correct that what you are talking about there is where  
16 you have a two-unit station such as Peach Bottom or Salem  
17 you prefer not to have both of them down at the same time?

18 A No, that's another consideration which I didn't  
19 even mention. The manpower considerations are the considera-  
20 tions of trying to have, for instance, a nuclear unit being  
21 refueled -- in PE's case at Limerick -- and another one being  
22 refueled at one of our Peach Bottom units, being refueled  
23 at the same time; so that we would be taking our manpower  
24 and our talented craftsmen and trying to spread them too  
25 thin and supervise too many contractor craftsmen in doing

1 work that is critical to NRC requirements and that type of  
2 thing. That would be one of the considerations. We would  
3 also run into that to some extent if we were running a major  
4 fossil unit outage as well as a nuclear outage. That is the  
5 manpower concern.

6 There is almost an unwritten rule that we will never  
7 have two nuclear units down at the same time because we  
8 just do not have even the operating manpower to handle that  
9 type of an outage.

10 There are basically two types of manpower. One is  
11 the maintenance manpower, and normally that is our major  
12 consideration. In scheduling we don't even consider the  
13 two units at the same plant, and that is an operating  
14 manpower consideration. The amount of operating manpower  
15 that is required in a nuclear unit for running a refueling  
16 outage is tremendous. You think in terms of the plant  
17 shutdown that they don't have to do anything, but according  
18 to NRC requirements there has to be certain systems that  
19 are in operation during the entire outage for the safety of  
20 the plant, so that you must block, unblock and reblock and  
21 that type of thing as you are doing maintenance throughout  
22 the whole plant, and everything must be then inspected after  
23 it is worked on before you can put it back in service; and  
24 then if you have to take it out again because of some other  
25 work -- it takes a tremendous operating manpower, licensed

1 operating manpower to do that type of thing. We just don't  
2 have them because we would have a lot of surplus manpower  
3 during the other periods of time. They are highly qualified  
4 and all pass NRC requirements.

5 Q Okay. Let me ask you this: in your production  
6 cost projections in this case, you had to input schedules  
7 for refueling outages for your base load stations; is that  
8 correct?

9 A Yes, we did.

10 Q And apart from a known outage that would be of  
11 sufficient duration and it had to run through the summer --  
12 for example the planned future replacement of pipes at  
13 Peach Bottom Unit 3 -- would I be correct that you have  
14 attempted to schedule your nuclear base load refueling  
15 outages in a non-peak season?

16 A Yes, you would be correct that we attempted that.  
17 Whether we were able to achieve it or not, I'm not sure.  
18 I'd have to go back and examine it.

19 MR. WERSAN: Your Honor, this is another place where  
20 I'm going to switch topics, if you would like to break.

21 JUDGE MATUSCHAK: It might be a good idea to break.  
22 I have about 13 minutes to 1:00. We can return at about  
23 1:50.

24 MR. MacGREGOR: Your Honor, before we go off the  
25 record, if we are leaving this area, the Consumer Advocate

1 had asked earlier for 1985 capacity factor figures to date  
2 for the company's four nuclear units. I can read those into  
3 the record now and take care of that data request.

4 JUDGE MATUSCHAK: Very well.

5 MR. MacGREGOR: The report is dated December 11th  
6 and will provide capacity factors through December 10th,  
7 1985.

8 For Salem Unit 1 the figure is 95.6 percent. For  
9 Salem Unit 2 it is 55.5 percent. Peach Bottom 2 is 26.7  
10 percent; Peach Bottom 3 is 38.5 percent.

11 MR. WERSAN: Thank you, Mr. MacGregor.

12 JUDGE MATUSCHAK: Very well. We will recess until  
13 1:50.

14 (Whereupon, at 12:50 p.m. the hearing was adjourned,  
15 to be reconvened at 1:50 p.m. this same day.)  
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AFTERNOON SESSION

(2:00 p.m.)

JUDGE MATUSCHAK: Back on the record.

You may proceed, Mr. Wersan.

Whereupon,

JOHN J. CARROLL

having previously been duly sworn, testified further as follow:

CROSS-EXAMINATION (Continued)

BY MR. WERSAN:

Q Mr. Carroll, before I discuss operating and maintenance expense with you, I have one question I wanted to clarify. When we were discussing outage scheduling of your nuclear units, I understood you to say that the company prefers not to have more than one nuclear unit down at one time if it can; is that correct?

A No. I think I said that we, in considering manpower considerations, prefer not to have more than one nuclear unit that we are maintaining; and if I did not put that in there, that's what I meant, that we are maintaining so that therefore we could have an outage of a Salem unit and a PE unit because that does not affect the manpower considerations.

Q I see. And even recognizing that desire though, there have been times when, for example, both Peach Bottom

1 units have been down at the same time for outages?

2 A I think that's true, but I don't think it was  
3 scheduled outages. I think we are talking of scheduled  
4 outages.

5 Q Okay, that's fine.

6 A There will always be exceptions to any rule that  
7 you make, but I think we were talking scheduled outages.

8 Q Now, going to the topic of O&M, if I could refer  
9 you to Schedule 2 attached to your testimony, do you have  
10 that?

11 A Yes, I do.

12 Q And this schedule is sponsoring the development  
13 of normalized outage costs for the Eddystone and Cromby  
14 units; is that correct?

15 A No, this is all of the Philadelphia area fossil,  
16 which is the oil and coal units in the Philadelphia area.

17 Q And as I understand what you have done, you have  
18 started with the outage expense presented by the company  
19 in the last base rate case at Docket R-842590 and adjusted  
20 it by the Commission's audit adjustment in that case?

21 A That is correct.

22 Q And then you increased it from 1984 to June, 1986  
23 by 5.25 percent for 1985 and one-half of 6.4 percent for  
24 1986?

25 A Yes, but before I did that inflation adjustment

1 there were two other corrections to the Commission -- to  
2 the value we presented to the Commission in 842590. One  
3 was we removed Southwark, which was in there; and the other  
4 one was we attached the Commission-approved normalization  
5 from that last case. Then we corrected it for inflation.

6 Q You are right. I didn't mean to mischaracterize  
7 it. I was more interested in simply the fact that you  
8 inflated it through 1985 to June, 1986 using the 5.25  
9 percent and the 3.2 percent to June, 1986, which was the  
10 one-half of 6.4 percent.

11 A That's correct.

12 Q And were these inflation factors provided to you  
13 by Mr. Solecki or his department?

14 A Yes, they were.

15 Q And did you proceed in the same manner with respect  
16 to inflating normalized outage expense for your nuclear units  
17 in this case also?

18 A Yes, I think that is correct.

19 Q Mr. Carroll, were you also involved in the  
20 development of the O&M projections used for the Limerick  
21 cost benefit analysis done by the company in this case?

22 A Yes.

23 Q And am I correct that those projections show a  
24 real increase in O&M of 3 percent per year through 1990,  
25 and then zero real increase thereafter?

1 A That is correct.

2 Q If I could refer you back to OCA Exhibit 19, which  
3 we discussed earlier?

4 A Yes.

5 Q Do the attachments to that exhibit also show total  
6 production expenses less fuel for both Salem and Peach  
7 Bottom?

8 A Yes, they do.

9 Q In the far right-hand column?

10 A Yes.

11 Q And if we start with Peach Bottom on the last page  
12 we will see that the O&M expense, total production expense  
13 for the Peach Bottom station for Philadelphia Electric's  
14 share, has gone from about \$4.7 million in 1975 to over  
15 \$36 million in 1984; is that correct?

16 A That is correct.

17 Q And if we made a similar comparison for the Salem  
18 station, it has gone up to as high as \$90 million in 1984;  
19 is that correct?

20 A Yes, that is correct. But we must remember that  
21 the first four values shown on there are for Salem No. 1  
22 only, and then only in 1981 do we start picking up part  
23 of the year of Salem No. 2.

24 Q That's right. So for Salem 1 it went from about  
25 \$5.7 million up to almost -- to a little over \$29 million,

1 and then when Salem 2 came along it started at \$35.7 million  
2 and then it went up to \$90 million for the total station?

3 A Yes. Again I would caution that the first year  
4 is only a partial year; it is not a full year.

5 Q Okay. But would you agree that for both Peach  
6 Bottom and Salem the increase in O&M has exceeded on  
7 average 3 percent a year in real costs?

8 A Yes, I would.

9 Q And I have one last question in this area of  
10 expenditures on the nuclear plants. Yesterday the Office  
11 of Consumer Advocate identified an OCA Exhibit Number 4,  
12 which shows the history of capital additions at the Peach  
13 Bottom and Salem stations; and I have one specific question  
14 on that. I can show it to you, unless Mr. MacGregor has  
15 a copy he can show you.

16 I have another copy here.

17 (Document handed to witness.)

18 If I could refer you to the additions for the Salem  
19 100 percent common facilities, it shows that for the first  
20 six months of 1986 the company is planning to spend  
21 \$24,689,000 on common facilities; is that correct?

22 A Salem Station common facilities, first six  
23 months 1986; yes, it shows -- that's the number it shows  
24 on this exhibit; that is correct.

25 Q Can you please state what is happening at the

1 Salem Station in the first six months of 1986 for which  
2 that substantial capital addition is being made?

3 A No, I'm afraid I do not know.

4 Q Do you know if any of the other witnesses in this  
5 case -- Mr. Kemper or Mr. Hill -- might know?

6 MR. MacGREGOR: We can provide an explanation. I'm  
7 not sure if this is the specific witness.

8 MR. WERSAN: Why don't we just make that a transcript  
9 request.

10 BY MR. WERSAN:

11 Q Now, Mr. Carroll, I would like to talk about  
12 dispatching of PECO generating units in its model and in  
13 the PJM. Can you please describe how the company's  
14 generating units are committed and dispatched, and who is  
15 responsible for the process?

16 A I take it you are asking for the daily commitment  
17 of the generating units for dispatching purposes?

18 Q Yes.

19 A The operation of the PECO system separately and  
20 in conjunction with the PJM on a daily basis is the  
21 responsibility of the System Operation Department of Electric  
22 Production. They are responsible for issuing all releases  
23 on every piece of capacity of Philadelphia Electric, to  
24 release it from service, so that if a station has a need  
25 to take the unit out they request a release from the System

1 Operation Department, and therefore they give them the  
2 release. That release then is the start of the process for  
3 preparing permits so that the equipment can be operated on,  
4 and it comes from the System Operation Department so the  
5 System Operation Department can review the loss of that  
6 piece of equipment from the system for the period covered  
7 by the release, to make sure reliability considerations --  
8 what impact it has on transmission outages, which also have  
9 releases and everything.

10 Then that allows then the daily scheduler within the  
11 System Operation Department to know what equipment he has  
12 to operate that day. He then commits to PJM the equipment  
13 that he has available for PJM to operate on that day, and  
14 then PJM will look at the projected cost level for the day,  
15 and the scheduler will then schedule for operation all of  
16 the equipment that he has available up to the cost level  
17 that is predicted for the day.

18 That's worked on an operating rate developed based  
19 on current fuel performance and everything, and he looks  
20 down the list and says: all right, we're going to have an  
21 operating rate of 40.6; that will bring all of these units  
22 on the line, and these units will be sitting in cold standby  
23 reserve.

24 Q Is there a dispatch rate sent automatically to  
25 each company by PJM and updated every three seconds by the

1 PJM?

2 A Yes, there is a dispatcher generation rate assigned  
3 to every company within the various transmission areas of  
4 PJM. Everyone gets one, but they may not be the same to  
5 all members at the same time.

6 Q How does PJM develop that dispatch rate?

7 A PJM develops that dispatch rate by looking at the  
8 known dispatch rate this instant and reviewing basically  
9 what is known as the area requirements signal. It is a  
10 combination of all of the tie lines in and the tie lines  
11 out, compared to the schedule of tie lines in and out.

12 If PJM is drawing heavy on the tie lines, it  
13 increases the dispatch rate, but in increasing the dispatch  
14 rate it looks at the transmission capabilities internal in  
15 PJM and says: all right, do I have to increase that dispatch  
16 rate in the East, the South, the West, the Central, or can  
17 I increase it across the board? So it is basically an area  
18 requirement signal that drives the dispatch rate either up  
19 or down, depending on whether we are leaning on the ties  
20 or pushing out power on the ties.

21 Q Does PJM have some kind of a computer and a  
22 computer program constantly talking to the companies at their  
23 generating units?

24 A Yes, from the PJM computer that develops this  
25 there is direct access to either the individual company

1 dispatching headquarters or the individual companies'  
2 computers. It takes this signal and then transmits it into  
3 the generation requirements on the various different units.

4 Q Am I correct that PECO has to supply PJM with the  
5 operating characteristics of its units so that those  
6 characteristics are adequately modeled or inputted into the  
7 PJM computer?

8 A PECO supplies the PJM with the incremental costs  
9 at the various different valve points of our generating  
10 equipment, so that we will bring a unit from its present  
11 level of generation up to the next valve point, and that  
12 cost level is in the PJM computer; but that is primarily  
13 how the system is dispatched.

14 The system is dispatched, as I say; they will increase  
15 the cost level, and then that is sent back to PE, and then  
16 PE will in turn take the new cost level and interrogate our  
17 loading schedules on our units and assign them new genera-  
18 tion assignments. Then the unit will come up to that new  
19 generation assignment.

20 MR. WERSAN: Your Honor, at this time I would like  
21 to mark for identification OCA Exhibit Number 22, which is  
22 the company's response to IR-OCA-6-15.

23 JUDGE MATUSCHAK: Very well.

24 (Whereupon, the document was  
25 marked as OCA Exhibit No.  
22 for identification.)

1 BY MR. WERSAN:

2 Q Are you familiar with this document, Mr. Carroll?

3 A Yes, I am.

4 Q Does this response contain the generating unit  
5 characteristics which are applicable to PECO's units?

6 A Yes, it does.

7 Q And if I could refer you to -- really any one of  
8 the pages, but the second column labeled "B" -- does that  
9 say "Minimum Load" at the top of the column?

10 A "Minimum Load;" that is correct.

11 Q What do you mean by minimum load for a unit?

12 A That is the load at which the unit comes to when  
13 the unit is put on line. We will not operate the machine  
14 below that for stability purposes on the unit itself.

15 Q Would I be correct that the minimum load compared  
16 to the maximum load on a plant -- the minimum load for a  
17 coal or oil unit, a fossil unit, tends to be lower than for  
18 a nuclear unit in relation to its maximum load?

19 Let me restate it. The minimum load for a fossil  
20 plant can be a much greater difference than compared to a  
21 nuclear plant?

22 A If you look at percentages, I'm not sure that's  
23 exactly true. Eddystone No. 1 has a minimum load of 180  
24 and a maximum of approximately 300; so, therefore, the mini-  
25 mum load is approximately 50 percent. At Cromby it is about

1 35 percent. We are talking on the Peach Bottom units --  
2 as they are listed here, we are talking about the unit will  
3 come to a much higher percentage, I agree, than their  
4 maximum load. For economic loading purposes only --the unit  
5 is capable of coming down lower than that, but for economic  
6 loading purposes only, that is the minimum load we put on.  
7 And for small time periods for area requirement, if there  
8 is sufficient nuclear capacity that we must pack the nuclears  
9 down, they can come lower than the minimum load.

10 Q Okay, just so I understand again; for the fossil  
11 units the minimum load is based upon plant characteristics,  
12 and for the nuclear plants it is based upon economics?

13 A Primarily, yes. Yes.

14 Q And what is there about the nuclear plants that  
15 makes that difference?

16 A As of right now primarily it is because of the  
17 major economics of the machines. There is no reason to  
18 investigate whether we could really take it down to a  
19 lower value. I think that is under review because of the  
20 increase in nuclear capacity coming on and the potential  
21 for some small areas of time when they will have to come  
22 down.

23 The idea behind a nuclear unit is you want to get  
24 it on and you want to get it up fast. It's much easier to  
25 control the nuclear physics in the core and everything else

1 when it is running at a higher level.

2 Q If you could go to the far right-hand column of  
3 one of these sheets, it says "Adjustment Factor" at the  
4 top of the column.

5 A Yes.

6 Q How is that adjustment factor used?

7 A If you were to look at the Btu's per kilowatt  
8 hour at the very incremental loadings, okay, those Btu's  
9 per kilowatt hour are based on what is known as bogie  
10 conditions. That is a design, a tested design level of  
11 Btu's, and that's a standard which we do not deviate from.  
12 Then that also is for knowing that we have the proper  
13 circulate design and circulating water temperature. All  
14 of the conditions are designed.

15 The adjustment factor then says that at this particu-  
16 lar time -- and that adjustment factor will change -- at  
17 this particular time the Btu's must be multiplied by 1.1327,  
18 and then you multiply by the appropriate fuel cost which  
19 is in effect at that time, and that will tell you the mills  
20 per kilowatt hour that are necessary for producing -- and  
21 I'm looking at Schuylkill No. 1, 70 megawatts. That will  
22 tell you the necessary mills per kilowatt hour to produce  
23 the 70 megawatts.

24 Q Are these adjustment factors included in informa-  
25 tion provided to the PJM; is it necessary for PJM to know

1 about these adjustment factors?

2 A Basically what PJM will get will be the 70  
3 megawatts and the mills per kilowatt hour. This is the  
4 background that goes into the computer program, which will  
5 develop that number.

6 Q And are these adjustment factors also included  
7 in your production cost program used for projecting into  
8 the future?

9 A Yes, they are.

10 MR. WERSAN: At this time I would like to mark for  
11 identification OCA Exhibit 23, which is the company's  
12 response to IR-OCA-6-5. At this time I will be talking  
13 about interruptible load on the PECO system.

14 JUDGE MATUSCHAK: Very well.

(Whereupon, the document was  
15 marked as OCA Exhibit No.  
16 23 for identification.)

17 BY MR. WERSAN:

18 Q Are you familiar with this, Mr. Carroll?

19 A Yes, I am.

20 Q Could you clarify for me something about this  
21 response? I got the impression from this that the company  
22 does not know what the interruptible load on the system is  
23 on an hour-by-hour basis; is that understanding correct?

24 A The company does know who the customers are, but  
25 they don't know the amount of megawatts because they do not

1 know hour-to-hour exactly what load level that customer is  
2 running at; and there is a fixed amount they will come down  
3 to by contract on the interruptible rate, so they don't know  
4 whether he's running it 110 percent of the value or 120 per-  
5 cent or something, so therefore that is correct, we do not  
6 know the total amount hour-by-hour of interruptible load  
7 that is connected to the system

8 Q Now, how does interruptible load affect your  
9 production cost program projections for the future?

10 A We don't use it at all.

11 Q You assume there is no interruptible load?

12 A We assume that there is no capacity shortage, and  
13 therefore, we do not assume that we need the interruptible  
14 load to be interrupted.

15 I would like to make one slight clarification. There  
16 are periods of time when the forced outage rate is such, and  
17 the randomness is such, that there is a loss of load over  
18 the entire PJM. What we do in those particular circumstances  
19 is dispatch the PJM up to its maximum capability. Then we  
20 miss meeting the requirement in that bi-hourly period that  
21 the load shape has called for. So if you want to look at  
22 that, the way we missed it is either through some way of  
23 interrupting load, either through a voltage reduction, asking  
24 for the interruptible customers to come off or something  
25 else. The plot course is not simulated; it just says you

1 can't make it all.

2 Q In that answer we are still dealing with the  
3 production cost model?

4 A Yes.

5 Q Now, in your production cost forecast for the  
6 future on Limerick 1, did you include Three Mile Island Unit  
7 1 in the model at some level of output?

8 A In the -- the answer is yes, we did; not for the  
9 entire period, but I'm not exactly sure when we did put it  
10 in service. I know -- I think -- my best recollection at  
11 this point is we assumed that Three Mile Island would be  
12 coming on in January, 1977. It was a two-year study start-  
13 ing in June, 19 -- July -- I'm sorry, 1987. It is a two-  
14 year study starting in July 1986. So that for that period  
15 of time; I guess it would have been in for 18 out of the  
16 24 months of the study.

17 Q Would you have put it in at its full MDC  
18 capacity?

19 A When it went in it went in, at that time, back  
20 into commercial operation at its full rating, yes.

21 Q Do you know if what you have just stated about TMI  
22 also applies to the long-term production costs shown for  
23 the Limerick cost/benefit analysis?

24 A That was basically made at a later time, so that  
25 I really can't say when it went in in that particular study.

1 I'd have to go back and again look to see when it went in  
2 in that study. It was made later than mine, and the decision  
3 with TMI was after we ran our study. So I would imagine  
4 it is in earlier than when I put mine in, my Limerick, be-  
5 cause the Limerick 1 had to be done early in the filing  
6 period. The other one was done later on.

7 Q And with respect to the Limerick -- the two-year  
8 energy savings, if TMI-1 had been in at the start of that  
9 study instead of six months into the study, would you agree  
10 it would have had some incremental effect on what the inter-  
11 change price was in the model?

12 A Yes, it would. It would have made the Philadelphia  
13 Electric fuel costs go up.

14 Q And the answer is because --

15 A Because it cuts down the ability of Philadelphia  
16 Electric to sell the surplus from Limerick, and there is  
17 a profit to be made with sales. It would have made the  
18 fuel costs of Philadelphia Electric go up. It is expected  
19 to go up when TMI comes on line.

20 Q With respect to the Muddy Run Pump and Storage  
21 facility owned by Philadelphia Electric, is that committed  
22 and dispatched by PECO, or is it done in the same fashion  
23 as operating units on their system?

24 A It's done a little bit differently than any other  
25 unit on the system. The Muddy Run energy and pumping is

1 based on a weekly schedule so that we can go from a full  
2 pond at 8:00 a.m. Monday morning to essentially an empty  
3 pond Friday night, and return to full status of a full pond  
4 on Monday morning. In looking at that then you must project  
5 how much energy you can take out each day, because we take  
6 a full drawdown over the five days. It's not a daily cycle  
7 where you take it out today and put it back tonight.

8 So the PJM then runs a program of projecting the unit  
9 availability on the system, the loads on the system, to look  
10 at the pumping costs at night time versus the energy costs  
11 in the day time, and schedules the PJM for the entire week,  
12 updating that every day through the week as we get closer  
13 and closer to the point. PJM then schedules the pumping  
14 and schedules the energy on those units.

15 They notify PE, and PE orders the units on.

16 Q Was the company able to fully utilize Muddy  
17 Run this last year?

18 A I'm not sure what you mean by fully utilize Muddy  
19 Run this last year.

20 Q Was the company able to keep the reservoir at the  
21 top full or pumped up as it as designed to be used?

22 A Yes.

23 Q Now if we could turn to the Conowingo facility.  
24 Conowingo is a run-of-the-river hydro plant; is that correct?

25 A That is correct.

1 Q And am I correct that the capacity of Conowingo  
2 has been downrated by 100 megawatts recently?

3 A That is correct.

4 Q And that is because there is a minimum water  
5 release requirement at that facility now?

6 A That is part of the reason.

7 Q What's the other part?

8 A Within the PJM contract for installed capacity  
9 there is an evaluation done of the ability of capacity to  
10 satisfy the load requirements. It's an evaluation of  
11 limited energy capacity. Run-of-river hydro is one example  
12 of that, but another example may be gas-burning facilities  
13 which can only burn gas, and the ability to get the gas in  
14 the winter periods or something like that.

15 That program says: so what is the ability of an  
16 individual company to fit the limited energy underneath  
17 their own load curve, and how much can they utilize under-  
18 neath their own load curve, and also how much collectively  
19 can all fit underneath the PJM load curve?

20 The limited energy capacity on PJM is such that at  
21 the summertime all of it will not fit underneath the load  
22 curve to its full capacity rate. So PE's allocation of the  
23 capacity reduction on PJM was such that we had to for  
24 interconnection to PJM installed capacity accounting purposes  
25 take a reduction in our limited energy capacity. It was

1 compounded by the water release that we are required to do  
2 now for the Susquehanna River Basin, and that amounted to  
3 100 megawatts that we had to take. So that's the reasons  
4 for the deration.

5 Q Do you know what portion of the 100 is due to the  
6 water release?

7 A No, I do not.

8 Q With respect to the PJM accounting, that doesn't  
9 mean that the capacity isn't there, but that you account  
10 for it; is that correct?

11 A No, the capacity is still there. You can still  
12 produce any one hour or in the summertime as long as you  
13 have not produced it for too much; you can still produce  
14 512 megawatts out of Conowingo.

15 But the ability of that capacity to meet the load  
16 requirements is such that it is only good for 401 as you  
17 are projecting what capability does that have to meet the  
18 peak load requirements of PE and the PJM collectively.

19 Q Okay, now with respect to the water release, when  
20 water is released at Conowingo is it released through the  
21 turbine?

22 A Any opportunity we get, the only way we ever release  
23 water is through the turbine. Now that may not be true if  
24 we have to ultimately put a fish ladder in, but other than  
25 that it is always released through the turbine. But it's

1 released at a time when the economics of that water would not  
2 have you release anything. You are releasing water at  
3 night time when its worth is very little to the benefit  
4 of the company and its customers.

5 Q Right. But with respect to the amount of  
6 capacity or generation you can get out from that minimum  
7 water release, has that portion of Conowingo been turned,  
8 in effect, into a must-run unit?

9 A During that period of time I would say yes, they  
10 consider that as a must-run unit. Yes. I have never  
11 actually analyzed it with that terminology to it, but I  
12 think it could probably be analyzed and put in that  
13 category at that time, yes.

14 Q How was it decided that for derating purposes for  
15 PJM that Conowingo would be derated as compared to some  
16 other unit?

17 A Primarily it depends to a certain extent on where  
18 you fit the units in on the load curve, what unit is picked  
19 for the derating, and if you consider the fact that the  
20 run-of-river basically does the very top skimming -- they  
21 are smaller units and everything, and they are capable of  
22 doing a better job of skimming the very top of the load --  
23 it would mean it would be the last one on there, and that  
24 would be the one that would take the derating.

25 Q Finally, if I could refer you to page 18 to 20

1 of your testimony, am I correct that you there discuss an  
2 adjustment shown at page D-10d of TPH-2 relating to an  
3 amortization of expenses incurred at the Salem station for  
4 a management audit?

5 A Yes, for the development and implementation of  
6 an action plan that came about through a management audit,  
7 yes.

8 Q And on D-10d you show a total cost to PECO of  
9 \$7,283,000; is that correct?

10 A Yes.

11 Q And that is, as I understand it, PECO's share of  
12 the total cost of the evaluation program?

13 A That is correct.

14 Q So on a total cost basis it was around \$15 million  
15 that was spent on this?

16 A Yes.

17 Q Am I correct that in your testimony on page 18  
18 at lines 17 to 21 you state that at the time of the Salem  
19 number 1 breaker incident PSE&G was questioned by the NRC  
20 on the company's ability to operate and manage a nuclear  
21 facility; is that correct?

22 A Is that on page --

23 Q Page 18, lines 17 to 21.

24 A Yes.

25 Q Am I correct that when you say the Salem 1

1 breaker incident you are referring to the portion of an  
2 outage at the Salem 1 station that ran from February 23,  
3 1983 to May 21, 1983?

4 A I don't think I am referring to a portion of an  
5 outage; I'm referring to the incident that caused the unit  
6 to drop off on February 25th, 1983.

7 Q Just to be clear, actually the plant was down  
8 for refueling at the time and just didn't come back up?

9 A Yes.

10 Q And the incident was that certain important  
11 reactor scram breakers at the station failed to work when  
12 required; is that correct?

13 A That is correct.

14 Q And --

15 A Automatically when required.

16 Q And the NRC undertook some kind of investigation  
17 into the incident itself; is that correct?

18 A That is correct.

19 Q The PUC also undertook an investigation into the  
20 prudence of that outage in its investigation in the ECR-82

21 A That is correct.

22 Q And didn't the PUC rule that the replacement  
23 power cost resulting from the outage from February 25 to  
24 May 21, 1983 should not be passed on to PECO's ratepayers?

25 A That was the Order of the Commission; that is

1 correct.

2 Q Just so it is clear, those replacement power  
3 costs, the Commission found, were on the order of approxi-  
4 mately \$26 million for PECO?

5 A Yes, that is correct.

6 Q And the Management Analysis Report that was done  
7 was a result of this whole incident that started with the  
8 reactor scram breakers; is that correct?

9 A The Management Analysis Report per se came out  
10 well after that. The thing that led to the Management  
11 Analysis Report was addressing the NRC as a result of that  
12 breaker incident, yes.

13 Q Has Philadelphia Electric ever hired a company  
14 such as Management Analysis Corporation for the sum of  
15 \$7 million to \$15 million to do a management review of the  
16 Peach Bottom stations?

17 A No. We did not. The \$15 million was not the price  
18 that was paid to Management Analysis Corporation; that was  
19 the cost of the consultant, the PSE&G employees that are  
20 not on the Salem station payroll, and everybody else who  
21 was active in developing the action plan. Management Analy-  
22 sis Corporation was really the consultant on it, and most  
23 of the work was done by other parties, some of them being  
24 contracted technical people from the various different  
25 industries who supply them; some of them were the Engineering

1 Department of PSE&G from their Newark Headquarters, and that  
2 type of thing.

3 We have hired Management Analysis by Philadelphia  
4 Electric Company to do an overview of our Peach Bottom  
5 operation, and we have hired them -- and that was maybe three  
6 or four years ago. We have hired them since in other  
7 areas within Philadelphia Electric Company to do overviews  
8 very similar to this type of an overview, yes.

9 Q Was the overview done at Peach Bottom at a cost  
10 on the order of \$15 million?

11 A I'm not sure that we kept the records in the same  
12 fashion as Public Service did for the Engineering Department  
13 input, the technical staff input and everything associated  
14 with our overview, so I could not say how much that particu-  
15 lar overview cost Philadelphia Electric Company.

16 Q Did Philadelphia Electric ever undertake an  
17 audit because of concerns by the NRC that the company did  
18 not have the ability to operate and manage its nuclear  
19 facilities?

20 A No, we have never undertaken an order like that,  
21 and I'm not sure that this particular audit was of that  
22 fashion. This particular audit was to turn around and to  
23 -- turn around and look at the management of the company  
24 and all of its aspects from the nuclear side to say: what  
25 are you doing right; what can you do better; and how can

1 you achieve better?

2 Q Was this management analysis planned to be done  
3 prior to the Salem 1 breaker incident, in the time frame  
4 it was done?

5 A Not in the time -- not to my knowledge, no; not  
6 in the time frame it was done.

7 MR. WERSAN: Your Honor, that's all the cross-  
8 examination I have for Mr. Carroll. At this time I would  
9 like to move into evidence OCA Exhibits 14 through 23.

10 MR. MacGREGOR: No objection, Your Honor.

11 JUDGE MATUSCHAK: OCA's Exhibits 14 through 23 are  
12 admitted into evidence.

13 (Whereupon, the documents  
14 marked as OCA Exhibits Nos.  
15 14 through 23 were received  
16 in evidence.)

17 MR. WERSAN: Thank you, Mr. Carroll.

18 THE WITNESS: You are welcome.

19 JUDGE MATUSCHAK: Is staff ready?

20 MS. CHESTNUT: With Your Honor's permission, Staff  
21 would like to bifurcate its questioning of Mr. Carroll.  
22 I would like to question him with respect to the Limerick  
23 fuel savings, and Assistant Counsel Smith would cross-  
24 examine Mr. Carroll on the other areas of his testimony.

25 JUDGE MATUSCHAK: As you will.

MS. SMITH: I'm going to proceed first, Your Honor.

## CROSS-EXAMINATION

1  
2 BY MS. SMITH:

3 Q Mr. Carroll, I would like to follow up on just  
4 a few items that Mr. Wersan questioned you about with regard  
5 to the management audit. You indicated that -- the question  
6 involved was PSE&G was questioned by the NRC on its ability  
7 to operate and manage a nuclear facility.

8 Would you tell me in what time frame was the response  
9 due to the NRC?

10 A There were meetings with the NRC, and the NRC had  
11 to be satisfied that action was being taken to address their  
12 concerns before the NRC gave them permission to come back  
13 on line, and the action plan that was developed, in broad  
14 terms, was submitted to the NRC, and the NRC approved the  
15 time frame of the action plan that was developed.

16 Q My question was: did the NRC provide you with a  
17 response time, a specific response time that you had to  
18 respond within, a year or six months?

19 A No, they approved the action plan as developed,  
20 which had when it should start, when it should be reviewed  
21 by the NRC, when it should be completed; and some of those  
22 actions went through -- they are not due to be finished until  
23 late 1986, I think. Others had to be completed in an  
24 earlier time frame. And I think there was an interrogatory  
25 response which gave you a list of all the items and a bar

1 chart of the milestones and that type of thing. That was  
2 what was accepted by the NRC. So there was not a specific  
3 time frame when the whole thing had to be completed.

4 Q Was the type of response required specified at  
5 the time that PSE&G was approached by the NRC?

6 A I can't answer in detail whether they specifically  
7 said what they would do. They did accept MAC as the  
8 evaluation team; they had had experience with MAC; Public  
9 Service had had experience with MAC. And they knew the type  
10 of work that MAC did. So whether they got into the exact  
11 details of what they expected of MAC, I doubt, given the  
12 time frame they had to look at the thing and issue a license  
13 --or issue permission to restart the plant.

14 Q Did the NRC require the company to hire an outside  
15 consultant to review the company's procedures and policies  
16 and develop an action plan?

17 A The NRC told the company that they were concerned  
18 with it and they wanted it addressed by the company, and  
19 did not require but strongly recommended that a consultant  
20 firm would probably be the best one to do this thing.

21 Q Who made this specific recommendation for the  
22 NRC -- or this strong recommendation that you get an outside  
23 consultant?

24 A It was a meeting with the executives of Public  
25 Service and members of the NRC staff, but I can't tell.

1 you who it was.

2 Q According to you, they specifically recommended  
3 or suggested that you get an outside consultant to do this?

4 A It is my understanding that they strongly  
5 recommended that if an outside consultant was picked they  
6 would view that favorably. I don't think there was anything  
7 that said: you must get an outside consultant. I think  
8 the words were: if you get one we will view that favorably.

9 Q Who made the decision to hire MAC?

10 A The Public Service executives made that decision.

11 Q Was that in consultation with PECO?

12 A Public Service executives advised PECO that they  
13 were thinking of getting MAC, and did they have any problems  
14 associated with using MAC. Since we had also used MAC we  
15 did not have any -- and felt that they did a very good job  
16 in that area, we did not have any problems associated with  
17 that.

18 Q Mr. Carroll, would you consider this an ongoing  
19 type problem that would -- let me rephrase that.

20 Did the company, PSE&G who hired MAC, did they ask  
21 initially what the fee was going to be?

22 A I'm not sure that when they asked MAC to come in  
23 there was a sufficient definition of the scope to even  
24 begin to think about getting a fixed price contract  
25 associated with it. I'm sure there was some known prices

1 associated with the type of talent, the amount of time, and  
2 what they would be costing per period of time; but how long  
3 it was going to take when they brought MAC in originally,  
4 I'm not sure anybody knew.

5 Q Am I correct that there were no bids issued in  
6 this proceeding?

7 A That's correct. There was not sufficient time  
8 to even consider writing specifications and putting it out  
9 for bids, because every day it was delayed Salem Unit No.  
10 1 had been off line that much longer.

11 Q Could you provide for us the actual fee that was  
12 paid to MAC?

13 A Do you mean what portion of the total dollars MAC  
14 received?

15 Q Yes.

16 A Yes, I'd be glad to get that for you.

17 Q Can we assume that this would not be a normal  
18 recurring type audit that would have to take place?

19 A This particular one is one that would not be a  
20 normal reoccurring one, but I'm not sure whether this  
21 particular type of an audit would not have to be undertaken  
22 again; but there is always constantly audits of this or other  
23 fashions of management practices, and evaluations and attempts  
24 to improve.

25 As I mentioned before, about four years ago we had

1 MAC in on Peach Bottom, and we have had MAC in on some other  
2 areas at PeaCH Bottom recently. We have had other audits  
3 internal in the company in selected areas of how can we  
4 improve our actions, so in that respect it is a part of  
5 ongoing management reviews of how you can do things better.

6 Q So your response is -- my question was: will  
7 specifically this type of review be required again on an  
8 ongoing basis?

9 A I think I first answered that by saying I'm not  
10 sure whether this would ever have to happen again. I can't  
11 say it will never have to happen again.

12 Q You indicated at Peach Bottom there was a similar  
13 type review; is that correct?

14 A We had a management audit of Peach Bottom's  
15 operation and maintenance practices about four years ago,  
16 yes.

17 Q What were the MAC fees in that instance; do you  
18 recall?

19 A I don't know.

20 Q Can you provide us with that information, and could  
21 you also indicate to us what portion was billed to the  
22 other owners of the Peach Bottom unit?

23 A I can tell you which portion was billed to the  
24 other owners of Peach Bottom because it became an O&M  
25 expense of Peach Bottom station and every owner was billed

1 their proportionate share.

2 Q I am going to switch subjects on you, Mr. Carroll.

3 With respect to your coal inventory for the Phila-  
4 delphia area plants --

5 A Just a minute please.

6 (Pause.)

7 All right; I'm sorry. Thank you.

8 Q Am I correct that the company maintains a 60-day  
9 supply at their Philadelphia area facilities?

10 A For coal?

11 Q Yes.

12 A Yes.

13 Q And what is the basis for the use of a 60-day  
14 supply?

15 A The basis for using a 60-day supply is because  
16 of the fact that historically that's been an industry-wide  
17 level of fuel reserves. It has the potential for a need  
18 for that type of thing associated with strikes or trans-  
19 portation problems, that you can dig into your reserves.  
20 There is also a chance that if you have a target 60-days  
21 reserve that because of some reasons it may have to fall  
22 below that at any one time, and Murphy has a tendency to  
23 catch up with you; so when it falls below is when you are  
24 going to have a problem and you will start losing deliveries.

25 But it has been a traditional industry-wide level of

1 coal reserves for as long as I've had anything to do with  
2 coal reserves.

3 Q You indicated part of the reason is the anticipa-  
4 tion of potential strikes?

5 A Yes.

6 Q When was the last time there was a strike in the  
7 coal industry that affected PECO's coal inventory?

8 A I have to refresh my memory. It is in one of the  
9 interrogatory responses.

10 (Witness perusing documents.)

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1 A 1981.

2 Q Do you know when the current UMW contract expires?

3 A I think it is a three-year contract which would  
4 go out in 1987.

5 Q Now, am I correct that you indicated there is a  
6 lower coal burn at the Philadelphia area plants as a result  
7 of Limerick 1's availability?

8 A Yes, that is correct.

9 Q Would this also have a potential effect of  
10 reducing the need for the high inventory level of coal carried  
11 at the plants?

12 A Did it also have a --

13 Q The availability of Limerick would also have an  
14 impact in the sense of reducing a need for a 60-day level?

15 A No, we do not think it will change the need for  
16 60 days, but we think it will change the need for the level  
17 to provide 60 days.

18 MS. SMITH: At this time, Your Honor, I have a data  
19 request for Mr. Carroll, and that is if he or counsel would  
20 refer to DR-Staff-REW-1, if they could provide the budgeted  
21 numbers of employees for Limerick by month to the end of the  
22 future test year and provide the actual numbers for October,  
23 November and December as they come available.

24 It is basically an update. That is what I am asking  
25 for.

1 MR. MacGREGOR: This is just for Limerick?

2 MS. SMITH: Yes, for Limerick. We will get to the  
3 others later.

4 That is all I have for Mr. Carroll, Your Honor.  
5 Ms. Chestnut has some questions.

6 CROSS-EXAMINATION

7 BY MS. CHESTNUT:

8 Q Good afternoon, Mr. Carroll.

9 A Good afternoon, Ms. Chestnut.

10 Q Mr. Carroll, before I start, I am going to be  
11 referring you to DR-Staff-REO-1 and page D-21a of TPH-2.

12 MS. CHESTNUT: I have copies of REO-1, Your Honor,  
13 and I will be marking this as an exhibit.

14 JUDGE MATUSCHAK: Very well.

15 BY MS. CHESTNUT:

16 Q Now, Mr. Carroll, you used the ProdCost computer  
17 model to stimulate the expected fuel savings resulting from  
18 the inclusion of Limerick 1 in rate base; is that correct?

19 A Yes, that is correct.

20 Q You didn't use the So big model?

21 A They are the same thing.

22 Q They are the same program?

23 A There is no difference.

24 Q The ProdCost includes fuel expense; is that  
25 correct?

1 Q Does it include variable O&M for the various units?

2 A No, it does not. It does not print out. It loads  
3 the units based on a variable O&M, but it does not calculate  
4 the variable O&M.

5 Q Does it include in reactor interest?

6 A No, it does not.

7 Q How about spent fuel?

8 A It does not calculate or include in its loading  
9 schedule spent fuel either.

10 Q Mr. Carroll, do you have before you the company's  
11 response --

12 A Excuse me. It takes the spent fuel expenses as  
13 a fixed increment per kilowatt the same as it would attach  
14 the variable O&M as a fixed cost in developing the loading  
15 schedule, but it doesn't calculate what it is supposed to be.

16 Q It is not an explicit input?

17 A It is an explicit input in the fact that it adds  
18 the spent fuel disposal charges as part of the variable O&M  
19 for loading the units incrementally.

20 Q When you say units are loaded incrementally, that  
21 basically means the units are loaded at increasing cost to  
22 run them?

23 A That's correct.

24 Q Do you have before you the company's response  
25 to DR-Staff-REO-1?

s4

1 A Yes, I do.

2 Q Are you responsible for the preparation of this  
3 response?

4 A Yes, I was.

5 MS. CHESTNUT: Your Honor, I have distributed copies  
6 of this response to Your Honor, to the court reporter and to  
7 the parties. I request that it be marked for identification  
8 in this proceeding as Staff Exhibit 6.

9 JUDGE MATUSCHAK: Very well.

10 (Whereupon, the document was  
11 marked as Staff Exhibit No. 6  
for identification.)

12 BY MS. CHESTNUT:

13 Q Mr. Carroll, what has been marked for identifica-  
14 tion as Staff Exhibit No. 6 is the output from the ProdCost  
15 run; is that correct?

16 A That is correct.

17 Q If I can simplify, what this document shows is  
18 that for the period July 1st, 1986 through June 30th, 1988,  
19 it shows the expected generation and cost estimates broken  
20 down monthly for the various sources of generation; is that  
21 correct?

22 A That is correct; and interchange.

23 Q It includes interchange; it includes two-party  
24 transactions; and it includes sources of generation.

25 A Yes.

1 Q If we look down at the bottom of any one of these  
2 pages -- for example, page 1 -- underneath the line informa-  
3 tion for rate division, the first topic is dollars less finance  
4 charges; is that correct?

5 A That is correct.

6 Q Now, for the year ended 6-87, would you agree that  
7 the expected production shown on this exhibit is 4.890 million  
8 megawatt-hours? That is shown on page 14 if you would like  
9 to check that.

10 A For the year ending when?

11 Q '87.

12 A June of '87?

13 Q Yes.

14 A Could you give me the page number again?

15 Q Page 14.

16 A For Limerick 1 the expected generation, yes, is  
17 4,890,000 megawatt-hours.

18 Q For the year ended June, 1988, the expected  
19 generation from Limerick Unit 1 is 7.058 million megawatt-  
20 hours?

21 A That is correct.

22 Q And the average of these two values is 5.974?

23 A I will accept that, subject to check.

24 Q Are you familiar with the simulations that were  
25 used in the Limerick 2 investigation?

1 A. Yes, I am.

2 Q. Are you familiar with the Case 3 scenario?

3 A. I can't say that I can immediately recall Case 3.  
4 If you point out some things, I may be able to remember it.

5 Q. What I am going to ask you, Mr. Carroll, is: isn't  
6 it correct that in that scenario, Limerick 1 production for  
7 the period 1986 through 1990 was never projected to be below  
8 5.2 million megawatt-hours?

9 A. That could have been, yes.

10 Q. Would you accept that, subject to check?

11 A. Yes.

12 Q. And, in fact, the range for those years was  
13 from 5.2 million megawatt-hours to 7.1 million megawatt-hours.

14 A. Okay.

15 Q. Will you accept that, subject to check?

16 A. Yes, I will.

17 Q. Is it correct that there is a refueling outage  
18 expected for Limerick Unit 1 in early 1987?

19 A. Yes, there is.

20 Q. Can you tell us more exactly when that will  
21 occur?

22 A. Our latest thinking?

23 Q. Yes.

24 A. I think it starts on March 28th and ends on  
25 July 11th. It is 17 weeks long.

1 Q That is 1987?

2 A That is correct.

3 Q Now, if we look at REO-1, since it shows cost as  
4 well as generation, we can use it to derive the unit fuel  
5 cost; is that correct?

6 A We can use it to derive what?

7 Q A unit fuel cost.

8 A Yes.

9 Q And we get that by dividing cost by generation  
10 to get a mills per kilowatt-hour value?

11 A That is correct.

12 Q For the year ended June, 1987, Mr. Carroll, would  
13 you accept, subject to check, that the unit cost is 7.39 mills  
14 per kilowatt-hour?

15 A Yes, I will.

16 Q I obtained that by using the cost of 36,161,000  
17 shown on page 26 and I divided by the generation for that  
18 period.

19 Would you accept that the analogous cost for the  
20 year ended June, 1988 was 5.4 mills per kilowatt-hour?

21 A When you say the year 1987 and the year 1988,  
22 you are referring to the year ending June in those years?

23 Q Yes.

24 A Okay.

25 Q Would you accept that number, subject to check,

1 Mr. Carroll?

2 A. Yes, I will.

3 Q. And the cost I used for that appears on page 28.  
4 It is 38,143,000.

5 A. Okay.

6 Q. Can you explain why the unit cost will decrease  
7 for that period?

8 A. Yes. The cost associated with the first batch  
9 of fuel in Limerick has a rather high allowance for construc-  
10 tion associated with the fuel being fabricated and everything  
11 some time ago. That is one of the components. The fabrica-  
12 tion and enrichment and everything has been done for some  
13 time. Therefore, it is picking up AFUDC. Therefore, the  
14 cost in the first batch is high.

15 There is another reason for that in the fact that  
16 all precommercial burn-up does not carry any AFUDC; so the  
17 AFUDC must be pushed across the commercial burn-up only.

18 Secondly, the second batch I think is of slightly  
19 lower ore cost, because it was later on when the ore cost  
20 had come down. I'm not sure on that, but I think that's it.  
21 But the major portion of it is the fact that the AFUDC is  
22 for a much shorter period and the AFUDC is spread across the  
23 entire energy of the core minus the precommercial energy.

24 Q. Now, Mr. Carroll, the data used on REO-1 or  
25 Staff Exhibit 6 was used to develop the data shown on

1 page D-21a of Exhibit TPH-2; is that correct?

2 A. That is correct.

3 Q. On D-21a, it shows that the company proposes  
4 to recognize the anticipated fuel savings by reducing the  
5 current base energy component by 7.355 mills per kilowatt-  
6 hour; is that correct?

7 A. I think all D-21a shows is the calculation of  
8 7.35 mills per kilowatt-hour.

9 Q. That is the company's proposal; is it not?

10 A. Yes, I think so.

11 Q. So the effect -- these calculations will be used  
12 to reduce the base energy component which is currently at  
13 28.178 mills by 7.355 mills for a base energy component of  
14 20.823 mills?

15 A. I think that those reductions are on an earlier  
16 portion of TPH-2, but I think that is correct. I don't have  
17 those numbers exactly. That is not my area.

18 Q. For clarification purposes, Mr. Carroll, the  
19 differential between 7.355 and 7.505 is due to inclusion  
20 of the gross receipts tax; is that correct?

21 A. That is correct, the gross receipts tax as it  
22 applies to base rates.

23 Q. Now, is the information shown in REO-1 that used  
24 for ECR purposes?

25 A. Which ECR?

1 Q Generally, will this be used by the company to  
2 develop your ECR filings?

3 A I doubt that anything per se that was used in  
4 the development of REO-1, except the logic of that particular  
5 project, will be used to develop an ECR; because in developing  
6 an ECR, we will be expected to supply the latest data we have  
7 to Philadelphia Electric at the time. And since everything  
8 is always in a changing mode, there will be all kinds of  
9 changes in the data between what was used here and when we  
10 will file a new ECR.

11 Q I recognize that the data will be updated, but is  
12 this the type of information that will be used?

13 A This is the type of information, yes.

14 Q Is fuel handling an expense that is included  
15 in the ECR filing?

16 A No, it is not.

17 Q I notice on page 1 of REO-1 there are values  
18 there for fuel handling for the period July through December,  
19 1986. But if we look further for the period January, '87  
20 through June of '87, the fuel handling is valued at zero.

21 A That is correct.

22 Q Can you explain why that is?

23 A Yes. Because of the fact that the values of  
24 fuel handling by month for 1986 is part of the budgeting  
25 process on a monthly basis through December, 1986.

1           The end of 1986, the budget is prepared on an annual  
2 basis. Therefore, we do not have available to us the  
3 monthly fuel handling budgeted expenses. So we couldn't  
4 show it on a monthly basis on this particular report.

5           Q. You expect there to be fuel handling expenses?

6           A. Oh, there will be fuel handling expenses. That is  
7 part of our standard format output for this particular page  
8 of this report. We did not attempt to change the formatting  
9 of the page to take off the information which was not  
10 pertinent to this particular filing.

11           So you are getting information on the filing which  
12 is not pertinent. That happens to be one of them. And since  
13 it was a zero and it made no difference in this particular  
14 filing, we weren't concerned with it.

15           Q. There is one thing I'd like to clarify, Mr.  
16 Carroll, after our discussion yesterday. The output for  
17 the Philadelphia Area Coal Units, is that on a 100 percent  
18 basis or is that adjusted?

19           A. That is the generation predicted from the unit.  
20 It has nothing to do with the Btu's that provided the source  
21 of heat to provide that generation.

22           Q. Mr. Carroll, the expected energy savings of  
23 207 million is a two-year average; is that correct?

24           A. I'm sorry. The expected energy savings of what?

25           Q. \$207 million is the result of a two-year average.

1 A. Yes.

2 Q. And the expected energy savings for the first year  
3 will be approximately 155 million? That number, Mr. Carroll,  
4 is the difference between 626 shown on page 34, the dollars  
5 less finance charges, minus 471.

6 A. It is 154,692,800.

7 Q. And the energy savings expected for the second  
8 year is approximately \$262 million?

9 A. Yes, \$261,943,600.

10 Q. And that is derived by taking the difference  
11 between the 752 shown on page 36 and the 490 shown on page 4  
12 of dollars less finance charges?

13 A. That is correct.

14 Q. So although \$207 million will be built into base  
15 rates as the energy savings for the first year, the actual  
16 energy savings predicted on REO-1 will be 155 million. Is  
17 that a fair summary?

18 A. For the first year, that is correct.

19 Q. And that results in an underrecovery of approxi-  
20 mately \$52 million?

21 A. Yes.

22 Q. And that \$52 million underrecovery is recoverable  
23 through the ECR; is that correct?

24 A. Yes, that would be correct.

25 MS. CHESTNUT: Thank you. Your Honor, I have no

1 no further cross.

2 MR. RUBIN: Your Honor, could we go off the record for  
3 a moment?

4 JUDGE MATUSCHAK: Yes.

5 (Discussion off the record.)

6 JUDGE MATUSCHAK: Back on the record.

7 Mr. Rubin, you may proceed.

8 CROSS-EXAMINATION

9 BY MR. RUBIN:

10 Q Mr. Carroll, my name is Scott Rubin. I am with  
11 the Office of Consumer Advocate. I just have a couple of  
12 questions concerning Staff Exhibit 6.

13 Could you turn back to page 14 of that exhibit?

14 A Yes.

15 Q Now, I believe you stated under cross-examination  
16 by Ms. Chestnut that your current plans for the Limerick  
17 refueling outage in 1987 were for a 17-week outage beginning  
18 in mid-March and ending in -- was it mid-July; is that right?

19 A I think it is the beginning of July. I think it  
20 is something like the 5th of July. I think that's what I  
21 stated.

22 Q Could you tell me if that assumption was used  
23 in the preparation of Staff Exhibit 6?

24 A No, it was not.

25 Q Was a 17-week outage for the first refueling

1 assumed in the preparation of Staff Exhibit 6?

2 A. I think this one is 15 weeks, not 17.

3 Q. And that would begin roughly in the last week of  
4 February and end in the first week of June; would that be  
5 right?

6 A. Approximately, yes.

7 MR. RUBIN: Thank you, Mr. Carroll.

8 Thank you, Your Honor.

9 JUDGE MATUSCHAK: Mr. Ettner.

10 CROSS-EXAMINATION

11 BY MR. ETTNER:

12 Q. Good afternoon, Mr. Carroll. I am Mike Ettner  
13 with GSA.

14 Mr. Carroll, two days ago on Tuesday when I was  
15 cross-examining Mr. Solecki on the issue of the inflation  
16 rates that he had developed, I asked Mr. Solecki some  
17 questions about the application of his inflation rates in  
18 the development of the future test year results.

19 At that time, Mr. Solecki deferred the questions  
20 to either you or Mr. Hill.

21 A. Oh, he's a friend of mine.

22 Q. Let me try to see if you can provide the  
23 responses to those questions.

24 Mr. Carroll, do you have with you a copy of Volume II  
25 of the basic filing of the company?

1 A. I'm sure I do.

2 (Witness perusing documents.)

3 A. Yes.

4 Q. Could I ask you to turn to Attachment II-D-1b.

5 A. Yes.

6 Q. Do you have before you Sheet 1 of 6?

7 A. I do now.

8 Q. Could you tell me what that represents?

9 A. No. I'm afraid I can't. They are not the accounts  
10 that I have anything to do with; so I really can't tell you.  
11 I don't deal with those accounts at all. It may be what I  
12 deal with is summarized in these accounts, but that is part  
13 of the general accounting and I don't know it. I know it  
14 in my accounts.

15 I deal with the accounts from 500 to 556. That's  
16 what I can deal with, production expenses. Now, I do know  
17 that on this page they summarize them, but I don't recognize  
18 them in a summarized form at all.

19 Q. Let me then ask you to turn to the next page  
20 starting on Sheet 2 of 6. Could you describe what that  
21 information represents?

22 A. Yes. This represents the variations in the  
23 accounts, and I think that the criteria that has been used  
24 all the way through is the same. The variation must be  
25 greater than 10 percent and greater than \$1 million. Then

1 there is an explanation of that variation.

2 Q As an example, Mr. Carroll, let me direct your  
3 attention to Account 500. Do you have that?

4 A Yes.

5 Q Now, in the narrative description of the varia-  
6 tion, there is an indication that part of that variation is  
7 attributable to inflation. Do you see that?

8 A Yes.

9 Q And that amount is 834,000?

10 A That is correct.

11 Q That is just a portion, however, of the total  
12 variation you reflect there?

13 A That is correct.

14 Q There are other accounts on that sheet and on  
15 succeeding sheets which also include a reflection of an  
16 inflation increase; is that correct?

17 A What they are showing is what portion of the  
18 variation we have calculated to be attributable to inflation,  
19 yes.

20 Q What inflation rate is applied in each of those  
21 accounts in which we can find an inflation factor being  
22 applied?

23 A To try and determine the portion of the variation  
24 which was attributed to inflation, we turned around and used  
25 a component of the corporate inflation rate which worked out

1 to be 5.8 percent.

2 What we did was we divided the budgeted test year by  
3 1.058, came up with a number, and subtracted it from the value  
4 which was shown for the budgeted test year and attributed  
5 that to inflation.

6 We did that because we know that in the known areas  
7 of cost, as well as in our trended areas of cost, there is  
8 a component of inflation. In the known areas of cost that  
9 were included in the budget, we don't necessarily know what  
10 the contractor had put in for inflation or what the supplier  
11 who was going to charge us for had put into his cost for  
12 the next year for inflation, but we know he had some  
13 component.

14 For our trended areas of cost, we had used the  
15 corporate inflation rate to take a trended area of mainten-  
16- ance cost and routine expenses associated with maintaining  
17 air compressors and trended it up by the corporate inflation  
18 rate. We just imputed the corporate inflation rate to all  
19 the costs for purposes of variation explanation only.

20 Q For purposes of the calculation, you used 5.8  
21 percent.

22 A Yes.

23 Q The factor was taken out to one decimal place,  
24 not beyond that?

25 A That's correct.

to be 5.8 percent.

1           What we did was we divided the budgeted test year by  
2 1.058, came up with a number, and subtracted it from the value  
3 which was shown for the budgeted test year and attributed  
4 that to inflation.

5           We did that because we know that in the known areas  
6 of cost, as well as in our trended areas of cost, there is  
7 a component of inflation. In the known areas of cost that  
8 were included in the budget, we don't necessarily know what  
9 the contractor had put in for inflation or what the supplier  
10 who was going to charge us for had put into his cost for  
11 the next year for inflation, but we know he had some  
12 component.

13           For our trended areas of cost, we had used the  
14 corporate inflation rate to take a trended area of mainten-  
15 ance cost and routine expenses associated with maintaining  
16 air compressors and trended it up by the corporate inflation  
17 rate. We just imputed the corporate inflation rate to all  
18 the costs for purposes of variation explanation only.

19           Q For purposes of the calculation, you used 5.8  
20 percent.

21           A Yes.

22           Q The factor was taken out to one decimal place,  
23 not beyond that?

24           A That's correct.  
25

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1 Q So in each and every instance on those sheets where  
2 we see an inflation amount, you are using that same 5.8 percent  
3 inflation rate?

4 A That is correct.

5 MR. ETTNER: Thank you, Mr. Carroll.

6 That's all I have, Your Honor.

7 JUDGE MATUSCHAK: Any further cross-examination of  
8 this witness?

9 MR. KLEPPINGER: Yes, Your Honor.

10 CROSS-EXAMINATION

11 BY MR. KLEPPINGER:

12 Q Good afternoon, Mr. Carroll.

13 A Good afternoon.

14 JUDGE MATUSCHAK: Before we begin, let's take a  
15 ten-minute recess.

16 (Recess.)

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1 JUDGE MATUSCHAK: On the record.

2 Proceed, Mr. Kleppinger.

3 BY MR. KLEPPINGER:

4 Q Mr. Carroll, one point of clarification on the  
5 fuel price forecasts that have been covered already today.  
6 On the PECO forecast portion of OCA Exhibits 14 and 15, the  
7 prices listed for 1987 through 1991, can you tell me if  
8 those are in nominal dollars or constant dollars?

9 A What were those numbers again?

10 Q For the years 1987 through 1991, on the first  
11 page of OCA Exhibit No. 14. What I am trying to do is  
12 identify what column of the DRI forecast would then be  
13 directly comparable to --

14 A They are in nominal dollars for the year.

15 Q And on the DRI forecast, the nominal dollar  
16 column is the one that is not labeled, I take it?

17 A I think that's correct.

18 Q At page 26 of your testimony, Mr. Carroll, you  
19 provide us with justification for utilization of a two-year  
20 period in calculating the Limerick 1 fuel savings at lines  
21 14 and 15, where you say that such a study was consistent  
22 with the company's proposed two-year stay-out. Do you see  
23 that reference?

24 A Yes.

25 Q That proposed stay-out is the subject of another

1 witness' testimony, I understand, but in your knowledge of  
2 that stay-out, is that a conditional or unconditional  
3 stay-out?

4 A. To my knowledge of it, it's a conditional stay-  
5 out.

6 Q. You go on then to state that the analysis that  
7 you have done in this case is similar to the one done in  
8 the last case. I take it you mean that the ProdCost  
9 Computer Program has not changed substantially between the  
10 one utilized in calculating Salem 2 fuel savings in the last  
11 docket, is that true?

12 A. Yes. We used the same methodology, and essen-  
13 tially the ProdCost Program is essentially the same program  
14 as we had used. The methodology is exactly the same.

15 Q. Is it your recollection from the last case at  
16 Docket 842590 that the company ultimately offered to  
17 guarantee the fuel savings associated with Salem Unit 2?

18 A. There's a wording in there that I am not quite  
19 sure of. All I can say is that the fuel savings were  
20 guaranteed.

21 Q. But you don't recall if that was proposed at any  
22 point in the case by the company or imposed on the company?

23 A. I have no idea where it came from. I was just  
24 told it was guaranteed.

25 Q. A similar guarantee, I take it, has not yet been

1 proposed by the company in this case, is that true?

2 A. I am not aware of any such considerations in  
3 this case at this time, no, but I wasn't aware of them the  
4 last time until it was resolved.

5 MR. MacGREGOR: Those are really questions that go  
6 more to Mr. Hill's area, Mr. Kleppinger.

7 MR. KLEPPINGER: Fine.

8 BY MR. KLEPPINGER:

9 Q In response to an earlier question by the  
10 Consumer Advocate, I believe you stated that with the  
11 addition of TMI-1 on line through the ProCost Program, it  
12 had the effect of increasing the fuel cost for Philadelphia  
13 Electric, is that correct?

14 A It had the effect of increasing the fuel and  
15 interchange expenses of the company, that is correct.

16 Q Is that a result of the fact that TMI-1 can  
17 dispatch power out to the interchange at a lower rate, price  
18 if you will, than what Limerick 1 can?

19 A No. It is essentially a result of a fact that  
20 one of the major buying companies, the GPU group, has  
21 reduced the amount of purchases that they are making because  
22 of the energy they are receiving from TMI. Therefore, that  
23 reduces the sales market to Philadelphia Electric Company.

24 If we don't sell, we don't reduce our fuel expenses  
25 by the savings associated with those sales. So, it has

1 nothing to do with the relative cost of TMI or Limerick. It  
2 is that we lose a market because GPU gets a lot of low cost  
3 energy, and therefore they don't have to buy the high cost  
4 energy.

5 Q So, with TMI-1 back on line, I take it, you will  
6 not make as many sales on the interchange, and that would  
7 have the effect of lowering the fuel savings that PE  
8 customers otherwise would have seen with Limerick 1 absent  
9 the presence of TMI-1?

10 A It would have the effect -- could I have that one  
11 again, because I think I got lost. It would have the effect  
12 of what? Could you read that back to me, please?

13 (Whereupon, the reporter read from the record, as  
14 requested.)

15 THE WITNESS: I think that is correct, that assump-  
16 tion you made there.

17 BY MR. KLEPPINGER:

18 Q If we try to take a look at the reverse of that,  
19 in the event that Limerick 1 does not operate as projected,  
20 but TMI-1 continues in the ProdCost Program as you have  
21 forecasted, what then would be the effect on the fuel  
22 savings -- excuse me, the total energy costs that PE  
23 customers would see when you would compare it to the  
24 situation that Limerick 1 was on line with TMI-1?

25 A You say, if Limerick 1 does not operate as

1 expected?

2 Q That's correct.

3 A If you mean by that Limerick 1 does not achieve  
4 as high a capacity factor as has been projected, it will  
5 obviously decrease the fuel savings associated with  
6 Limerick 1.

7 If it has a higher capacity factor, it would increase  
8 the fuel savings associated with Limerick 1. The savings  
9 are related not necessarily directly, but related to the  
10 capacity factor.

11 As the capacity factor goes down, the savings go down.  
12 As the capacity factor goes up, the savings go up.

13 Q And now that TMI-1 is back on line, that would  
14 have the effect, would it not, of lowering the price of  
15 power that PECO would purchase on the exchange in the  
16 situation where Limerick 1 does not operate as projected,  
17 is that a fair statement?

18 A It will have some minor effect on that, yes. It  
19 has a very small effect on the price of power we purchase,  
20 because it's only a small unit in the overall PJM require-  
21 ments. It has the bigger effect on the fact that GPU is  
22 not a big a purchaser, so that it only has a very small  
23 effect on the selling company costs.

24 It has the much bigger effect on the buying company's  
25 replacement value.

1 Q You mentioned earlier today that the first  
2 refueling outage for Limerick 1 has been moved back  
3 slightly in the 1987 time frame, is that correct?

4 A Present thinking, yes.

5 Q If you were to have gone with the three-year  
6 average of projected fuel savings for Limerick 1 under  
7 current plans for the first outage at Limerick 1, would we  
8 have seen a second outage in that three-year average, a  
9 second standard refueling outage?

10 A We are talking June --

11 Q 1986 through June of 1989.

12 A -- 1986, yes, we will.

13 Q And two outages in a three-year period, in  
14 proportionate terms, would have more down time than one  
15 refueling outage in a two-year period, is that true?

16 A That is correct.

17 MR. KLEPPINGER: Thank you, Mr. Carroll. I have no  
18 further questions.

19 JUDGE MATUSCHAK: You may proceed.

20 CROSS-EXAMINATION

21 BY MS. FERKIN:

22 Q Mr. Carroll, my name is Zori Ferkin. I represent  
23 the Governor's Energy Council. I have provided the parties  
24 and your counsel with a copy of a response to an interroga-  
25 tory, Interrogatory Response GEC 2-2, which we received

1 earlier this week.

2 Mr. Carroll, I'd like to ask you some questions about  
3 that response, if I could. First of all, are you familiar  
4 with that response?

5 A. GEC-2-2? Yes, I am.

6 Q. Are you responsible for its preparation?

7 A. Yes, I am.

8 Q. I notice Mr. Smith's name is noted on the cover  
9 page. Can you tell me what portions of the response Mr.  
10 Smith was responsible for, if you know?

11 A. The additions to plant by FERC account is the  
12 responsibility of Mr. Smith. The operating and maintenance  
13 expenses are the area that I have information with respect  
14 to.

15 Q. By that response, do I understand that Attachment  
16 B of this response is solely Mr. Smith's responsibility? It  
17 is 13 pages at the back of the response.

18 A. Oh, I'm sorry, in answer to Question 2b, yes, that  
19 is Mr. Smith's.

20 MS. FERKIN: Can we go off the record for just a  
21 moment?

22 JUDGE MATUSCHAK: Off the record.

23 (Discussion off the record.)

24 JUDGE MATUSCHAK: Back on the record.

25

1 BY MS. FERKIN:

2 Q I'd like to ask you some questions, Mr. Carroll,  
3 about Attachment A.

4 MS. FERKIN: Before I do that, I would like to have  
5 this entire response marked as GEC Exhibit No. 1.

6 JUDGE MATUSCHAK: Very well, it will be so marked.

7 (Whereupon, the document was  
8 marked GEC Exhibit No. 1 for  
9 identification.)

10 BY MS. FERKIN:

11 Q Mr. Carroll, would you turn to page 1 of  
12 Attachment A, GEC Exhibit No. 1? I am interested in the  
13 levels of expenses in the FERC accounts listed there, and  
14 we will deal with page 1, which pertains to Peach Bottom.

15 Just for informational purposes, Mr. Carroll, if I  
16 were to turn to Schedule 3 of your written testimony, page  
17 2 --

18 A Schedule 3, page 2?

19 Q Yes.

20 A Yes.

21 Q Would Schedule 3, page 2 of your written testimony  
22 identify for me the names of the accounts listed on  
23 Interrogatory Response 2-2a?

24 A Yes, the operating and supervision and engineering  
25 is the 517 account, the fuel is the 518, the coolants and  
water is 519, steam expenses is 520, the electric expenses

1 is 523, miscellaneous steam and nuclear power expenses are  
2 524, and rents are 525; maintenance, supervision and  
3 engineering is 528; maintenance and structures is 529;  
4 maintenance of boiler reactor plant is 530; maintenance of  
5 prime movers, electrical plant is 531; and maintenance of  
6 miscellaneous steam plant for nuclear is 532.

7 Q. Thank you very much, I appreciate that.

8 Mr. Carroll, what I would like to find out is, in  
9 your experience, which of the accounts listed here tend to  
10 vary with the level of energy production from the nuclear  
11 unit.

12 Now, would I be correct that Accounts 517 through  
13 524, the level of expenses attributable to those accounts  
14 tends to vary, depending on the level of production from the  
15 particular nuclear unit?

16 A. They tend to vary with time on the level of  
17 production, but the ultimate value is -- total money spent  
18 does not necessarily vary that much with the level of  
19 production. It's only the timing of when it will be spent  
20 that varies with production.

21 If we have a very long time to get the production  
22 between refueling outages, then we would see that level of  
23 production expensed over time being lower per year.

24 If we have high production between refueling outages  
25 and therefore the refueling outages are short, then we will

1 see a high level of those expenses over time.

2 But the per kilowatt-hour cost does not vary that  
3 much. It is the timing of when you are experiencing that  
4 per kilowatt-hour cost which is a function of production.

5 Q Let's look if we could at the maintenance  
6 accounts, 528 through 532. Would you agree that the  
7 levels of expenditures in those accounts tend not to vary  
8 with the level of energy production in the unit, that is  
9 that they tend to remain stable?

10 A Yes, except for maybe -- you know, again, it's  
11 an order of magnitude. If I am achieving a 65 percent  
12 capacity factor, it's going to be one. If I'm achieving a  
13 60, I don't think there's much difference.

14 But if I'm achieving a 30 percent capacity factor,  
15 you may see some. And one of the things might be the  
16 structures account. It's a function of time.

17 Other than that, they will not vary that much.

18 Q Also on Attachment 2a, Mr. Carroll, again on  
19 that first page, you provided Peach Bottom data by  
20 individual unit, Unit 2 and Unit 3, only back to 1982.

21 Isn't 1981 data for Peach Bottom available broken  
22 down by individual units?

23 A I don't think it is, and I think that's the rea-  
24 son we didn't supply it.

25 Q Do you know why that is?

1           A. We did not start separating, the -- go into an  
2 accounting procedure, an automated procedure that allowed  
3 us to separate the costs between Peach Bottom and allocate  
4 the common cost components to individual units.

5           Prior to that, we kept a Peach Bottom Station cost  
6 the same as we keep all FERC accounting costs. In 1982,  
7 we attempted and changed our corporate accounting system  
8 to allow us to allocate common costs between the two units  
9 so that we could get an individual cost for Peach Bottom 2  
10 and an individual cost for Peach Bottom 3.

11           Q. So the change in the company accounting system  
12 to allow for unit breakout was in 1982?

13           A. To the best of my knowledge, that's when we did  
14 it.

15           Q. Then on page 2 of Attachment A, I notice you have  
16 individual unit data for the Salem plant.

17           A. Yes.

18           Q. You were able to break out the expenses for the  
19 Salem station?

20           A. No. They were able to break them out and give  
21 them to us. We were not able to break them out and give them  
22 back to them. That's a separate company accounting system.

23           Q. In other words, that's a result of PSE&G's  
24 accounting?

25           A. That is correct.

1 Q Mr. Carroll, I have a number of questions related  
2 to Attachment B of this interrogatory. I understand we  
3 are going to try them with Mr. Hill tomorrow, but there  
4 are some more general questions that I would like to try  
5 with you. I think you can help me on them.

6 A I will have to get a copy of it. I don't have a  
7 copy.

8 Q I don't really think you need to refer to it. I  
9 think we can do it without that.

10 MS. FERKIN: Mr. MacGregor, while you're there,  
11 could you provide Mr. Carroll, if he doesn't have it  
12 already, with what was marked today as OCA Exhibit No. 20?

13 (Document handed to the witness.)

14 THE WITNESS: All right, I have a copy.

15 BY MS. FERKIN:

16 Q Mr. Carroll, am I correct that you could tell me  
17 about some of the capital additions that have been made to  
18 the nuclear units over the last three, four, five years,  
19 that you would be able to describe the physical change made  
20 to the unit, tell me what it is and why it was made?

21 A To some of them, yes.

22 Q I would like to ask you about a few of them, if  
23 I could.

24 A Try me.

25 Q In 1984 at Peach Bottom, Mr. Carroll, did you

1 replace the turbine rotors?

2 A. Yes, we replaced the A and C low pressure rotors  
3 on No. 2 unit.

4 Q. Now, can you tell me, if you know, what the rea-  
5 son was for the replacement of the rotors on Unit 2?

6 A. Yes. The low pressure rotors at Peach Bottom  
7 were a stacked disc rotor, manufactured by General Electric,  
8 and they were getting cracking on the discs.

9 And they were becoming an operational hazard, so  
10 that there was an extensive study to see the size of the  
11 cracks, the promulgation and rate of the cracks and  
12 everything, and it was decided that the A and C rotor must  
13 be changed at that particular time.

14 We are now taking the blades off of the A and C  
15 rotor and putting them to solid disc core rotors so that  
16 we can replace the others.

17 But it was because of cracking in the stacked discs.

18 Q. In your opinion, Mr. Carroll, did that cracking  
19 result from a generic problem with the rotors, or was it due  
20 to just operational wear and tear?

21 A. It's a generic problem with the rotors that  
22 General Electric swore they didn't have, and then finally  
23 they decided that they did have.

24 Q. Now, I understand that at Peach Bottom, there have  
25 also been modifications made to the torus?

1 A. That is correct.

2 Q. Can you tell me about that modification?

3 A. Yes. The torus is a doughnut-shaped ring around  
4 the bottom of the reactor, and it is used to squelch the  
5 steam that comes from the relief valves in the reactor.

6 And it was determined that when the steam came down  
7 and hit the water, it actually created an uplifting of the  
8 torus off of its foundations, and so therefore they had to  
9 turn around and put a modification on the steam coming down.

10 It came into a Y and ran out. They had to tie the  
11 torus down completely. There was a thorough investigation  
12 by the BWR Owners Group in conjunction with General Electric  
13 to the point where they built a full-scale model.

14 It was approved by the NRC as a correction remedy,  
15 and then all toruses were corrected to meet those  
16 modification requirements.

17 Q. So, do I understand then that the modifications  
18 made to the torus in Peach Bottom were also a response to a  
19 generic problem?

20 A. That is correct.

21 Q. And not due to operational wear and tear?

22 A. That is correct.

23 Q. Am I also correct that the replacement of the  
24 piping in Peach Bottom 2 and Peach Bottom 3 -- first of all,  
25 am I correct that that is being done primarily in response

1 to intergranular stress corrosion cracking?

2 A. Yes. At this stage of the game, we have only  
3 replaced the pipe on Peach Bottom 2. It is a replacement  
4 because of the intergranular stress corrosion cracking,  
5 generic problem within the BWR industry.

6 Q. And not due, in your opinion, to operational  
7 wear and tear?

8 A. That is correct.

9 Q. Can you tell me, in your opinion, what changes,  
10 what capital changes have been made at Peach Bottom that  
11 were the result of simple wear and tear on the unit, either  
12 Unit 2 or 3?

13 A. I am not the expert, but I don't know of any at  
14 this stage of the game that we have replaced a unit of  
15 property as it is required to be a capital improvement,  
16 where we have replaced a unit of property because the life  
17 of that unit of property has worn out through normal wear  
18 and tear as opposed to an unknown design problem such as the  
19 IGSCC or something like that.

20 Q. Can you turn for a moment to OCA Exhibit No. 20,  
21 the attachment to that exhibit?

22 A. Yes.

23 Q. With respect to Unit 3 at Peach Bottom, the  
24 fourth item, the refueling that began March 15, 1981.

25 A. The fourth refueling?

1 Q. Right, under Unit 3.

2 A. Yes.

3 Q. There's an item listed there that I read to be  
4 service platform failure. Is that a complete statement of  
5 what the work item was there, to the best of your knowledge?

6 A. That's the reason for the extension of the  
7 outage was, we had a failure of the operational aspect of  
8 the service platform which does the refueling, and therefore  
9 that had to be corrected before we could continue the fuel  
10 movement and everything, and it was a reason for the outage  
11 extension.

12 Q. Now, when you were discussing the Salem plant  
13 with Mr. Wersan earlier, you mentioned the failed generators  
14 in both Salem 1 and 2, and you also mentioned with respect  
15 to Salem 1 other, I think you called them minor repair  
16 problems. Do you recall what you were referring to in that  
17 statement?

18 A. Yes, I think maybe the one thing that came to my  
19 mind was the cocked top hat that we recently discussed on  
20 Tuesday in the ECR No. 9, was one of the things I was  
21 thinking about.

22 Q. Unfortunately, I was not present at that session.

23 A. What we did was, we had to install on top of the  
24 reactor an upper control rod guide which is referred to as a  
25 top hat.

1           One of them was put on 90 degrees off where it was  
2 supposed to. As a result, a dowel pin did not fall into  
3 the dowel hole when the head was put back on the reactor,  
4 and a hot drag test was done. It was found out the control  
5 rod would not move properly.

6           They had to disassemble the reactor. It extended the  
7 outage by 28 days. That's what I meant by minor repair  
8 problems.

9           Q    What prompted the positioning of the cocked top  
10 hat, a response to a generic problem, or was that again  
11 needed to keep the unit operational?

12           A    The reactor was disassembled to replace the  
13 split pins, and they are a portion of the hold-down within  
14 the reactor, and those pins had to be replaced because of a  
15 generic problem.

16           Q    Is it your understanding that the company will  
17 be submitting additional testimony in this rate case in  
18 response to the Commission's ECRA order?

19           A    Yes, it is my understanding we will be submitting  
20 additional testimony.

21           Q    Will you be submitting testimony as part of that  
22 filing?

23           A    There is a very strong probability that I will  
24 be submitting testimony.

25           MS. FERKIN: That's all I have, Your Honor. I would

1 simply like to mention a couple of things. Based on my  
2 discussions with Mr. Carroll, I think it might be necessary  
3 to cross-examine Mr. Smith on some of these issues. Again,  
4 I will take that up with the company off the record.

5 Secondly, yesterday I indicated that because of the  
6 lateness of some interrogatory responses, I might sense the  
7 need to again have Mr. Carroll return. I will review that  
8 and take it up with the company.

9 Finally, I would like to move to admit GEC Exhibit  
10 No. 1.

11 MR. MacGREGOR: No objection to the admitting of the  
12 exhibit, Your Honor.

13 JUDGE MATUSCHAK: GEC Exhibit No. 1 is admitted into  
14 evidence.

15 (Whereupon, the document marked  
16 GEC Exhibit No. 1 was  
received in evidence.)

17 MR. MacGREGOR: Your Honor, if I can just make a  
18 brief statement in response to the GEC statement, we have no  
19 problem in bringing these witnesses back if it is necessary.  
20 We would simply ask counsel, to the extent possible, that  
21 where the cross-examination desired is of an informational  
22 type nature, that perhaps a good portion of that could be  
23 done by separate phone calls outside the hearing room which  
24 would reduce hearing time and the need for scheduling  
25 additional hearings.

1 JUDGE MATUSCHAK: We will expect counsel to cooperate  
2 and try to make whatever arrangements they can.

3 MR. MacGREGOR: Also, with respect to Mr. Smith's  
4 knowledge of this Part B of your Exhibit No. 1, I am not  
5 sure what the nature of your questions will be, and  
6 perhaps we can discuss this further off the record, but he  
7 may well not be the person who can tell you what each of  
8 these numbers relates to in terms of projects. He is the  
9 manager of plant accounting and is responsible for keeping  
10 the company's plant accounts and continuing property records.

11 But he is not presented as an expert who can explain  
12 the source behind each one of these figures. So, it may be  
13 that Mr. Carroll can answer some of those questions, perhaps  
14 Mr. Hill can answer the others.

15 If there are other informational questions, we can  
16 provide those to you outside of the normal cross-examination  
17 procedure.

18 MS. FERKIN: I will review my questions with respect  
19 to Attachment B again, and maybe try them with Mr. Hill  
20 tomorrow.

21 JUDGE MATUSCHAK: Any further cross-examination of  
22 Mr. Carroll?

23 (No response.)

24 JUDGE MATUSCHAK: Any redirect?

25 MR. MacGREGOR: Yes, Your Honor, two or three brief

1 questions.

2 REDIRECT EXAMINATION

3 BY MR. MacGREGOR:

4 Q Mr. Carroll, during cross-examination by the  
5 OCA and the Staff, you were asked certain questions  
6 concerning the MAC audit of the Salem unit.

7 I believe in response to specific questions by Mr.  
8 Wersan, you stated the audit was performed in the specific  
9 time frame as a result of the circuit breaker incident at  
10 Salem.

11 Could you provide some further explanation as to the  
12 scope of that audit and to whether the entire scope of the  
13 audit was related to the circuit breaker incident?

14 A No. Essentially, the audit covered the gauntlet  
15 of the relationship of nuclear operation within Public  
16 Service Electric & Gas: communication, management,  
17 maintenance practices, quality assurance -- you can just  
18 run down the whole list. It was all in there.

19 Some of those items were specifically raised by the  
20 NRC, purchasing, quality assurance, management. But all of  
21 those items were not a concern of the NRC.

22 But since MAC was coming in and was investigating and  
23 doing this audit, coming up with an action plan, it seemed a  
24 very appropriate time to do the entire action plan and bring  
25 them in once and get the whole thing done, so that the scope

1 once they were in was expanded to do a complete nuclear  
2 department audit action plan type of a thing for improvement,  
3 where available, reexamination and everything, across the  
4 line of the entire department.

5 Q Mr. Carroll, in response to some questioning by  
6 Ms. Chestnut of the Staff concerning interrogatory REO-1,  
7 which is the production cost output used in the development  
8 of the Limerick fuel savings on D-21 of TPH-2, could you  
9 state for the record the Limerick 1 capacity factor that  
10 was employed in that analysis?

11 A Yes. The capacity factor that was achieved in  
12 the two-year period for the Limerick savings was as stated  
13 on -- I'm trying to find it in my testimony. It is in my  
14 testimony, and I can't find the page right now.

15 (Witness perusing document.)

16 On the bottom of page 27, it has a 64.6 percent  
17 capacity factor.

18 Q Finally, Mr. Carroll, you were asked a certain  
19 question by Mr. Ettner concerning PECO Exhibit No. 1, page  
20 II-D-1, explaining certain variations in FERC accounts, and  
21 particularly the application of the inflation factor in the  
22 determination of those variances.

23 Can you explain the connection or relationship if any  
24 between those variance explanations and the company's  
25 development of its budgeted operating and maintenance expense

1 claim for the future test year?

2 A. In developing the budget for the Electric  
3 Production Department, the procedure that is used is to  
4 examine all of the items which we are intending to do during  
5 the budget period, and in many of those items there are  
6 known costs of what that particular operation is going to be.

7 And in some of the areas of expenses, there is a  
8 good history trend of expenses, and then in the area of all  
9 the labor costs, there is a known, predicted salary that is  
10 going to be paid based on the company's projected salary  
11 plans.

12 So that only in areas where we are looking at a  
13 trending of costs for routine maintenance which is usually  
14 performed by Philadelphia Electric employees, but we don't  
15 do a manhour rate associated with that, or in trending of  
16 supplies and expenses or something in that area, which are  
17 relatively small items of the overall corporate budget, do  
18 we apply the corporate inflation factor supplied to us by  
19 Budget and Control.

20 But then going back and trying to do a variation  
21 explanation such as we are asked to do over a fiscal filing  
22 year to try and attempt to look at each individual item of  
23 budget -- and for the entire Electric Production Department  
24 there is some 6,000 different items of budget that go into  
25 making up our total budget -- and to look and try and

1 determine on each one of them what portion of a known  
2 cost which has been received from outside suppliers or  
3 something is a level of inflation, and to try to pull out  
4 PE's labor portion versus materials and supplies, we  
5 assume and we impute for variation explanation purposes  
6 that the inflation across the entire budget was the  
7 corporate inflation value.

8 Q Would it be fair to say, Mr. Carroll, that the  
9 application of the general inflation factor in the variance  
10 analysis is an after-the-fact attempt to provide a general  
11 explanation of the variance for filing purposes and does not  
12 accurately portray the methodology the company used in  
13 developing its future test year budget?

14 MR. WERSAN: Objection, Your Honor. I think that's  
15 a very leading question on behalf of counsel.

16 JUDGE MATUSCHAK: Yes, it is. The objection is  
17 sustained.

18 MR. MacGREGOR: Your Honor, if I could have a moment  
19 to confer with the witness about one additional area, I am  
20 not sure I have a question.

21 JUDGE MATUSCHAK: Very well.  
22 (Pause.)

23 MR. MacGREGOR: Just one more question, Your Honor.  
24 BY MR. MacGREGOR:

25 Q Mr. Carroll, in questioning earlier today by

1 Mr. Wersan from the Consumer Advocate's Office, you were  
2 asked certain questions as to what might happen to the  
3 company's fuel savings calculations on D-21 and also for  
4 purposes of the 80/20 calculation in the new ECR filing if  
5 fossil fuel prices were lower than the company had  
6 projected.

7 For purposes of symmetry, could you briefly explain  
8 what the impacts might be if fuel costs were higher than  
9 projected by the company or if other factors in the analysis  
10 were to change?

11 A. Yes. Specifically with respect to the 80/20  
12 Commission order, if we were to project the expenses on a  
13 level of fuel prices that was exceeded in the year, then the  
14 company revenue would be lower than our actual fuel  
15 expenses, the same as in answer to Mr. Wersan's questions  
16 they would have been higher.

17 And if the sales or other factors, if the sales were  
18 higher than we had projected, then the revenue would be  
19 less than the expense.

20 Conversely, if the sales were lower, then the revenue  
21 would have been greater than the expense. So, it works both  
22 ways.

23 MR. MacGREGOR: Thank you, Mr. Carroll.

24 That's all I have, Your Honor.

25 MR. WERSAN: If I may, Your Honor, thank you.

## RE-CROSS-EXAMINATION

1  
2 BY MR. WERSAN:

3 Q Mr. Carroll, with respect to the MAC analysis at  
4 the Salem station and the topics that were reviewed, are  
5 you familiar with the NRC documents and opinions written  
6 concerning the Salem 1 outage that was under review?

7 A It's been a while, Mr. Wersan, since I have  
8 read them all.

9 Q If I could refer you to page 19 of your testimony  
10 where you discuss the seven main areas that the action plan  
11 covered, at line 7, you list those.

12 A Yes.

13 Q Would I be correct that the NRC called into  
14 question the management of PSE&G of the Salem station?

15 A That's part of it, yes.

16 Q And were there concerns by the NRC about the  
17 safety of the plant and the ability of PSE&G to operate the  
18 plant safely and control all safety mechanical features of  
19 the plant?

20 A As they pertain to certain areas, I think that  
21 the word "safety" in here is not necessarily in the context  
22 of the NRC's concern for safety. Yes, there was some safety,  
23 but I think it had more concern with quality control,  
24 management, maintenance.

25 Q What do you mean by "safety" then in your

1 testimony?

2 A. I think the safety here is the overall concept of  
3 the concern with the community, the concern with the  
4 security, safety from that standpoint, the concern with the  
5 proper training of operators.

6 And yet, that was not one of the things that the NRC  
7 had concern with. I think the connotation of safety in here  
8 as it was done in the management plan covered all aspects,  
9 and I think the NRC was only concerned with some very  
10 specific areas of safety.

11 Q. Let me follow up on what you just said. You  
12 mentioned operators. Wasn't there a concern by the NRC  
13 that the operators at Salem weren't familiar with all of the  
14 information that was available to them to analyze the  
15 actual failure that did occur?

16 A. The NRC was very commendable of the control room  
17 operators and the action they took to get the unit off the  
18 line in both particular cases.

19 There was some concern with the after-the-fact review  
20 of the events that did happen, but they were very commendable  
21 of the operation by the control operators at the time.

22 Q. Let me rephrase it. I agree that the NRC said  
23 good things about the fact that Salem was able to be shut  
24 down before a problem occurred, but didn't they also say  
25 that the operators faultily turned off alarms, that the

1 operators didn't realize for two days that the reactor  
2 breakers failed to work, and other things to that effect  
3 about the training of the operators on the plant?

4 A. They did say that they failed to analyze the  
5 events recorder properly, and failed to recognize for two  
6 days that they hadn't worked in the one.

7 But I don't think that was necessarily the operators  
8 that they were picking on as it was the supervision that  
9 was doing the analysis after the fact.

10 Normally, that type of thing is not done by the shift  
11 man. It's done by his supervisor and the technical people  
12 that come in afterwards.

13 Q. I am not quite sure what you mean by modifications  
14 or operations.

15 A. They were looking at the procedures in place and  
16 how we scheduled and planned to do modifications to the  
17 plant that were required.

18 They were looking at the operations, and in here,  
19 this is some of the operations which you were just talking  
20 about, hey, did we review the things after the fact properly.  
21 That's part of operations.

22 There was no criticism at all of the record controls.  
23 There was no criticism of the training. There was some  
24 concern over the quality control aspect. And yet, the  
25 maintenance aspect as PSE&G did their maintenance got a very

1 high thing.

2 What they did have a problem with was the record  
3 keeping of their contractor maintenance.

4 Q Let me ask you this, Mr. Carroll. I think  
5 quality control and maintenance are tied together a little  
6 bit. Isn't it true that the initial problem at the Salem  
7 unit was that maintenance done on the reactor scram  
8 breakers was first not done for a period of years and then  
9 was done improperly when it finally was done?

10 A Yes, and yet the instructions said you shouldn't  
11 touch them. And then when they did touch them, they had  
12 Westinghouse do it. So, that's why I say it was not PSE&G  
13 people's maintenance, but it was the contractor maintenance  
14 that they had that the NRC was concerned with.

15 Q But there was a concern about the maintenance  
16 being done on the plant. Now, you differentiate between  
17 contractor and PSE&G maintenance, but there was maintenance  
18 being done on the plant for which there were questions?

19 A Yes, and the month before, they got a fine SALP  
20 rating on maintenance. So, there is some question of,  
21 even from the NRC standpoint, who was wrong and who was  
22 right. And part of this whole action plan was to thrash out  
23 the whole thing and say who's right, who's wrong, how can we  
24 do better; do we need to do better and if we do, how can we  
25 do better.

1 Q And all those questions came up because of this  
2 scram breaker problem, isn't that correct?

3 A No, I don't think all of them did, but I think --

4 Q The impetus --

5 A I think a few in selected areas came in, but not  
6 the entire thing came in.

7 Q But the impetus for this action plan came as a  
8 result of concerns that arose from the reactor scram breaker  
9 problem?

10 A I agree that the impetus for the timing of this  
11 particular implementing of a management review came because  
12 of the NRC action. I don't necessarily agree that it would  
13 not have happened anyway, and I think the scope was greatly  
14 increased because you've got a management consultant firm in  
15 to do it, you might as well do it completely in order to  
16 minimize the overall cost in the long range.

17 MR. WERSAN: That's all the questions I have, Your  
18 Honor. Thank you, Mr. Carroll.

19 MS. SMITH: I just have one point of clarification.

20 RE-CROSS-EXAMINATION

21 BY MS. SMITH:

22 Q You indicated with regard to the management  
23 analysis -- was the analysis done only with respect to the  
24 Salem unit, or did it include any other PSE&G units?

25 A It included the entire nuclear department of

1 PSE&G. The only units the nuclear department was operating  
2 at the time were the Salem units.

3 MS. SMITH: Okay, thank you.

4 I have no other questions.

5 JUDGE MATUSCHAK: Anything further of this witness?  
6 (No response.)

7 JUDGE MATUSCHAK: Mr. Carroll is excused.

8 (Witness excused.)  
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1 JUDGE MATUSCHAK: What is the pleasure of counsel  
2 now?

3 MR. MacGREGOR: Your Honor, we have Mr. Hill avail-  
4 able, and we understand the Staff and GSA were ready to  
5 cross-examine him today.

6 We are happy to proceed, if it is all right with the  
7 parties, so we might not be as late tomorrow getting done.

8 JUDGE MATUSCHAK: Very well.

9 Mr. Hill has been previously sworn.

10 MR. MacGREGOR: Yes, Your Honor.

11 MS. CHESTNUT: Your Honor, I think I neglected to  
12 move into into evidence Staff Exhibit No. 6. I would like  
13 to move it in at this time.

14 MR. MacGREGOR: No objection, Your Honor.

15 JUDGE MATUSCHAK: Staff Exhibit 6 is admitted into  
16 evidence.

17 (Whereupon, the document marked as  
18 Trial Staff Exhibit No. 6 was  
received in evidence.)

19 Whereupon,

20 THOMAS P. HILL, JR.

21 having previously been duly sworn, testified further as  
22 follows:

23 JUDGE MATUSCHAK: Is Staff ready to proceed?

24 MS. SMITH: Yes, Your Honor.  
25

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## CROSS-EXAMINATION

1  
2 BY MS. SMITH:

3 Q Good evening, Mr. Hill.

4 A Good evening, Ms. Smith.

5 Q On page 12 of your Statement 18A, you refer to  
6 the Bradshaw Reservoir and list an amount of \$12.9 million.

7 What does that amount consist of?

8 A I don't know whether -- by way of clarification,  
9 Ms. Smith, when I was on the stand yesterday I indicated  
10 that the \$12.9 million mentioned in my supplemental testi-  
11 mony is too low, and the company is in the process of pre-  
12 paring a revision.

13 I have the direct cost available, but we are calcu-  
14 lating the AFUDC.

15 I can provide you the elements or detail, if you  
16 wish, of that \$12.9 million. It represents our investment  
17 in the facilities and the associated AFUDC exclusive of  
18 land for the Bradshaw Reservoir Project.

19 Q May I ask what was the purpose of putting the  
20 facilities into rate base if the land was left in land held  
21 for future use at the time of your filing?

22 A That's correct. The land for Bradshaw is in  
23 Account 105. The investment which I am removing through  
24 my supplemental testimony represents the capital cost plus  
25 AFC, exclusive of land.

1           Q   My question was: why was it treated separately?  
 2           Why was it also not included in plant in service, the land  
 3           as well as the whole operation?

4           A   I believe, as Mr. Smith previously testified,  
 5           land is booked to Account 105 and stays in Account 105 in  
 6           conformance with FERC Order 420. It does not shift from  
 7           105 to Account 107, construction work in progress; it goes  
 8           directly from land held for future use to plant in service  
 9           at the time construction is completed.

10          Q   Could you refer to TPH-2, page D-5 -- actually,  
 11          D-5a?

12          A   Yes.

13          Q   The second column is labeled "Total Payroll."  
 14          At the end of the column the total is \$467,057,000. Could  
 15          you explain what that amount represents?

16          A   That represents the total payroll for Philadel-  
 17          phia Electric Company, exclusive of overtime, budgeted for  
 18          the 12 months ended June 1986. It includes the payroll  
 19          not only for the electric operations, but also the payroll  
 20          for our gas and steam operations.

21          Q   Does this amount represent the total payroll  
 22          expense claimed in this case?

23          A   No, it does not. The company's claim for total  
 24          payroll expense is provided on the previous page, D-5.

25                 This is the month-by-month budgeted payroll and does

1 not reflect any adjustment for annualized conditions as of  
2 the end of the test year.

3 That adjustment, which is the basis of our claim,  
4 is provided on page D-5.

5 Q And that would be the \$8,931,000?

6 A Pardon me?

7 Q That would be the \$8,931,000?

8 A The \$8,931,000 represents the adjustment to the  
9 payroll shown on page D-5a for Philadelphia Electric Com-  
10 pany. That \$8,931,000 is further adjusted down below on  
11 page D-5 to reflect that portion which is applicable to  
12 electric operations; i.e., 59 percent.

13 Q But the total payroll on an annualized basis  
14 would be the total of the 467 plus the 8?

15 A Are you asking for the company's claim to total  
16 payroll?

17 Q Total payroll expense claimed.

18 A The company's total payroll expense claimed in  
19 the test year would be \$416,296,000 plus an adjustment --  
20 excuse me; would be \$424,256,000 plus an additional com-  
21 ponent for overtime of \$971,000. The sum of those two num-  
22 bers multiplied by 59 percent represents the company's  
23 claim for payroll applicable to electric operations.

24 Q Could you refer, please, to IR-OCA-1-38?

25 Do you have that?

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A. Yes, I have that.

Q. At the bottom of that page you make a comparison of the budgeted to actual payroll dollars -- do you see that -- for 1984?

A. Yes, I see it.

Q. For the 1984 dollars, you indicate that the actual total payroll expense for PECO was \$419,706,000; do you see that?

A. Yes, I do.

Q. With respect to your prior year's claim, do you recall what that claim was for your total payroll expense claimed in 1984 in the last rate case?

A. I don't have any materials from the prior rate case with me.

MS. SMITH: Your Honor, the record can show that I am handing the witness a copy of TPH-2 from the prior case, the 842590 docket number.

(Document handed to witness.)

BY MS. SMITH:

Q. Can you tell us what the company's claimed expense was in that case on an annualized basis?

A. Again, just for clarification, OCA-1-38 refers to total Philadelphia Electric Company payroll, including all operations, electric, gas and steam. Our claim is only based upon electric operations. So our claim for

1 total annualized payroll in the prior case, which is regu-  
2 lar payroll, annualized regular payroll of \$404,759,000,  
3 plus overtime, an additional component for overtime of  
4 \$3,826,000, which is approximately \$408.5 million.

5 Q. And that is from pages D-5 and 5a?

6 A. Yes; from Exhibit TPH-2 for the 12 months ended  
7 December 31, 1984 at Docket R-842590.

8 Q. Thank you, Mr. Hill.

9 Mr. Hill, can you tell us the actual number of  
10 employees for October and November of 1985?

11 A. Yes.

12 (Witness perusing document.)

13 A. Actual employees as of October 1985 for Phila-  
14 delphia Electric Company is 10,578, and as of end of month  
15 November 1985, actual employees for Philadelphia Electric  
16 Company are 10,595.

17 Q. Would you please provide us at the close of  
18 December, the numbers for December?

19 A. Yes.

20 Q. In addition, would you provide the actual num-  
21 bers of employees -- I'm sorry. With respect to OCA Inter-  
22 rogatory 1-35, do you have an update on that with you?

23 A. 1-35 or 1-38?

24 Q. I am now referring to IR-OCA-1-35, which is  
25 also with regard to payroll data.

1           What I would like to have is an update for October  
2           and November on that item, and, at the time it is avail-  
3           able, for December.

4           A. I can provide that.

5           Q. You don't have it with you now?

6           A. I don't have December with me. I have October  
7           and November.

8           Q. Why don't you give that to us now and get it on  
9           the record.

10          A. I am missing one number, I believe, for OCA-1-35,  
11          and that is the actual number applicable to electric opera-  
12          tions. I have the company's payroll reports, but I am  
13          missing one number. So I will have to supply that.

14          Q. Okay; thank you -- we would like to have what  
15          you have now. You can give us the completed picture later.

16          A. For the month of October, actual payroll dollars  
17          for Philadelphia Electric Company are \$41,557,000; over-  
18          time dollars are \$6,634,000. I do not have the PE electric  
19          operations payroll, so I cannot develop the rest of the  
20          numbers on the sheet.

21          Similar numbers for the month of November 1985,  
22          actual payroll for November is \$38,478,000; overtime is  
23          \$6,088,000.

24          Q. Thank you, Mr. Hill.

25          On page 9 of Statement 18A, could you explain why

1 the company has increased the deductible for the insurance  
2 covering major storm damage from \$1 million in the last  
3 case to \$3.75 million in this proceeding?

4 A. I can. I believe I have answered an interroga-  
5 tory in response to that.

6 (Witness perusing documents.)

7 A. I can't locate it. To summarize, the company's  
8 Insurance Division reviewed its coverage with its carriers.  
9 Coverage at the \$1 million level could have been obtained  
10 at a very high premium, which at the time was not felt to  
11 be economic. The availability of this type of coverage is  
12 limited; and it was the position of our Insurance Division  
13 that the coverage that we have for damage over and above  
14 the \$3.75 million deductible is the most economic choice.  
15 It is very difficult to get. There is also the further  
16 position that should we sustain significant storm damage,  
17 that the availability of this type of insurance for utili-  
18 ties like ourselves would not be available.

19 It is also my understanding, in conversations with  
20 our Insurance Division, that there are several major  
21 utilities along the east coast who have been dropped from  
22 this type of coverage; in fact, some of them very recently  
23 as a result of the claims associated with Hurricane Gloria.

24 So for several reasons our coverage changed; one,  
25 because of the economics of the coverage, and, two, because

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1 of the limits of the availability of that type of coverage.

2 Q Do you have with you IR-OCA-1-22, which is in  
3 reference to the microprocessors?

4 A Yes, I do.

5 Q How many microprocessors does the company  
6 currently have?

7 A I can't answer your question specifically. My  
8 recollection from the last case was we were supposed to  
9 obtain some 400. I have not ascertained what that number  
10 is.

11 Q Have you obtained any of them?

12 A It is my understanding that all the micro-  
13 processors have been obtained, and the company is in the  
14 process of implementing the system. And the expectation  
15 is that the system will be completely operational for all  
16 divisions by December of this year.

17 It is in operation in various portions of our  
18 system. -- excuse me; June of 1986, rather than December  
19 of '85.

20 Q That will be outside the test year at the time  
21 those items will be in use; is that correct?

22 A No; that will be in the test year. Our test  
23 year ends in June of 1986.

24 Q They will be in by June 1?

25 A June 30 is the end of our test year.

1 Q But they will be in during the month of June?

2 A All of the equipment has been leased. The  
3 system should be totally operational by the end of our test  
4 year.

5 We are already under lease obligations.

6 Q The company made a claim for them in the last  
7 proceeding; is that correct?

8 A That's correct, and my recollection was that we  
9 had not received all of the recorders or did not expect to  
10 receive all of the recorders until April of 1985. That  
11 seemed to be some question because our test year in the  
12 last case ended in December of 1984.

13 Q At the time of the rate case it was anticipated,  
14 though, that these microprocessors would be in service dur-  
15 ing the future test year; is that correct?

16 A I think the question last time was whether we  
17 would have the processors in our possession by the time the  
18 rate case ended, or by the time the case concluded.

19 Q In response to Staff Interrogatory IR-Staff-REO-  
20 12, you were asked the number of budget versus actual  
21 dollars for Accounts 901 to 905. You responded that: "We  
22 do not budget by FERC accounts."

23 A Ms. Smith, could you give me the reference to  
24 the interrogatory?

25 Q IR-Staff-REO-12.

1 A. I have it.

2 Q. I would like to know if it is possible to pro-  
3 vide the total number of employees for the customer accounts  
4 expense, which includes the total of all accounts, 901 to  
5 905.

6 A. I would have to answer that question the same  
7 way. I could provide you the number of customers by depart-  
8 ment.

9 Q. You mean employees?

10 A. Employees; excuse me; the number of employees by  
11 department. The problem with the 900 series accounts is  
12 that you have employees which are split between operations,  
13 you have employees which clear to electric, gas and steam,  
14 and our system of clearances performs that on a dollar  
15 basis, payroll basis. Likewise, it is very difficult to go  
16 in and split up employees between those since they perform  
17 a variety of functions for electric, gas and steam.

18 I can give you the composite estimates for the  
19 people that do that work corporately.

20 Q. For those accounts?

21 A. Again, it would be for those accounts for elec-  
22 tric operations, gas operations and steam in composite.

23 Q. We would like that information, please.

24 In your Statement No. 18, at page 27, and on B-17 of  
25 TPH-2, you request a three-year amortization of the cost of

1 damaged nuclear fuel assemblies; do you see that?

2 A. Yes.

3 Q. You state that the 1982 PUC audit of the Energy  
4 Cost Rate disallowed recovery of these expenses through  
5 the energy clause; is that correct?

6 A. That's correct.

7 Q. Am I correct that you propose to amortize  
8 \$929,000 of cost for the damaged nuclear fuel assemblies at  
9 \$310,000 a year for three years? Is that correct?

10 A. That's correct.

11 Q. And you are now proposing to collect these ex-  
12 penses through base rates as a result of the audit reports.

13 A. As a fallout of that audit, which recommended  
14 that it would be more appropriate to collect these expenses  
15 through base rates, rather than through the Energy Cost  
16 Rate.

17 Q. Mr. Hill, can you tell us what amount of expenses  
18 the audit report recommended that PECO refund to its cus-  
19 tomers through the ECR?

20 A. The amount that they recommended that we refund,  
21 including the appropriate interest, was \$929,000.

22 Q. Could you refer then to Staff Data Request  
23 DR-Staff-RET-2?

24 A. Yes.

25 Q. On the last page of that, page 3, there is an

1 item which lists -- it is difficult to read; it says,  
2 "Miscellaneous Current and Accrued Assets, Deferred Energy  
3 Cost, Electric," and on the far side it shows \$617,495.

4 A. Yes.

5 Q. Could you explain the differences in these num-  
6 bers? Is that the number --

7 A. The \$617,495 is the amount that we had in our  
8 Energy Cost Rate for recovery which the Bureau requested  
9 that we remove in their audit.

10 They additionally wanted the monies refunded through  
11 the ECR mechanism, since we had already recovered them; and  
12 they wanted them refunded with interest at the residential  
13 mortgage lending rate.

14 That interest is the difference between this approxi-  
15 mately \$617,000 and the \$929,000 in the company's claim.  
16 We are claiming, in this proceeding, amortization of the  
17 interest, as well as the cost of the damaged fuel assembly.

18 Q. So the difference between the \$929,000 and the  
19 \$600,000 is interest?

20 A. That's correct; yes.

21 Q. And that was refunded through the ECR?

22 A. That is being refunded through the ECR.

23 Q. Mr. Hill, when was it first known that the fuel  
24 assemblies had bowed, during the operation or after the  
25 operation, as far as when they were being removed? Was it

1 before, during or after?

2 A. When was it --

3 Q. When was it that the company realized that the  
4 fuel assemblies had been damaged?

5 A. Upon trying to extract the assemblies from the  
6 reactor during the refueling outage, damage occurred to the  
7 grid strap which actually holds the assembly together, both  
8 in the assembly that was bowed and also some adjacent  
9 assemblies.

10 At that point was the point of discovery where the  
11 damage occurred.

12 Q. In your testimony you state that this is an  
13 expense that can occur periodically. How periodically  
14 could we anticipate this taking place?

15 A. I think I mentioned, or for clarification also  
16 in Staff RET-2, what I was not referring to there specifi-  
17 cally was that this specific incident would happen with a  
18 periodicity. What I am saying is that damage of material  
19 or incidents of this nature occur on a regular basis, and,  
20 therefore, I believe or deem it to be a reasonable expense  
21 of operation and, therefore, recoverable through revenues.

22 Q. But you wouldn't anticipate this particular type  
23 item taking place?

24 A. That's correct. I would not construe this  
25 specific event to be something that would occur periodically.

1 MS. SMITH: Your Honor, that's all I have for  
2 Mr. Hill.

3 MR. WERSAN: Your Honor, the OCA had not planned to  
4 cross Mr. Hill today, but rather tomorrow morning.

5 MR. ETTNER: Your Honor, for GSA, I have about ten  
6 minutes of cross-examination.

7 JUDGE MATUSCHAK: Proceed.

8 CROSS-EXAMINATION

9 BY MR. ETTNER:

10 Q Good afternoon, Mr. Hill.

11 A Good afternoon, Mr. Ettner.

12 Q Mr. Ettner, let me direct your attention to page  
13 12 of your testimony, at line 6.

14 Do you have that?

15 A Yes, I do.

16 Q It is at that point in your testimony that you  
17 mention 21 adjustments that the company has made to income  
18 for return; is that correct?

19 A That's correct.

20 Q And one of the major adjustments is an adjustment  
21 which reflects the reductions in energy expenses due to the  
22 inclusion of Limerick No. 1; is that correct?

23 A That is correct.

24 Q In your testimony you indicate that this adjust-  
25 ment reduces revenue requirements to customers, but does

1 not affect operating income; is that correct?

2 A. That's correct.

3 Q. I just want to explore that adjustment for a  
4 moment with you.

5 For purposes of calculating the adjustment, you  
6 assumed a plant capacity factor for Limerick of 65 percent;  
7 is that correct?

8 A. Mr. Carroll had in his calculation an average  
9 capacity factor and has assumed an average capacity factor  
10 of 65 percent over a long period of time.

11 Q. What effect would a different capacity factor  
12 -- let's assume for a moment a lower capacity factor --  
13 have upon the base revenue requirements from customers?

14 A. If the capacity factor were higher than 65 per-  
15 cent, if that would be the point of discussion, the fuel  
16 savings to customers would increase, and --

17 Q. And if it were lower, Mr. Hill?

18 A. If it were lower, the fuel savings would decrease.

19 Q. You did state in your testimony that there would  
20 be no effect upon operating income; therefore, it is the  
21 ECR, the Energy Cost Rate, that would be calculated to make  
22 up any additional revenues that you would need, that the  
23 company would need, as a result of a different capacity  
24 plant factor; is that correct?

25 A. Well, when I refer to the fact that the adjustment

1 has no effect on income, what I'm saying is that the opera-  
2 tion of the Energy Cost Rate, coupled with the company's  
3 method of deferred fuel accounting, prevent any effect on  
4 income associated with increases or decreases in fuel ex-  
5 pense relative to increases or decreases in fuel adjustment  
6 revenue.

7 Q A lower capacity factor would have the effect  
8 on the company of the company needing more money, would it  
9 not?

10 A No.

11 Q Mr. Hill, are you generally familiar with the  
12 cumulative lifetime plant capacity factor for the Salem  
13 nuclear units?

14 A Not specifically, no.

15 Q Would you accept that if you were to look at the  
16 monthly operating status reports filed with the Nuclear  
17 Regulatory Commission, for example, the report filed on  
18 July 1 of 1985, you would find a cumulative plant capacity  
19 factor for Salem 1 of 49.2 percent and for Salem 2 of 41.7  
20 percent?

21 A I'm not familiar with the reports. If that's  
22 what they say, I will accept your reading of the report.

23 Q With that as a background, if the capacity fac-  
24 tor of Limerick 1 turned out not to be 65 percent but some-  
25 thing on the order of 50 percent or lower, what effect

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1 would that have upon the projected energy savings from that  
2 unit?

3 A. The energy savings would be lower if there were  
4 a lower capacity factor.

5 Q. What effect would that have on the rate increase?

6 A. On the base rate increase as we have filed it?

7 Q. Yes.

8 A. It would have no impact as we have filed it.

9 Q. What about on the overall rate increase as the  
10 company perceives that?

11 A. I think we're getting into a semantics problem  
12 here. The operation of the unit under the Energy Cost Rate  
13 mechanism balances fuel expense with fuel revenue such  
14 that there is no effect on the company's statement of  
15 operations.

16 Therefore, if the unit performs at a zero percent  
17 capacity factor or a 100 percent capacity factor, and the  
18 company recovers those expenses associated with either zero  
19 or 100, that is the savings or replacement power costs,  
20 there is no effect on the company and its operating state-  
21 ment. There is, however, an effect on the customer as the  
22 capacity factor varies, because the customer is picking up  
23 the swing in the performance of the unit through the mech-  
24 anism of the Energy Cost Rate.

25 He usually picks up that swing on the basis of the

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1 deviation in the company's projection under the Energy Cost  
2 Rate and the actual performance on a one-year lag basis  
3 through the operation of the Energy Cost Rate mechanism it-  
4 self.

5 Q So a lower plant capacity factor than 65 percent  
6 would have a positive or an adverse ultimate effect upon  
7 the customer?

8 A An improvement in the capacity factor would have  
9 a positive effect on the customer.

10 Q And a lowering?

11 A Would have a negative effect on the customer.  
12 By "negative" I mean it would mean a higher cost of service,  
13 and a higher bill, if you will.

14 Q And the anticipated \$207 million energy offset  
15 would not be realized?

16 A The \$207 million savings would be passed on, as  
17 the company has its filing structured right now, would be  
18 passed on during the first year, because there would be no  
19 change to the company's Energy Cost Rate until April of  
20 1987.

21 At that point in time, when the company did its  
22 reconciliation of energy cost based upon the 12 months  
23 ended January 1987, any over or under-recovery resulting  
24 from a change in the capacity factor as it deviated from  
25 the 65 percent would be wrapped into a subsequent ECR,

1 which would take effect in April of 1987.

2 Q Mr. Hill, turning to a different area; are you  
3 familiar with the -- you have participated in the company's  
4 last few rate cases, have you not?

5 A Yes, I have.

6 Q Are you familiar with the Commission's treatment  
7 of Edison Electric Institute, EEI, dues designated for  
8 media communications?

9 A Yes, I am.

10 Q Have you eliminated that expense item from the  
11 company's presentation in this case?

12 A No, we have not. It is contained in the com-  
13 pany's operating accounts as an expense and part of our  
14 claim.

15 Q So you are seeking recognition of that in this  
16 case?

17 A That's correct; we are.

18 Q Notwithstanding the Commission's disallowance of  
19 that in the past.

20 A That is correct.

21 Q Finally, Mr. Hill, let me direct your attention  
22 to page 16 of your testimony -- let me backtrack a second,  
23 Mr. Hill.

24 Is there any point in your testimony, or the testi-  
25 mony of any other PECO witness, which justifies the

1 inclusion of that EEI dues designated for media communica-  
2 tions?

3 A I have not isolated it in my testimony as a  
4 particular item. It is included in the 900 series accounts.  
5 It is also included in error. I am in the process of  
6 correcting the amount that is in there.

7 I have the responsibility for justification of the  
8 expense, if you want to question me about why I believe it  
9 to be appropriate.

10 Q It was not otherwise highlighted in the  
11 testimony?

12 A It has been highlighted to a great extent in  
13 the company's pre-filed interrogatory, specifically,  
14 II-D-7, which summarized the company's claims to Account  
15 930. It has also been discussed in several interrogatories.

16 Maybe I can help you by locating them. I believe  
17 OCA-1-18, OCA-1-20, OCA-1-25; Staff-REE-1, Staff-REE-2,  
18 Staff-REO-4 and 5. It is also discussed in OCA-1-29;  
19 Staff-REO-4, 5 and 6.

20 Staff-REO-6 has not been submitted yet. I am going  
21 to use that as the vehicle by which I will explain the  
22 error in expense for EEI advertising.

23 I will also incorporate that change to correct the  
24 error in our final accounting exhibit.

25 Q Thank you. Back to page 16 of your testimony.

1 Starting at line 17 on that page you begin a discussion of  
2 the issue of the company's purchase of nuclear fuel for  
3 Limerick 1 rather than leasing it.

4 Do you see that?

5 A. (No response.)

6 Q Carrying over onto page 17, for example, you  
7 note that fuel for Salem and Peach Bottom are leased, and  
8 that is in contrast.

9 A. I think I contrast the ownership of the Limerick  
10 fuel versus the lease -- explaining why certain rate treat-  
11 ment must be afforded the Limerick 1 fuel and similar  
12 treatment is not required for Salem and Peach Bottom since  
13 they fall under nuclear fuel leases.

14 I think that is the thrust of my testimony on pages  
15 16 and 17.

16 Q Briefly, Mr. Hill, could you tell me what is the  
17 rationale for purchasing the nuclear fuel for Limerick,  
18 rather than leasing it, which is the case for those other  
19 units at Salem and at Peach Bottom?

20 A. The rationale is not different at all. I might  
21 point out that both Salem and Peach Bottom fuel were owned  
22 by Philadelphia Electric Company, and decisions were made  
23 at subsequent points in time to lease that fuel. Those  
24 decisions were made on the basis of an evaluation of the  
25 company's financial needs at that point in time, and on an

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1 economic basis, an economic evaluation.

2 It is my understanding that there is no immediate  
3 requirement or need to lease the Limerick fuel. It is not  
4 an impossibility, but currently there is no active negotia-  
5 tion to lease the Limerick fuel specifically.

6 I might also point out that from a ratemaking stand-  
7 point, it makes very little difference or no difference  
8 whether you lease the fuel or own the fuel; both derive a  
9 revenue requirement.

10 Q You mentioned an economic evaluation that went  
11 into your decision-making.

12 A I would prefer to say a financial evaluation.

13 Q Financial. What form did that take?

14 A That is not done by me. That is done by our  
15 Financial Division under the direction of our Vice-  
16 President.

17 Q Has that been the subject of an interrogatory or  
18 data request?

19 A We have had several questions on it, but I don't  
20 think anybody has specifically asked for that evaluation.

21 Q If not, then, I would like to ask as an in-  
22 hearing interrogatory/data request for a copy of that  
23 financial evaluation justifying the purchase of Limerick  
24 No. 1 fuel.

25 A Let me just drop back a bit. In terms of a

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1 decision of whether you are going to lease or own some-  
2 thing, we already own the Limerick fuel. At the time that  
3 we undertook the Peach Bottom and Salem lease, there were  
4 financial questions such as where our coverage stood, what  
5 our abilities were to raise capital at various points in  
6 time.

7 At that point in time it was felt to be the most  
8 economic vehicle to raise capital. If those conditions do  
9 not exist today, then I cannot pinpoint a specific finan-  
10 cial evaluation which says: let's lease Limerick fuel.

11 The same criteria would apply to any company asset,  
12 as to whether we should lease it or whether we should own  
13 it, whether it be fuel, whether it be a magnesium oxide  
14 regeneration facility or whether it be a production  
15 facility.

16 Q With respect to the purchase of fuel for  
17 Limerick No. 1, however, Mr. Hill, if the scheduled on-  
18 line date for Limerick No. 1 is delayed, and delayed sub-  
19 stantially, doesn't that mean that current ratepayers would  
20 get no benefit from the fuel?

21 A. I don't understand your question. Ratepayers  
22 will get the benefit -- will consume the fuel, or pay for  
23 the fuel that is consumed at the time that the unit gener-  
24 ates.

25 Q What I am trying to draw, Mr. Hill, is a

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1 distinction between your purchase of fuel -- and you indi-  
2 cated that you have already purchased it.

3 A. Yes.

4 Q. -- and your desire to have that recognized in  
5 this rate case, as contrasted with a lease situation, a  
6 lease that you could engineer to begin at the on-line date  
7 of Limerick.

8 With that as a context, would it not make more sense  
9 -- isn't the course that you have chosen, meaning that  
10 current ratepayers are not going to get any benefit from  
11 that fuel, are actually having to pay for it even though it  
12 is not being used, and couldn't that situation be remedied  
13 by the lease situation?

14 A. No. If we lease the fuel, the lease would  
15 appear, the lease payment would appear in the company's  
16 operating statement as an operating expense. There are no  
17 expenses appearing in the company's operating statement to  
18 reflect the carrying charges on that investment because  
19 there is no lease.

20 What we have done is added an investment or this  
21 portion of the investment to our rate base in order to seek  
22 a return on that investment for the period of time that we  
23 are supporting that investment.

24 That is a parallel situation to a lease; you either  
25 pay it to a third party, i.e., a leasing company, for the

1 privilege of them carrying the expense, and then they back-  
2 charge you as an interest component which appears as an  
3 operating expense -- that's one way to do it. The other  
4 way to do it is to have the company own it and have the  
5 ratepayers support, through rate base, the investment in  
6 that fuel while it is in the reactor serving those cus-  
7 tomers. You get the result whether you lease or whether  
8 you own.

9 MR. ETTNER: Thank you, Mr. Hill.

10 That concludes my cross, Your Honor.

11 JUDGE MATUSCHAK: Any further cross-examination for  
12 Mr. Hill at this time?

13 MS. FERKIN: Your Honor, the Energy Council will  
14 have cross-examination for Mr. Hill tomorrow.

15 JUDGE MATUSCHAK: I guess this is a good time to  
16 quit. It is ten minutes after 5:00. We will adjourn un-  
17 til tomorrow morning at 10:00.

18 MR. MacGREGOR: Your Honor, there had been some dis-  
19 cussion among the parties as to whether we might want to  
20 start at 9:30 or 9:00.

21 Is that necessary?

22 MR. RUBIN: I don't think so.

23 MR. MacGREGOR: Ten o'clock is fine. Thank you.

24 (Whereupon, at 5:10 p.m., the hearing was adjourned,  
25 to be reconvened at 10:00 a.m. on Friday, December 13, 1985,  
in Harrisburg, Pennsylvania.)

C E R T I F I C A T E

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I hereby certify, as the stenographic reporter,  
that the foregoing proceedings were taken stenographically  
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COMMONWEALTH REPORTING COMPANY, INC.

By: Sandra Milus-Brown  
Sandra Milus-Brown

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