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C O N T E N T S

	<u>WITNESSES</u>	<u>DIRECT</u>	<u>CROSS</u>	<u>REDIRECT</u>	<u>RECROSS</u>
1					
2					
3	A. Gerald Harris				
4	By Mr. MacGregor	2171		2203	
5	By Mr. Delaney		2173		
6	By Mr. Wersan		2188		
7	By Mr. Clark		2200		
8	By Mr. Kleppinger		2200		
9	Thomas P. Hill, Jr.				
10	By Mr. MacGregor	2210			
11	By Ms. Chestnut		2213		
12	By Mr. Wersan		2294		
13	By Mr. Clark		2305		
14	By Mr. Kleppinger		2308		
15	Joseph W. Gallagher				
16	By Mr. DeCusatis	2258			
17	By Mr. Wersan		2260		
18	By Mr. Clark		2268		
19	By Ms. Chestnut		2273		
20	John J. Carroll				
21	By Mr. MacGregor	2313			
22	By Ms. Chestnut		2314		
23	By Mr. Wersan		2338		
24	By Mr. Clark		2340		

E X H I B I T S

	<u>NUMBER</u>	<u>FOR IDENTIFICATION</u>	<u>IN EVIDENCE</u>
17			
18	<u>PECo Statement</u>		
19	✓ No. 28A (Brennan)	2170	2173
20	✓ No. 18B (Hill)	2209	2212
21	✓ No. 30 (Gallagher)	2258	2287
22	✓ No. 22A (Carroll)	2312	2314
23	<u>PECo Exhibit</u>		
24	✓ VAGH-1 (Harris)	2170	2173
25			

E X H I B I T S (Continued)

2.	<u>NUMBER</u>	<u>FOR IDENTIFICATION</u>	<u>IN EVIDENCE</u>
3	<u>PECo Exhibit No.</u>		
4	JFB-2 (Brennan)	2171	2173
5	JJC-1 (Carroll)	2312	2314
6	PECo Statement No. 18B, Schedule 3, Revised 1-28-86	2210	2212
7	<u>Staff Exhibit</u>		
8	No. 20 (Illustrative 80/20 ECR Calculations)	2246	2357
9			
10	No. 21 (IR-Staff-REO-19)	2326	2357
11	<u>GEC Exhibit</u>		
12	No. 5 (DR-Staff-REO-1)	2344	2357
13	No. 6 (IR-GEC-4-1)	2344	2357

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P R O C E E D I N G S

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2 ADMINISTRATIVE LAW JUDGE JOSEPH MATUSCHAK: This is  
3 the time and place for the further hearing in the matter  
4 of the Pennsylvania Public Utility Commission versus  
5 Philadelphia Electric Company, at R-850152.

6 Are there any preliminary matters before we proceed  
7 with testimony?

8 (No response.)

9 JUDGE MATUSCHAK: I have a request from the City  
10 of Philadelphia. They prefer that their expert witnesses  
11 be cross-examined on February 15th, Dr. Schinnar and Mr.  
12 Palast. Is there any problem with that?

13 MR. MacGREGOR: There may be, Your Honor. I am  
14 not intimately involved in the details of this, but I under-  
15 stand that there is an ongoing dispute between the company  
16 and the City of Philadelphia concerning the cross-examination  
17 of these witnesses. It is my understanding that pursuant  
18 to the agreement made by the parties at the prehearing  
19 conference that with respect to Limerick testimony all  
20 work papers, computer models and studies would be  
21 supplied with the filing of the testimony on January 14th.

22 To date, to the best of my knowledge, the company  
23 has not received the computer model backup or any of the  
24 work papers associated with the testimony of Mr. Schinnar.  
25 The company, therefore, has notified the City of

1 Philadelphia, and may be filing a motion shortly indicating  
2 its inability to conduct cross-examination or discovery  
3 or to file rebuttal testimony in a timely fashion, because  
4 of the City's failure to provide the documents as they  
5 agreed to do at the prehearing conference.

6 JUDGE MATUSCHAK: They indicate that of the 5th  
7 and 7th they prefer the 5th.

8 MR. DELANEY: Excuse me; did you say February 15th  
9 is the date they are asking for the witnesses to be  
10 presented?

11 JUDGE MATUSCHAK: They are asking concerning  
12 witnesses Schinnar and Palast; they say that they are only  
13 available for cross-examination on February 5th through  
14 7th in Philadelphia. They prefer February 5th for cross-  
15 examination.

16 MR. DELANEY: The 5th through the 7th were the dates,  
17 Your Honor? I'm sorry.

18 JUDGE MATUSCHAK: 5th and 7th.

19 MR. MacGREGOR: Your Honor, I would just state for  
20 the record it would not be possible for the company to  
21 cross-examine the witnesses at that early date because  
22 of the City's failure to provide the documents they agreed  
23 to provide on January 14th.

24 I don't know that Your Honor has to rule on this  
25 now, but the company does have an objection. We are trying

1 to work it out with the City.

2 JUDGE MATUSCHAK: Very well. You may proceed.

3 MR. MacGREGOR: Your Honor, today is the day scheduled  
4 for cross-examination of the company's witnesses on the  
5 proposed revision to its energy cost rate as ordered by  
6 the Commission's Order of October 30, 1985 in the ECR-8  
7 investigation. The company has four witnesses on this  
8 issue, Mr. Harris, Mr. Hill, Mr. Carroll and Mr. Gallagher.

9 I would like to proceed with the witnesses in that  
10 order, subject to the exception that we would like to start  
11 with Mr. Gallagher immediately after lunch no matter where  
12 we are because he has a later engagement in the day and  
13 would like to be out of here by 3:00 if possible.

14 So we propose to proceed with Mr. Harris now.

15 JUDGE MATUSCHAK: In that connection there is a  
16 pending motion to strike certain testimony regarding  
17 Witnesses Hill and Brennan.

18 MS. CHESTNUT: Yes, Your Honor, I filed a motion  
19 to strike the testimony of Witnesses Hill and Brennan on  
20 the basis that they are not in compliance with the  
21 Commission's ECR-8 Order. I filed that motion last Thurs-  
22 day, and I recognize that the company has not yet had a  
23 chance to respond. Therefore, it is Staff's suggestion  
24 that we cross-examine this witness subject to Your Honor's  
25 ruling.

1 JUDGE MATUSCHAK: I was going to say we will admit  
2 the written statements and conduct cross-examination subject  
3 to a ruling on that motion.

4 MR. MacGREGOR: That's fine, Your Honor. We will  
5 file a written response.

6 MR. CLARK: Your Honor, I am Roger Clark with the  
7 Governor's Energy Council. I have one small matter about  
8 the schedule. The Energy Council is awaiting an interroga-  
9 tory response from the City. I spoke with Mr. MacGregor  
10 about the possibility of having Mr. Carroll be our last  
11 witness today if no other party has any objection.

12 MR. MacGREGOR: That is fine.

13 JUDGE MATUSCHAK: Very well.

14 Whereupon,

15 A. GERALD HARRIS

16 having been duly sworn, testified as follows:

17 JUDGE MATUSCHAK: There is one other item before  
18 we proceed. There has been a request for a subpoena of  
19 Joseph Farrell, who is the designee. Does the Commission  
20 Trial Staff have any objection to that?

21 MS. CHESTNUT: Your Honor, as Staff has not yet had  
22 an opportunity to review the application, we can get back  
23 to Your Honor within an hour probably to give you some  
24 indication of our position on that.  
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JUDGE MATUSCHAK: We won't issue the subpoena until we hear from you.

MR. MacGREGOR: Your Honor, I have previously distributed to the parties and to the court reporter and to Your Honor copies of the document entitled "Education Background, Business Experience and Qualifications of A. Gerald Harris." I would ask that it be marked for identification as PECO Exhibit AGH-1.

JUDGE MATUSCHAK: The motion is granted.

(Whereupon, the document was marked as PECO Exhibit AGH-1 for identification.)

MR. MacGREGOR: In addition, Your Honor, I have previously distributed to Your Honor and all parties copies of a document entitled "Supplemental Direct Testimony of Joseph F. Brennan, President, Associated Utility Services, Inc. Concerning the Energy Cost Rate," and I would ask that it be marked for identification as PECO Statement 28-A.

JUDGE MATUSCHAK: 28-A?

MR. MacGREGOR: Yes. Do you have it, Your Honor?

JUDGE MATUSCHAK: Yes. It may be so marked.

(Whereupon, the document was marked as PECO Statement No. 28-A for identification.)

MR. MacGREGOR: I have also distributed copies of

1 a document entitled "Exhibit to Accompany the Supplemental  
2 Direct Testimony of Joseph F. Brennan, President, Associated  
3 Utility Services, Inc., Concerning The Energy Cost Rate,"  
4 and I would ask that it be marked for identification  
5 purposes as Exhibit JFB-2.

6 JUDGE MATUSCHAK: So marked.

7 (Whereupon, the document was  
8 marked as PECO Exhibit No.  
9 JFB-2 for identification.)

9 DIRECT EXAMINATION

10 BY MR. MacGREGOR:

11 Q Mr. Harris, do you have before you a copy of  
12 a document that has been marked for identification as  
13 PECO Exhibit AGH-1?

14 A Yes, I do.

15 Q Does this document contain a statement of your  
16 education background, business experience and qualifications?

17 A It does.

18 Q Was this document prepared by you or under your  
19 direct supervision?

20 A Yes.

21 Q Is the information contained in this document  
22 true and correct, to the best of your knowledge?

23 A Yes, it is.

24 Q Mr. Harris, do you also have before you copies  
25 of the two documents which have been marked for identification

1 as PECO Statement No. 28-A and Exhibit JFB-2?

2 A Yes.

3 Q Mr. Harris, did you participate in the preparation  
4 of these documents?

5 A Yes.

6 Q Have you reviewed these documents, and are you  
7 familiar with the material set forth in these documents?

8 A I am.

9 Q Mr. Harris, is the information contained in these  
10 two documents true and correct, to the best of your knowledge?

11 A To the best of my knowledge, it is true and  
12 correct.

13 Q And do you in fact adopt these two documents  
14 as your direct testimony in this proceeding?

15 A Yes.

16 MR. MacGREGOR: Your Honor, as I have previously  
17 indicated, due to a hospital stay Mr. Brennan is unavailable  
18 for cross-examination on his testimony. It will, therefore,  
19 be co-sponsored by Mr. Harris. And I would ask that the  
20 documents that have been marked for identification as  
21 Exhibit AGH-1, PECO Statement 28-A and Exhibit JFB-2 be  
22 admitted into evidence in this proceeding, subject to any  
23 motions or objections.

24 JUDGE MATUSCHAK: They will be admitted subject  
25 to any timely motions to strike or any other motions. They

1 will also be admitted subject to the pending motion that  
2 has already been filed by the Commission Trial Staff  
3 regarding the supplemental testimony of Mr. Brennan.

4 (Whereupon, the documents marked  
5 as PECO Exhibit No. AGH-1,  
6 PECO Statement No. 28-A, and  
7 PECO Exhibit No. JFB-2 were  
8 received in evidence.)

9 JUDGE MATUSCHAK: Thank you, Your Honor. The witness  
10 is available for cross-examination.

11 Mr. DELANEY: Your Honor, the Staff would like to  
12 make an initial statement. We have no objections to Mr.  
13 Harris being substituted for Mr. Brennan, provided Mr.  
14 Harris can respond to the cross-examination questions.  
15 If that is not the case, then Mr. Brennan may well have  
16 to come back again.

17 JUDGE MATUSCHAK: If you have any problems, we will  
18 require that Mr. Brennan be brought in when Mr. Brennan  
19 is able to appear.

20 MR. DELANEY: Thank you, Your Honor.

21 CROSS-EXAMINATION

22 BY MR. DELANEY:

23 Q Good morning, Mr. Harris. My name is Dan Delaney.  
24 I represent the Trial Staff in this matter. I have some  
25 questions on the statement of Mr. Brennan's.

Could I direct your attention first to pages 1 and

1 2 of the statement?

2 A Yes.

3 Q There the testimony stresses the use of automatic  
4 adjustment clauses and how it could affect the perception  
5 of a particular utility's risk, and that discussion begins  
6 on the bottom of page 1 and goes through page 2.

7 Mr. Harris, in the period of 1973 to the present,  
8 do you know how many different types of automatic adjust-  
9 ment clauses were used by the Philadelphia Electric Company?

10 A No, I don't.

11 Q In the preparation of this testimony do you know  
12 whether that issue was examined, the history of the automatic  
13 adjustment clauses used by the Philadelphia Electric  
14 Company?

15 A Not specifically to Philadelphia Electric Company,  
16 no.

17 Q Would you accept subject to check that in that  
18 time period Philadelphia Electric Company had four automatic  
19 adjustment clauses?

20 A I will accept that subject to check.

21 Q Do you know for how many years the Philadelphia  
22 Electric Company has had an automatic adjustment clause  
23 that was subject to a subsequent reconciliation?

24 A No, I don't.

25 Q Do you know if that issue was examined in the

1 preparation of this testimony?

2 A No, it wasn't examined.

3 Q Would you accept subject to check that since  
4 1978 with its adoption of an energy clause that the company's  
5 automatic adjustment clause revenues were subject to  
6 reconciliation?

7 A Since 1978?

8 Q Yes.

9 A Yes, I'll accept that subject to check.

10 Q To your knowledge, in the period from 1973 to  
11 the present did any rating agency change its rating of  
12 the company's securities as a result of a change in the  
13 type of automatic adjustment clause used by the company  
14 during this period?

15 A To my knowledge, there was no specific rating  
16 change regarding PECO because of a fuel adjustment clause.

17 Q Or a change in a fuel adjustment clause?

18 A Or a change in a fuel adjustment clause.

19 Q Can I direct your attention to page 7 of the  
20 testimony?

21 A Yes.

22 Q Starting on line 6 of that page there is a dis-  
23 cussion of the Commission's Order at Docket M-840375, which  
24 concerns Philadelphia Electric's ECR No. 8; do you see  
25

1 that testimony?

2 A Yes.

3 Q Mr. Harris, do you know why the Commission decided  
4 to modify the company's ECR?

5 A Well, there was an Administrative Law Judge's  
6 recommendation that the fuel clause be eliminated.

7 Q Do you know why that recommendation was made?

8 A Certain allegations were made regarding the  
9 prudence of the company's fuel management.

10 Q Specifically do you know what these allegations  
11 were -- or actually conclusions of the Administrative Law  
12 Judge concerning the company's administration of its  
13 automatic adjustment clause?

14 A Specifically I don't recall that at the moment.

15 Q Mr. Harris, I have a copy of the Commission's  
16 Order referenced in that portion of the testimony. I  
17 would like to show you -- do you have a copy of it?

18 A Yes, I have a copy.

19 Q Can I direct your attention to page 157 of that  
20 Commission decision?

21 A Yes.

22 Q Do you have it?

23 A Yes, I do.

24 Q Could I ask you to read out loud the last sentence  
25 of the first full paragraph of that page, the sentence

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that begins with "Our analysis"?

A "Our analysis of the causes for the generating outages does not alleviate our concern as to the ability of PECO's management to effectively and prudently plan, operate and maintain its energy generation in the most economical manner while giving full consideration to its obligation to provide safe and adequate service at th most reasonable cost to ratepayers."

Q Thank you, Mr. Harris. And you previously indicated that you were aware of the presiding Administrative Law Judge's recommendation to the Commission which was that the company's automatic adjustment clause be eliminated?

A Yes.

Q Would you agree, Mr. Harris, that the use of an incentive automatic adjustment clause such as the Commission's 80/20 ECR direction here is an effort to share risk between the company's shareholders and the ratepayers?

A I will agree that that is perhaps the intent of it. That it will operate in that manner is subject to disagreement.

Q Disagreement?

A Yes. There have been several incentive fuel clauses imposed throughout the nation. There is no evidence that these have effectively provided an incentive for

1 utilities to lower fuel costs.

2 Q So your disagreement is that these kinds of auto-  
3 matic adjustment clauses have not effectively lowered fuel  
4 costs, not that they are not an attempt to share risk be-  
5 tween the utility and its ratepayers?

6 A They are an attempt to share risk. That they  
7 have been effective is subject to disagreement. There  
8 are many factors which already are in place encouraging  
9 the utility to seek to minimize its fuel costs and  
10 efficiently operate its plants. This is another attempt  
11 to do so.

12 Q Based on that section of the Order that I asked  
13 you to read a moment ago, would you agree that these factors  
14 in place have not alleviated the Commission's concern  
15 about the company's administration of its automatic  
16 adjustment clause?

17 A I would agree that these factors have not  
18 eliminated the Commission's concern.

19 Q Would you agree that an incentive automatic  
20 adjustment clause could benefit the company if it caused  
21 it to operate its generating plants in a more efficient  
22 manner, or to predict its energy costs more accurately,  
23 or to procure its fuel more economically; do you believe  
24 that that could benefit the company?

25 A It would be a benefit to the company if it had

1 that effect.

2 Q Would you also agree that the company could  
3 also benefit from an incentive automatic adjustment  
4 clause if the fuel costs which were collected through that  
5 clause continued to fall?

6 A The company certainly would benefit if the fuel  
7 costs would fall. The fact that fuel costs fall does not  
8 directly relate it to the institution of an incentive fuel  
9 clause.

10 Q If that were to occur then it could benefit the  
11 company; would you agree with that?

12 A If that were to occur, yes, it would benefit  
13 the company.

14 Q Would you also agree that these reduced fuel  
15 costs would also lessen the impact of the incentive auto-  
16 matic adjustment clause on the company?

17 A Would you clarify that; lessen the impact in  
18 what respect?

19 Q Well, if the company's cost to procure fuel were  
20 less than the negative impacts of increased costs apparently  
21 identified by Mr. Carroll in his scenarios would also be  
22 less; wouldn't that be true?

23 A I believe Mr. Carroll's scenarios involve incidents  
24 which may change fuel costs that are beyond the company's  
25 control.

1 Q Yes, and one of these -- I think he also indenti-  
2 fies increased fuel costs as one of those.

3 A That's right, which is beyond the -- the market  
4 for fuel is beyond the company's control.

5 Q Yes. And my question was: if the fuel costs  
6 were lessened because of factors beyond the company's con-  
7 trol, would the impacts that he identifies in terms of  
8 increased costs resulting to the company from this incentive  
9 automatic adjustment clause be lessened; would you agree  
10 to that?

11 A Yes, if fuel costs fell. On the other hand,  
12 if fuel costs rise that would be an impact on the company.

13 Q Could I direct your attention to page 21 of your  
14 testimony, Mr. Harris?

15 A (Witness complying.)

16 Q On that page of the testimony you recommend that  
17 the Commission incorporate a cap into the incentive ECR  
18 formula?

19 A Yes.

20 Q On page 22 you calculate an appropriate cap to  
21 be one-half of one percent of the total company common  
22 equity, which you calculate to be \$35 million. Do you  
23 see that reference? It's on page 22.

24 A Yes.

25 Q In the answer beginning on line 8.

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A Yes.

Q Initially let me ask you -- the sentence that begins on line 15; do you see that? It begins "The prospective dollar amount."

A Yes.

Q It reads, "The prospective dollar amount of total company common equity would" be "approximately \$350 million over the course of the next five years."

My question is: Should that "million" not be "billion"? In fact, shouldn't it be \$3.5 billion?

A That is correct.

Q So if that's correct then the reference at the beginning of line 17 should be \$3.5 billion?

MR. MacGREGOR: Mr. Delaney, I think it is earnings on common equity is what the \$350 million is referring to, for clarification purposes.

BY MR. DELANEY:

Q Mr. Harris, Schedule 1 of JFB-2, column (E) -- do you have that, Mr. Harris?

A Yes.

Q I thought I understood the reference to the \$350 million in the testimony to be the numbers in that column.

A \$3.5 billion is approximately the total common equity in the company at the end of 1987, projected.

Q Is that not the reference that is made at the

1 beginning of line 17?

2 A (No response.)

3 Q And in the next sentence you have one-half of  
4 one percent of \$350 million to be \$17.5 million, which  
5 as I do the mathematics is not correct?

6 A Yes.

7 (Witness computing on calculator.)

8 Yes, it is \$17.5 million. .05 times \$3.5 billion  
9 would give you \$17.5 million.

10 Q Okay, so the reference, as I understand it --  
11 I'm not trying to confuse you -- is on lines 17 and 18  
12 where you have \$350 million in both places that should  
13 be \$3.5 billion; is that correct?

14 A Yes, that is correct.

15 Q So your recommendation is the \$35 million cap,  
16 and that is developed on page 22 of your testimony; is  
17 that correct?

18 A Yes.

19 Q Could you explain how you propose this cap to  
20 work here?

21 A It is proposed that the company and the ratepayers  
22 be at risk for only \$35 million due to fluctuations in  
23 fuel costs beyond those projected in the energy cost rate.

24 Q So this would be a cap on the amount that would  
25 not be reconcilable, which is the 20 percent of the

1 company's projected fuel costs, their actually realized  
2 fuel costs?

3 A That is correct.

4 Q Therefore, as I understand it, any amount that  
5 would be subject to this 20 percent non-reconciliation  
6 that is over \$35 million you propose that the company should  
7 collect that?

8 A I propose that the company should collect that  
9 through -- collect that or pay it back through the "E"  
10 factor.

11 Q Once again turning to the Commission's ECR-8  
12 Order, to your knowledge, Mr. Harris, does that order pro-  
13 vide for a cap as you have just described it?

14 A The Order does not specifically mention a cap.  
15 However, it is silent on the issue, and the Order does  
16 not preclude the company from proposing a cap.

17 Q But as that Order reads currently, would you  
18 agree that your recommendation is inconsistent with that  
19 Order in terms that the Order itself does not provide for  
20 a cap?

21 A No, I don't agree with that. As I said before,  
22 the Order is silent on the subject of a cap.

23 Q Could you turn to Schedule 1 of JFB-2, the  
24 exhibit?

25 A Yes.

1 Q Do you have it?

2 A Yes, I do.

3 Q As I understand that exhibit, Column (A) of the  
4 exhibit addresses the scenarios sponsored by Mr. Carroll  
5 concerning the possibility of increased fuel costs for  
6 the company?

7 A Yes, there are two scenarios.

8 Q Two or three? He has two scenarios for three  
9 years?

10 A Yes, two scenarios for three years, each scenario  
11 containing a combination of events.

12 Q And on Column(B), as I understand it, it has  
13 identified the potential financial exposure for the company  
14 under these scenarios; is that correct?

15 A That is correct.

16 Q And the amounts that are contained in the range  
17 of scenarios in different years goes from -- is that  
18 \$21 million or is that billion on the first entry of Column  
19 (B)?

20 A That's \$21 million.

21 Q \$21 million to, in the bottom of Column (B), a  
22 potential exposure under the nuclear scenario on June 30,  
23 1989 of \$46 million?

24 A That's right.

25 Q And as I understand the last column on the exhibit,

1 that attempts to identify a potential decrease in the  
2 rate of return on average common equity resulting from  
3 these different exposures that Mr. Carroll believes may  
4 occur; is that correct?

5 A Well, I don't believe that Mr. Carroll has said  
6 that they may occur; he has said that there is a possibility  
7 that they could occur and these are possible events.

8 Q As I understand the entries on Column (F) of  
9 that exhibit, what Mr. Brennan and yourself calculated  
10 to be the potential impact of those possibilities are  
11 decreases by the indicated amounts in the rate of return  
12 on average common equity?

13 A Yes.

14 Q And for the amounts of potential exposure by  
15 the company -- and they range from \$21 million to \$46  
16 million as indicated in Column (B) -- the potential decrease  
17 in the rate of return is between 32 basis points and 62  
18 basis points; is that correct?

19 A Yes.

20 Q To your knowledge, Mr. Harris, is that a signifi-  
21 cant impact on the company's average rate of return, that  
22 number of basis points?

23 A Well, it's significant depending on one's  
24 perspective. One must consider here the starting point  
25 for this company. This company is now rated Bbb-minus

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and any negative financial impact could seriously affect that rating.

Q Okay.

A The company right now is -- if you will look at Schedule 3, that has a before income tax coverage excluding AFC currently, or over the last five years, 1980 through 1984, averaging at 1.6, which is barely sufficient to maintain its rating.

Q Excuse me. What schedule are you referring to?

A Schedule 3, page 1.

You can see that minor changes could lower that coverage.

Q Excuse me for a second, Mr. Harris.

(Pause.)

Q Mr. Harris, could I direct your attention to again Schedule 1 of JFB-2?

A I have it.

Q Column (F) of that exhibit where you have the percentages of decrease in rate of return on average common equity.

A Yes.

Q Are those figures pre-tax or post-tax?

A Those figures are post-tax.

Q Post-tax.

Could I direct your attention to page 16 of your

1 testimony, Mr. Harris?

2 A Yes.

3 Q On lines 6 through 16 of that page you have a  
4 comparison there for the utilities which use automatic --  
5 incentive automatic adjustment clause experience, as you  
6 discuss in your testimony, and you have a chart of the be-  
7 fore income tax return on common equity cap and the  
8 approximate after income tax return on common equity cap.  
9 You have those figures there.

10 I'm wondering: did you do a similar calculation  
11 for the Philadelphia Electric Company?

12 A Well, a similar calculation -- perhaps I should  
13 ask for a clarification on that.

14 Q Under the scenarios that Mr. Carroll suggests  
15 and your recommendation.

16 A Column (F) of Schedule 1 is a similar calculation  
17 to the after income tax effect of the cap on the California  
18 companies.

19 Q Would it be correct then that Column (F) on that  
20 Schedule 1 for the before income tax would be double the  
21 entries on Column (F)?

22 A The before income tax?

23 Q Assuming approximately --

24 A Yes, assuming a 50 percent tax rate, yes. So  
25 it would be double.

1 MR. DELANEY: That's all the questions, I have,  
2 Your Honor. Thank you.

3 JUDGE MATUSCHAK: The Consumer Advocate?

4 MR. WERSAN: Thank you, Your Honor.

5 CROSS-EXAMINATION

6 BY MR. WERSAN:

7 Q Good morning, Mr. Harris. My name is David  
8 Wersan. I'm with the Office of Consumer Advocate.

9 A Good morning.

10 Q Initially I would like to refer you to your  
11 Exhibit AGH-1, which deals with your educational back-  
12 ground. You list the cases that you have sponsored  
13 testimony in prior to this case on pages 2 and 3, and  
14 I notice that in Pennsylvania you have testified for  
15 Duquesne Light Company, Pennsylvania Gas and Water, Penn-  
16 sylvania Power and Light and Pennsylvania Power Company;  
17 is that correct?

18 A Yes.

19 Q In the predominant number of cases and certainly  
20 in the most recent cases in which you have testified in  
21 Pennsylvania, those have been Pennsylvania Power Company;  
22 is that correct?

23 A The predominant number, yes.

24 Q And what testimony did you present for Pennsyl-  
25 vania Power Company in its last few rate cases; would I

1 be correct that those were cost of service studies?

2 A Yes.

3 Q In which you were developing information for  
4 use in the rate structure portion of the case; is that  
5 correct?

6 A Yes, it is.

7 Q Did you present rate of return testimony in any  
8 recent Penn Power Company cases?

9 A No, I did not.

10 Q When was the last time you presented rate of  
11 return testimony in the State of Pennsylvania for a company?

12 A I have not presented rate of return testimony  
13 for any company in Pennsylvania or in any jurisdiction.

14 Q Now, have you ever presented any testimony in  
15 a fuel adjustment clause case in Pennsylvania?

16 A No, I haven't.

17 Q Have you ever been involved in a fuel adjustment  
18 clause case in Pennsylvania?

19 A Not directly, no.

20 Q Now, initially I have a question which I'm a  
21 little confused on. I would refer you to page 21 where  
22 you discuss the cap. At line 22, etcetera, there, you  
23 talk about the cap being a maximum exposure of one-half  
24 of one percent after the income tax return on total company  
25 common equity, and then you say that's approximately

1 \$35 million as a cap that is a result of that; correct?

2 A Yes.

3 Q What is the cap you are proposing? Is it one-  
4 half of one percent or is it \$35 million?

5 A We are proposing the \$35 million cap.

6 Q Would you agree that to the extent that total  
7 company common equity grows the \$35 million will over time  
8 represent a smaller percentage of total company common  
9 equity?

10 A As the company grows, it would be a smaller per-  
11 centage of common equity. However, I think it is important  
12 here that some type of cap be established, and the  
13 communication that this Commission is moving cautiously  
14 in establishing a new procedure which could significantly  
15 affect the investment community's perception of the risk  
16 associated with this company, which already is a very risky  
17 investment.

18 Q I understand your concern about the riskiness  
19 of Philadelphia Electric Company. My question though is:  
20 to the extent the cap is set at \$35 million and total company  
21 common equity grows, in effect the cap as a percentage  
22 mechanism will shrink over time and it will not stay  
23 constant in its relationship to common equity, so in effect  
24 the Commission will be pulling back in the future years  
25 as common equity grows; isn't that true?

1           A The testimony also says that after some experience  
2 with this cap that a review can be made and changes made  
3 as warranted. So the cap is a beginning point. I  
4 recommend that the situation be reviewed after some  
5 experience with it.

6           Q If we turn to Exhibit JF-2, Schedule 1, in the  
7 next-to-the-last column on the right we have common equity  
8 as of December 31 for each of those years. Would you agree  
9 that the common equity from June 30, 1987 to June 30, 1989  
10 grows by approximately \$330 million?

11           A Yes.

12           Q Now, if I could refer you to line 17 of your  
13 testimony -- excuse me, page 7, line 17.

14           A Yes.

15           Q From line 17 to line 21 you discuss the fact  
16 that in your opinion the Commission has adequate incentives  
17 employed for the company in its administration regarding  
18 its attempt to minimize energy costs, and you discuss a  
19 fuel audit procedure where fuel procurement decisions are  
20 reviewed in detail; is that correct?

21           A Yes.

22           Q Could you please state your understanding of  
23 the fuel audit procedure that this Commission uses?

24           A The purchasing practices of the company are  
25 monitored by the Commission.

1 Q What do you mean by "monitored by the Commission;"  
2 how does the Commission do that?

3 A They are reviewed by members of the staff.

4 Q What members of the staff; what bureau of the  
5 Commission does that?

6 A The Audit Bureau.

7 Q Have you ever been involved in a review of that?

8 A No, I have not.

9 Q Do you know what the staff looks at when they  
10 do such a review?

11 A Specifically, no.

12 Q Do you know if they do that review annually?

13 A I believe it is annual.

14 Q And what is that belief based on?

15 A My recollection.

16 Q Of what; you haven't been involved in such a case.  
17 What is your recollection that leads you to that conclusion  
18 that it is done annually?

19 A That is my memory.

20 Q Okay, you say "Imprudence in fuel management  
21 practices can be detected in this process." What kind  
22 of imprudence in fuel management practices are you referring  
23 to here?

24 A Imprudence in purchasing, imprudence in managing  
25 its fuel inventory, things of that nature.

1 Q So this particular point of imprudence has to  
2 do with purchasing and storing fossil fuels; is that what  
3 you are referring to?

4 A That is one aspect of it, yes.

5 Q What other aspects are there?

6 A I'm not specifically familiar with the entire  
7 audit process, but I do understand that the auditors go  
8 over the company's books and records and review all the  
9 calculations and all of the assumptions that go into its  
10 fuel management practices.

11 Q What is that understanding based upon?

12 A My general knowledge of the subject.

13 Q Do you know whether the Commission has any  
14 regulations on fuel procurement practices?

15 A No, I don't know.

16 Q Do you know whether the Commission has any  
17 policies on fuel procurement practices?

18 A I don't know.

19 Q The next item you note on page 7 has to do with  
20 the fact that PECO is a member of the PJM power pool, and,  
21 therefore, electricity is dispatched from the lowest cost  
22 sources; is that correct?

23 A Yes.

24 Q Would it be true that regardless of how Phila-  
25 delphia Electric purchased its fuel or runs its plants,

1 the lowest cost plant to operate at any one moment is what  
2 is going to be dispatched by PJM?

3 A Given the lack of other constraints, yes.

4 Q And so while PJM will dispatch the lowest cost  
5 plant available, that in and of itself only deals with  
6 one element; it doesn't deal with why plants are available  
7 or unavailable, does it?

8 A No, it doesn't deal with why certain plants are  
9 available or unavailable.

10 Q Are you familiar with the operating character-  
11 istics of the company's major base load plant for the last  
12 few years, say since 1983?

13 A Not specifically, no.

14 Q Do you know whether there has been any particular  
15 extended forced outages on Philadelphia Electric's base  
16 load plants over the last few years?

17 A I believe there has been an extended outage  
18 regarding the Salem plant, which Philadelphia Electric  
19 itself does not operate.

20 Q Which Salem plant are you referring to?

21 A The nuclear plant in New Jersey.

22 Q There are two units there.

23 A Well, I'm not sure which one.

24 Q Do you know whether there have been extended  
25 outages at the Peach Bottom units that PECO owns and

1 operates?

2 A No, I don't.

3 Q Would you agree with me that while those plants  
4 are shut down the company is still purchasing off of the  
5 PJM?

6 A Yes.

7 Q But the fact that it is purchasing off of PJM  
8 is a result of being part of the power pool and doesn't  
9 go to whether or not energy costs have risen as a result  
10 of those outages at those stations?

11 A No, it does not, but neither does the incentive  
12 fuel clause ensure that there won't be extended outages  
13 at these plants.

14 Q Let me ask you this, Mr. Harris: suppose you  
15 had a business of your own, and half of your expenses in  
16 that business you were guaranteed recovery, and half were  
17 subject to the risk of the marketplace, and you had a  
18 budget that you had to apportion within your company.  
19 Would you tend on an average to apportion a tightly  
20 controlled budget more toward those parts of the company  
21 where there is greater risk as compared to lesser risk?

22 A I'm not sure I understand the question.

23 Q Okay. In your company that you have some  
24 portion, 50 percent of the expenses that you are going  
25 to incur over the course of the year are guaranteed; you

1 are guaranteed recovery for some of these. The other 50  
2 percent of your expenses are at risk in the marketplace  
3 for some other reason; maybe they are two different markets.

4 Will you agree that as a prudent business manager  
5 you are more likely to focus your resources and manpower  
6 and attention on that portion of your business with which  
7 the greatest risk is involved?

8 A In your scenario you asked if one would pay more  
9 attention to the segment where there is greatest risk.  
10 However, in this instance the company has an incentive  
11 imposed upon it by the marketplace, and that incentive  
12 is to keep its total costs as low as it possibly can; and  
13 that incentive is certainly superior to any artificially  
14 administered incentive.

15 Q I refer you to page 8 of your testimony, Mr.  
16 Harris. In the second full paragraph there you say,  
17 "PECO has been criticized for failing to accurately  
18 forecast future energy costs, but actual fuel costs are  
19 the result of many unanticipated circumstances beyond  
20 PECO's control." Is that correct?

21 A That is correct. And Mr. Hill in his testimony  
22 has listed a number of factors that could cause fuel  
23 costs to change that are beyond the company's control.

24 Q I take it you reviewed those factors?

25 A I reviewed Mr. Hill's description of them, of

1 those factors.

2 Q So your statement that there are many factors  
3 beyond the company's control really relies upon Mr. Hill  
4 and not upon your own knowledge of those factors?

5 A Well, I had knowledge that sales changes other  
6 than those anticipated can cause the dispatch of more  
7 efficient or less efficient units, and that certainly is  
8 one factor which is beyond the company's control.

9 Q Okay, you list forced outages on line 17. We  
10 just had a discussion, or attempted to have a discussion  
11 of some of the forced outages effects on the company's  
12 system, but you were unfamiliar with some of them.

13 Do you know whether any of those outages were within  
14 the company's control or not at its major nuclear stations?

15 A No, I don't know whether they were beyond the  
16 company's control.

17 Q You also discuss swings in the market price of  
18 fuel. Would you agree with me that since 1983 or there-  
19 abouts that the cost of fossil fuel has been fairly steady  
20 or in the decline?

21 A I would agree that in that period it has been  
22 in a decline.

23 Q Now, you cite in your testimony what other states  
24 have done with their fuel clauses and note that, for example,  
25 in California they use a 90/10 split; is that correct?

1 A Yes. California in first initiating an incentive  
2 fuel clause had a 98/2 percent split to begin with.

3 Q And then they moved to a 90/10?

4 A Then they moved to a 90/10.

5 Q What factors do you think go into the decision  
6 by the California Commission to using the 90/10 split?

7 A The Commission in its order admitted that the  
8 whole process is somewhat judgmental. That's my recollec-  
9 tion. It is judged by the Commission to be a reasonable  
10 split, at least at this beginning point.

11 Q But when you say a reasonable split, was the  
12 California Commission concerned about the risk that it  
13 was imposing upon the utilities by using a 90/10 method?

14 A The Commission in its entire consideration of  
15 the incentive fuel cost considered risk and the competitive  
16 risk among companies. It set Southern California Edison  
17 as the benchmark company, so to speak.

18 Q Would you agree with me that the California  
19 decision to use a 90/10 as opposed to an 80/20 was a  
20 decision by that Commission on where it felt the risk should  
21 fall out, or how much risk should be included in the  
22 process?

23 A Implicitly it certainly is.

24 Q And so would you also agree then that if the  
25 California Commission had used an 80/20 that would be a

1 different judgment as to how much risk they wanted to  
2 introduce into the energy clause process?

3 A I would assume that would be the Commission's  
4 rationale.

5 Q Tell me this: do you think that when the Pennsyl-  
6 vania Commission decided to go with an 80/20 they were  
7 conscious of the risk that they were including in that  
8 fuel clause methodology?

9 A I don't know. I don't know what the Commission  
10 was thinking at that time.

11 Q Would you agree that if the Pennsylvania  
12 Commission had gone to a 70/30 or a 60/40 they might have  
13 been introducing an additional amount of risk for non-  
14 reconcilable fuel costs?

15 A They certainly would have been introducing a  
16 greater amount of risk, yes.

17 Q So would you agree that the split itself that  
18 is arrived at is some measure of how much risk is to be  
19 introduced into the fuel clause process?

20 A It governs the amount of risk that is to be  
21 introduced into the fuel clause process.

22 Q Thank you. That's all I have, Mr. Harris.

23 MR. WERSAN: Thank you, Your Honor.  
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1 JUDGE MATUSCHAK: Proceed, Mr. Clark.

2 CROSS-EXAMINATION

3 BY MR. CLARK:

4 Q Mr. Harris, my name is Robert Clark, and I  
5 represent the Pennsylvania Governor's Energy Council. I  
6 just have a couple of questions about your \$35 million cap  
7 that you discuss on page 21 and 22 of your testimony.

8 What total ECR swing would be necessary for the ECR  
9 to reach that \$35 million cap of the company's share?

10 A. I haven't made that calculation. I can provide  
11 it to you.

12 Q Am I correct it would be five times that, or  
13 \$175 million?

14 A. Yes.

15 Q Do you know if the Philadelphia Electric Company  
16 has ever experienced an ECR swing of \$175 million?

17 A. No, I don't.

18 MR. CLARK: I have no further questions.

19 JUDGE MATUSCHAK: Any further cross-examination?

20 MR. KLEPPINGER: Yes, Your Honor.

21 CROSS-EXAMINATION

22 BY MR. KLEPPINGER:

23 Q Good morning, Mr. Harris. My name is David  
24 Kleppinger. I represent the Philadelphia Area Industrial  
25 Energy Users Group.

1 A. Good morning.

2 Q. I just have a few questions on this quantifi-  
3 cation of risk, if you will. As I understand your testi-  
4 mony, you believe that the Commission's 80/20 order, if  
5 applied to the letter of that order, would increase the  
6 risk of Philadelphia Electric Company?

7 A. Certainly, it would increase the risk, and one  
8 must remember the beginning point that we're dealing with  
9 here with this company. This company is already considered  
10 a risky endeavor, and to the extent that more risk is per-  
11 ceived by the investment community and its bond rating is  
12 lowered, that will result in higher costs to the consumer  
13 because the company must spend more for borrowing in order  
14 to finance its needs, and that is passed on to the consumer.

15 Q. Insofar as the fuel clause is concerned, you  
16 believe that the risk under the current scheme of ECR  
17 regulation is less than the risk if we would go to the  
18 Commission's new 80/20 plan?

19 A. To the extent that it places 20 percent of  
20 fluctuations from forecasts -- and I emphasize forecasted  
21 fuel costs -- yes, it does add to the risk.

22 Q. If we have at one extreme the amount of risk  
23 under the current ECR mechanism and at the other extreme  
24 the Commission's 80/20 plan, where does your \$35 million  
25 cap then fall? Is that between those two, in terms of the

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1 amount of additional risk we would be adding to Philadelphia  
2 Electric?

3 A. The cap that is proposed here is part of the  
4 80/20 split set forth by the Commission.

5 Q. But, presumably, the 80/20 split that the Commis-  
6 sion has in its order doesn't have a cap at least specified.  
7 So assuming there would be an 80/20 with no cap, I take it  
8 that would be more risky than your recommendation for a  
9 \$35 million cap?

10 A. No cap would be more risky than a cap.

11 Q. Under the current regulatory scheme of the  
12 Energy Cost Rate, are you familiar with the amount of fuel  
13 cost dollars which the Commission disallowed in the ECR-8  
14 proceeding?

15 A. I know there was a substantial amount.

16 Q. Would you agree, subject to check, that it was  
17 over two times the \$35 million cap that you're recommending?

18 A. I would agree subject to check.

19 Q. Are you familiar with the amount of fuel costs  
20 the Commission has decided to suspend in the ECR-9  
21 proceeding?

22 A. No, I'm not.

23 Q. Would you accept, subject to check, that it is  
24 approximately \$45 million in addition to prior disallowances  
25 and suspensions in ECR-8?

1 A. I will accept that subject to check.

2 Q. And once again, that number is in excess of the  
3 cap that you are proposing to be used in combination with  
4 the 80/20 split?

5 A. That is correct, but I believe those disallow-  
6 ances relate to allegations of prudence, whereas this  
7 80/20 fluctuation has to do with changes in fuel costs for  
8 any reason, whatever they may be.

9 MR. KLEPPINGER: I have no further questions,  
10 Your Honor.

11 JUDGE MATUSCHAK: Any redirect?

12 MR. MacGREGOR: Could we have just a short break,  
13 Your Honor?

14 JUDGE MATUSCHAK: We'll take a ten-minute recess.  
15 (Recess.)

16 JUDGE MATUSCHAK: When you are ready.

17 MR. MacGREGOR: Your Honor, I just have one question.

18 REDIRECT EXAMINATION

19 BY MR. MacGREGOR:

20 Q. Mr. Harris, during cross-examination by  
21 Mr. Kleppinger you were asked certain questions concerning  
22 the dollar amounts disallowed in the ECR-8 investigation  
23 and dollar amounts under suspension in the ongoing ECR-9  
24 investigation.

25 Mr. Harris, in either of the instances referred to,

1 the dollar amounts referred to you by Mr. Kleppinger, would  
2 the cap, the \$35 million cap proposed in your testimony,  
3 have been called into play?

4 A. No, it would not have been called into play be-  
5 cause those dollar amounts are in reference to total fuel  
6 costs, and 20 percent of those dollar amounts would be less  
7 than the \$35 million cap proposed here.

8 MR. MacGREGOR: Thank you, Mr. Harris.

9 That's all I have, Your Honor.

10 JUDGE MATUSCHAK: Mr. Harris, you indicated that  
11 you didn't agree with Staff on the interpretation of the  
12 Commission's order. Which part of the order do you dis-  
13 agree with?

14 THE WITNESS: I didn't specifically disagree with  
15 the interpretation of the order. My comment was --

16 JUDGE MATUSCHAK: The assignment to us in this case.

17 THE WITNESS: Your Honor, my comment was that the  
18 Commission order did not specifically address a cap. It  
19 didn't mention a cap, nor did it preclude the introduction  
20 of a cap. It merely addressed the risk split between the  
21 company and the fuel clause recovery.

22 (Pause.)

23 JUDGE MATUSCHAK: On page 163 of the Commission's  
24 order the Commission assigns to us in this rate filing  
25 certain things. Is there anything on that page which

1 indicates that the Commission will authorize a reopening  
2 of the question of the 80/20 criteria?

3 THE WITNESS: On page 163, Your Honor?

4 JUDGE MATUSCHAK: 163, where the assignment is made.

5 THE WITNESS: No; this does not indicate that the  
6 Commission has asked that any discussion of the 80/20 split  
7 be made, and the company has not at all challenged that  
8 split.

9 JUDGE MATUSCHAK: But from the testimony of  
10 Mr. Brennan, though, it is assumed that the assignment in-  
11 cluded the availability of us to modify that criteria,  
12 doesn't it?

13 THE WITNESS: No, sir. We have stuck with the 80/20  
14 criteria.

15 JUDGE MATUSCHAK: But you have modified -- by  
16 Mr. Brennan's testimony you are attempting to modify that  
17 80/20 by putting a cap on it.

18 THE WITNESS: Yes; we have recommended that a cap  
19 be initiated so as to mitigate some of the adverse finan-  
20 cial impact of the incentive fuel clause.

21 It is not my reading of this Commission order that  
22 the company is precluded from structuring the proposed fuel  
23 clause in a way that it would find beneficial. And in  
24 this case a cap, we believe, would be beneficial to both  
25 the company and to the company's ratepayers.

1 MR. MacGREGOR: Your Honor, I would note that the  
2 company will file a written response to the motion to  
3 strike, but in several places on 162 and 163, and particu-  
4 larly your reference to the top of page 163 where the ALJ  
5 is assigned to consider these issues, it is also clear  
6 that you are entitled to consider, in addition, any other  
7 information deemed to be relevant to the determination of  
8 a proper energy cost level for PECO.

9 JUDGE MATUSCHAK: We will wait until you have an  
10 opportunity to respond to the motion.

11 MR. MacGREGOR: Thank you, Your Honor.

12 MS. CHESTNUT: Your Honor, Staff respectfully dis-  
13 agrees with the company's interpretation of that language.  
14 It is clear from the language that the information Your  
15 Honor is permitted to consider goes to the determination  
16 of a proper energy cost level.

17 The Commission is concerned with setting the energy  
18 cost level. It is not concerned with revising or adjust-  
19 ing the mechanism that it set up.

20 That is Staff's position, Your Honor. I'm sure the  
21 company will respond to it.

22 JUDGE MATUSCHAK: Mr. Harris, it could be possible,  
23 couldn't it, that the 80/20 could be so manipulated that  
24 the 20 percent could be absorbed without any damage to the  
25 company? Suppose, for instance, that the estimate is made

1 based on -- to take it to the extreme -- all generated  
2 electricity and that the company uses nuclear instead, so  
3 that the estimate may be based on all generated electricity  
4 and the use of nuclear at your cost could negate the 20  
5 percent; it would be a meaningless thing.

6 THE WITNESS: Your Honor, under this proposal if  
7 fuel costs declined, the stockholders would receive a  
8 benefit under the 80/20 split, and the \$35 million cap  
9 here also puts a limit on the benefit that the stockholders  
10 would receive from these fluctuations, which may or may  
11 not have to do with the company's fuel management  
12 practices.

13 JUDGE MATUSCHAK: But the reliability of the 80/20  
14 split is contingent upon a fair estimate in the first place.

15 THE WITNESS: I agree that it is a function of the  
16 initial estimate. However, we have found, especially in  
17 forecasting energy prices, that we are not able to produce  
18 very good forecasts of energy prices.

19 JUDGE MATUSCHAK: Don't you think that the Commis-  
20 sion realized that the 80/20 was not meaningful unless a  
21 proper recognition was taken of whether the estimate and  
22 the basis for the estimate of the company were valid, that  
23 the 80/20 wouldn't be meaningful at all?

24 THE WITNESS: Your Honor, I'm sure that in producing  
25 its forecasted fuel costs the company's estimates and

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assumptions are monitored very closely. Even with the best intentions, analysts throughout the industry and throughout the country have not been very successful in forecasting fuel costs. The volatility of the market for fuel is so great that there has not been very good success in those estimates.

JUDGE MATUSCHAK: Thank you.

(Witness excused.)

MR. MacGREGOR: Your Honor, the company would like to recall Mr. Thomas P. Hill, Jr. Mr. Hill has been previously sworn.

JUDGE MATUSCHAK: Yes; the witness has been previously sworn.

Whereupon,

THOMAS P. HILL, JR.

having previously been duly sworn, testified further as follows:

JUDGE MATUSCHAK: Identify the witness on the record before we proceed.

MR. MacGREGOR: Yes, Your Honor. The company would call as its next witness today, Mr. Thomas P. Hill, Jr., Assistant Manager of the company's Rate Division, who has previously appeared and been cross-examined on other statements in this proceeding.

Your Honor, I have previously distributed to the

1 parties, the court reporter and to Your Honor copies of a  
2 document entitled "Further Supplemental Direct Testimony  
3 of Thomas P. Hill, Jr.," and entitled "Summary of PECO  
4 Response to ECR No. 8 Order Respecting Modification of the  
5 Energy Cost Rate."

6 I would ask that it be marked for identification  
7 purposes as PECO Statement 18B.

8 JUDGE MATUSCHAK: Very well.

9 (Whereupon, the document was marked  
10 as PECO Statement No. 18B for  
11 identification.)

12 MR. MacGREGOR: In addition, Your Honor, I have  
13 just now distributed copies of a document entitled "Energy  
14 Cost Rate Factor Applicable to Service Rendered on June  
15 27, 1986 and Thereafter."

16 I would ask that it be marked for identification as  
17 PECO Statement 18B, Schedule 3, Revised January 28, 1986.

18 JUDGE MATUSCHAK: Then Statement 1 that you have  
19 indicated, that should be deleted? You have another  
20 Statement 1.

21 MR. MacGREGOR: I'm sorry, Your Honor?

22 JUDGE MATUSCHAK: You have as the heading of it,  
23 "Statement No. 1." I said you have another Statement No. 1.  
24 Should that designation be deleted?

25 MR. MacGREGOR: Your Honor, the "Statement No. 1"  
designation refers to the fact that this is the first

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Energy Cost Rate factor applied by the company. It is part of the document itself. It was not intended to be part of the title.

JUDGE MATUSCHAK: Very well. This would be ECR Statement No. 1; is that it?

MR. MacGREGOR: Yes, Your Honor.

JUDGE MATUSCHAK: You have another Statement No. 1 in this proceeding, and we don't want to confuse it.

MR. MacGREGOR: Yes, Your Honor. For clarification, if you want to put "ECR Statement 1" in front of it, that would be fine.

JUDGE MATUSCHAK: We will do that.

(Whereupon, the document was marked as PECO Statement No. 18B, Schedule 3, Revised January 28, 1986, for identification.)

DIRECT EXAMINATION

BY MR. MacGREGOR:

Q Mr. Hill, do you have before you copies of a document that has been marked for identification as PECO Statement 18B?

A. Yes.

Q Is this document in fact a copy of your further supplemental direct testimony in this proceeding?

A. Yes, it is.

Q Was this document prepared by you or under your

1 direct supervision?

2 A. Yes, it was.

3 Q. Mr. Hill, if you were asked the same questions  
4 contained in this document again today, would your answers  
5 be the same as those contained therein, and would they be  
6 true and correct to the best of your knowledge?

7 A. Yes, they would.

8 Q. Mr. Hill, do you also have before you a copy of  
9 the document that has been marked for identification as  
10 PECO Statement 18B, Schedule 3, Revised January 28, 1986?

11 A. Yes, I do.

12 Q. Could you explain the contents of this document?

13 A. Yes. As a part of my original Statement 18B, I  
14 submitted Schedule 3, which was the company's preliminary  
15 Energy Cost Rate factor number 1, and all the associated  
16 calculations.

17 After submitting this data it was discovered that  
18 the sales data shown on Schedule E-2, Sheet 3 of 3, were  
19 incorrect.

20 I have corrected that sales data to reflect the  
21 proper period, July 1986 through June of '87, and have  
22 completed the attendant calculations in order to derive  
23 what I believe to be the company's best estimate for the  
24 first Energy Cost Rate factor. That amount would be equal  
25 to a credit of 2.768 mills per kilowatt-hour for service

1 rendered on and after June 27, 1986.

2 These sheets that appear in Schedule 3, Revised  
3 1/28/86, would replace the sheets included in my initial  
4 Statement 18B, Schedule 3.

5 Q. Thank you.

6 Mr. Hill, is the information contained in your  
7 Revised Schedule 3 true and correct to the best of your  
8 knowledge?

9 A. Yes.

10 MR. MacGREGOR: Your Honor, I would ask that the  
11 documents that have been marked for identification as  
12 PECO Statement 18B and the revised pages of Schedule 3 of  
13 that statement be admitted as evidence in this proceeding,  
14 subject to any motion to strike or other objection.

15 JUDGE MATUSCHAK: Under those conditions, and until  
16 the resolution of the pending motion, we will grant the  
17 motion.

18 (Whereupon, the documents marked as  
19 PECO Statement No. 18B and PECO  
20 Statement No. 18B, Schedule 3,  
Revised 1/28/86, were received in  
evidence.)

21 MR. MacGREGOR: Thank you, Your Honor. Mr. Hill is  
22 available for cross-examination.

23 JUDGE MATUSCHAK: Ms. Chestnut.

24 MS. CHESTNUT: Thank you, Your Honor.  
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## CROSS-EXAMINATION

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BY MS. CHESTNUT:

Q Good morning, Mr. Hill.

A Good morning, Ms. Chestnut.

Q Mr. Hill, you have presented testimony here which purports to represent the company's response to the Commission's ECR-8 order; is that correct?

A Yes, I have.

Q When was your testimony prepared?

A In December of 1985.

Q You presented testimony in the ECR-8 proceeding and in the ECR-9 investigations also; is that correct?

A Yes, I have.

Q In fact, a substantial portion of the testimony that you presented in this case was included in your testimony in those proceedings?

A There are similarities in certain of the questions and answers contained in my testimony; yes.

Q In fact, if we compare your testimony here to the statement that you submitted in the ongoing ECR-8 investigation, we find that there is a substantial overlap in your discussion. In fact, out of your 22-page statement here, approximately ten pages are either identical to or discuss the same items as in your ECR-9 testimony. Would you agree with that, Mr. Hill?

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1           A. I would agree that portions of my testimony pro-  
2           vide the background and basis for the establishment of  
3           the company's Energy Cost Rate factor number 1, which I be-  
4           lieve to be necessary to explain the mechanics and how we  
5           got where we are today.

6           Q. Is your answer to my specific question "yes"?

7           A. I think I answered yes.

8           Q. Now, it is your opinion, Mr. Hill, isn't it,  
9           that the 80/20 split ordered by the Commission should be  
10          ignored in this proceeding; isn't that correct?

11          A. I think my testimony says in summary that there  
12          are sufficient incentives available to allow the company  
13          to perform or operate in an efficient manner; however, if  
14          it is the intention of the Commission to adopt an 80/20  
15          type fuel adjustment clause for Philadelphia Electric Com-  
16          pany, the proposed clause, as I have outlined it in my  
17          Statement 18B, is what I believe to be a proper, equitable  
18          structure for such an 80/20 clause.

19          Q. It is the company's position, Mr. Hill, that  
20          there should be no revision to the current ECR as ordered  
21          by the Commission in its ECR-8 order; is that correct?

22          A. It would be preferable not to adjust the  
23          current ECR.

24          Q. And then you give you alternate position where  
25          you say, at page 16, that should the Commission proceed to

1 adopt an 80/20 percent ECR, then there should be the cap  
2 described by Mr. Harris put on the non-reconciled portion;  
3 is that correct?

4 A. That's a part of our proposal. I think, as my  
5 testimony indicates, or I shall indicate now, that I was  
6 involved in the ECR-8 investigation, I am involved in the  
7 ECR-9 investigation; there is no record evidence to my  
8 knowledge concerning an 80/20 clause in either of those  
9 investigations. This is the first time that we have had  
10 an opportunity to discuss it, so I presented that testimony.

11 Q. Mr. Hill, with respect to the company's due  
12 process rights in that proceeding, that is currently an  
13 issue on appeal, isn't that correct?

14 A. I believe the company has filed an appeal with  
15 the Commonwealth Court in ECR-8. I do not know the status  
16 of that appeal.

17 Q. It is going to be the Court's decision as to  
18 whether the company had full opportunity to present its  
19 case. That is not really what we are concerned with in  
20 this proceeding, is it?

21 A. I'm concerned with the company changing its  
22 fuel adjustment mechanism to a proper method of collection  
23 of Energy Cost Rates which is fair and equitable to the  
24 company and its customers.

25 Q. I think we are all concerned with fairness and

j17

1 equity to both the company and its customers, Mr. Hill.  
2 What we are talking about here is how to achieve that as  
3 ordered by the Commission.

4 You use the phrase "should the Commission proceed  
5 to adopt an 80%/20% ECR" at page 16 of your testimony.

6 My question to you is: the Commission already has  
7 adopted that 80/20 percent split; isn't that correct?

8 A. That is not my position.

9 Q. Upon what do you base that position that the  
10 Commission has not yet ordered that 80/20 split?

11 A. My understanding and reading of the Commission  
12 order.

13 Q. Are you a lawyer?

14 A. No, I am not. I provided my vita in Statement 18.

15 Q. You have never been a regulatory commissioner  
16 either, have you?

17 A. No, I have not.

18 Q. Do you think, Mr. Hill, that it is fair and  
19 equitable for PECO's ratepayers for the company to recover  
20 imprudently incurred expenses?

21 A. No, I do not.

22 Q. Would you agree as a general matter, Mr. Hill,  
23 that all the expenses claimed for recovery by the company  
24 in this rate proceeding are incurred solely to benefit its  
25 ratepayers?

j18

1 A. Are we talking about our claims in this rate  
2 proceeding?

3 Q. Yes.

4 A. Yes; I believe the company has tried or  
5 attempted to make a fair presentation of what we believe  
6 expenses and capital investment will be at the end of the  
7 future test year as specified by Commission regulation,  
8 and we are prepared to support those and bear the burden  
9 of proof.

10 Q. And the basis upon which rates are set in base  
11 rate proceedings, Mr. Hill, is on the normalized level;  
12 isn't that correct?

13 A. Yes, I would accept that.

14 Q. And when we say "normalized," -- why don't you  
15 give us your definition of "normalized"?

16 A. To me what we are attempting to do in the rate-  
17 making process is to take a future test year, which is  
18 allowed by regulation, and attempt to adjust that test year  
19 to properly reflect what we expect conditions to be for  
20 the period of time that rates will be in effect.

21 In order to do that we take unadjusted accounting  
22 data, because that is the basis of our test year, and we  
23 seek to make normalization and annualization adjustments  
24 such that we can create this pro forma condition.

25 Q. And the purpose is to set a representative

j19

1 level, or, I should say, a level of revenue that will re-  
2 cover expenses established on a representative level?

3 A. Yes, for prudently incurred expenses and pru-  
4 dently invested capital.

5 Q. What kind of control does the company have over  
6 its cost of capital?

7 A. Over its cost of capital?

8 Q. Yes.

9 A. To the extent that the -- I would think the  
10 only controls the company would have would be the decisions  
11 as to the particular types of capital it raises.

12 It is the company's decision whether it would raise  
13 common equity, preferred stock, long-term debt, either in  
14 the form of mortgage bonds or revolving lines of credit or  
15 debentures; but, to a large degree the company's ability  
16 to raise certain types of financing are controlled by mar-  
17 ket conditions and what people are willing to buy at par-  
18 ticular points in time.

19 I think there is some latitude there, but generally  
20 the market rates of interest are controlled by the market.

21 Q. What kind of control does the company have over  
22 its O&M expenses?

23 A. That's a pretty general question. If you could  
24 be a little more specific. The company has many O&M  
25 expenses, including fuel, labor, materials, rentals,

j20

1 leases, contractual obligations.

2 Q. Okay; let's talk about them. Let's talk about  
3 labor. What kind of control does the company have over its  
4 labor costs?

5 A. If we're speaking in terms of total labor costs,  
6 I believe the company has control over the number of  
7 employees and the particular job assignments of the em-  
8 ployees.

9 The company's management has control over the  
10 salaries and associated benefits of its employees, but it  
11 has to be mindful of what market conditions are such that  
12 there are not influxes or outflows of employees because of  
13 trying to compete with other utilities or with the rest of  
14 the labor market.

15 We are interested in having a solid level of employ-  
16 ment, with maintaining a happy employment, people willing  
17 to work for extended periods of time or, in fact, their  
18 lifetime if they so desire.

19 Q. Aside from the happiness of your work force,  
20 Mr. Hill, how much of PECO's work force is unionized?

21 A. None.

22 Q. How many times within the last ten years, for  
23 example, have these employees received an annual increase  
24 less than the annual rate of inflation?

25 A. Less than the annual rate of inflation?

j21

1 Q Yes.

2 A I have not done an analysis recently. In order  
3 to answer that question, I would like you to provide me  
4 with what you believe to be the regional level of inflation  
5 for Philadelphia Electric Company.

6 Q You are not familiar with the data supplied by  
7 the company in the last rate case, for example, comparing  
8 the annual rates of inflation to the increases granted to  
9 its employees?

10 A I am aware of two comparisons made in the last  
11 rate case, not specifically the data, but I believe they  
12 were levels of general wage increases as well as historic  
13 data indicating what the Consumer Price Index changes have  
14 been over time, and also changes in the Gross National  
15 Product Implicit Price Deflator.

16 Those comparisons, to some extent, give you some  
17 feel for the Philadelphia Electric Company's level of wage  
18 increases relative to those indicators. Whether those  
19 indicators effectively capture inflation as you have de-  
20 fined it or expected to find it for the Philadelphia area  
21 and our service territory, I don't think they do, partic-  
22 ularly the GNP Implicit Price Deflator, which is a national  
23 measure and is not regionalized.

24 Q Are you stating that it is your belief,  
25 Mr. Hill, that the increases granted to Philadelphia

j22

1 Electric's employees on an annual basis have been less  
2 than the inflation rate as measured by the GNP?

3 A. I have not reviewed that. I would suspect that  
4 over time our wage increases were above the GNP Implicit  
5 Price Deflator; likewise, sometimes they were below; and I  
6 believe the same is true of the Consumer Price Index, both  
7 national and regional.

8 Q. What kind of increase did they get in the future  
9 test year?

10 A. The future test year as originally cast and  
11 our budget for the '85-'86 budget estimated a 5.5 percent  
12 general wage increase, which was adjusted on page D-5 of  
13 Exhibit TPH-2 to reflect the actual general wage increase  
14 granted on August 1, which was 5.4 percent, and the actual  
15 attendant pension and benefit changes which took place.

16 Q. Let's talk about materials and supplies expense  
17 for a minute here, Mr. Hill. What kind of control does the  
18 company exercise over those expense levels?

19 A. Materials and supplies, the company has the  
20 inventory control as to the actual level of inventory that  
21 it carries for M&S, including fuel inventories.

22 As to the prices, there is control from the stand-  
23 point that we have the ability to go out and seek bids for  
24 material suppliers and choose between vendors based upon  
25 prices and other factors that our fuel procurement and

j23

1 purchasing department feel to be appropriate standards.

2 Q Those prices, though, within which you have the  
3 option of purchasing are set by market factors, aren't  
4 they, or I should say are influenced by market factors?

5 A Yes, I would say they are severely influenced  
6 by market factors.

7 Q Has Philadelphia Electric Company ever laid any  
8 employees off, do you know, in the last five years, for  
9 example?

10 A Philadelphia Electric Company has laid employees  
11 off over the last five years. I am not familiar with any  
12 of the cases.

13 Q Do you have any idea of how many were laid off?

14 A No. I am generally aware of some disciplinary  
15 problems with certain employees in which there were layoffs,  
16 but I am not specifically aware of the incidents or the  
17 people involved.

18 Q How about layoffs for economic reasons?

19 A Specifically, Philadelphia Electric Company  
20 employees?

21 Q Yes.

22 A No, I am not aware of any.

23 Q Mr. Hill, would you agree that Philadelphia  
24 Electric's ratepayers have no direct control over the  
25 performance of the company's generating units?

j24

1           A. I think it is obvious that they don't have any  
2 control directly on the performance of the generating  
3 units.

4           Q. And they don't have any direct control over the  
5 operation of PJM member units either, do they?

6           A. That follows; yes.

7           Q. And they don't really have -- I shouldn't say  
8 they don't really; they don't have any direct control over  
9 the quantity or cost of fuel; isn't that correct?

10          A. Direct control, no, they do not.

11          Q. Who has more direct control over the operations  
12 of PECO, the customers or the shareholders acting through  
13 the board of directors?

14          A. On what aspect of Philadelphia Electric  
15 Company?

16          Q. Every aspect.

17          A. Which ones?

18          Q. Maintenance scheduling.

19          A. I don't think the board of directors has much  
20 control over the maintenance schedule -- any more control  
21 over the maintenance schedule of Philadelphia Electric  
22 Company than the ratepayers do.

23          Q. Doesn't the president and chief executive  
24 officer of Philadelphia Electric report to the board of  
25 directors?

j25

1 A. You said the stockholders?

2 Q. Yes.

3 A. The chairman of the board and the president are  
4 both stockholders. To the limited degree that they as  
5 stockholders are controlling the maintenance function, I  
6 think is about as direct a control as our customers have  
7 over the maintenance of our power production units.

8 In their position as chief executive officer and  
9 chief operating officer, I think they do have control over  
10 the maintenance function, but not as stockholders.

11 Q. But they are answerable to the board of  
12 directors, are they not?

13 A. They are part of the board of directors.

14 Q. Now, you discuss the variability of PECO's  
15 energy costs, and you discuss this in the context of PJM  
16 cost fluctuations.

17 Isn't it correct, Mr. Hill, that this variability  
18 is due more to the unavailability of PECO's own units than  
19 to PJM cost fluctuations?

20 A. I don't know whether I am the proper witness to  
21 answer that question; it might better be directed to  
22 Mr. Carroll.

23 Q. Well, Mr. Hill, you're the person who makes the  
24 statement.

25 A. I think I make some generalized statements in

j26

1 my testimony that there are effects on the company's  
2 energy cost rates due to the availability of our units,  
3 the units on the PJM.

4 Q. At page 8 of your prepared supplemental testi-  
5 mony, Mr. Hill, you make the statement that "Since inter-  
6 change costs accounted for approximately 53% of total fuel  
7 and interchange costs incurred by PECO in 1984;" is that a  
8 correct summation?

9 A. Yes. That is data that I extracted from the  
10 company's financial reports.

11 Q. Do you know what percentage of total energy  
12 costs for the period ending 6/87--what percentage are PJM  
13 costs of the total for the projected costs for the period  
14 ending June 1987?

15 A. That data is contained within Mr. Carroll's  
16 exhibit. I don't have it before me.

17 Q. Would you agree, subject to check, that it is  
18 eight percent?

19 A. If you would like me to check it, it is in that  
20 exhibit. I don't have the number.

21 Q. Why don't you take a minute and check it?

22 (Witness perusing documents.)

23 A. That was the period ended 1987?

24 Q. Yes; that's right, Mr. Hill.

25 (Witness perusing documents.)

j27

1 Q To shorten this, Mr. Hill, since it doesn't  
2 appear directly, perhaps I can tell you how we got that  
3 percentage.

4 A I believe I have your answer.

5 (Witness computing on electronic calculator.)

6 A I derive a number for interchange transactions  
7 as a percent of total energy costs of almost 27 percent.

8 Q How did you arrive at that?

9 A In Mr. Carroll's exhibit, which has not been  
10 identified but I guess will later be identified as Exhibit  
11 JJC-1, going past the cover page, three pages -- well, it  
12 is numbered page 2 -- it lists the electric generation and  
13 fuel cost estimates for the period ended June of 1987.

14 At the bottom of that sheet, the 12 months inter-  
15 change and purchases account for \$128,507,856, and total  
16 fuel and interchange expenses excluding finance charges  
17 on the nuclear fuel are represented by \$476,536,383.

18 I performed that division and came up with 26.97  
19 percent.

20 Q First off, Mr. Hill, that same page appears in  
21 your testimony, does it not?

22 A Yes; that appears as one of the exhibits.

23 Q And what you have done is taken the total of  
24 that category of interchange and purchases, isn't that  
25 correct, to derive your differential?

j28

1 A. Yes, I have; my percentage, yes.

2 Q. And you did not limit it to the received PJM  
3 or delivered PJM? Those aren't the two numbers you netted.

4 A. I have taken into account all interchange and  
5 purchase, which are the transactions which pass through  
6 Account 555, which is entitled "Interchange and Purchase,"  
7 which represent the dollars of expense for units not  
8 operated -- or non-PE operated units.

9 Q. Perhaps we have a misunderstanding here, Mr.  
10 Hill. My question only went to PJM; it didn't refer to  
11 energy received from other sources.

12 A. Well, you were drawing a parallel earlier to  
13 page 7 of my Statement 18B in which you referred to 45  
14 percent of the total operating expenses, which was fuel  
15 and interchange, and I believe someplace else in my testi-  
16 mony I itemize how much is fuel and interchange.

17 The numbers that I was talking about were total  
18 interchange and purchase power.

19 Q. So we are talking 20 percent of total interchange  
20 projected for the year ending 6/87; is that correct?

21 A. Twenty-seven percent.

22 Q. And that is analogous to your 53 percent?

23 A. Yes.

24 Q. Would you agree, subject to check, Mr. Hill,  
25 that if you look only at the PJM portion of the interchange

j29

1 energy cost, that would represent eight percent of  
2 projected energy costs?

3 (Witness computing on electronic calculator.)

4 A. If I am only looking at PJM --

5 Q. Right.

6 A. -- it looks like it is about 13 percent. That  
7 is the .123 million of interchange dollars received --  
8 actually what we paid; and then on a delivered basis, \$63  
9 million. Netting those two and dividing by total fuel and  
10 interchange I get 12.6 percent.

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1 Q Mr. Hill, isn't it true that oil and coal prices  
2 are currently stable, if you know?

3 A I don't believe oil prices are stable. Within  
4 a narrow band, I believe there has been little movement.

5 Q Okay; well, let's separate the question. Let's  
6 talk about coal prices first. Isn't it correct that coal  
7 prices are currently stable?

8 A There have been minor fluctuations in the price  
9 of coal. I think the company's long-term projections for  
10 coal indicate it will increase at a rate of real inflation  
11 of about 2 percent on a long-term basis, but there has been  
12 some stability in coal prices recently.

13 Q And how about oil prices, aren't they decreasing  
14 slightly from the prior period?

15 A If you're talking about the market price of oil  
16 as we've heard it quite often in the media, I think there have  
17 been some dramatic drops in the price of oil. How those  
18 have been felt on Philadelphia Electric Company's system I  
19 think would be a question more appropriately addressed to  
20 Mr. Carroll.

21 Q Mr. Hill, at pages 14 and 15 of your supplemental  
22 testimony, you discuss what you say are incentives that  
23 currently exist for PECO to supply the most reliable and  
24 economic power to meet its customers needs, and you list  
25 four different items which you say provide this incentive.

1 I guess the first one you discuss is the economic  
2 dispatch practice by PJM; is that correct?

3 A Yes.

4 Q The second being what you refer to as the strong  
5 incentive to minimize rate levels in order not to lose sales?

6 A I believe I say "to attract sales."

7 Q To attract additional sales. The third is  
8 Commission oversight. The fourth is PECO's management's  
9 pride in doing their job well. Is that correct?

10 A I think I expand. There is a lot more than  
11 Commission oversight. I believe I've outlined quite clearly  
12 the items that I'm referring to, such as the 1307 audit  
13 proceedings, management audits, rate cases, and other audits  
14 that go on.

15 Q Don't they involve Commission oversight?

16 A I don't dismiss it as an oversight investigation.  
17 I think some of those analyses done by the Commission's  
18 Bureau of Audits are quite intensive.

19 Q What does oversight mean to you, Mr. Hill? How  
20 about if I use the word "review" or "scrutiny," would that  
21 make you feel better?

22 A Yes; that would make me feel a lot better.

23 Q Was the Commission aware of all of these factors  
24 when it made its decision in October -- when it issued its  
25 ECR No. 8 order?

1 A I believe the Commission is aware -- I'm hopeful  
2 that they are aware of all of the activities that are taking  
3 place within the various bureaus. I would assume that they  
4 would be familiar with the auditing function.

5 Q I think you misunderstood my question, Mr. Hill.  
6 The four categories of incentives that you discuss, was  
7 the Commission aware of them when it made its ECR-8 order?

8 MR. MacGREGOR: Objection, Your Honor. I don't know  
9 if Mr. Hill should be asked to conjecture on what the  
10 Commission was aware of or wasn't aware of when it wrote  
11 its order.

12 MS. CHESTNUT: I'll rephrase my question, Your Honor;  
13 no problem.

14 JUDGE MATUSCHAK: Very well.

15 BY MS. CHESTNUT:

16 Q Have any of these incentives been implemented  
17 since the Commission issued its ECR-8 order?

18 A I am having trouble with your question, because  
19 some of the items that you've listed or I've listed as  
20 incentives that the company has to provide power to its  
21 customers at the lowest possible cost are ongoing. There are  
22 currently audits ongoing. There are currently rate cases  
23 ongoing.

24 Q Mr. Hill, there were rate cases going on before  
25 October, 1985; isn't that correct?

1 A. Yes, but not today's rate cases. There is new  
2 information evolving at all times.

3 Q. That's true of any rate case, isn't it?

4 A. Yes, that is true.

5 Q. And there was an Audit Bureau performing audit  
6 functions prior to October, 1985; isn't that correct?

7 A. Yes, auditing different items than they are  
8 auditing today; that's correct.

9 Q. Economic dispatch was practiced by PJM prior to  
10 October, 1985, wasn't it?

11 A. Yes; and to my knowledge, there was no change  
12 in that.

13 Q. The same PECO management that was in place prior  
14 to October, 1985 is in place now, isn't it?

15 A. The top management is exactly the same. There  
16 have been changes in other levels of management of Phila-  
17 delphia Electric Company.

18 Q. And I assume that the pride of PECO's management  
19 in performing its job well was also in existence prior to  
20 October, 1985?

21 A. Yes, I believe that is the case and still is.

22 Q. I assume that the effect of rates on sales levels  
23 and revenues was something that was known prior to October,  
24 1985, isn't that correct, the relationship that you discuss  
25 in your list of incentives?

1           A.     Well, there have been a lot of changes in 1985 in  
2 both rates and sales.

3           Q.     I'm not talking about the absolute level, Mr.  
4 Hill. I'm talking about the relationship which you discuss.

5           A.     Again, I have trouble with your question as you  
6 posed it. What I have stated in my testimony is that there  
7 is an incentive to minimize cost to customers in order to  
8 attract sales. That is an ongoing concern and incentive  
9 to the company. However, the relative level of sales and  
10 revenues have changed since this testimony was written and  
11 since the Commission's order at ECR-8.

12          Q.     Was it a concern of the company prior to October,  
13 1985?

14          A.     It has always been a concern and always will be  
15 a concern of the company.

16          Q.     And yet, the company still made the decision  
17 that these factors did not provide sufficient incentive for  
18 the company; is that correct?

19          A.     I can't look inside the mind of the Commissioners  
20 to determine what they utilized in determining that the  
21 company in this rate case, that we should look at an 80/20  
22 type clause.

23          Q.     Well, the Commission made the decision based on  
24 all of the facts of which it was aware that the current  
25 situation did not provide sufficient incentive; isn't that

1 correct?

2 A. You've asked me whether the Commission has  
3 weighed all of these elements. I cannot tell you exactly  
4 how the Commission weighed those individual elements.

5 Q. That's not what I'm asking you, Mr. Hill. I  
6 think you are misunderstanding my question.

7 The fact is that you've already testified that all of  
8 these elements were in place or known prior to October, 1985.  
9 I am saying that based on the facts available at that time  
10 to the Commission -- I'm not asking how much the Commission  
11 considered them. Based on the facts available to the  
12 Commission, didn't they still make the decision that additional  
13 incentives were necessary? Isn't that why you presented  
14 supplemental testimony?

15 A. The reason I presented supplemental testimony is  
16 a result of the Commission's order directing us to file an  
17 80/20 type clause to be discussed in this rate proceeding.

18 Q. And why did the Commission adopt an 80/20 percent  
19 ECR? What does it say in its order?

20 A. I think the order speaks for itself, Ms.  
21 Chestnut.

22 Q. Don't you know, Mr. Hill?

23 A. Yes, I do know.

24 Q. Why don't you give us your understanding then?

25 A. I believe, as I told you, and my testimony speaks

1 of it, that the company was directed by the Commission to file  
2 an incentive-type clause in an 80/20 format which was to be  
3 discussed. The costs, the structure of that clause were to  
4 be discussed in this rate proceeding, and the Administrative  
5 Law Judge was directed to provide a recommendation to the  
6 Commission as to the implementation of that clause.

7 That is my understanding of the Commission's order at  
8 ECR-8. And as I stated earlier, I am aware of no record  
9 other than what I can read in the document by the Commission  
10 and the prior Administrative Law Judge in the ECR-8  
11 investigation. That's all I have to go on since there was  
12 no discussion of an 80/20 type mechanism in ECR-8.

13 Q Well, the Commission order speaks for itself,  
14 doesn't it, in terms of the reasons for which the Commission  
15 ordered this?

16 A I agree with you; it does speak for itself.

17 Q With respect to PJM, Mr. Hill, isn't it correct  
18 that the systems dispatch costs are dependent on the  
19 economics of the units which comprise the system and their  
20 availability at a particular point in time?

21 A Yes, that is the basic structure of the dispatch  
22 system on PJM. There are other criteria in the area of  
23 reliability which have to be satisfied, which may or may not  
24 be the most economic way to do it, but it's the only way to  
25 do it.

1 Q In these --

2 A An economic dispatch is the structure of the  
3 PJM system.

4 Q And economic dispatch means that units are loaded  
5 on an increasing cost basis?

6 A Yes, to meet the load of the entire PJM system.

7 Q Leaving aside the relative order in which the  
8 units are stacked -- let me rephrase that. The relative  
9 order in which these units are stacked depends on the  
10 economics of each unit?

11 A Yes.

12 JUDGE MATUSCHAK: What was your answer?

13 THE WITNESS: Yes, it does.

14 BY MS. CHESTNUT:

15 Q Now, if all of the PJM members run their units  
16 in an uneconomical fashion, that will affect only the  
17 stacking; isn't that correct?

18 A I don't know what you mean by "run them in  
19 an uneconomical fashion."

20 Q Actually, I don't think that really needs to  
21 be explained. What I am saying is if everybody's costs are  
22 high to run their units, higher than they might be otherwise,  
23 those higher costs are reflected in the PJM system dispatch  
24 costs. PJM is only a relative ranking.

25 A What I'm having problems with -- and I guess

1 Mr. Carroll would be your expert to talk to -- but included  
2 in this formula for economic dispatch is, obviously, the cost  
3 of the fuel on a particular unit and then the incremental  
4 operation and maintenance expenses necessary to run that  
5 unit. Those costs are known to the load dispatcher.

6 When you say they are running them in an uneconomic  
7 fashion, I don't know whether you mean -- I don't know what  
8 you mean. Fuel costs are fuel costs, and an incremental  
9 O&M to produce a megawatt on a unit is an incremental O&M  
10 expense.

11 The units will be stacked and operated on the basis  
12 of the lowest -- the next unit chosen will be the lowest cost  
13 to serve the load.

14 Q If a company has fuel prices, for example, which  
15 are not economical--they are inflated somehow; they entered  
16 into some imprudent contracts, or whatever; they are paying  
17 more than they could get otherwise -- that would affect the  
18 unit's cost; right?

19 A If the fuel prices are inflated and they are  
20 wrong for whatever reason, and those are the prices that the  
21 load dispatcher has, yes, they will be worked into the formula  
22 for PJM accounting purposes.

23 Q And the purpose of PJM is to make available to  
24 the various utility's ratepayers the cheapest available power  
25 at that time?

1 A. Yes.

2 Q. Can you tell me how that provides an incentive  
3 for PECO to operate its own units in an economical fashion?

4 A. We certainly want to minimize our fuel bill. We  
5 have a fundamental duty to serve our customers at the lowest  
6 possible price, which means that if we want to have or desire  
7 to have our units available to serve, then we will do every-  
8 thing in our power to have those units available to serve.

9 I don't know where you're going with this hypothetical  
10 on fuel cost.

11 Q. Forget the hypothetical on fuel cost. The point  
12 I'm trying to make, Mr. Hill, and I think it's easier to just  
13 ask you directly, is: how does membership in PJM provide an  
14 incentive to PECO to keep its energy costs low -- I should  
15 say in the operation of its own units?

16 The purpose is to make available to PECO's ratepayers  
17 the cheapest available power.

18 A. Yes.

19 Q. But how does that affect PECO's operations of its  
20 own units?

21 A. The units that we are buying against on the PJM  
22 have to be available. If they are not available, then we  
23 cannot buy against them. If they are down for whatever  
24 reason, that unit cannot be utilized to buy against another  
25 unit.

1 Q Well, when you say "buy against," you're assuming  
2 that those units are also run economically; right?

3 A Yes. I mean, if we want to make the assumption  
4 that the entire PJM and all member companies are running on  
5 an uneconomic basis, then all uneconomic costs will flow  
6 through the PJM system and our customers will be paying  
7 uneconomic costs for service.

8 Q That's great, Mr. Hill. Thank you.

9 A I don't think that's the case.

10 Q I'm not saying it is, but that would be the  
11 effect of it; right?

12 A If one wants to take that as a hypothetical,  
13 that's fine. I do not believe it, and I don't believe any  
14 member of the PJM believes it.

15 Q There is no oversight exercised by PJM into the  
16 economics of its members' operating units, is there? They  
17 don't come in and check your O&M cost or fuel cost or anything  
18 like that, do they?

19 A I don't know what goes on at the PJM in terms  
20 of the Management Committee or the Operating Committee.  
21 Mr. Gallagher is also available as a company witness, and I  
22 believe he has sat in on both those committee meetings for  
23 the PJM member companies.

24 Q Can you tell me what competing fuels and power  
25 sources are available to residential ratepayers for electricity?

1 A. What competing --

2 Q. Yes.

3 A. For electricity?

4 Q. Yes, as distinguished from electric heat for  
5 residential.

6 A. Portable generators is about the only thing I  
7 can think of.

8 Q. Do you know what percentage of PECO's residential  
9 customers have portable generators?

10 A. No, I do not.

11 Q. Do you think it's a large percent?

12 A. No. I think generally most of the residential  
13 customers in our service territory utilize Philadelphia  
14 Electric Company electric service.

15 Q. They don't have a choice, do they?

16 A. Our customers don't have a choice, and we don't  
17 have a choice on our customers. We have a franchise service  
18 territory to serve our customers. It's a mutual agreement  
19 between the customer and the company.

20 Q. Mr. Hill, how often has there been a litigated  
21 investigation into the reasonableness of Philadelphia Electric  
22 Company's claimed energy cost?

23 A. How long has there been an investigation?

24 Q. How often?

25 A. I'm aware of two specific investigations, ECR-8

1 and ECR-9. There was a generic investigation at I.D. 214.  
2 There were other investigations which preceded that. There  
3 were audit investigations, if you will, which resulted in  
4 adjustments to the company's fuel and interchanges expense  
5 all throughout the history of the automatic adjustment  
6 clauses that I'm aware of.

7 Q I'm talking about litigated proceedings.

8 A Thankfully, they did not all go to litigation.  
9 In fact, the company would make the adjustments and they  
10 would be accepted, and we would move along our merry way.

11 Q So the only thing in comparative recent cases  
12 that you can think of are ECR-8 and ECR-9?

13 A They are the last two filed energy cost rates  
14 we've had, and they've both been investigated.

15 Q To clarify for the record, Mr. Hill, what we're  
16 referring to as the ECR-9 investigation, that is currently  
17 ongoing; there has been no final Commission decision?

18 A That is correct.

19 Q Now, I think we all know what happened in the  
20 ECR-8 investigation. The Commission disallowed a substantial  
21 portion of claimed energy costs in the area of approximately  
22 \$70 million; is that correct?

23 A The Commission disallowed \$73 million of claimed  
24 underrecoveries, some of which, I believe, the Commission  
25 deemed not to be viable energy costs under their interpretation

1 of the formula, such as the magnesium oxide regeneration  
2 cost which accounted for \$14 million of that \$73 million.

3 Q Well, they were deemed not appropriately recovered  
4 for various reasons?

5 A That is correct.

6 Q Has any PECO employee been disciplined as a result  
7 of that Commission finding?

8 A Aside from myself -- I'm not aware of any  
9 specifics. I have not investigated. I can't really answer  
10 your question. I'm just not aware of any.

11 Q Now, under the current ECR mechanism, Mr. Hill,  
12 when a major base load unit has an extended outage, replace-  
13 ment power costs are incurred, is that correct, either through  
14 additional interchange purchases or through operation of  
15 other of the company's own units?

16 A Yes.

17 Q And these replacement power costs are generally  
18 recovered by means of the ECR; is that correct?

19 A On a delayed basis, yes, that is correct.

20 Q The ECR, as it is currently in effect, allows  
21 for recovery on a dollar-for-dollar basis, and by that I  
22 mean that the difference between a projected energy cost and  
23 the actual energy cost is reconciled and the company recovers  
24 that difference if there is one?

25 A Yes; that actual dollar difference is collected

1 on a deferred basis. That is, the undercollection occurs  
2 presently, and at some prospective period, the company, through  
3 the ECR mechanism, has the entitlement to recover those  
4 expenses unless they are under investigation.

5 Q And the current ECR is not -- as you've explained,  
6 the current ECR is not set on a normalized basis?

7 A That is correct. The company sets its energy  
8 cost rate on the basis of, under the current procedure, its  
9 estimate for actual operating conditions for the fiscal year  
10 ended March 31st.

11 Q So unless energy costs are actually found  
12 unreasonable by the Commission, PECO will recover these  
13 costs on a dollar-for-dollar basis absent other adjustments  
14 made by the Bureau of Audits?

15 A It will recover the actual costs on a dollar-for-  
16 dollar basis. It will recover currently what its estimate  
17 of the cost is, and then the reconciliation will occur at  
18 a later date, and we will either pass back or collect any  
19 difference between the actual cost and the estimated cost.

20 Q That's not the way base rates are set, is it?

21 A No. Base rates are set in a general base rate  
22 proceeding.

23 Q On a normalized basis?

24 A Are costs --

25 Q No. Rates are set on a normalized basis?

1 A. Yes.

2 Q. Speaking of the current ECR, Mr. Hill, you used  
3 the term "C factor," and we've been through this before.

4 A. The C factor is equivalent to the Trial Staff's  
5 F factor.

6 Q. The term "C factor" doesn't appear in the company's  
7 ECR tariff, does it?

8 A. The "C" does not. That was my definition for  
9 simplicity in this presentation.

10 Q. Now, the way the current ECR is in effect,  
11 PECO' base rates currently contain an energy component of  
12 approximately 28 mills; is that correct?

13 A. Yes; that is correct.

14 Q. And that has been at that level for several  
15 years. It is not adjusted in each base rate case?

16 A. That's correct. It has been the way, I believe,  
17 since July, 1980.

18 Q. And you've explained the way the ECR functions  
19 with respect to the projections and the actual energy costs  
20 incurred by the company and their later reconciliation.

21 A. Yes.

22 Q. When this reconciliation occurs, the base energy  
23 component is rolled in and included in that reconciliation;  
24 isn't that correct?

25 A. Yes. Our reconciliation sheet for 1307(e) purposes

1 matches the total energy cost to the total recovery including  
2 that component recovered in base rates.

3 Q And that's the way 100 percent of energy costs  
4 are reconciled?

5 A Yes; that is correct.

6 Q Now, under the 80/20 mechanism that the Commission  
7 has adopted in its order, there are certain changes in this  
8 procedure aside from the 80/20 split itself. One is that  
9 the ECRF period will run from July 1st through June 30th  
10 rather than from April 1 through March 31st; is that correct?

11 A Yes, with the exception that we filed the first  
12 one, and in order to accommodate the difference at the end  
13 of this base rate case, we had to pick up a few days in June.  
14 It is our expectation that it will run for slightly longer  
15 than a one-year period for the first ECRF and then pick up  
16 on a one-year basis thereafter.

17 Q And the base energy component we discussed was  
18 anticipated to be set at 20 percent of whatever projected  
19 total energy cost level is found appropriate by the Commission  
20 in this proceeding?

21 A The portion not subject to reconciliation will  
22 be established in this proceeding.

23 Q And what would be reconciled would be 80 percent  
24 of the difference between your projected and actual energy  
25 costs in the future?

1 A Yes.

2 MS. CHESTNUT: Mr. Hill and Your Honor, I have prepared  
3 an exhibit which I hope clearly illustrates how this 80/20  
4 mechanism will operate.

5 For the record, I will state that I have prepared this  
6 myself using a format supplied by the company. I am not  
7 presenting this as any kind of evidence of the numbers  
8 contained in it. It is simply to provide an illustration of  
9 how the 80/20 mechanism will work.

10 I would like this marked, Your Honor, as Staff Exhibit  
11 No. 20.

12 JUDGE MATUSCHAK: Very well.

13 (Whereupon, the document was  
14 marked as Staff Exhibit No. 20  
for identification.)

15 (Pause.)

16 BY MS. CHESTNUT:

17 Q Have you had a chance to review that, Mr. Hill?

18 A I've looked at it, yes.

19 Q Before we get to that, Mr. Hill, I have one  
20 question with respect to that last series of questions I  
21 asked you about the base energy component and normalizations.

22 Since the base component is normalized, that means  
23 that there is a reflection of at least some portion of an  
24 outage, whether or not an outage is projected to occur within  
25 the next year; is that correct?

1           A.     If we can just be a little more specific. For my  
2 clarity, if we're talking about within the base rate case  
3 when we're looking at outage expenses for our base load units,  
4 the company does reflect what we believe to be a normal  
5 condition. For instance, our nuclear units are on an 18-month  
6 refueling cycle and we want to reflect that fact as opposed  
7 to having too many outages stacked in the test year. We  
8 construct a normalized condition. We do the same thing with  
9 our fossil outages.

10           That is the construct that is in the base rate case.  
11 And if that's what you mean by being normalized, then, yes,  
12 we do make those type of adjustments.

13           Q.     And that same type of adjustment will be applied  
14 to the 20 percent base energy component pursuant to the 80/20  
15 split?

16           A.     You've lost me on that one. I do not understand  
17 your question.

18           Q.     The 20 percent component will be set on a  
19 normalized basis?

20           A.     No. Are we talking about fuel costs now?

21           Q.     Yes.

22           A.     No. The 20 percent fuel cost will be set upon  
23 the data which we have filed in my statement adjusted for the  
24 actual over/underrecoveries which would take place through  
25 the end of April, data which we do not have available to us.

1 But the 80 percent and the 20 percent would be  
2 established on the basis of these fuel costs for the 12 months  
3 ended June, 1987.

4 Q Forget the 80 percent part. The 20 percent, it  
5 is your position that that is not going to be set on a  
6 normalized basis?

7 A That's correct. It is going to be set on 20  
8 percent of the fuel costs for the 12-month period ended June,  
9 1987.

10 Q And that 20 percent is only going to be changed  
11 within the context of a rate case; isn't that correct?

12 A No. That will change when the company files  
13 ECR Statement No. 2.

14 Q That ECR filing will purport to change both  
15 the 80 percent ECR portion and the 20 percent base rate  
16 portion?

17 A Yes; that is correct. And the company would be  
18 placed at risk for the variation actual experience of the  
19 20 percent of fuel cost which it estimates to be in effect  
20 in this case for the 12 months ended June, 1987.

21 If fuel costs are higher than that projected, the  
22 company will lose 20 percent of the increase in that fuel  
23 cost.

24 If fuel costs are lower, the company would receive  
25 a benefit of 20 percent of that differential adjusted for

1 the cap proposal which we discussed with Mr. Brennan's  
2 testimony adopted by Mr. Harris.

3 Q. Mr. Hill, the company's position that the 20  
4 percent is not going to be set on a normalized basis, what  
5 is that based on?

6 A. My interpretation of the Commission's order at  
7 ECR-8.

8 MS. CHESTNUT: Your Honor, for the record I should  
9 state here that that's not Staff's understanding of the way  
10 this mechanism is supposed to operate, and that's one reason  
11 why I wanted to get on the record how this is going to occur.

12 When I prepared this Staff Exhibit No. 20 it was with  
13 the understanding that the base rate component would be  
14 normalized. So I would like that for the record.

15 I guess there is a difference in understanding here,  
16 but it is certainly not Staff's position that the company's  
17 position is the correct one.

18 MR. MacGREGOR: It is the company's position that the  
19 20 percent and the 80 percent would change annually with each  
20 ECRF filing.

21 MS. CHESTNUT: And that is nowhere explicitly stated  
22 in your --

23 MR. MacGREGOR: It is our interpretation of the  
24 Commission's order.

25

1 BY MS. CHESTNUT:

2 Q Mr. Hill, have you had a chance to review what has  
3 been marked for identification as Staff Exhibit No. 20?

4 A I indicated I've looked at it, yes.

5 Q Do you understand what it purports to represent?

6 A Generally, I believe that you are holding sales  
7 constant and we are making an estimate of fuel costs, and  
8 then you are varying those fuel costs. In Case I, you don't  
9 vary them. In Case II, you lower them from the projection.  
10 In Case III, you increase them above the projection and  
11 somehow through your mathematics come up with how much the  
12 company benefits or loses because of this change in fuel price.

13 Q Let's go through this, Mr. Hill, to make sure I  
14 have this correct.

15 In Case I, the actual energy costs are the same as  
16 those projected?

17 A Yes, and sales are exactly the same.

18 Q That's a constant through all of these scenarios.

19 A Sales is constant.

20 Q I derived the \$8 million base rate portion by  
21 multiplying the \$40 million, obviously, by 20 percent, and  
22 I got the 80 percent by doing the same for the \$32 million  
23 of the ECR part?

24 A Yes.

25 Q And I multiplied the sales times each rate for the

1 base and the ECR to derive the revenue for each component.

2 A. Yes.

3 Q. And I offset the cost for each component and got  
4 the total. Are you following me so far?

5 A. Yes.

6 Q. And what this shows is that the projected energy  
7 costs are the same as the actual. There is no net cost  
8 or benefit to the company. They come out equal.

9 A. Yes.

10 Q. And Case II is where the actual costs are less  
11 than the projected energy cost, and we do the same type of  
12 calculation. What we show is that in that situation where  
13 actual energy costs are \$10 million less than the projected,  
14 the company has a net benefit of \$2 million?

15 A. Yes.

16 Q. And the same way going the other way. If energy  
17 costs are \$10 million more than projected, then there is a  
18 net loss to the company of \$2 million?

19 A. Yes.

20 Q. And what this does is just show how it swings  
21 back and forth?

22 A. Yes, all based upon a constant sales level; that's  
23 correct.

24 Q. At page 19 of your prefiled supplemental testimony,  
25 Mr. Hill, at line 2, you talk about the projected energy

1 costs in Mr. Carroll's direct testimony. You make the state-  
2 ment that "This filing is preliminary."

3 A Yes.

4 Q Is the company planning on submitting a final  
5 calculation?

6 A Yes, I believe, as I have described the  
7 mathematics, we have to provide a final calculation. Number  
8 one, we don't know what ECR-10 is today. The company is  
9 now collecting rates under ECR-9 which is due to expire on  
10 April 1st for service rendered prior to April 1st.

11 ECR-10 then will take effect for service rendered on  
12 or after April 1st, 1986 at a value which we have not, as I  
13 say, filed or calculated yet.

14 So we don't know what position of over or underrecovery  
15 we're going to be in or how much revenue we're going to  
16 collect from today through actually the end of April.

17 What this first ECRF, Energy Cost Rate Factor State-  
18 ment No. 1, envisions is that we would have to update our  
19 over/undercollection position to that amount; that is where  
20 we stand as of the end of April, 1986, and that would modify,  
21 hopefully, slightly the numbers that we have included in this  
22 original estimate.

23 Q Looking only at the projected energy costs for  
24 the period 6-27-86 through 6-27-87 and leaving aside any  
25 under or overcollection aspect of it, okay?

1 A. Yes.

2 Q. Is the filing that the company submitted on that  
3 particular issue going to be revised at some point? Is that  
4 calculation going to be changed?

5 A. I don't know. It depends upon what transpires  
6 between now and the end of this rate proceeding. If there  
7 are new data presented in this case for any reason, any  
8 changes that are proposed by the intervenors or the company  
9 to litigate other aspects of this case, it would be my  
10 position that the fuel and the forecast data that Mr. Carroll  
11 has presented would also have to be modified appropriately  
12 so we can put everything on the same basis.

13 Q. Well, when you say that this is a preliminary  
14 calculation, you're just saying that it would be updated the  
15 way the rest of the case would be at the close of the record  
16 in this case?

17 A. Yes.

18 Q. You're not planning on presenting some new  
19 calculation?

20 A. No. The whole purpose of this testimony was to  
21 provide a format. In order to intelligently discuss the  
22 80/20 format, the company has to put forward and was required  
23 to put forward by the Commission a proposal, and that's what  
24 we've done. We've also overlaid data.

25 The Commission's order doesn't solve all of our

1 problems. We had to make some assumptions in putting this  
2 filing together. The Commission did not give us transition  
3 rules in their order. They did not give us how you end a  
4 rate case on June 27th and start up a fuel adjustment clause  
5 on July 1. What happens there? They didn't tell us about  
6 proration. They didn't tell us what to do with ECR-10.

7 So the company put together what we believed to be  
8 a complete package to get us over all of these transitional  
9 problems and incorporate the theory or at least what we  
10 believed to be what the Commission had directed us to do as  
11 a result of the ECR No. 8 order.

12 Q Well, my problem, Mr. Hill, is that it is  
13 obviously the Commission's intention that the total projected  
14 energy cost level will be litigated in this proceeding, and  
15 I am concerned that we have an adequate basis upon which to  
16 do that and adequate time to do that.

17 The company has submitted its estimate here, and I,  
18 for one, don't want to be in the position of litigating  
19 something that's not going to be effective. I don't want  
20 the company coming in at the last minute with a completely  
21 new calculation, because that's not what the Commission  
22 intended and that's not the way issues are done in rate  
23 cases.

24 MR. MacGREGOR: Objection. Is that a question?

25 MS. CHESTNUT: I guess it's a comment on the record,

1 Your Honor, setting out Staff's position. As far as we are  
2 concerned, this is definitive, what the company has filed,  
3 and that is the basis that we are going on.

4 THE WITNESS: I agree with you, Ms. Chestnut. What  
5 I was alluding to was if there is a change -- if Mr. Carroll,  
6 for instance, hypothetically changes fuel prices in the  
7 company's presentation before we end this case, I think it  
8 is appropriate that those fuel prices be incorporated into  
9 this analysis.

10 It would to me be inappropriate to have one estimate  
11 of fuel prices in this ECRF and another set of fuel prices  
12 in the base rate case. It just wouldn't make sense. I think  
13 we have to bring those into a synchronous condition. That's  
14 the type of adjustment that I am referring to.

15 BY MS. CHESTNUT:

16 Q Let me clarify that. When you say "preliminary,"  
17 you're not anticipating the same type of two-step process  
18 that is currently in effect for the ECR where the company  
19 does file a preliminary ECR and then it files a final at a  
20 later time? That's not what you mean when you refer to the  
21 term "preliminary"?

22 A No, that is not what I am referring to.

23 JUDGE MATUSCHAK: Is this a good place to stop?

24 MS. CHESTNUT: This is where I would like to stop,  
25 Your Honor.

1 JUDGE MATUSCHAK: Fine. Then let's take our lunch  
2 recess until 1:30.

3 (Witness temporarily excused.)

4 (Whereupon, at 12:30 p.m., the hearing was adjourned,  
5 to be reconvened at 1:30 p.m., this same day.)  
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AFTERNOON SESSION

(1:35 p.m.)

1  
2  
3 JUDGE MATUSCHAK: When you're ready.

4 MR. DeCUSATIS: Your Honor, we would like to call  
5 as our first witness for this afternoon Mr. Joseph W.  
6 Gallagher, and we would ask that he be sworn at this time.

7 JUDGE MATUSCHAK: Didn't he testify before?

8 MR. DeCUSATIS: He has not testified before in this  
9 proceeding, Your Honor.

10 Whereupon,

11 JOSEPH W. GALLAGHER

12 having been duly sworn, testified as follows:

13 MR. DeCUSATIS: Your Honor, we have previously dis-  
14 tributed to counsel for all parties in this proceeding a  
15 copy of Mr. Gallagher's prepared direct testimony and the  
16 accompanying schedules which are marked as Schedules 1 and 2.

17 Mr. Gallagher's testimony has been marked as PECO  
18 Statement No. 30 and is indicated in parenthesis as revised.

19 We would simply indicate for clarification that the  
20 designation "Revised" on Statement 30 and Schedule 1 indi-  
21 cates some revisions that were made between the initial dis-  
22 tribution of this testimony and the subsequent distribution  
23 in which certain updates and corrections were made, and  
24 for convenience they were incorporated in the prepared  
25 direct testimony.

j31

1 Your Honor, we would request at this time that  
2 Mr. Gallagher's statement be identified for the record  
3 as PECO Statement No. 30.

4 JUDGE MATUSCHAK: It will be so identified.

5 (Whereupon, the document was marked  
6 as PECO Statement No. 30 for  
7 identification.)

8 MR. DeCUSATIS: Your Honor, we have previously dis-  
9 tributed to the reporter three copies of PECO Statement No.  
10 30.

11 DIRECT EXAMINATION

12 BY MR. DeCUSATIS:

13 Q Mr. Gallagher, do you have before you a copy of  
14 the document which has been marked and identified for the  
15 record as PECO Statement No. 30 and bearing the additional  
16 designation in parenthesis "Revised"?

17 A Yes, I do.

18 Q Initially, Mr. Gallagher, do you have any  
19 corrections of typographical errors that you would like to  
20 provide for the record at this time?

21 A There are just two. They are both in Schedule  
22 2. The first is on page 2, the second paragraph, the  
23 fourth line; the first word should be "casings" instead of  
24 "castings."

25 Schedule 2, page 2, second paragraph, fourth line;  
the first word in the fourth line is "casings" instead of

j32

1 "castings."

2 The second correction is on page 3 of the same  
3 Schedule 2. The second paragraph under Item II, "Personnel-  
4 Centered Efforts," the last line says "IMPO;" it should be  
5 "INPO." Otherwise, it is correct.

6 Q Mr. Gallagher, with regard to PECO Statement  
7 No. 30, if I were to ask you today the questions that are  
8 contained in that statement, would your answers be the  
9 same as are set forth therein?

10 A Yes, they would.

11 Q With respect to the two attached schedules  
12 which are marked as Schedules 1 and 2 to PECO Statement  
13 No. 30, were those schedules prepared by you or under your  
14 direction and supervision?

15 A Yes, they were.

16 Q Is the information as you have provided --  
17 subject to those corrections -- provided for the record  
18 this afternoon true and correct to the best of your  
19 knowledge, information and belief?

20 A Yes, it is.

21 MR. DeCUSATIS: Your Honor, Mr. Gallagher is now  
22 available for cross-examination with regard to PECO State-  
23 ment No. 30.

24 JUDGE MATUSCHAK: Staff.

25 MS. CHESTNUT: Your Honor, with your permission, I

1 will defer my cross until the other parties have com-  
2 pleted theirs. It may save time that way.

3 JUDGE MATUSCHAK: Very well. Consumer Advocate.

4 MR. WERSAN: Thank you, Your Honor.

5 CROSS-EXAMINATION

6 BY MR. WERSAN:

7 Q. Good afternoon, Mr. Gallagher. My name is  
8 David Wersan. I am with the Office of Consumer Advocate.

9 A. Good afternoon.

10 Q. First I would like to refer you to page 8 of  
11 your testimony. On page 8 you discuss Capital Authoriza-  
12 tions and Expense Authorizations, and you call them "CAs"  
13 or "EAs;" is that correct?

14 A. That's correct.

15 Q. Could you tell me how PECO decides when an  
16 expenditure should be a capital item as compared to an  
17 expense item?

18 A. Generally, it is when a major piece of property  
19 is either added or replaced. For example, if you have a  
20 generator and you replace it, that is a capital item,  
21 whereas the repair of a pump would be a maintenance item.

22 It is a case of whether it is a replacement or an  
23 addition of a completely new unit of property as compared  
24 to fixing something that is basically going to stay the  
25 same.

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1 Q Is the level of the expenditure relevant in  
2 that, or is it the kind of --

3 A No, the level is not relevant; no.

4 Q You mentioned replacing a generator. Would re-  
5 winding a generator be a Capital Authorization?

6 A Yes, because the winding itself is a unit of  
7 property, basically. So it wasn't the money that deter-  
8 mined it, it was how it is designated as a unit of property  
9 or not.

10 Q Who decides whether something is an Expense  
11 Authorization or a Capital Authorization?

12 A Our Finance and Accounting department. They  
13 advise us as to which way to go.

14 Q Who is the chief person in that department?

15 A Mr. Paquette, the Vice-President of Finance and  
16 Accounting.

17 Q If I could refer you to page 16 of your testi-  
18 mony; in the answer on that page starting at around line  
19 15 and going to the bottom you discuss improvements in the  
20 unit forced outage rate as a result of improvement in a  
21 system or a component; is that correct?

22 A Yes.

23 Q And you state, "As a unit ages and new problems  
24 arise, no absolute improvement in performance from past  
25 capital modifications and maintenance activities may occur;"

1 is that correct?

2 A. May occur; that's correct.

3 Q. What problems do you envision occur with aging  
4 of a generating unit?

5 A. Well, let me take the whole package together,  
6 which is the generator, the turbine and the boiler and all  
7 the equipment that goes with that.

8 Starting with the boiler, you have erosion or  
9 corrosion of the tubing which has to be replaced; you can  
10 replace it and basically bring the unit up to its former  
11 standards.

12 There are factors that occur in the piping from the  
13 boiler to the turbine which you may or may not decide to  
14 replace. Sometimes the piping is getting to the point  
15 where you had better operate at reduced capacity rather  
16 than replace.

17 The turbine can have wear on the blades that have  
18 to be replaced or vibration problems because of imbalance  
19 and you may have to replace the rotors. There are a lot of  
20 things like that. Generator windings fail over time be-  
21 cause of insulation breaking down.

22 So there are a lot of items. Really, as you go  
23 through the entire system, it is very difficult to define  
24 one to you, but that is the kind of thing I'm talking about.

25 Q. When you talk about aging here, the company has

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1 had experience, I guess, with a number of kinds of fossil  
2 plants and also nuclear plants, but you have had fossil  
3 plants for many more years; is that correct?

4 A. Oh, yes.

5 Q. Is there a difference in the way oil plants  
6 age as compared to the way coal plants age?

7 A. Yes. Coal plants tend to develop greater prob-  
8 lems because of the erosion of the coal, the ash from the  
9 coal, much more ash than you ever get from an oil-fired  
10 unit; and you also have pulverizers and things like that  
11 that you don't have on oil-fired units that tend to  
12 create greater problems. So they do age quite differently,  
13 yes.

14 Q. When you refer to those aging problems that you  
15 have seen, that is based upon, I guess, many years of  
16 experience with those plants on your system?

17 A. Yes.

18 Q. Do nuclear plants have problems with aging that  
19 are particular to that kind of a facility?

20 A. The oldest nuclear plants we have, of course,  
21 still in operation are ten years old--I guess they're 12  
22 years old now -- and we haven't gotten to the point where  
23 we see the same kind of aging; but nuclear plants have  
24 developed young/old-age problems, I suppose, from the  
25 standpoint of the piping, intergranular stress corrosion

j37

1 cracking, which I know you heard of in these proceedings  
2 before. That is a form of aging because of the kind of  
3 duty that it takes in the nuclear atmosphere and has re-  
4 quired replacing of piping and so on.

5 So, yes, they do age, but a little different kind  
6 of problems, you know, one versus the other, if you wanted  
7 to go down the list; but they do age differently, as we  
8 all do.

9 Q Are the costs of capital improvements on, say,  
10 nuclear plants -- do those costs tend to be greater be-  
11 cause of the environment you're working in compared to re-  
12 habilitation or maintenance on coal plants or oil plants?

13 A I would say for exactly the same kind of work,  
14 yes, the costs are greater.

15 Q Do you envision that problems in aging of your  
16 nuclear plants will begin or continue in the future as you  
17 have seen in major coal plants?

18 A I think aging on all equipment will continue.  
19 It is just the nature of the beast.

20 Q When the company decides to do plant rehabilita-  
21 tion or a Capital Authorization, do they do some kind of a  
22 cost/benefit analysis, comparing how much it will cost to  
23 rehabilitate the plant as compared to installing a differ-  
24 ent kind of plant or not doing the rehabilitation?

25 A That's the general practice; yes. There are

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1 certain things that you rehabilitate because you have to  
2 do it, and intrinsically I guess you make a cost/benefit  
3 analysis because if it's a case of shutting the plant down  
4 or keeping it operating -- for example, the decision to  
5 replace the piping on Peach Bottom 2; there were cost/  
6 benefit analyses of one method of repair versus another,  
7 that is, replace the piping now or do induction heating  
8 stress improvement of the welds now and then maybe replace  
9 the piping later. Those kinds of things were done.

10 But the question of whether or not something had to  
11 be done versus shutting down the unit is, obviously, --  
12 obviously, you make a repair to keep the unit running.

13 So I would be very surprised if we had a piece of  
14 paper showing a calculation for that particular case.  
15 Some things are obvious, and some we actually -- most of  
16 them we actually do a calculation on.

17 Q. Would it be possible that as a plant gets older,  
18 the repairs needed to keep it going would become so great,  
19 say, in the 20th or 30th year, that it might be more  
20 economic not to rehabilitate that plant?

21 A. Everything has a definite life cycle. I think  
22 in all plants, all pieces of equipment, you get to the  
23 point where it makes sense either to continue to repair it  
24 or replace it in kind or shut it down and build something  
25 else. That is a decision that has to be made depending on

1 the circumstances.

2 The general answer is yes, that everything ages and  
3 somewhere along the line you get to the point where it  
4 doesn't pay to fix it anymore.

5 Q In the company's decisions to do certain kinds  
6 of maintenance or to develop certain kinds of maintenance  
7 programs or to replace different equipment, do they look  
8 at what other utilities in the area or in the country are  
9 doing?

10 A Absolutely. We have a lot of groups that work  
11 on various kinds of power plant problems, work with them  
12 continually; I will say continuously because of that kind  
13 of a thing.

14 I think we are leaders in the field in many areas,  
15 in detection of problems and recommending methods of re-  
16 pair and that kind of thing.

17 But we definitely tie in with -- not only in this  
18 country but in Europe, in Japanese plants also; nuclear,  
19 particularly.

20 Q Does the company sometimes identify a plant or  
21 plants of other companies that have run particularly well  
22 and go visit that plant to see why that plant does such a  
23 good job?

24 A We do.

25 Q Has the company ever gone, for example, to

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1 Calvert Cliffs, which has a fairly high capacity factor?

2 A. We have. We have sat in with them on several  
3 occasions; yes.

4 Q. What is it that they do that gives that plant a  
5 better capacity factor than we have seen on Peach Bottom  
6 or Salem; do you know?

7 A. For one thing, it is a smaller plant; the units  
8 are smaller. That makes quite a difference, really.

9 Secondly, it is a pressurized water reactor. That  
10 has a little different environment than a boiling water  
11 reactor.

12 Those two things, I think -- and the Baltimore com-  
13 pany does a good job operating. I don't belittle anything  
14 they do.

15 I think those two things are the major differences  
16 between their plants and ours: they are smaller and they  
17 have a different design. And maybe they have been lucky  
18 and we haven't, too, in all honesty.

19 Q. You say it is a pressurized water reactor.  
20 Isn't the Salem station a pressurized water reactor?

21 A. Salem is a pressurized water reactor; yes.

22 Q. Would you agree that the choice of the kind of  
23 nuclear station to build and the size is one initially made  
24 by the company itself?

25 A. Yes.

1 Q The different maintenance programs and the  
2 Capital Authorization programs that you list in your testi-  
3 mony, are any of these programs the direct result of the  
4 Commission's ECR-8 order?

5 A I think not, really. This is part of our gener-  
6 al practice. What we're showing here is the kind of thing  
7 that we generally do routinely.

8 We are showing you, though, what we have done in the  
9 last three years and the next three years; that's why  
10 these particular projects are here, the last three and the  
11 next three.

12 We have not made a drastic change in practice be-  
13 cause of the ECR-8 order; no.

14 Q One final question. You mentioned, I guess, the  
15 pipe replacement, and I understood there were some repairs  
16 going on to Peach Bottom Unit 3.

17 Is that station still down for that outage, or is it  
18 back on line?

19 A It is due back on line the end of this week, so  
20 it is still down.

21 MR. WERSAN: That's all I have, Your Honor.

22 Thank you, Mr. Gallagher.

23 CROSS-EXAMINATION

24 BY MR. CLARK:

25 Q Mr. Gallagher, my name is Roger Clark, and I

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1 represent the Governor's Energy Council.

2 Mr. Wersan began his cross-examination talking about  
3 Capital Authorizations or Expense Authorizations. What I  
4 would like to do is get a sense of how those originated.

5 On page 7 of your testimony, you discuss that  
6 station management makes a request for an investigation of  
7 systems or components that have either failed or are  
8 exhibiting what station personnel consider to be deter-  
9 orated or unsatisfactory performance; is that correct?

10 A. Yes.

11 Q. Do you know of any company policy to identify  
12 potential improvements to efficiency in your operating  
13 plant other than those cases where there has been failure  
14 or reduced performance that you have identified on page 7?

15 A. Oh, yes. We make tests of our units -- I didn't  
16 mention that here, come to think of it. We make tests of  
17 our units to check the heat rate, the efficiency, and  
18 from that recommendations come, not just from the station,  
19 but from engineering or from the services group in the pro-  
20 duction department, to do something to improve the situation.

21 We have listed in here several jobs on improving  
22 the controls of the Eddystone and Cromby Units. We are  
23 putting in microprocessors to be able to get a better con-  
24 trol and improve the efficiency by being able to match the  
25 unit operation better to its requirements.

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1 That is the kind of thing I am referring to there.  
2 That really didn't come from any complaint from the station.

3 Q Are there other improvements that management  
4 wants station managers to look at other than your example  
5 of controls?

6 A Yes. Now you're going to ask me what, and I  
7 will have to go through the list and see what it is.

8 But really, that is a routine thing, too. We are  
9 really trying to reduce the costs of our units. It is not  
10 because of ECR-8. We have been doing that all our lives.  
11 Some years we have been successful, and some years we have  
12 not. In all honesty, that's the way it has been.

13 But we are continually looking to see where the  
14 unit could be improved, either from improving its  
15 efficiency or improving its availability.

16 Q Is there any way of predicting what a unit's  
17 efficiency or availability of improvement will be from  
18 various O&M changes and improvements that you make?

19 A You can predict it in total, I think. It is  
20 hard to say that if I fix this doodad, I'm going to get  
21 that much improvement. But what we do is we look at the  
22 work we are going to do for the next several years -- we  
23 go on a five-year forecast, actually -- and we estimate  
24 what improvement in equivalent availability that is going  
25 to give us in total. We make targets for ourselves.

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That is the way we actually try to take into account how we are going to improve as we are spending this money to improve.

But I have a hard time telling you, as I say, what fixing any particular piece is going to do, because one piece masks another sometimes, and you fix that and then the next one catches you; and it really doesn't work out that you can add up all the pieces and get a factor that way.

Q You mentioned the idea of targets. Can you explain what sort of improvement targets the company has?

A Yes. We have been shooting for trying to get average capacity factors of about 70 percent in our nuclear units and our coal-fired units. We haven't made that.

I don't have any capacity factors here, but I understand they are being presented in another area.

I think you will find that we are predicting improvements in our units getting towards the 70 percent. Seventy is a pretty high factor; if you read the going numbers, you can see that. But that's what we're shooting for. I don't know if we will make that, really.

I think you will find that Peach Bottom 2, for example, -- I would imagine the numbers you are going to see are going to show an improvement up into the middle-60s. Peach Bottom 3 won't show an improvement because you're

j45

1 only getting three-year data, I think; it won't show an  
2 improvement because of the fact that we still have the  
3 pipe problem to get through there.

4 Eddystone 1 and 2 are going to show improvements, I  
5 know, because of the boiler rehabilitation we have been  
6 going through there. We are finished on 1 and we're work-  
7 ing on 2.

8 So we are trying to fix the things that are going  
9 to get us to something close to 70 percent on our units,  
10 but it takes time.

11 Q. Does the company have any established incentive  
12 program, either in terms of salary rewards for personnel  
13 or other types of incentives, for those plant managers  
14 that are making their targets and those that aren't?

15 A. The company has a senior management salary pro-  
16 gram, and it is -- how much a particular person gets is  
17 based upon his meeting the goals that were set for him the  
18 preceding year. Station superintendents are under that  
19 plan; their assistants are under that plan; their senior  
20 engineers, their plant engineers, are under that plan.

21 So their evaluations are based upon how well they  
22 do, and, therefore, their salary is based upon how well  
23 they do.

24 Q. And the efficiency and operating levels of their  
25 plant are part of the goals that are set for the management

1 of the plant?

2 A. That is true. I'm not really in the operating  
3 department now, so what they are doing currently I had  
4 better not try to answer. But they are the sort of goals  
5 that you give them, yes.

6 MR. CLARK: I have no further questions.

7 JUDGE MATUSCHAK: Anyone else?

8 (No response.)

9 JUDGE MATUSCHAK: Staff.

10 MS. CHESTNUT: Thank you, Your Honor.

11 CROSS-EXAMINATION

12 BY MS. CHESTNUT:

13 Q. Mr. Gallagher, I'm Marci Chestnut with the  
14 Staff.

15 Mr. Gallagher, at page 9 of your testimony, you  
16 talk about jointly-owned units, and you explain that major  
17 capital or maintenance programs are submitted to the owners  
18 for review and approval.

19 Can you tell us what kind of voting process is in-  
20 volved in that?

21 A. Yes. Each of the operating companies prepares  
22 a budget, just as we do, and -- a budget and a forecast,  
23 up to five years -- and submits it to, first, an oper-  
24 ating and maintenance committee. I have served on the one  
25 -- I don't presently, but I served on the one for Keystone

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1 and Conemaugh, and also the one for Salem, and they were  
2 pretty much the same.

3 Each budget item has to be justified to the  
4 committee and each owner actually agrees or doesn't agree.  
5 If the majority of the owners don't agree, the job just  
6 doesn't get in the budget.

7 The operating and maintenance committee then  
8 recommends to the owners' committee, which consists  
9 basically of the vice-presidents from each of the owning  
10 companies, and they formally accept the budget that is  
11 left.

12 Q So you need a majority vote for the O&M  
13 committee?

14 A Majority based on percentage ownership; not  
15 numbers of people.

16 Q That was my next question.

17 A I thought so.

18 Q Mr. Gallagher, there has been some discussion  
19 this afternoon about the idea of cost/benefit tradeoffs,  
20 and you discuss that pretty forcefully in your testimony,  
21 that PECO feels that improvements and modifications must  
22 be cost justified.

23 Then you go on to state that non-mandated work is  
24 analyzed on a cost/benefit basis before expenditures are  
25 authorized. Yet later in your testimony, in response to

1 some interrogatories, and again this afternoon, you have  
 2 indicated that it is not really possible to quantify the  
 3 savings associated with each particular project; is that  
 4 a correct summary of your position?

5 A. No. What I said was, it is not possible to tell  
 6 you exactly the equivalent availability factor that is  
 7 going to be improved for any particular project. But you  
 8 can quantify many items independent of that.

9 For example, suppose I have a system that has a  
 10 couple of pumps in it that are giving excessive mainten-  
 11 ance; I can take the maintenance cost that I am saving and  
 12 put that against the capital cost to replace the pump or  
 13 whatever it is, and I can make cost/benefit studies of that  
 14 kind. There are a number of different kinds of studies  
 15 you can make without getting into the question of equivalent  
 16 availability of the whole system.

17 Q Let's talk about specifics, Mr. Gallagher.  
 18 Referring to your Schedule 1, Table 1, where you discuss  
 19 the Eddystone 1 and 2 projects to be completed within three  
 20 years -- in fact, I should state that for all the projects  
 21 that you have described, you give an estimated cost when  
 22 the cost is in excess of \$1 million; is that correct?

23 A. Yes.

24 Q But you don't list any cost savings for any of  
 25 these projects.

1 A. We were asked to -- as I recall, the question  
2 that we were answering here, we were asked to list the  
3 projects that we are performing or plan to perform to im-  
4 prove unit performance, and that's what we tried to do.

5 Q. I understand that, Mr. Gallagher. Do you have  
6 with you, or can you provide, an estimated cost savings  
7 for various of these projects?

8 A. I do not have them with me. I guess that we  
9 can provide them certainly on some of them, I'm sure.

10 MS. CHESTNUT: Your Honor, I would like to make an  
11 on-the-record data request at this point.

12 I would like the company to provide the estimated  
13 cost savings for each of the projects listed to be com-  
14 pleted within three years for each of the units, and if  
15 there is no cost -- I should say, if there is no savings  
16 estimate available, I would like an explanation why.

17 MR. DeCUSATIS: Your Honor, I would have to question  
18 the relevance of that data request. We have responded to  
19 a Commission order which had asked us to set forth the  
20 planned improvements over the next three years, which I  
21 think the company has done.

22 I don't know that the scope of that order requires  
23 an in-depth analysis of the cost/benefits for each and  
24 every one of those planned improvements. That is a con-  
25 siderable task which the company is being asked to

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1 undertake, and I would simply reiterate my questions re-  
2 garding its relevance and, perhaps, indeed, its necessity,  
3 given the scope of the work that we would be asked to  
4 undertake to provide that.

5 MS. CHESTNUT: Your Honor, in the Commission's  
6 order it requests the data supplied by the company, but it  
7 also makes the statement, as Your Honor pointed out this  
8 morning, "any other information deemed to be relevant to a  
9 determination of a proper energy cost level for PECO."

10 We are concerned that a number of these projects  
11 that the company has listed will not produce a reasonable  
12 energy level because they will cost more than the savings  
13 that will result.

14 We feel that if you're looking at an appropriate  
15 energy level for PECO, you have to look at what they are  
16 planning to do to achieve that level.

17 MR. DeCUSATIS: From the way that Ms. Chestnut  
18 expressed it, her concerns are obviously not energy re-  
19 lated, but related to base costs or base rate elements,  
20 namely, maintenance expense.

21 MS. CHESTNUT: Your Honor, of course, I disagree  
22 with Mr. DeCusatis' characterization. Our point is that  
23 the cost associated with these items is irrelevant if you  
24 don't look at the savings; it is meaningless.

25 We are concerned that the company has listed a lot

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of projects that don't result in anything and that there will be no change in their energy levels over the next few years.

The Commission has indicated very strongly that it is very concerned with the company's operating performance of its units, and that encompasses that area that I have requested Mr. Gallagher to supply. It is concerned with costs; it is concerned with the level of operation as well.

JUDGE MATUSCHAK: The witness has indicated that that information is available. We would direct the company to furnish that information.

MS. CHESTNUT: Thank you, Your Honor.

MR. DeCUSATIS: We will provide that.

BY MS. CHESTNUT:

Q Looking again at your tables, Mr. Gallagher, as you said, you have listed costs that are in excess of \$1 million. So if we look at Table 1 for Eddystone Units 1 and 2 for projects completed during the last three years, for example, costs are given for only four of the 11 projects indicated; is that correct?

A What page are you on?

Q Page 1, Table 1, Eddystone Units 1 and 2.

A Page 1; okay. I'm on 2; sorry.

Yes.

JUDGE MATUSCHAK: What page are you on?

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1 MS. CHESTNUT: Schedule 1, Your Honor. Table 1,  
2 which is on page 1.

3 THE WITNESS: Yes; there is one here. That is  
4 correct.

5 BY MS. CHESTNUT:

6 Q Do you have an aggregate cost for the other  
7 projects you list?

8 A I can tell you that the cost of the projects on  
9 which we showed the cost is about -- just under \$400 mil-  
10 lion, and the total cost of all the projects on which we  
11 didn't show the cost is about \$40 million.

12 Q That's fine, Mr. Gallagher.

13 Can you tell us, Mr. Gallagher, of the projects  
14 that are listed to be completed within three years for  
15 Eddystone Units 1 and 2, which of those are currently  
16 underway?

17 A Underway. Let me define this. We may have  
18 ordered the equipment. For example, the superheater out-  
19 let headers, the first one there, is underway because the  
20 equipment has been ordered and contracts have been let;  
21 there is nothing being torn out or put in; so that is  
22 underway.

23 The second one is underway. The third one is under-  
24 way. The fourth one is underway. The fifth one is a  
25 phase program; part of it is done. It may or may not, the

1 rest of it, be underway; I'm not sure.

2 The sixth one, I don't believe that is underway  
3 yet. The seventh one is underway. The eighth one is under-  
4 way. The ninth one is underway. I'm not certain about the  
5 next one; I don't remember.

6 Q Mr. Gallagher, perhaps it would be easier if  
7 the company could supply this for each of the units at a  
8 later time.

9 A. Their status?

10 Q Yes.

11 MS. CHESTNUT: I would like to make that an on-the-  
12 record data request, Your Honor.

13 MR. DeCUSATIS: Yes; we will accept that as an on-  
14 the-record data request; and, as I understand it, we are  
15 to provide, with respect to each project which is listed  
16 as one to be completed within three years, an indication  
17 of whether that project has been initiated. And we will  
18 do that with respect to the projects projected to be com-  
19 pleted within three years for those set forth on each of  
20 the tables comprising Schedule 1.

21 Is that the scope of your request?

22 MS. CHESTNUT: Yes, it is, Your Honor.

23 BY MS. CHESTNUT:

24 Q Mr. Gallagher, what steps are being taken to  
25 improve outage management at the Peach Bottom Units?

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1           A. Let me start with some history because outage  
2 management at Peach Bottom has been influenced greatly by  
3 the situation that we have been in for the last several  
4 years.

5           I think it should be recognized right off the bat  
6 that we have been able to do an excellent job in outage  
7 management on both Peach Bottom 2 and 3 in the past.

8           Prior to the time we got hit with the revisions that  
9 were required in the torus, the suppression pool enclosure  
10 and in the recirculation piping work that had to be  
11 changed out, we had refueling outages of about 40 days  
12 each for both Peach Bottom 2 and Peach Bottom 3 consecu-  
13 tively. And that is as good as anybody has ever done, so  
14 I think we know how to manage an outage.

15           What our problem has been lately is the tremendous  
16 retrofits that we have been forced to make because of the  
17 requirements partly of the NRC and partly of this business  
18 of the intergranular stress corrosion cracking which has  
19 arisen.

20           So we have detailed outage controls which we have  
21 improved in recent years. I'll get to them in a minute.  
22 But I wanted to go back to the start, that we have been  
23 able to run outages as good as anybody in the whole  
24 country has been able to do. Forty-day outages are the  
25 best you possibly can do on a nuclear plant.

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Now, we are still not satisfied. With the big outages, it was more difficult to control them, and so we have gone into manning of the outage groups in the stations; we have purchased or developed new computer programs to track various aspects of it, the scheduling, the costs, the manpower loading, all those kinds of things. They are all in place; and we firmly feel that once we get out of this piping problem with this one, that you're going to see good outages. I don't think you're going to see 40-day outages again, because I think that the paperwork world that we are swamped with now, not only for the NRC requirements and the quality assurance requirements, but also the necessity to document everything for such things as prudence hearings, takes the time of the people to the point that we'll never see a 40-day outage on refueling again. But we will see good ones.

So we have done a lot, and I think I have outlined it in my Schedule 2, the work on the PREMIS and the PICOM and those computer programs that we have been using in the last several years to track our outages better.

Our problem has been the situation we are in with the torus modifications and then followed by the recirculation piping problems.

Q I think you slightly misunderstood my question, Mr. Gallagher. I wasn't --

j56

1 A. My apologies.

2 Q. -- asking about outage planning, which is what  
3 your answer seemed to go to.

4 A. I thought that's what you said; I'm sorry.

5 Q. It was outage management.

6 A. Outage management. Outage management is the  
7 follow-up to the outage planning. We have set up personnel  
8 in both the maintenance and the construction area -- the  
9 construction people handling the modifications; the  
10 maintenance people handling the O&M, the repair-type work --  
11 which all has to be done in parallel.

12 We have people who watch over not only what our own  
13 people do, but also what contractors do. On major jobs  
14 we have weekly or bi-weekly meetings with the major con-  
15 tractors. For example, Chicago Bridge and Iron was the  
16 one who did the piping replacement; I personally held a  
17 meeting on that every other week to get a detailed report,  
18 to make sure things went straight, to straighten out things  
19 that weren't going straight.

20 Those are the kind of things we -- our vice-  
21 president, he follows the Limerick construction the same  
22 way. There is a lot of continual riding herd on the job  
23 that goes on.

24 Q. Do you plan any change in the formal outage  
25 management procedure that is presently in place within the

j57

1 next three years? Within the next three years, do you  
2 intend to change the current system by which outages are  
3 managed?

4 A. I am trying to steer clear of just outages, if  
5 you don't mind. I would like to discuss how projects are  
6 managed, because the sum of the project is what makes the  
7 outage.

8 We, yes, are changing what we are doing there. We  
9 have developed a project management section in our  
10 mechanical engineering division, and people are assigned  
11 to track our projects better from the time they are  
12 initiated until the breaker is closed and the job is back  
13 on line.

14 That is in place now. We are developing the pro-  
15 cedures and the methods and are manning the project manage-  
16 ment group. That will all be done in cooperation with the  
17 management groups in the stations. It is a joint, cen-  
18 tralized-decentralized effort.

19 Q. Does the company intend to make this effort  
20 more centralized in the future?

21 A. More centralized?

22 Q. Yes.

23 A. No. I think we are going to manage the central-  
24 ized portion better than we have in the past, but we are  
25 not going to make it more centralized.

j58

1 Q When you talk about "centralized portion" what  
2 are you referring to, to make it clear for the record?

3 A The modifications, the construction-type --  
4 things that occur by Capital Authorization, for example;  
5 put it that way.

6 Q Mr. Gallagher, I would like to refer you again  
7 to your Schedule 1. Can you tell me which of the projects  
8 listed for Eddystone relate to water walls? I should say,  
9 which of the projects to be completed relate to water walls?

10 A The Eddystone 1 water wall job is completed.  
11 Under Schedule 2 is where the water wall job, the replace-  
12 ment -- let me find Schedule 2.

13 (Witness perusing documents.)

14 A On Schedule 2, page 1, the first item is the  
15 Eddystone 1 and 2 steam generator pressure vessel parts,  
16 which the water wall tube replacement was a major portion  
17 of that.

18 Q Do any of these projects for Eddystone 1 and 2  
19 listed on Table 1, Mr. Gallagher, relate to the flue gas  
20 scrubbers?

21 A The big \$147 million job at the bottom of page 1  
22 of that table is the flue gas scrubbers, the magnesium  
23 oxide scrubber system.

24 Q For Cromby --

25 A The same thing; that's on there, too -- I'm

j59

1 sorry; ask your question.

2 Q That was it.

3 A Okay. That's on there. I think it is \$77 mil-  
4 lion, if I remember. I'll have to go back till I find  
5 Cromby.

6 (Witness perusing documents.)

7 A Table 2, page 1, the first item.

8 Q Do any of those Cromby items relate to water  
9 walls? Are water walls a factor in the operation of  
10 Cromby --

11 A Cromby has a very good operating record; a  
12 small unit and we have not had a big problem on the water  
13 walls there at Cromby.

14 Q How about for Keystone and Conemaugh, do you  
15 have any projects that relate to water walls there? Is  
16 that an issue?

17 A No, not that I recall.

18 Q How about the first reheater?

19 A The reheaters?

20 Q Yes.

21 A They have had reheater problems at -- you're  
22 on Keystone and Conemaugh now, are you?

23 Q That is Table 5.

24 A Table 5. I thought we had that on there.

25 "Replace intermediate reheaters," the bottom item; yes.

j60

1 Q. Is that the same as the first reheater?

2 A. I think it's a different name for it, yes.

3 Q. It does encompass that.

4 A. Yes.

5 MS. CHESTNUT: Thank you, Mr. Gallagher.

6 I have no further questions, Your Honor.

7 JUDGE MATUSCHAK: Any further cross-examination?

8 (No response.)

9 JUDGE MATUSCHAK: Any redirect?

10 MR. DeCUSATIS: Your Honor, if I may have about a  
11 minute or two, we can come back and see if we have any re-  
12 direct for Mr. Gallagher. I don't think I will have any.

13 (Pause.)

14 MR. DeCUSATIS: Your Honor, we have no redirect for  
15 Mr. Gallagher.

16 I would simply request and move for the admission  
17 of Mr. Gallagher's Statement No. 30 and the attached  
18 Schedules 1 and 2.

19 JUDGE MATUSCHAK: The motion is granted, subject to  
20 any timely motions to strike or any other objections.

21 (Whereupon, the document marked as  
22 PECO Statement No. 30 was received  
in evidence.)

23 MR. DeCUSATIS: Thank you, Your Honor. We are com-  
24 pleted with Mr. Gallagher.

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(Witness excused.)

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MR. DeCUSATIS: Your Honor, if we could have just a few moments, I believe that the schedule called for Mr. Hill to resume the witness stand and continue with his cross-examination.

I will see if we can --

JUDGE MATUSCHAK: Let's take a short recess.

(Recess.)

T4A

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1 JUDGE MATUSCHAK: There is some question in our mind  
2 as to how we are to proceed, and whose responsibility it  
3 would be to develop some of the assignments that are given  
4 to us by the Commission on page 163 of its order.

5 We would like to have some expression from the  
6 parties as to how we are going to proceed to arrive at the  
7 type of performance standards that the Commission seems to  
8 indicate that they want us to develop in this case.

9 MR. MacGREGOR: Your Honor, the company has provided  
10 in Exhibit JJC-1 data requested by the Commission's Order  
11 both as to the historic operating performance of its base  
12 load generating units and its projections of future  
13 performance.

14 Based upon the comparison of those figures to numbers  
15 projected by Mr. Carroll, the company believes it has  
16 demonstrated the reasonableness of the operation of its  
17 base load units for the period of time for the first year  
18 the new rates are going to be in effect. Other parties can  
19 then challenge that in their testimony.

20 JUDGE MATUSCHAK: We need more than justification  
21 from the operation of the company. What the Commission  
22 seems to want is something even further than that.

23 As they say, "PECo is further directed to provide us  
24 with such support for its expected energy costs in all future  
25 general rate filings."

1           That would seem to indicate that what the Commission  
2 wants of us is to set up some standards of performance for  
3 power plant production.

4           MR. MacGREGOR: Your Honor, I read that paragraph to  
5 simply say that each future rate case the company is  
6 involved in, they will be expected to provide a projection  
7 of its energy cost, and to provide full support for that  
8 energy cost to be investigated in future rate proceedings  
9 as they may be filed.

10           JUDGE MATUSCHAK: There have been other jurisdictions  
11 previous to this where standards have been established for  
12 power plant production, and there has been treatises, and  
13 standards have been discussed in a number of articles.

14           I would just like to have some expression from  
15 counsel of where we are going on that issue in Phase III of  
16 the investigation that the Commission had, and what part each  
17 party is going to have in trying to establish some kind of  
18 standards.

19           MS. CHESTNUT: Your Honor, it is Staff's position  
20 that this case should not be used as a Phase III of the  
21 Commission's ECR-8 order.

22           As far as we are concerned, it is very definite that  
23 that the Commission in its ECR-8 Order examined the question  
24 of what should be done to PECO's ECR, made a decision, and  
25 then ordered it to be implemented in this case.

1 I agree with Mr. MacGregor that the purpose of ordering  
2 that certain issues be looked at in this case is for the  
3 purpose of examining an overall reasonable projected  
4 energy cost level which will be used to develop the 80/20  
5 split.

6 The Commission's position, to my understanding, is  
7 that this was done because a base rate case is the most  
8 appropriate forum for the parties to pursue active litigation,  
9 being as it is a very complex issue.

10 JUDGE MATUSCHAK: It is complex, and I hesitate to  
11 get into something that is going to be of a generic nature.  
12 The Commission has a generic investigation going on, as I  
13 understand, now.

14 And is it your feeling that the Commission expected  
15 us to determine in this as to the facts applying to  
16 Philadelphia Electric Company in this case, and not try to  
17 set up some formula or standards?

18 MS. CHESTNUT: Your Honor, the only issue that the  
19 Staff thinks that the Commission referred to Your Honor for  
20 decision is the expected energy cost level.

21 That is the only issue to be resolved in this  
22 proceeding. Your Honor, in our view, is not to examine  
23 possible ECR revisions or to undertake any kind of a generic  
24 study. We think it is a very, very limited issue that the  
25 Commission referred to this proceeding, because the

1 Commission was certainly aware of the number of complex  
2 issues that Your Honor has before him in this case.

3 And we see it as, the information that the company was  
4 required to supply, and that the company has in fact  
5 supplied goes purely to that one issue, which is the  
6 projected energy cost levels.

7 JUDGE MATUSCHAK: We would like to confine it as  
8 much as we can, because we can see that this matter could  
9 be expanded almost to infinity if we want to go that far.  
10 I want to keep some curtailment here on this thing so we  
11 do not get out of bounds on this thing.

12 MS. CHESTNUT: Your Honor, I would like to note then  
13 for the record that depending on Your Honor's ruling on  
14 Staff's motion to strike, if Your Honor rules that it is  
15 appropriate for the company to propose modification of the  
16 80/20 Order, that Staff feels that it also has modifications  
17 that it would like to propose.

18 If Your Honor opens the door, that is exactly what is  
19 going to happen.

20 JUDGE MATUSCHAK: Very well. We will discuss that  
21 later.

22 MR. CLARK: Your Honor, I would like to also mention  
23 for the record, the Governor's Energy Council position on  
24 this matter. I think Ms. Chestnut is correct in her  
25 analysis of what the Commission is asking us to do in terms

1 of setting the energy cost rate here.

2 The Governor's Energy Council has presented,  
3 however, testimony about performance plans. We feel that is  
4 in the best interest of the ratepayers and for this company,  
5 and ought to be part of the regulatory scheme in setting  
6 just and reasonable rates.

7 Depending how Your Honor rules on the Trial Staff's  
8 motion, we will suggest ways of either integrating that into  
9 the 80/20 ECR, if Your Honor grants the motion, or in the  
10 alternative, suggesting ways of changing the ECR with this  
11 plant performance, suggestions that have been developed  
12 already. So, we are in need of a ruling on that motion.

13 JUDGE MATUSCHAK: We will try to see if we can get a  
14 handle on this issue, and get some idea of where we are going  
15 on it, anyway.

16 MR. CLARK: Your Honor, may I ask simply if we have a  
17 time frame for a ruling on that motion? Do you know when  
18 the company will be filing its response?

19 JUDGE MATUSCHAK: I haven't gotten an answer to it yet.  
20 They have ten days to answer.

21 MR. MacGREGOR: I haven't received a copy of the  
22 motion.

23 MR. CLARK: The only issue is that testimony from the  
24 parties responding to the ECR filing is due next Friday.

25 JUDGE MATUSCHAK: We are not going to preclude

1 anybody. If it should be necessary to add supplements to  
2 testimony, we are going to permit the parties an opportunity  
3 to supplement the testimony, if it should become necessary,  
4 to cover the issue.

5 MR. CLARK: That will solve my problem.

6 JUDGE MATUSCHAK: You may proceed.

7 MR. MacGREGOR: Your Honor, we are ready to proceed  
8 with further cross-examination of Mr. Hill.

9 JUDGE MATUSCHAK: Staff?

10 MS. CHESTNUT: Your Honor, I had concluded my cross-  
11 examination of Mr. Hill.

12 JUDGE MATUSCHAK: Consumer Advocate?

13 MR. WERSAN: Thank you, Your Honor.

14 Whereupon,

15 THOMAS P. HILL, JR.

16 having previously been duly sworn, testified further as  
17 follows:

18 CROSS-EXAMINATION

19 BY MR. WERSAN:

20 Q Mr. Hill, I have questions in two basic areas.  
21 The first one is: is the company requesting the PUC to  
22 reconsider its Order on ECR-8 with respect to the 80/20,  
23 setting aside the cap issue? Is the company asking the  
24 Commission to go back to a 100 percent reconcilable ECR in  
25 this case?

1           A. I think I can only answer your question yes in  
2 part. We were required by Commission Order to file certain  
3 data, in the form of an 80/20 clause, and a whole series of  
4 historic performance indicators and performance on our unit  
5 and projections.

6           On page 163 of the Commission's Order, it states that  
7 "Upon investigation of the ECR filing and accompanying data  
8 by the Commission, and after hearings thereon and approval  
9 by the Commission of the ECR, the company will commence  
10 recovery."

11           To my understanding and my interpretation of that  
12 language, the Commission has not yet accepted the 80/20  
13 proposal as being a final decision, that we are required to  
14 present the information and litigate that issue within this  
15 proceeding.

16           So, I don't think it precludes us or the Commission  
17 from drawing the conclusion at the end of this proceeding  
18 that we can maintain our position on the existing ECR, that  
19 it is an option available to the Commission.

20           Q So, you are asking the Commission to do that, then?

21           A. And that is one of the reasons why I have  
22 outlined the beginning, much as I had in the ECR-8 testimony,  
23 the history of the clause, how we got where we are, and what  
24 benefits and detriments and incentives are available to the  
25 company under the existing ECR.

1           It sets the framework in order for the Commission to  
2 make a reasonable judgment as to whether the company should  
3 stay where we are or shift to an 80/20 type clause.

4           Q. My next question goes to the implementation of  
5 your projected energy cost rate factor. You stated earlier  
6 in cross-examination with Ms. Chestnut that if Mr. Carroll  
7 were to reach the conclusion that fuel prices would in the  
8 future be different from what is included in your current  
9 ECRF projection, that you might file a different projection  
10 at the end of this case.

11           A. I utilized that as an example, yes. There are  
12 other elements within the case that also I would think it  
13 would be appropriate to work those in.

14           Q. But, for example, if the company were to change  
15 its outage schedule for its plant, would that also be  
16 incorporated?

17           A. If it was a significant change, I think it should  
18 be incorporated. Mr. Carroll and his staff in our electric  
19 production department receive changes on the availability of  
20 units on a regular, routine basis.

21           And if in his evaluation there is some significant  
22 change that should be brought to the attention of all parties  
23 in this investigation and it has a significant effect on the  
24 company's energy cost, I think it should be incorporated, if  
25 it can be done so on a timely basis.

1 Q Is it fair to assume that if the ECRF was  
2 changed from the current projection due to factors such as  
3 fuel prices or outages, the company would in some way flag  
4 or indicate what those specific changes were?

5 A Yes, I think we would.

6 Q And now if I could refer you to page 20 of your  
7 testimony, it is my understanding that starting on page 20  
8 you discuss the effect of the 80/20 on the level of energy  
9 cost in base rates, is that correct?

10 A Yes.

11 Q And in effect, what you are saying is that the  
12 level of energy reflected through the base rate charge which  
13 the company is proposing in this case will not change in any  
14 manner as it might be affected by the ECRF that you are  
15 projecting?

16 A That is correct, and in that explanation, I try  
17 to explain why it would be a senseless exercise to unravel  
18 that, since the company's cost allocation and proposed  
19 distribution of increase is all integrally tied to that  
20 D-21 adjustment that the company made in its initial filing  
21 back in September, that it would be unnecessary to shift  
22 the base to an alternate.

23 You would still get the same results, since the  
24 reconciliation is going to apply to 80 and 20 percent of  
25 total energy costs.

1           And how they are apportioned between, quote, "base  
2 rates" and a factor really has no bearing on the final  
3 result.

4           In addition, as a part of the Commission's Order, on  
5 the customer's bill, at least from a customer's perspective,  
6 the customer will see no differentiation because currently  
7 we have three line items on our bill.

8           We currently have the base bill, the ECR factor, ECR  
9 portion of the bill and the state tax adjustment. Under the  
10 Commission's Order as it is outlined now, the ECR factor and  
11 the base rate bill will be rolled together as one component  
12 and will be actually the base rates for the customer, and  
13 only that component and STAC will be appearing on customers'  
14 bills.

15           Q. And with that explanation, that means that the  
16 fact that the company is lowering these base energy costs  
17 from approximately 28 mills to approximately 21 mills is  
18 really more an accounting mechanism, because the actual  
19 overall bill will reflect the projected overall energy  
20 costs in the ECRF?

21           A. Yes. I would say not only accounting, but also  
22 cosmetic. It is really an arbitrary base at that point.  
23 All we are doing is, whether our adjustment would be from  
24 20 mills up to another value or 21 mills, it really doesn't  
25 matter, mechanically.

1           Q.    And    the company reduced the energy portion of  
2 the base rate by 7.355 mills because that number worked out  
3 to the average two year energy savings projected by the  
4 company for the addition of Limerick 1?

5           A.    Yes.   That was the mathematical fallout.

6           Q.    But in the first year that rates will be in  
7 effect, what ratepayers will be actually billed as a result  
8 of Limerick energy savings should they occur will not be the  
9 \$270 million, but actually those energy costs that are  
10 projected in the new ECRF?

11          A.    I think to answer your question, I have to go  
12 back to what our initial plans were when we made our filing  
13 in September, and how our plans for implementation at the  
14 end of this case are now before us with the 80/20 clause.

15               Initially, when we filed in September, the company  
16 was going to make no change to its ECR at the conclusion of  
17 this rate proceeding.

18               We were going to reduce base rates by 7.355 mills per  
19 kilowatt-hour at the same time any base rate increase would  
20 take effect.

21               The energy cost rate that was in effect at that time  
22 would be computed on the basis of Limerick 1 not being in  
23 service.

24               And therefore, the mechanism to pass back the energy  
25 savings would occur not through the energy cost rate

1 mechanism, but through base rates. That was our initial  
2 plan.

3 And the fuel costs that would have been included in  
4 that ECR would have been the ones that would have been  
5 filed to become effective April 1, 1986.

6 We did not have the data available to us at that time,  
7 so we were unable to supply that information of what that  
8 estimate would be to customers.

9 As we stand today, we are going to lower the base  
10 cost of energy by the same amount, the 7.355 mills, but we  
11 are going to calculate energy costs based on the specific  
12 fuel and interchange expenses that we filed with my  
13 testimony and Mr. Carroll's testimony, which reflects the  
14 full level of operation in the first year for Limerick  
15 Unit No. 1.

16 So, from where we were to where we are really  
17 represents not only a change in the amount of energy savings  
18 flow-through, but also a difference in fuel and interchange  
19 estimates, one on a basis that would have been made back  
20 prior to April 1, and now another one based upon estimates  
21 that we have before us today.

22 Q. Do you know if the company has prepared any  
23 projections of what the first year energy savings are as a  
24 result of Limerick I as would be reflected in the ECRF that  
25 you are using now?

1           A.   The first year fuel savings? We have analyzed,  
2 we have looked at the first three years, which was required  
3 based upon what we think to be the best guess conditions  
4 that we have before us, and then we did the two sensitivity  
5 cases.

6           In addition, we have looked at the long-term effect  
7 without Limerick in there, to see what the energy savings is.  
8 I think that the numbers are quite similar to those that  
9 were utilized in developing the D-21. In fact, my  
10 recollection is, they are very close.

11          Q.   So, my recollection was that in the first year,  
12 the savings from Limerick were approximately \$154 million,  
13 \$155 million. So, if what you describe is going to be, then  
14 the first year, ratepayers will not see a reduction of  
15 energy savings due to Limerick of \$207 million, but rather  
16 150-some million dollars, is that correct? I am talking  
17 about in the first year.

18          A.   In the first year, with that single element, all  
19 else being held constant, the answer to your question is yes.  
20 But all else was not held constant.

21           The company's latest projections of fuel and unit  
22 availability have shown that the average cost of energy is  
23 coming down.

24           And by utilizing this more recent data, the customers  
25 will see additional energy savings benefits, not specifically

1 from Limerick, but the other operations on the PJM flowed  
2 through as an additional benefit to customers.

3 Q I understand that. But when you did your energy  
4 savings benefit analysis for Limerick 1, you did it with  
5 Limerick 1 and without Limerick 1, and everything else is  
6 held constant.

7 So, you would do that again today, everything else  
8 would be held constant and you would be identifying the  
9 savings due to Limerick, and I thought you indicated that  
10 was about in the same ballpark.

11 A It would be about in the same ballpark, yes.

12 Q Which would be about \$150 million to \$155 million?

13 A In that -- I don't know the exact number, but it  
14 is somewhere within that range.

15 Q And secondly, while your initial plans were that  
16 the \$207 million represented a two-year average and there  
17 would potentially be a stay-out of two years in base rate  
18 filings, as you are presenting it now, I understand that  
19 next year you will revise the ECRF again to be effective  
20 June 30, 1987, and that will include a new production  
21 forecast, including your forecast for the output from  
22 Limerick 1?

23 A Yes, and that would be submitted well before the  
24 implementation of that.

25 Q So, whether or not the additional energy savings

1 that you had projected for Limerick 1 are flowed through to  
2 ratepayers depends on what happens over the course of the  
3 next year and what your forecast is for the year after for  
4 the operation of that plant?

5 A. Which is in essence the same conditions that  
6 existed as we originally had planned on filing it or have  
7 it become effective, since the energy cost rate, ECR No. 10,  
8 which would be scheduled to take effect November 1, 1986  
9 would expire on March 31, 1987, at which point -- actually,  
10 two months prior to that -- there would be a reconciliation  
11 of over/underrecovery, and then we would go forward with  
12 another prospective estimate.

13 Q. So, the actual difference, then, in your opinion,  
14 is that for the coming year, the energy savings as a result  
15 of Limerick 1 operation as seen by ratepayers on their bills  
16 will be lower by about \$50 million; after that, everything  
17 will be reconciled for actual energy costs as it would have--

18 A. As we initially filed it, is that what you are  
19 saying, or --

20 Q. Okay, I'll restate it. The main difference  
21 between how you originally perceived what would happen in  
22 this case with Limerick energy savings and what you now  
23 perceive will happen is that ratepayers will see \$50 million  
24 less of energy savings in the first year, approximately, and  
25 after that you would have reconciled total energy costs in

1 any event, is that correct?

2 A. Not quite. It's not \$50 million, and it's not  
3 one year. As I indicated, the ECR would have changed on  
4 April 1, 1987, so we are talking about nine months. And  
5 there would be various, whatever the effect happened to be  
6 for that nine month period.

7 All we are doing here is really more accurately  
8 aligning the fuel savings benefit with the actual operation  
9 of the unit, as opposed to our initial presentation that  
10 was made in September, which was a levelization over a  
11 two-year period, that package being put together without  
12 knowing what the final result is going to be in the ECR-8  
13 investigation, which was obviously a complicating factor.

14 Q. And finally, to the extent the total amount of  
15 the rate increase in this case is discussed by people, the  
16 base rate increase is approximately \$878 million and it is  
17 no longer a net case of approximately \$670 million, is that  
18 correct?

19 A. I don't think that is really a fair comparison.

20 Q. Well, would you agree that it is no longer a net  
21 case of about \$670 million?

22 A. Are you saying is the -- the base rate impact is  
23 exactly the same as it was before. The operation of the  
24 energy cost rate was always hanging out there with the  
25 variability, the unknown variability.



1 were all on the same basis. What was typed on these sheets  
2 was an incorrect tabulation of the sales for the period  
3 July, 1986 through June, 1987.

4 There was no update of data. It was just totally  
5 incorrect. In fact, I think if you go back to the sheet,  
6 the original sheet, you'll see up in the title it says,  
7 "Estimated Sales from April of 1986 through March of 1987."  
8 It was out of sync in time, and it was the wrong sales  
9 numbers to boot. So, this is just a correction.

10 Q So, the production cost run that the company  
11 supplied as part of Interrogatory GEC 4-1 is still a current  
12 and valid production cost run?

13 A Yes, it is.

14 Q Mr. Carroll is the witness to ask questions about  
15 on those cost runs?

16 A Yes.

17 Q You mentioned with Mr. Wersan that there would be  
18 several elements that would determine the need to recompute  
19 your ECRF. Would a significant disallowance in the Limerick  
20 1 rate basing, say of half a billion dollars, be such an  
21 element to determine whether or not to readjust the ECRF?

22 A No. Number one, that fact wouldn't be known to  
23 me until after the record was closed and the Commission had  
24 made their final decision.

25 And number two, the actual cost of plant or the

1 allowed plant in service that the Commission recognizes  
2 has no bearing on the operation of an energy cost rate.

3 Q Could you turn to your energy cost rate factor,  
4 which is Schedule 2 of your testimony? I am looking at  
5 2nd Revised Page No. 31.

6 At the bottom of that page, the bottom full paragraph,  
7 there is a sentence that talks about excluding company's  
8 energy costs for units whose costs are not currently reflec-  
9 ted in base rates. Could you explain that exclusion for me,  
10 please?

11 A Yes. That is a parallel paragraph to the one  
12 that is in the company's existing energy cost rate. And  
13 what that does is, it synchronizes any effect associated  
14 with a base rate increase on a new base load unit with the  
15 fuel savings benefit flowing through to customers.

16 The period of time after a unit is declared  
17 commercial and until such time as it is included in any  
18 base rate determination is, let's call it a dead period, if  
19 you will.

20 And in order to prevent fuel savings from flowing  
21 through, this paragraph would keep that element out of the  
22 energy cost rate mechanism.

23 It is very similar to the test power provision which  
24 applies on the precommercial generation. However, in that  
25 circumstance, the precommercial generation is capitalized as

1 a credit against the cost of the plant.

2 Q So, you are saying then that once any portion of  
3 the unit's cost gets included in base rates, then they  
4 become subject to the ECRF?

5 A Yes.

6 MR. CLARK: I have no further questions.

7 JUDGE MATUSCHAK: Mr. Kleppinger?

8 MR. KLEPPINGER: Thank you, Your Honor.

9 CROSS-EXAMINATION

10 BY MR. KLEPPINGER:

11 Q Good afternoon, Mr. Hill.

12 A Good afternoon, Mr. Kleppinger.

13 Q I would like to look primarily on page 21 of your  
14 testimony, if you would turn there, please. At lines 19  
15 through 27, you indicate that the level of fuel cost in  
16 base rates will have no impact on the operation of an 80/20  
17 ECR. Now, is that statement based on the company's believe  
18 that the Commission's ECR-8 Order requiring you to file an  
19 80/20 clause relates primarily to the reconciliation of  
20 fuel costs of PECO and not to the collection mechanism of  
21 those fuel costs?

22 A My statement is based upon the reconciliation  
23 aspect of it. There is obviously rate impacts, if one is  
24 to define base costs versus fuel adjustment clause, because  
25 they are handled differently for cost allocation purposes by

1 Mr. Sundermeier.

2 Q In terms of this statement, you are not  
3 suggesting at any point, are you, that a given percentage  
4 of total fuel costs be collected in base rates versus the  
5 ECRF?

6 A I think that is correct, because basically as I  
7 describe, the company really is going to have all its fuel  
8 costs in a base rate element, since this ECRF will be acting  
9 much like a rider to base rates, and appearing, as the  
10 customer sees it, as all base rate revenue.

11 Q Later on on that page, beginning at lines 41 and  
12 carrying over to page 22, you mention that the proposed fuel  
13 rollout of the 7.355 mills is part of the basis for the cost  
14 study, the allocation of the increase, the rate design and  
15 the phase-in calculations, is that correct?

16 A Yes, that's correct.

17 Q Now, if that amount of fuel rollout, or if the  
18 amount of fuel in base rates, the 20.8 that we have heard  
19 discussed, is modified, am I correct that that has implica-  
20 tions for the cost study and the rates of return produced in  
21 that cost study?

22 A Yes, it will.

23 Q And that will vary --

24 A By individual classes of service, but not on a  
25 composite basis for the total company.

1 Q. That's correct. And is it true that it will  
2 vary on a class by class basis at least partially because  
3 of the difference in the way fuel costs are allocated in  
4 the cost study based on sales levels or generation levels,  
5 kilowatt-hours?

6 A. That is correct.

7 Q. Now, the second item that you say it affects is  
8 the allocation of the proposed revenue increase. If the  
9 amount of fuel in base rates would be modified to some  
10 extent, the allocation among the customer classes of this  
11 \$670 million increase could change also, is that true?

12 A. I believe that is correct, yes.

13 Q. And is one of the reasons that that would occur  
14 attributable to the fact that the company has decided to  
15 allocate this increase among customer classes on essentially  
16 an equal percentage basis, including that fuel component?

17 A. Including the reductive effect of the roughly  
18 7.5 mills.

19 Q. Had the company distributed this increase among  
20 customer classes as it had in the prior proceeding, is it  
21 true that whatever happened to that fuel component of base  
22 rates would not have affected the distribution of the  
23 increase among the customer classes?

24 A. Prior to this case, it is my recollection that  
25 the company employed something akin to the zero fuel

1 methodology. We have not employed that methodology in this  
2 proceeding.

3 Q And that zero fuel methodology would have made  
4 the distribution of the increase independent of whatever  
5 portion of fuel was included in base rates?

6 (No response.)

7 Q Perhaps I can clarify that.

8 A I don't think that is quite correct, because even  
9 under the zero fuel methodology, we recognize the differences  
10 between sales and net generated on the associated losses  
11 between various classes of service for the base component  
12 of fuel.

13 Q It would have cost of service implications, but  
14 it would not have the dramatic effect on the percentage  
15 increases applied to the customer classes, because the fuel  
16 component is removed before the increase is applied, is that  
17 correct?

18 A That is correct.

19 MR. KLEPPINGER: Thank you, Mr. Hill.

20 I have no further questions, Your Honor.

21 JUDGE MATUSCHAK: Any further cross-examination?

22 (No response.)

23 JUDGE MATUSCHAK: Any redirect?

24 MR. MacGREGOR: I have no redirect, Your Honor.

25 (Witness excused.)

1 MR. MacGREGOR: Your Honor, the company calls its next  
2 witness, Mr. John J. Carroll. He's been previously sworn.  
3 Whereupon,

4 JOHN J. CARROLL

5 having previously been duly sworn, testified further as  
6 follows:

7 MR. MacGREGOR: Your Honor, I have previously  
8 distributed to the parties copies of a document entitled  
9 "Supplemental Direct Testimony of John J. Carroll, Data  
10 Requirements of ECR No. 8 Order, Appendix B, Explanation  
11 of Revised ECR Projection, Energy Cost Scenario Analyses."

12 I would ask that that document be marked for  
13 identification purposes as PECO Statement Number 22-A.

14 JUDGE MATUSCHAK: So marked.

15 (Whereupon, the document was  
16 marked as PECO Statement No.  
22-A for identification.)

17 MR. MacGREGOR: In addition, Your Honor, I have  
18 distributed copies of a document entitled "Exhibit to  
19 Accompany Supplemental Direct Testimony of John J. Carroll,  
20 Data Requirements of ECR No. 8 Order, Appendix B," and  
21 I would ask that that be marked for identification purposes  
22 as PECO Exhibit JJC-1.

23 JUDGE MATUSCHAK: So marked.

24 (Whereupon, the document was  
25 marked as PECO Exhibit No.  
JJC-1 for identification.)

## DIRECT EXAMINATION

1  
2 BY MR. MacGREGOR:

3 Q Mr. Carroll, do you have before you a copy of  
4 the document which has been marked for identification pur-  
5 poses as PECO Statement Number 22-A?

6 A I do.

7 Q Is this document in fact a copy of your supple-  
8 mental direct testimony in this proceeding?

9 A It is.

10 Q Was this document prepared by you or under your  
11 direct supervision?

12 A Yes, it was.

13 Q Mr. Carroll, if you were asked the same questions  
14 that are in this document again today would your answers  
15 be the same as those contained therein, and would they be  
16 true and correct to the best of your knowledge?

17 A Yes, they would.

18 Q Mr. Carroll, were you also responsible for the  
19 preparation of the document which has been marked for  
20 identification as PECO Exhibit JJC-1?

21 A Yes, I was.

22 Q Mr. Carroll, is the information contained in  
23 that document true and correct to the best of your knowledge?  
24

25 A Yes, it is.

1 Q Mr. Carroll, do you have any additions or correc-  
2 tions to make to either of these documents at this time?

3 A No, I do not.

4 MR. MacGREGOR: Your Honor, I would ask that the  
5 documents that have been marked for identification as PECO  
6 Statement Number 22-A and Exhibit JJC-1 be admitted as  
7 evidence in this proceeding, subject to any timely motions  
8 to strike or other objections?

9 JUDGE MATUSCHAK: Under those conditions the motion  
10 is granted.

11 (Whereupon, the documents marked  
12 as PECO Statement No. 22-A  
13 and PECO Exhibit No. JJC-1  
were received in evidence.)

14 MR. MacGREGOR: Your Honor, Mr. Carroll is available  
15 for cross-examination.

16 JUDGE MATUSCHAK: Trial Staff?

17 MS. CHESTNUT: Thank you, Your Honor.

18 CROSS-EXAMINATION

19 BY MS. CHESTNUT:

20 Q Good afternoon, Mr. Carroll.

21 A Good afternoon, Ms. Chestnut.

22 Q Mr. Carroll, am I correct that in order to derive  
23 the company's anticipated fuel savings associated with  
24 Limerick you ran your model with and without Limerick for  
25 a two-year period ending June 30, 1988?

1 A That is correct.

2 Q And these estimates were supplied in the response  
3 to a Staff interrogatory?

4 A That is correct.

5 Q Now in response to the Commission's ECR-8 Order  
6 did you re-examine the estimates that you used to derive  
7 that anticipated energy savings?

8 A Yes, we did. We re-evaluated the system condi-  
9 tions that we would expect to be in place starting on  
10 July 1, 1986, based on our latest knowledge of fuel cost,  
11 outages and any other changes we saw in the system, and  
12 completely revised the estimate based on the latest informa-  
13 tion we had.

14 Q Did you update the fuel prices used?

15 A We updated the fuel prices to the latest fuel  
16 prices, which have been presented in the base rate filing,  
17 which essentially lowered the coal prices and left the  
18 oil prices the same.

19 Q Did you revise the maintenance schedules?

20 A There were several revisions to the maintenance  
21 schedule. We used the latest one.

22 Q Can you tell us what the changes were, what units  
23 they were associated with?

24 A I can't tell you all of the changes. Right now  
25 the most significant change was that the Peach Bottom pipe

1 replacement outage was extended in duration, the Limerick  
2 refueling outage was moved forward in time, there were  
3 minor changes in timing of the other outages; I don't have  
4 all of the changes specifically, but those two that I  
5 mentioned are the two most significant ones.

6 I think one other significant thing was that the  
7 TMI Unit No. 1 was returned to service, and in the answer  
8 to the ECR-8 Order it was not an operating unit in the  
9 base rate filing initial situation.

10 Q To get back to your response with respect to  
11 Peach Bottom, am I correct that what you did was you  
12 extended the length of the maintenance outage -- you kept  
13 the same time but you extended it?

14 A We extended the length. It was approximately  
15 the same time. I can't say it started that same week,  
16 but approximately at the same time, but we did extend it,  
17 yes.

18 Q And whereas for Limerick you kept the same length  
19 of outage but you moved it to a different time?

20 A I think -- we moved it to a different time. We  
21 may have extended the length of it a week or two; I'm not  
22 sure on that. Primarily it was the same length.

23 Q Would you check on that and get back to us?

24 A Check on?  
25

1 MS. CHESTNUT: Your Honor, I would like to make  
2 that an on the record data request.

3 THE WITNESS: Would you please specifically say  
4 what you would like me to check on?

5 BY MS. CHESTNUT:

6 Q Sure. I want to know how the maintenance  
7 schedules were revised; I should say the major revisions  
8 to the maintenance schedules used.

9 A Major revisions?

10 Q Yes.

11 MR. MacGREGOR: We will provide that.

12 BY MS. CHESTNUT:

13 Q Did you change the forced outage rates, Mr.  
14 Carroll?

15 A There were some changes to forced outage rates,  
16 as is a continual process within the production cost area,  
17 the Services Group; they are always reviewing the forced  
18 outage rates, the data supplied by other companies, and  
19 doing their typical evaluation, as I have commented on that  
20 many times with respect to an analysis of ProdCost, and  
21 using revised updated extended data as to what the forced  
22 outage rates of different units should be; so there were  
23 some changes to forced outage rates.

24 Q Were there any major changes, to your knowledge?

25 A It depends upon what your definition of major

1 is compared to mine. We did reduce the forced outage rate  
2 on Keystone -- one of the Keystone units; we dropped one  
3 of the Keystone units. We raised --

4 Q Did a wash?

5 A That's hard to say. I didn't really look at  
6 them to see whether the availability and the weighted average  
7 on both of the units was exactly the same; very close to  
8 a wash, but there were changes. One I know went from 25  
9 or something down to 17. The other one -- no, I think  
10 in the predictions they were actually a net gain because  
11 the other one I think was around 22, is what we used,  
12 and it went up to about 25. In the predictions it was  
13 about a net gain -- it was a net gain.

14 Q How about the other units; were there any major  
15 changes there?

16 A There were some -- there was a complete review  
17 of the forced outage rates, as is traditon. I did not  
18 make an analysis of what was in one versus what was in  
19 the other because that is not normally our process, to just  
20 say: what did we use last time; what are we using this  
21 time?

22 Our process is to look at what the history is, what  
23 the reasons are, what the basis for the forced outage  
24 is, and use it, and not say: okay, is that the same thing  
25 I used last time?

1 We make an independent judgment of what should be  
2 used this time, so that I can't really tell you all of  
3 the changes. I know there was an interrogatory request  
4 asking us for some of the differences, and we supplied  
5 them, and that's the reason why I know some of the ones  
6 that I just reiterated to you.

7 Q Were the fuel escalation rates changed, to your  
8 knowledge?

9 A Only with respect to the fuel prices that I just  
10 commented to you. Oil prices did not change because the  
11 projection is not there. Coal price was lower and, to the  
12 best of my knowledge, was a lower starting point and the  
13 escalation rate was the same, but they were in line with  
14 the last fuel projection which we'll put in base rates.  
15 If that created a slightly different escalation rate, then  
16 it did change the escalation rate. If it kept it the  
17 same, then it stayed the same.

18 Q I'm not sure I follow that, Mr. Carroll. Did  
19 you take a lower price and apply the same escalation rates  
20 to it?

21 A What we do is we take the fuel projection and  
22 we convert the fuel projection in dollars per unit quantity  
23 into an escalation rate, and then we apply that escalation  
24 rate in the production cost program. So the latest fuel  
25 projection cost in dollars per quantity which was put in

1 base rates was converted into an escalation rate so that  
2 we could use the escalation rate in the program. So what  
3 I'm saying is we put those dollars per unit quantities  
4 in. Whether that developed a different escalation rate  
5 or not I really don't know.

6 Q Mr. Carroll, did you change the variable O&M  
7 rates when you redid this.

8 A I have to think of the timing of the year right  
9 now. We made the other one in 1985; we made this one in  
10 1985. The variable O&M rates for use in production costs  
11 incremental schedule loading is updated on an annual basis.  
12 Therefore, they would have been the same because it would  
13 have been updated in approximately the first quarter of  
14 '85 and not updated again until the first quarter of '86.

15 Q Now, in response to (3)(i) of the Commission's  
16 Order you provide comparison unit data. Is the average  
17 operating cost the number that is calculated directly  
18 from the output of ProdCost?

19 A Yes, it is.

20 Q You don't adjust it, in other words, the results?

21 A I'm sorry; I don't know what you mean by "adjust  
22 it."

23 Q Well, you don't do anything to the result  
24 generated by ProdCost?

25 A No, we do not because we have nothing to -- we

1 have no projections aimed at the future of the O&M costs  
2 to do anything with. The only thing we are projecting  
3 into the future is the fuel costs, so that's what we are  
4 giving you the average operating costs for.

5 Q Do the future years ending June 1988 and June  
6 1989 reflect the input of the fuel escalation rate during  
7 the base period? You might have answered this already.

8 A Yes, they do.

9 Q I wasn't sure.

10 Now, in your response about the input data, Mr.  
11 Carroll, on page 1 you note that the annual factors for  
12 fossil fuels escalation starts in 1985 and goes to 1995;  
13 is that correct?

14 A I'm sorry.

15 Q I think I might have -- I think there is an  
16 easier way for me state that.

17 On your input data explanations, which is (1)(ii)(b),  
18 Production Cost Model Input Data.

19 A Yes.

20 Q I'm not exactly sure where it is in here, but  
21 someplace you say that the annual factors for the fossil  
22 fuel escalations starts in 1985 and it goes to 1995; is  
23 that correct?

24 A Yes, that's on the first page of (1)(ii)(b),  
25 reference card 5, columns 14 to 72.

1 Q Right.

2 A Yes.

3 Q So if we turn to page 5 -- it's marked Sheet  
4 5, and it follows your input data there, and it says,  
5 "Fossil fuel escalation curve."

6 A Yes.

7 Q Do you see that reference, Mr. Carroll?

8 A Yes.

9 Q We see it has got a value of 1.000 for the  
10 first number, 1.00 for the second number; is that correct?

11 A That is correct.

12 Q And what that means is that there is no change  
13 estimated in fuel price for the coal units over that time  
14 period?

15 A That is because of the fact that the coal prices  
16 we put into this particular program for purposes of this  
17 calculation were prior to the beginning of 1985. So that  
18 we would not want then to escalate the prices -- we didn't  
19 backdate to the beginning of 1985 to put the prices in;  
20 we put the prices in that we are using today. What those  
21 prices would do is we multiplied by that factor to get  
22 to January, first quarter, 1985, and then multiplied by  
23 another factor from there to get to the first quarter  
24 of 1986. There was no way we wanted to take the fourth  
25 quarter prices of 1985 and multiply them by a factor to

1 get to the first quarter of 1986. So you have to look  
2 at the time frame of how this program is being used and  
3 the input numbers that you are putting in to determine  
4 how you use those particular factors.

5 We were putting in fourth quarter 1985 fuel prices.

6 Q Okay, and if we continue reading on that line,  
7 Mr. Carroll, the next value is 1.134. Am I correct that  
8 what this means is that in 1987 there will be a 13.4 percent  
9 increase in coal prices?

10 A No, that means there will be a 13.4 percent  
11 increase on the coal price which is in the particular  
12 computer program at this time, which represents fourth  
13 quarter 1985 prices, to get it to the first quarter of  
14 1987 prices. So, yes, it would be 13.4 percent above the  
15 fourth quarter 1985 prices for the first quarter of 1987.

16 Q Now, Mr. Carroll, if we go to Sheet 13 of this  
17 same section here, you list there the 1986 seasonal fuel  
18 cost factors; is that correct?

19 A Yes.

20 Q And am I correct that the purpose of this is  
21 to modify the fuel costs for certain times of the year?

22 A That's correct.

23 Q And if we look at the first line, which is  
24 identified as coal, we see a factor of 1.031; is that  
25 correct?

1 A Yes.

2 Q And what that means is that at the time you pre-  
3 pared it it was predicted a 3.1 percent increase in the  
4 coal price for the first quarter of 1986?

5 A That says that the first quarter of 1986, yes,  
6 would be 3.1 percent over and above what we had experienced  
7 or what the input item was in the coal costs that we were  
8 looking at.

9 Q And the number 13 indicates the second quarter,  
10 and 27 indicates the third quarter, etcetera; is that correct?

11 A Yes. What they represent is the week number in  
12 the course of the year when those particular factor --  
13 increases would go into effect. They go in the first week  
14 of the year, the 13th, the 27th and the 40th week of the  
15 year.

16 Q And the seasonal factors were applied every year  
17 to the calculation of fuel prices which the model uses;  
18 is that correct?

19 A They are applied -- a seasonal factor is applied  
20 for the particular year. This is listed as the 1986  
21 seasonal fuel factor cost. If there was a 1987 you would  
22 see that one, or it would revert back to the previous one.

23 Q Now, Mr. Carroll, in your response to the ECR-8  
24 Order you did not normalize the maintenance schedules;  
25 is that correct? You updated it, your revised it, but

1 you didn't put it on a normalized basis?

2 A I'm not sure I exactly understand what you mean  
3 by putting the maintenance schedule on a normalized basis.

4 Q Do you know what the term "normalized" means?

5 A Yes, I fully understand what "normalized" means.  
6 I just don't understand what you mean by putting the  
7 maintenance schedule on a normalized basis for ProdCost  
8 purposes.

9 Q When you revised your model you updated it to  
10 reflect actual flow, your prediction of the actual events  
11 that will occur in the coming year?

12 A That is correct.

13 Q Am I correct that for forced outage rates you  
14 used a rate which you determined best predicted the  
15 operation on a daily basis?

16 A No, I don't think that's -- I don't think that's  
17 the purpose of a forced outage rate. I think the purpose  
18 of a forced outage rate is to try and spread the hours  
19 when a unit is off due to other than planned and mainten-  
20 ance outages or reduced in generating capability due to  
21 planned and maintenance outages across the course of the  
22 period of study -- in this case we are looking at a three-  
23 year study -- such that the forced outage simulator within  
24 the ProdCost program will give you a reasonable reduction  
25 of generating capabilities; and I don't think it is meant

1 to turn around and say on a daily basis that we are trying  
2 to predict what the forced outage rate is going to be.

3 Q Mr. Carroll, do you have with you the company's  
4 response to IR-Staff-REO-19?

5 A No, I do not.

6 MS. CHESTNUT: Your Honor, we just received this,  
7 and I didn't have an opportunity to make copies, so I can  
8 show my copy to Mr. Carroll, and have it marked as an exhibit  
9 and provide copies later, if Your Honor would like me to.

10 JUDGE MATUSCHAK: Very well.

11 MS. CHESTNUT: Your Honor, I request that Staff  
12 Exhibit 21 -- that this interrogatory response be marked  
13 for identification as Staff Exhibit Number 21.

14 JUDGE MATUSCHAK: So marked.

15 (Whereupon, the document was  
16 marked as Trial Staff Exhibit  
17 No. 21 for identification.)

18 BY MS. CHESTNUT:

19 Q Have you had a chance to peruse that, Mr.  
20 Carroll?

21 A Yes, I have.

22 Q And am I correct that the answer uses the phrase  
23 "day-to-day operating conditions"?

24 A Yes, it does, but it is not referring to an  
25 individual unit day-to-day operating conditions; it is  
referring to the day-to-day operating conditions of PJM

1 collectively. And when you asked me the question originally  
2 I got the impression you were talking about a forced outage  
3 rate used to simulate the day-to-day operations of each  
4 individual unit.

5 The forced outage rate is used to simulate the  
6 unavailability of the machines and collectively to  
7 simulate the day-to-day operations of the PJM as a  
8 collective supply of energy to the PJM load.

9 Q And you have employed a certain amount of  
10 operating experience and engineering judgment, is that  
11 correct, in arriving at this?

12 A I think that is necessary. Definitely the answer  
13 is yes, and that is necessary in any work with a production  
14 cost or any type of a predicting program that is trying  
15 to say what is going to happen in the future, that the  
16 man who is responsible for that has to put some sort of  
17 a judgment into it as to its inputs.

18 Q Staff Exhibit 21 refers to Keystone Unit 2.

19 A That is correct.

20 Q Did you do a similar adjustment for Conemaugh  
21 based on your --

22 A The Conemaugh units in particular were not too  
23 far removed from the averages, and if you looked at the  
24 net effect of the large base load or coal units on the  
25 PJM it is not necessary to adjust them all; it is only

1 necessary to adjust some. Keystone seemed to be an appropriate  
2 one to make an adjustment on for several reasons. One, it  
3 was a joint-owned unit so it had the impact of adjusting  
4 everybody, and it wasn't necessary to make more than one  
5 for this particular run.

6 Q How about Cromby? Did you find it necessary to  
7 adjust Cromby?

8 A Cromby No. 1? Not to my knowledge, no.

9 Q How about Eddystone; did you adjust Eddystone?

10 A We did not adjust Eddystone for that reason.  
11 We did adjust the rates on Eddystone based on some history,  
12 but we did not make the adjustments on Eddystone for that  
13 particular reason.

14 Q Now, Mr. Carroll, you included data with respect  
15 to Limerick Unit 1. Am I correct that your assumption  
16 on the operation of your model results in a predicted  
17 capacity factor for Limerick Unit No. 1 in 1987 of 55.8  
18 percent?

19 A I think that's the number I used in my testimony,  
20 yes.

21 Q And for 1988 71.7, and for 1989 57 percent?

22 A That's correct.

23 Q And the difference in capacity factors is due  
24 to a scheduled refueling outage; is that correct?

25 A There are two things that are different, that

1 cause the difference in capacity factor. One is the refuel-  
2 ing outage, and, secondly, is the fact that we have put  
3 an immature forced outage rate on Limerick in the first  
4 year, and a mature forced outage rate at the end of the  
5 fifth year, and it goes between the first and the fifth  
6 year on an empirical type curve where it takes a very big  
7 drop from the initial year to the second, and then a smaller  
8 drop on everything until it finally gets down to the fifth  
9 year and starts operating at the mature forced outage rate.  
10 So we have a drop in forced outage rate going down in time  
11 for those three years, as well as the refueling outage  
12 or end-of-cycle outage.

13 Q What is that empirical curve based on? Is it  
14 based on the operating history of the similar types of  
15 plants to Limerick, or all nuclear units?

16 A It's based on all plants that have been used  
17 in production costs by the industry, to the best of my  
18 knowledge, for about ten years, since it has been developed;  
19 and it was an industrywide evaluation and analysis of the  
20 reduction in forced outages.

21 Q Mr. Carroll, in any of your analysis here has  
22 any modification or adjustment been made to reflect the  
23 possible lack of water for Limerick?

24 A Limerick is predicted in these particular  
25 production cost curves as having full water availability,

1 and, therefore, no reduction in output due to lack of cooling  
2 water.

3 Q Mr. Carroll, does your analysis incorporate the  
4 improvements testified to by Mr. Gallagher today?

5 A We have evaluated some of the improvements of  
6 the past and included them in revisions to the forced  
7 outages. We have reviewed the improvements or projects  
8 that Mr. Gallagher has addressed and have specifically  
9 not reduced the forced outage rates because of deterioration  
10 which we know is going to happen and which Mr. Gallagher  
11 addressed. We have not specifically addressed an increase  
12 in availability, and I think that's in line with Mr.  
13 Gallagher's testimony that he can't quantify where he  
14 expects an increase because of the other deteriorations,  
15 the things that have been masked, the things that we don't  
16 know about yet but we are going to have to tackle in the  
17 future.

18 Q I'm not real sure I understand your answer, Mr.  
19 Carroll. Is it that you indirectly included these improve-  
20 ments in that you did not adjust the forced outage rates  
21 upward to reflect deterioration; is that correct?

22 A That's correct. We have not moved it upward  
23 to reflect deterioration because we think there are gains  
24 to be made which will offset the deterioration.

25 Q So to the extent that the improvements offset

1 this deterioration they were included; and to the extent  
2 that these improvements were greater than anticipated  
3 deterioration, they were not?

4 A As far as the past is concerned. As far as the  
5 past is concerned, we have included no projects in the  
6 past where we can see -- within the past three years --  
7 where we can see or we fully anticipate that there will  
8 be improvements made. As far as the ones in the future  
9 all we have done is offset deterioration.

10 Q Are we talking about projects that were concluded  
11 in the last three years or projects that perhaps were  
12 ongoing in the last three years?

13 A We are talking more projects that were completed  
14 during the last three years. I would like to also point  
15 out that there are some projects in the past and there  
16 is one project specifically in the future with respect  
17 to the nuclear units, they being the intergranular stress  
18 corrosion cracking and the generator failures at Salem,  
19 those have been eliminated from our projections of forced  
20 outages, the ones in the past because we felt they were  
21 catastrophic. We do not include catastrophic failures  
22 in our forced outages, so therefore those projects and  
23 the capital investment in those projects have been fully  
24 reflected because there is no catastrophic failures put  
25 into our forced outages.

1 Q Mr. Carroll, how many outages at Eddystone Unit  
2 have been due solely to operation of the scrubbers trains?

3 A Are you talking about full-down time or partial  
4 reductions when you say "how many outages"?

5 Q Full.

6 A To the best of my knowledge -- and I'm not sure  
7 of this, but I think there's been one time when we had  
8 to take the unit off, but there have been some reductions.  
9 Eddystone 2 not as significant in the reduction as Eddystone  
10 1 because Eddystone 2 has three 40 percent scrubbing  
11 trains; Eddystone 1 only has three 33 1/3.

12 Q Are you sure that is correct, Mr. Carroll?

13 A I said "to the best of my knowledge."

14 Q Is it not that Unit 2 has three 50 percent trains  
15 and Unit 1 has two 50 percent trains?

16 A Unit 1 has three 33 1/3 percent trains; Unit  
17 2 has three 40 percent trains. Cromby No. 1 has three  
18 50 percent trains.

19 Q Now, Mr. Carroll, at page 8 of your testimony  
20 you state that the capacity factors of the oil units are  
21 expected to decrease as a result of increased base load  
22 generation; is that correct?

23 A Yes.

24 Q When you talk about increased base load generation  
25 you are talking about Limerick, aren't you -- or are you

1 talking about Limerick?

2 A I'm talking about all base load generation.  
3 I'm talking about Limerick coming on, I'm talking about  
4 Susquehanna coming on, I'm talking about Oak Creek coming  
5 on, I'm talking about TMI returning to service, I'm talking  
6 about a better availability of both Salem and Peach Bottom,  
7 and I'm talking about better availability on all the coal  
8 units; and they all affect the oil generation.

9 Q Would you tell us what you mean when you state  
10 on page 8, line 27, that, "Cromby 2 is predicted to be  
11 low in the future test year due to a projected shutdown  
12 to permit full operation of the Limerick 1"?

13 A Yes. We are anticipating to get full water,  
14 but we will probably have to shut Cromby No. 2 down so  
15 that Limerick will be allowed to use the evaporative loss  
16 of the water from the Schuylkill as a result of Cromby  
17 No. 2's operation so we can run Limerick.

18 Q Mr. Carroll, what is a unique explainable  
19 situation? You use that term on page 10 of your testimony.

20 A Let me see where I used it.

21 Q Line 33.

22 A I was using that in reference to a situation  
23 -- I think the best example would be the pipe replacement  
24 outage projected in the future for Peach Bottom No. 2,  
25 which will be 52 weeks, okay? That is a unique explainable

1 prediction which I think should be accepted as a deviation  
2 from the norm.

3 Q I understand what you mean by the word "unique,"  
4 but what about "explainable"?

5 A I think I just gave you an explanation of a  
6 situation which is explainable. We must take that particu-  
7 lar unit down; we must change the piping out to meet an  
8 NRC requirement that will allow us to continue to operate  
9 that plant on an 18-month cycle. That is explainable to  
10 me.

11 Q Isn't that true of any work to be done during  
12 an outage?

13 A But it may not be a great deviation from the  
14 norm, and that's what we are talking about in here.

15 Q Does the concept of prudence enter into this?

16 A I think the concept of prudence is always  
17 available to the Commission, and I don't think there is  
18 anything that the company would ever try to put forward  
19 that would take away from the Commission their authority  
20 to examine the concept of prudence.

21 Q Well, you make the statement that PECO strongly  
22 believes that its plants should be compared to their  
23 own history.

24 A Yes.

25 Q What I am saying is: what if that history

1 includes some imprudent outages?

2 A Then I think the history should be modified to  
3 adjust for what the Commission says they did not feel was  
4 appropriate in the history.

5 Q Further on in your testimony, Mr. Carroll, begin-  
6 ning at page 20 you describe the sensitivity analyses that  
7 you did. Am I correct that you identified certain factors  
8 and ran two scenarios incorporating various combinations  
9 of those conditions?

10 A That is correct.

11 Q In what you referred to as the nuclear generation  
12 scenario you postulated that there would be reduced two-  
13 party purchases, higher fuel prices and lower PJM nuclear  
14 energy; is that correct?

15 A (Witness perusing document.)

16 Q That's on page 24 of your testimony, Mr. Carroll.

17 A That's what I'm looking for.

18 Reduced two-party purchases, higher fuel prices  
19 and low PJM nuclear energy; that is correct.

20 Q And the coal generation scenario has also  
21 incorporated the reduced two-party purchases and the higher  
22 fuel prices, but instead of the lower PJM nuclear energy  
23 it reflected low hydro power and low PJM coal energy?

24 A That is correct -- no.

25 Q No?

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A Correctly it reflected low PJM coal availability.

Q Okay.

A All right.

Q Now it is not your testimony, is it, that these particular combinations of conditions will occur in the future test year, is it?

A No, it is not my testimony that they would occur. If I thought they would occur -- would have occurred in the future test year, that would have been the case that I was trying to put forward to you people. The case that I am putting forward to you people is what I fully expect and, after consultation back at the company, what we expect will happen next year.

These are conditions that have a probability of occurring. Whether it is low or high, they have a probability of occurring, but it is not what we expect to occur.

Q Did you have any sensitivity analysis incorporating optimal conditions for these factors?

A I'm sorry; I don't know what you mean by "optimal."

Q Increased two-party purchases, lower fuel prices, etcetera.

A Well, we can't get increased two-party purchases because we are running the production cost program at the maximum import capability level of two-party purchases, so there is no probability without building additional

1 transmission that we could ever increase the two-party  
2 purchases.

3 Q How about lower fuel prices?

4 A We did not run one with lower fuel prices. We  
5 did not run one with higher hydro energy. We didn't run  
6 the opposite.

7 Q Thank you, Mr. Carroll.

8 MS. CHESTNUT: That concludes my questions, Your  
9 Honor.

10 JUDGE MATUSCHAK: We will take a five minute recess.

11 (Recess.)  
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1 JUDGE MATUSCHAK: When you're ready.

2 CROSS-EXAMINATION

3 BY MR. WERSAN:

4 Q Good afternoon, Mr. Carroll.

5 A Good afternoon.

6 Q I would like to refer you to your Exhibit JJC-1,  
7 Data Request (3)(i) where you give a comparison unit data  
8 report.

9 A Yes.

10 Q Am I correct that the information on the first  
11 page, for example, for your nuclear units where you give  
12 annual data is the result of your production cost run?

13 A That is correct.

14 Q So if we were to look at the capacity factors  
15 for each of your nuclear units, those capacity factors are  
16 the ones you are projecting at this point for each unit for  
17 the next three years; is that correct?

18 A That is correct.

19 Q Am I correct that the column marked "Average" on  
20 the far right-hand side is the average of the three years  
21 ending June 30, 1989?

22 A That is correct.

23 Q So that average does not incorporate the column  
24 "Historical Average"?

25 A That is the average of our projection as compared

1 to the historic average of our experience.

2 Q Do those figures show that only Peach Bottom  
3 Unit 2 is projected to have a capacity factor above or equal  
4 to 65 percent over the next three years on an average?

5 A That is correct.

6 Q If we were to average the capacity factors for  
7 all of your nuclear units for the next three years by averag-  
8 ing the far right-hand column, would you accept, subject to  
9 check, that that would be approximately 62 percent capacity  
10 factor?

11 A Yes, but I think you did an arithmetic average  
12 on that, did you not?

13 Q Yes.

14 A It should be done by a capacity weighting factor.  
15 If you got 62 percent on an arithmetic, it might be slightly  
16 lower because Limerick is two-and-one-third times as big  
17 as the other units, but it's in that range.

18 Q But you would agree with me that your three-  
19 year capacity factor projections do not show that the  
20 majority of the plants will operate at a level averaging  
21 65 percent?

22 A I do not anticipate that in the next three-year  
23 period. There are probably two major reasons for it. One  
24 is the pipe replacement for Peach Bottom No. 3, and the  
25 second one is a ten-year ISI inspection on Salem No. 1.

1 They are the two major reasons why it will not average  
2 65 percent.

3 Q An ISI inspection, is that an in-service inspec-  
4 tion?

5 A Yes.

6 Q When is that going to occur?

7 A It is going to occur in the outage of Salem Unit  
8 No. 1, which is due in the fiscal year ending 6-30-88. So  
9 I think it extends over the fiscal years 6-30-88 and 6-30-89,  
10 and it extends into that third year.

11 MR. WERSAN: Those are all the questions I have, Your  
12 Honor. Thank you, Mr. Carroll.

13 JUDGE MATUSCHAK: Mr. Clark.

14 CROSS-EXAMINATION

15 BY MR. CLARK:

16 Q Mr. Carroll, my name is Roger Clark. I represent  
17 the Governor's Energy Council.

18 Do you supervise the office that produces the produc-  
19 tion cost runs?

20 A No. My title is not such that I supervise the  
21 office that produces the energy cost runs. One of my  
22 responsibilities, though, is no production cost runs from  
23 Philadelphia Electric's Electric Production Department is  
24 released from the department without my approval.

25 Q But you are familiar with the operation of PECO's

1 generating facilities?

2 A. Yes. Up until 18 months ago, all those people  
3 worked for me.

4 Q. Are you also familiar with the operation of  
5 other units on the PJM system and how they interact with  
6 PECO units?

7 A. I'm not sure what you mean by "operation of  
8 the others." The economic loading of PJM and the dispatching  
9 of PJM, I am very familiar with that, yes.

10 Q. Now, Mr. Carroll, Mr. Wersan talked about the  
11 average nuclear capacity factors over the next few years  
12 of being in the 62 percent range area, and you mentioned  
13 the weighted average issue. You thought that might make  
14 that number a little bit lower, say 58 to 62 percent, some-  
15 where in there?

16 A. No. I think Mr. Wersan said it was 62, and I  
17 said if you weight it, Limerick No. 1 would probably drop  
18 it slightly below the 62. It is the biggest unit, and it's  
19 61.6. If you weight it, there is no way it could get down  
20 to 58.

21 Q. Mr. Carroll, let's suppose that PECO experienced  
22 a capacity factor change in its nuclear units of 5 percent  
23 reduction, say, in the PECO nuclear unit capacity factors.

24 How would PECO alter its generation or its purchases?  
25 Do you have a sense of that?

1           A.    I'm sorry.  If PECO altered its capacity factor  
2    by --

3           Q.    If the capacity factor was 5 percent lower than  
4    what you are projecting, how would your other plants and  
5    your purchases make up that 5 percent difference?

6           A.    First off, a lot depends on the timing of the  
7    outage, the load level, the overall load level of the timing  
8    of the outage, what would cause the change.

9           The first thing we would fully expect is that we  
10   would expect that the capacity factors on our cold units  
11   compared to their availability would increase.

12          Q.    Do you know how much of an increase you might  
13   expect from them?  Would it make up half the difference or  
14   a third?

15          A.    Well, I guess the first thing I have to ask is:  
16   was this 5 percent reduction as a result of all being on  
17   Limerick, which is a 1,000 megawatt unit, or was it all because  
18   of one of our jointly owned, which is in the neighborhood  
19   of 450 megawatts?  Was it spread evenly?  How did it occur?  
20   Because that seriously affects how you change it.

21          You've got to remember that the cold units are  
22   predominantly supplying close to or at full output during the  
23   peak load periods of the summer, during the peak load periods  
24   of even the off-season weekly peak days.  So if you had an  
25   extended period of Limerick, they would not be able to pick up

1 as much.

2 Q Let's just assume for purposes of my hypothetical  
3 that the 5 percent reduction in nuclear capacity is spread  
4 evenly throughout the units.

5 A I would fully expect that we would see -- I've  
6 got to do some thinking. We have 2700 megawatts of nuclear  
7 units -- I'm sorry; 2800 megawatts of nuclear units --  
8 2871 to be exact. We have 1500 or 1600 megawatts of cold  
9 units without going down and adding them up specifically.

10 So, we may see maybe like a half-a-percent of the 5  
11 attributed to the cold.

12 We're talking about 1200 or 1300 megawatts of oil,  
13 and that may see another half-a-percent at the most, and  
14 interchange would probably see the remaining 4 percent pickup.

15 Q Would those averages between coal, oil and  
16 interchange purchases be about the same if the overall  
17 reduction of nuclear capacity is about 10 percent? Will  
18 things change drastically at 10 percent or --

19 A I don't think that right now, trying to reload  
20 the entire PJM in mind, I could answer that.

21 Q How about if we went the other way? Let's suppose  
22 we had a 5 percent improvement in your overall nuclear  
23 generating capacity levels. How would you back out coal  
24 and oil and interchange purchases?

25 A I would expect that there would be minor changes

1 in the coal. Again, the coal is a function of the peak load  
2 requirements, and that's the reason it is loading more than  
3 anything else.

4 Oil would see some reduction. The major reduction  
5 would be in a lower interchange purchase and probably an  
6 increased interchange sale. So the net interchange would  
7 pick up a major portion of the additional generation.

8 MR. CLARK: Your Honor, I would like to mark for  
9 identification two exhibits, GEC Exhibit No. 5, which is a  
10 portion of the Staff's Data Request REO-1. I have just pulled  
11 out a few of the pages that I wanted to use for that. That  
12 has already been admitted into the record, but I'm only  
13 interested in a few pages. And GEC Exhibit No. 6, which  
14 is, again, a portion of the response the company gave us  
15 to our Interrogatory 4-1.

16 JUDGE MATUSCHAK: They will be so marked.

17 (Whereupon, the documents were  
18 marked as GEC Exhibits Nos.  
5 and 6 for identification.)

19 BY MR. CLARK:

20 Q Mr. Carroll, what I'm interested in is looking  
21 at the differences in some of these production cost runs,  
22 I'm trying to understand a little bit about what is going  
23 on.

24 First of all, if you would look at what has been  
25 identified as GEC Exhibit No. 5, the first number I'm

1 interested in is the total output number for the year ending  
2 June, 1987, which is on the second page of data, and then  
3 the total output number for the year ending June of '88.

4 If you look at that, it goes from 30,310,022, and it  
5 falls down to 30,273,435; is that correct?

6 A. I'm sorry. You said the total output for the  
7 year ending June, '87 on 5 and 6; right?

8 Q. I don't understand the 5 and 6. I'm on page 2  
9 of 64.

10 A. Oh, I'm sorry; both on 5.

11 Q. Yes.

12 A. Yes, that's correct; they go down.

13 Q. So from June of '87 to June of '88, the numbers  
14 go down?

15 A. That is correct.

16 Q. Now, if we could look at the comparable numbers  
17 in GEC Exhibit No. 6, which is a more recent production  
18 cost run that you provided us in our Interrogatory GEC 4-1,  
19 the numbers go up. Do you see that?

20 A. Yes.

21 Q. Can you tell me the reasons why one has the  
22 numbers going down and the other going up?

23 A. No, I can't, except for the fact that they were  
24 run essentially four months apart. They were probably 50  
25 computer program runs apart.

1           What we did was to try and go back and take the data  
2 deck from one and re-enter it back into the computer program  
3 data deck to re-enter the other one.

4           It looks like the year '88 is up. The year '87,  
5 July of '87, has slight changes.

6           Q. Let me go to another group of numbers. Again,  
7 I'm interested in the directions of change here. That is  
8 in the numbers for two-party transactions.

9           If you look again on GEC Exhibit No. 5, REO-1, the  
10 two-party transactions from June of '87 through June of '88  
11 go up; is that correct?

12          A. Yes.

13          Q. Yet, if you look at the same numbers for your  
14 later ProdCost run, GEC Exhibit No. 6, the two-party  
15 transactions over those two years dropped; is that correct?

16          A. That is correct.

17          Q. Can you explain what is going on or the reasons  
18 for that, why up in one case and down in the other?

19          A. Yes. I think part of the explanation for the  
20 two-party transactions is the situation of TMI was simulated  
21 in the filing run for the Limerick savings associated with  
22 base rates.

23               TMI coming on the line increases the capability  
24 of west-to-east transfers, because it reinforces the voltage  
25 and the reactive at the Juniata bus on the 500 kv transmission

1 system.

2 In the original situation, TMI was not simulated to  
3 come on in the year '86-'87, if I'm not mistaken.

4 Q By original situation, do you mean the REO-1  
5 prod cost run?

6 A The base rate filing Limerick savings study,  
7 which was presented, specific data, yes, in REO-1.

8 In the second case, it was simulated to come on. The  
9 two-party transaction level that is ultimately picked by  
10 PE and the proportion of the two-party level that is used by  
11 PJM, in general, is a function of the economics of the  
12 system.

13 We enter into an agreement for making so much capacity  
14 available to us and we schedule the energy on an economic  
15 cost basis. The more nuclear capacity you get on, the better  
16 capacity factors you get on in your nuclear, the lower the --  
17 I guess the appropriate word that everybody would understand --  
18 the lower the capacity factor on the two-party transactions.

19 So as you have better economic generation on your  
20 own system, the capacity factor of the two-party transactions  
21 go down. And I think that's what we're seeing here; because  
22 as you put TMI on, you increase the PJM low-cost generation.  
23 Therefore you cause a lower capacity factor on the two-party  
24 transactions.

25 Q Let's stay with that two-party transaction issue

1 now. This time I would like to compare with our Exhibit No. 6  
2 the two-party transactions under your base case and then what  
3 I have as the second part of my exhibit, your low-nuclear  
4 example.

5 To review, with the base case, you agree that two-party  
6 transactions go down from June of '87 to the year ending  
7 June of '88.

8 Do you see on the low-nuclear scenario how the two-  
9 party transactions go up from the year ending June, '87 to  
10 the year ending June, '88?

11 A. Yes, I do.

12 Q. Can you explain why that difference in the general  
13 trend? Why are they going up under the low-nuclear scenario?

14 A. Do you mean the fact that they are going from  
15 a total of 914 in the year ending June, '87 to 950 in the  
16 year ending June, '88? Is that what you're talking about by  
17 going up?

18 Q. Yes.

19 A. The obvious answer is the economics is such  
20 that we have increased the capacity factor. There are many  
21 things that attribute to that economic factor.

22 Q. Would you be precluded by the transmission  
23 limitations you mentioned earlier of making that number even  
24 larger?

25 A. Well, under this scenario we're talking about

1 here that you just made reference to, the two-party is capped  
2 at -- it should say 1,000 instead of 100 megawatts. The  
3 two-party is capped at 1,000 megawatts for PJM. There is  
4 no transmission limitation. The transmission limitation  
5 factor is not a factor at all on the amount of two-party that  
6 you can take in.

7 That runs from 2,500 to 3,500 megawatts of input  
8 depending on conditions, normally averaging 3,000.

9 Q Mr. Carroll, in your low-nuclear scenario, does  
10 the fact that you have a 49.8 percent nuclear capacity factor  
11 affect that 1,000 megawatt cap?

12 A No. The scenario said that we were in -- the  
13 western coal generation either was not available or there  
14 were governmental regulations which said you could not fire  
15 up capacity for outside the state. That was the scenario.

16 We said, all right.: Because of those conditions,  
17 though, we figured that there was a sharing of reserve energy.  
18 If you have to have this capacity on and you don't need  
19 it yourself, but it's on for reserve, you can sell it to  
20 someone else. That's what capped the thousand megawatts.  
21 It had nothing to do with what the PJM conditions were.  
22 It was that there is only a thousand out there that could  
23 be operated today under some acid rain, increased load,  
24 increased retirements of units, or whatever scenario. There  
25 are only a thousand megawatts out there that they can sell

1 to us, and they can only sell it to us when they don't need  
2 it themselves.

3 Q Let's assume that the nuclear capacity factor  
4 across PJM was quite low. Would the system be able to bring  
5 in more than that 1,000 megawatts; and if so, how much  
6 more?

7 A Right now, the system can bring approximately  
8 3,500 megawatts of import capability from the west. Under  
9 the scenario that was created for saying, "Hey, the west is  
10 reduced," they couldn't bring in more than 1,000 regardless  
11 of PJM's capacity. But if that scenario was not there, we  
12 could bring in 3,500 as we are projecting in the no limita-  
13 tions on two-party purchases.

14 Q Mr. Carroll, I'd just like us to look at one  
15 more pair of numbers, and that is the numbers for oil  
16 generation between these two cost runs.

17 As I read the charts, the oil generation from the  
18 year ending June of '87 goes down to the year ending June of  
19 '88 in REO-1, but under the new ProdCost runs, oil generation  
20 goes up over that period; is that correct?

21 A Yes, that is correct.

22 Q Could you tell us the reasons that that is  
23 happening?

24 A One of the significant things that would cause  
25 it to go up in the latest run is, as I mentioned in answer

1 to a question from Ms. Chestnut, the Peach Bottom outage  
2 was extended in length, and so therefore, that particular  
3 nuclear unit is down for an extended period of time in the  
4 second year which would cause the oil generation to go up.

5 I'm not sure of what all the other ramifications are  
6 that would cause it to go up or how the loading was. It  
7 could be a function of the timing of forced outages. There  
8 could be a lot of reasons why the oil generation went up.  
9 I know that's a significant one.

10 Q Has the company done any production cost runs  
11 beyond June of '88--and I'm thinking up through the year  
12 ending June 30, 1990 -- since Mr. Hieronymus' work papers?  
13 We have been calling them OCA 2-25. Have those production  
14 cost runs for those later years been revised anywhere?

15 A The company is always running production cost  
16 runs. Whether there has been any production cost runs under  
17 the conditions that we are predicting here, the answer, to  
18 the best of my knowledge, is no. But when you say, "Has the  
19 company made any production cost runs beyond the year 1989,"  
20 the answer is obviously yes. The company is always making  
21 production cost runs for all kinds of scenarios and all  
22 kinds of studies.

23 Q Mr. Carroll, I just have a couple of questions  
24 about your exhibit, the section on Data Request (3)(i).

25 On the first page, "Comparison Unit Data Report,"

1 you mention a number of different nuclear units.

2 Does the figure of average operating costs for the  
3 nuclear units include the finance charges for those units?

4 A. No, it does not.

5 Q. On the next page, does the figure of --

6 A. Can I make one comment with respect to the  
7 finance charges?

8 Q. Sure.

9 A. The finance charges for a nuclear unit will  
10 change based on the distribution of the generation from those  
11 nuclear units. For purposes of budgeting, we asked the  
12 Finance Department, "With this amount of generation and this  
13 amount of burn-up, would you please supply us with the  
14 monthly financing charges." Those are an input item from  
15 the Finance and Accounting Department to our production cost  
16 run results tabulation.

17 If there is no reason to change the financing charges  
18 for the particular run that we're making on production cost  
19 and no valid reason why it's needed, we never go back and  
20 ask the Finance Department to do all the recalculations.

21 So that anything you see in the production cost runs  
22 for fuel and interchange purposes, the financing charges are  
23 not necessarily comparable and valid to those nuclear burns,  
24 because we do not need financing charges for total fuel  
25 and interchange purposes. So we can't be sure exactly what's

1 in the deck. A lot of times, and if it comes from the  
2 Rate Division, it is whited out just for that reason. I  
3 didn't go into all of the effort to white mine out, but they  
4 are not necessarily valid numbers. Please, do not use them.

5 Q We spoke over the break, Mr. Carroll, about the  
6 finance charges for Peach Bottom 2 and 3 and how we could  
7 split that out.

8 Is there anywhere in your other schedules where the  
9 finance charges for Peach Bottom 2 might be listed?

10 A Based on the production cost runs that were  
11 used to generate Exhibit JJC-1?

12 Q Right.

13 A No, there has never been a set of calculations  
14 of exact finance charges based on the burn-ups of Exhibit  
15 JJC-1 for the nuclear, either Salem or Peach Bottom.

16 Q Now, I would like to go to the next page on  
17 Data Request (3)(i). With the oil-fired units and the coal  
18 units, does the average operating costs there include your  
19 estimates for fuel cost escalation?

20 A Yes, they do. All of the costs we see here  
21 represent the dollars produced by the production cost program  
22 for the years under study, and in the case of the average  
23 operating cost, it is then those dollars divided by the  
24 megawatt-hours out to give you an operating cost in cents  
25 per kilowatt-hour.

1 Q So we can get your fuel cost escalation figures  
2 and pull those out from the ProdCost runs; is that correct?  
3 They are in there?

4 A The fuel cost escalation figures that are in the  
5 ProdCost run do not try to take the difference between the  
6 average cost per kilowatt-hour between one year and the  
7 next and develop a fuel cost escalation, because that includes  
8 the banking coal and the no-load coal and everything for the  
9 years that are under study. They may not be the same, and  
10 that's the reason the rates between the two years could be  
11 different than the fuel cost escalation. There are a lot  
12 of factors that go into the average cost per kilowatt-hour  
13 over the course of a year.

14 Q Is there anywhere in your exhibits or has PECO  
15 developed an estimate of fuel cost escalation for the year  
16 ending June 30, 1990?

17 A I'm not sure whether that year is included in  
18 the base rate filing data or not; so I can't really answer  
19 that.

20 (Witness conferring with PECO personnel.)

21 A I was advised it is in the base rate case and  
22 it is in the exhibits sponsored by Dr. Hieronymus.

23 MR. CLARK: Your Honor, I just have one more question,  
24 if I could just have a moment.

25 (Pause.)

1 BY MR. CLARK:

2 Q Mr. Carroll, the last subject I want to get your  
3 help with is looking at the average operating cost of your  
4 units. Let's take, for example, Peach Bottom 2. You will  
5 notice the average operating cost for the year ending 6-30-87  
6 is .932.

7 What I am interested in is how you derived that  
8 number. The start seems to be in your data request (1)(i).  
9 If you look on page 6 of that, you will see Peach Bottom 2  
10 over on the far right column. The total you'll see is  
11 2,322,163. Then on your page 14, there is another number  
12 listed for Peach Bottom 2 of 16,238,077.

13 Now, how do I relate those three numbers to each  
14 other? The smaller number, the \$2.3 million is generation.  
15 The second one is cost, the \$16.2 million.

16 I'm just wondering: what is the arithmetic you used  
17 to generate that .932?

18 A On page 13 and 14, it lists the Peach Bottom 2  
19 nuclear cost, which is the \$16 million you talked about. It  
20 lists the auxiliary cost, which is \$352,678; and it lists  
21 the Peach Bottom diesel cost, which is the fuel cost to run  
22 the diesel which does not produce any net kilowatt-hours out-  
23 put out of the plant.

24 So, we would have to look at the nuclear fuel cost,  
25 half of the auxiliary boiler cost, half of the diesel cost,

1 add those fuel dollars up; then we should be able to divide  
2 it by the output from Peach Bottom No. 2 unit, which is  
3 shown on page 6 as \$2,322,163, and should come up with the  
4 dollars per kilowatt-hour. If it doesn't, it's because I  
5 made a mistake.

6 MR. CLARK: Your Honor, it might be, in the interest  
7 of time, a good idea if we could go off the record. When we  
8 do that computation, we don't get anywhere near that number.

9 JUDGE MATUSCHAK: Let's go off the record.

10 (Discussion off the record.)

11 JUDGE MATUSCHAK: Back on the record.

12 BY MR. CLARK:

13 Q Mr. Carroll, in our off-the-record discussion --  
14 correct me if I'm wrong -- you agreed to provide us with an  
15 explanation of how you obtained the average operating cost  
16 for the nuclear units and also in that explanation to state  
17 whether or not your listing of average operating costs  
18 includes finance charges; is that correct?

19 A Yes, I did agree that I will supply you with a  
20 set of calculations that will show the development of the  
21 932, the 903, and the 995 for Peach Bottom 2, the 994, the  
22 2,000 and the 898 for Peach Bottom No. 3.

23 Q May we also extend that request to include  
24 Salem?

25 A Yes.

1 MR. CLARK: Your Honor, I am finished. Thank you  
2 very much.

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

4 JUDGE MATUSCHAK: Any redirect?

5 MR. MacGREGOR: No, Your Honor.

6 JUDGE MATUSCHAK: Very well. The witness is  
7 excused.

8 (Witness excused.)

9 JUDGE MATUSCHAK: Mr. Wersan?

10 MR. WERSAN: Thank you, Your Honor.

11 In discussions among the different parties --

12 MS. CHESTNUT: Excuse me, Dave. Before we get to the  
13 schedule, I neglected to move in Staff Exhibits 20 and 21.  
14 Could I do so at this time?

15 MR. MacGREGOR: No objection, Your Honor.

16 MR. CLARK: Your Honor, I would also move in GEC  
17 Exhibits 5 and 6.

18 MR. MacGREGOR: No objection, Your Honor.

19 JUDGE MATUSCHAK: Staff Exhibits 20 and 21 and  
20 GEC Exhibits 5 and 6 are admitted into evidence.

21 (Whereupon, the documents  
22 marked as Staff Exhibits Nos.  
23 20 and 21 and GEC Exhibits  
24 Nos. 5 and 6 were received in  
25 evidence.)

24 JUDGE MATUSCHAK: You will furnish copies to counsel?

25 MS. CHESTNUT: I will do that tomorrow, Your Honor.

1 MR. WERSAN: On the schedule for the week of  
2 February 3 to 7 and February 10 to 14, we have an agreement  
3 on the following schedule: on the 3rd, there is a public  
4 input in Doylestown. On the 4th, there are two public input  
5 hearings in Philadelphia, one in the afternoon and one in  
6 the evening.

7 February 5th was initially scheduled to be the first  
8 day of evidentiary hearings. The City has asked that on  
9 the 5th their two witnesses be presented. The company is  
10 opposing. That's all the information I have on what it is  
11 going to happen on the 5th.

12 On the 6th, we have two witnesses scheduled, Dennis  
13 Dougherty for the Staff and Randall Falkenberg for PAIEUG.

14 On Friday, the 7th, there are two Consumer Advocate  
15 witnesses, Thomas Knudsen and Steven Hanauer.

16 Starting on Monday, the 10th, we have OCA Witness  
17 Charles Komanoff, University of Pennsylvania Witness Paul  
18 Chernick; and then we have three Staff witnesses who  
19 presumably will start on the 10th, and if they are not done  
20 will carry over to the 11th. That is Mr. Rosenthal, Mr. Paul  
21 and Mr. Gruber.

22 In addition to the carry-over of the Staff witnesses  
23 on the 11th, on the 11th is Mr. James J. O'Brien.

24 We currently have no witnesses scheduled for the  
25 12th.

1 On the 13th, there are two witnesses, Mr. Lanzalotta  
2 and Mr. J. W. Wilson; and there are no witnesses scheduled  
3 for the 14th.

4 JUDGE MATUSCHAK: Who do you have for the 13th?

5 MR. WERSAN: On the 13th, we have Mr. Lanzalotta and  
6 Mr. Wilson. There is no one on the 14th. Of course, the  
7 week after, we're back in Philadelphia for rate structure.

8 It is my understanding that the 10th through the 14th  
9 is here in Harrisburg.

10 Of course, we will just await your ruling on when the  
11 City witnesses will be cross-examined.

12 The main reason I wanted to bring this to your  
13 attention, Your Honor, in addition to getting your approval,  
14 was noting that the City was not cross-examined on the 5th,  
15 there would be one free day in Philadelphia, the 5th, between  
16 the public inputs on the 4th and the evidentiary hearings on  
17 the 6th, and also there would be a free day on the 12th here  
18 in Harrisburg.

19 JUDGE MATUSCHAK: Maybe we can pick up some loose ends  
20 on those days, witnesses to be cross-examined.

21 Do the other parties agree to that tentative schedule?

22 MR. MacGREGOR: Yes, Your Honor. We had previously  
23 discussed it with Mr. Wersan, and that is fine.

24 JUDGE MATUSCHAK: What about tomorrow?

25 MR. MacGREGOR: Tomorrow is the company's

1 cross-examination of the eight Staff witnesses. I can't  
2 remember all of the names right now.

3 JUDGE MATUSCHAK: Who does Staff have for tomorrow?

4 MS. CHESTNUT: We have, Your Honor, Mr. Weakley,  
5 Mr. Jones, Mr. Prowell, Mr. Loudenslager --

6 JUDGE MATUSCHAK: I can't hear you.

7 MS. CHESTNUT: We have, Your Honor, Mr. Weakley,  
8 Mr. Jones, Mr. Prowell, Mr. Prego, Mr. Heverling,  
9 Mr. Loudenslager, Mr. Mayer, and Mr. Hosler.

10 MR. CLARK: Is that the order of the witnesses  
11 tomorrow or not?

12 MS. CHESTNUT: No, that's not the order, Mr. Clark.

13 MR. MacGREGOR: There is an order Veronica Smith gave  
14 me, but I don't have it with me right now.

15 JUDGE MATUSCHAK: Is there anything further?

16 MR. WERSAN: If we're going to complete the schedule  
17 on Thursday, Mr. Bleiweis will be presented first, and any  
18 Staff witnesses that are not crossed tomorrow will carry  
19 over. And Mr. Kelly for GSA is also on Thursday.

20 JUDGE MATUSCHAK: Very well. We will adjourn now  
21 until tomorrow at 10:00.

22 (Whereupon, at 4:58 p.m., the hearing was adjourned,  
23 to be reconvened at 10:00 a.m., Wednesday, January 29, 1986,  
24 in Harrisburg, Pennsylvania.)

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I hereby certify, as the stenographic reporter, that the foregoing proceedings were taken stenographically by me, and thereafter reduced to typewriting by me or under my direction; and that this transcript is a true and accurate record to the best of my ability.

COMMONWEALTH REPORTING COMPANY, INC.

By: John A. Kelly  
John A. Kelly

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