COMMONWEALTH OF PENNSYLVANIA

PUBLIC UTILITY COMMISSION

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Pennsylvania Public Utility Commission, et al.: versus Philadelphia Electric Company. : Docket No. Investigation into a requested $660 million : R-850152 annual rate increase. :

ORIGINAL

Further Hearing :

- x

Pages 1578 through 1748

Hearing Room No. 1
State Office Building
Broad and Spring Garden Streets
Philadelphia, Pennsylvania

Monday, January 6, 1986

Met, pursuant to adjournment, at 10:00 a.m.

BEFORE:

JOSEPH MATUSCHAK, Administrative Law Judge

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C O N T E N T S

WITNESSES	DIRECT	CROSS	REDIRECT	RECROSS
William F. Sundermeir				
By Mr. MacGregor	1587	--	--	--
By Ms. Chestnut		1588	--	--
By Mr. Selkowitz		1595	--	--
By Ms. Pitts		1598	--	--
By Mr. O'Donnell		1627	--	--
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E X H I B I T S

NUMBER	FOR IDENTIFICATION	IN EVIDENCE
Philadelphia Electric Company		
Statement No. 24 (Sundermeir)	1586	1588
Exhibit No. WFS-1 (Sundermeir)	1586	1588
General Services Administration		
Cross-Examination Exhibit No. 7 (IR-PAIEUG-1-34)	1605	1625
Cross-Examination Exhibit No. 8 (IR-GSA-1-20)	1613	1625
Cross-Examination Exhibit No. 9 (IR-GSA-1-17)	1614	1625
Cross-Examination Exhibit No. 10 (IR-PAIEUG-1-40)	1618	1625
Occidental Chemical Corporation		
Exhibit No. 1 (IR-Chem-1-1 through IR-Chem-1-5)	1679	1694

E X H I B I T S (Continued)

NUMBER	FOR IDENTIFICATION	IN EVIDENCE
Philadelphia Area Industrial Energy Users Group		
Exhibit No. 2 (IR-PAIEUG-1-12)	1679	1746
Exhibit No. 3 (IR-PAIEUG-1-10)	1700	1746
Exhibit No. 4 (Rebuttal Testimony of W. F. Sundermeir at Docket R-842590)	1725	1746

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P R O C E E D I N G S

ADMINISTRATIVE LAW JUDGE JOSEPH MATUSCHAK: This is the time and place set for the further hearing in the matter of the Pennsylvania Public Utility Commission against the Philadelphia Electric Company, at Docket Number R-850152 and the consolidated complaints.

Are there any preliminary matters before we get started?

MR. RYAN: Your Honor, my name is Bernard Ryan. I would like to enter my appearance today on behalf of the Pennsylvania Food Merchants Association. I have handed up to you and I've circulated to several other Counsel copies of a formal entry of appearance form. The originals will be filed with the Secretary in Harrisburg.

I've also entered the appearance of a partner of mine, George Miller, in Philadelphia, but I've noted on the form that service on me in the Harrisburg office will be sufficient.

JUDGE MATUSCHAK: Thank you.

MR. PEPPERNEY: Your Honor, I would also like to enter my appearance. My name is Kenneth R. Pepperney and I'm appearing on behalf of United States Steel Corporation. With me today is Louise Q. Symons of our office. She also is co-Counsel for U. S. Steel in this case.

U. S. Steel has filed a complaint. We filed it after the prehearing conference. We attended the prehearing

conference. At that time our attorney indicated that we were not certain as to how we were going to proceed with witnesses. For the information of the other parties I would like to state today that we will be co-sponsoring witnesses along with the group of industrial customers who Mr. Kleppinger represents.

JUDGE MATUSCHAK: Very well.

MS. PITTS: Your Honor, I'm Mildred E. V. Pitts, of the General Services Administration, representing the Federal Executive Agencies.

JUDGE MATUSCHAK: Very well.

Is Mr. Bosch present, representing some of the universities, present here?

(No audible response.)

JUDGE MATUSCHAK: Mr. Bosch, among other things, has indicated that he wishes to join another university in that joint complaint of Temple University, Bryn Mawr and so forth. Since he's not here we will have to make a written order. He inquires of us as to whether his letter is sufficient to make Thomas Jefferson University a joint party within that complaint.

He will have to reject that form of incorporation of Thomas Jefferson University within that joint complaint. Although we are not about to issue an advisory opinion as to how Counsel should proceed to prosecute their case and to

make the proper filing according to the procedures, we would suggest that Counsel in that case check the rules, and if he wants to he can check with the Secretary's office to determine what rules he should comply with in order to add a party to a joint complaint that is already filed. We are not going to tell him how to do it. That is his responsibility.

There had been a request from one of the parties to this proceeding, Community Legal Services. Does somebody represent Community Legal Services?

MR. HANGER: Yes, I do, Your Honor. My name is John Hanger.

JUDGE MATUSCHAK: In our conversation you indicated that you wanted to have your expert cross-examine the Company's witnesses Williams and Sundermeir on January 7th. We indicated we will permit that. Counsel for Philadelphia Electric will arrange to have those witnesses present tomorrow.

MR. MacGREGOR: Which witnesses are we referring to?

MR. HANGER: Mr. Williams and Mr. Sundermeir.

MR. MacGREGOR: That will be fine.

MR. HANGER: Thank you.

JUDGE MATUSCHAK: There are any other preliminary matter

MS. FERKIN: Your Honor, I represent the Energy Council. On December 20th, Your Honor, the Energy Council filed a

request for the postponement of the filing of our phase-in testimony. The Company filed a response on January 2nd -- or an answer to our request. Today we have filed a very brief response to the Company's answer.

I was wondering if it would be possible for Your Honor to give some indication as to when you will rule on our request.

JUDGE MATUSCHAK: We will hear you this afternoon on that matter after we have had a chance to read your response. We will hear you this afternoon and rule on that matter.

MS. FERKIN: Thank you very much, Your Honor.

MR. WERSAN: Your Honor, I would like to note that when we closed the hearings in Harrisburg the possibility of cross-examining PECo Witness Dr. Louis Perl was left open for today. An agreement, as I understand it, has been worked out between the Company, the Staff and the Consumer Advocate such that Dr. Perl will not be called for cross-examination but certain of his answers to interrogatories will be moved into the record. I believe those exhibits will be made tomorrow. I assume Mr. Calvert or some representative of the Company will present that information or be aware of that tomorrow.

MR. MacGREGOR: That is our understanding. I think it would also be appropriate at that time to admit Dr. Perl's addendum testimony into evidence if there is no objection.

MR. WERSAN: Yes.

MR. SELKOWITZ: Your Honor, unknown to those three parties, because of an answer to an interrogatory sponsored by Dr. Perl we had some questions for him on behalf of the University of Pennsylvania and we just assumed that he was coming down here this morning so I never bothered to communicate that to anybody.

We will review what we have and we may be able to come to a stipulation on the answers to a few things and not have to ask that he be recalled. We will try to do that.

MR. MacGREGOR: That's fine.

JUDGE MATUSCHAK: You check with the Company and with the Consumer Advocate to see about those additional areas that you want to probe, and if you will keep Mr. Perl on hand this afternoon -- can you tell us this afternoon?

MR. SELKOWITZ: We don't have to do it this afternoon. I assume he's not in town. But we can get him another day.

JUDGE MATUSCHAK: Well, we will await your response and give you an opportunity if you want it. You will have to contact the company.

MR. SELKOWITZ: Fine. Thank you.

JUDGE MATUSCHAK: Anything further?

MS. PITTS: Your Honor, I have a preliminary procedural matter. With regard to the Company's supplemental direct testimony of Joseph Brennan concerning the energy cost rate, which was just filed, I would like to know in what category

this testimony comes and when there will be an opportunity for cross-examination.

MR. MacGREGOR: Your Honor, there were four pieces of testimony which constituted the Company's response to the Commission's order in the ECR No. 8 investigation as to the proposal for a revised energy cost rate. We have not established with the parties a proposed schedule during which that would be cross-examined, but Mr. Brennan's supplemental testimony along with those other three statements will be cross-examined as a group under the schedule that is eventually established by Your Honor.

JUDGE MATUSCHAK: We don't have our schedule of dates and places completed. We will have to do that before we leave this week.

We suggest that Counsel confer with each other and see when an appropriate time would be to take the matter of the ECR into this already overburdened rate case.

If there is nothing further preliminarily we may proceed with the first witness.

MR. MacGREGOR: Thank you, Your Honor.

Your Honor, we are turning to the rate structure portion of the case this week. The Company's first witness is Mr. William F. Sundermeir, who has not been previously sworn.

Whereupon,

WILLIAM F. SUNDERMEIR

having been duly sworn, testified as follows:

JUDGE MATUSCHAK: You may proceed.

MR. MacGREGOR: Your Honor, I have previously distributed to Your Honor and to the court reporter and to all parties copies of a document entitled "Pennsylvania Public Utility Commission versus Philadelphia Electric Company, Docket No. R-850152, Direct Testimony of William F. Sundermeir, Class Cost Allocation and Unit Cost Study." I would ask that it be marked for identification purposes as Company Statement No. 24.

JUDGE MATUSCHAK: It will be so marked.

(Whereupon, the document was marked as PECo Statement No. 24 for identification.)

MR. MacGREGOR: Your Honor, I have also distributed copies of a document entitled "Philadelphia Electric Company Electric Operations, Exhibit WFS-1, Allocation of Costs and Rates of Return by Classes of Service, 12 Months ended June 30, 1986," and I would ask that it be marked for identification as PECo Exhibit WFS-1.

JUDGE MATUSCHAK: It will be so marked.

(Whereupon, the document was marked as PECo Exhibit No. WFS-1 for identification.)

DIRECT EXAMINATION

BY MR. MacGREGOR:

Q. Mr. Sundermeir, do you have before you copies of a document that has been marked for identification as Company Statement No. 24?

A. I do.

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

A. Yes.

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

A. Yes.

Q. Mr. Sundermeir, if you were asked the same questions contained in Statement No. 24 again today, would your answers be the same as those contained therein and would they be true and correct to the best of your knowledge?

A. Yes.

Q. Mr. Sundermeir, were you also responsible for the preparation of the document that has been marked for identification as PECo Exhibit WFS-1?

A. Yes.

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

A. Yes.

MR. MacGREGOR: Your Honor, I would ask that the

documents that have been marked for identification as PECo Statement No. 24 and Exhibit WFS-1 be admitted as evidence in this proceeding subject to any timely motion to strike or other objection.

JUDGE MATUSCHAK: Under those conditions the motion is granted.

(Whereupon, the documents marked as PECo Statement No. 24 and Exhibit WFS-1 were received in evidence.)

MR. MacGREGOR: Your Honor, Mr. Sundermeir is available for cross-examination.

JUDGE MATUSCHAK: Who wants to start the cross-examination?

MS. CHESTNUT: I will, Your Honor.

JUDGE MATUSCHAK: Very well.

CROSS-EXAMINATION

BY MS. CHESTNUT:

Q. Good morning, Mr. Sundermeir.

A. Good morning.

Q. Mr. Sundermeir, I would like to refer you to what has been marked as admitted as PECo Exhibit WFS-1, specifically pages 47 through 54.

Do you have that reference, Mr. Sundermeir?

A. Yes.

Q. Am I correct that these pages show the cost/

revenue curves for the HT and PD classes?

A. Those were pages 47 to 54? Yes.

Q. And what a cost/revenue curve does is simply compare the cost allocated to serve a particular class with the revenue generated by that class; is that correct?

A. Yes.

Q. On page 49, Mr. Sundermeir, where it shows maximum demand, 1,300 KW, am I correct that this is generally taken to be the maximum demand of an average HT customer?

A. That would be the approximate average demand, yes.

Q. And that the analogous demand for a PD customer would be shown on page 53 and is 175 KW?

A. That's correct.

Q. Now, if we look at these curves, Mr. Sundermeir, what they show is that average customers at these demand levels are producing revenue in excess of the costs incurred to serve them; is that correct?

A. No, I don't think that's actually correct. What it shows is that for a theoretical customer that has the same demand month in and month out it would produce possibility a higher revenue. But, of course, the actual rates themselves are not theoretical.

Q. Do you want to explain that a little further?

A. Well, when we develop -- let me back up on that as to how the rates are developed. We develop a cost curve and

then we determine the energy pricing by the slopes of the cost curve between the various price blocks. Also, from the cost data we can determine the customer component of costs.

At this point we then, by applying these prices to the billing determinants, the energy billing determinants and the number of customers, we can determine how much revenue we are going to recover from those prices. Of course, it leaves a balance of the total revenue requirement, and that is determined by taking that balance and dividing it by the number of billing units during the test year. That is how that price is determined.

Now, those billing units are really determined by the actual customers as they occur and the price is then set to recover the total revenue requirement for that class of service. So when you look at the resulting rates and you make a comparison -- a theoretical comparison -- to a customer with a given 1,300 kilowatts, 12 months a year, there may be some variation between the actual cost curve and the actual revenue curve. However, the way the rates are designed the revenue curve is parallel to the cost curve.

Q. It's also an objective of the company to design the rates to produce at least as much revenue as the costs, to cover the costs; is that correct?

A. That's correct.

Q. And that's an important objective in rate structure

design?

A. That's correct.

Q. And if we look at the rate of return rates on page 6-A of Exhibit WFS-1, the bottom line marked rate of return, 12.70 is the system average rate; is that correct?

A. That's correct.

Q. And 12.23 and 12.4 are the respective rates for Rates HT and PD?

A. That's correct.

Q. And these rates show that these classes are earning less than the system average?

A. The rates that we filed are producing the returns that are shown at the bottom of page 6-A.

Q. And the returns that they are producing on the rates that you filed are less than the system average?

A. Slightly less than the system average; that's correct.

Q. And that's even though your revenue/cost curves show that they are producing revenue in excess of the cost of service?

A. Keeping in mind, again, that the cost/revenue curves are based on a theoretical size customer that would have the same billing determinants every month. You would hardly expect -- I wouldn't expect, at least -- for that revenue curve to fall right on the cost curve.

What I would expect by the way we design the rate is that it would be at least parallel to the cost curve, and it is.

Q. Well, I understand that due to the inherent limitations and practical difficulties you can't design cost curves for every actual customer for every month, but given the theoretical basis that is used to produce these curves I would presume that they have some relationship to reality.

A. They do have some relationship to reality. The pricing of the energy and the pricing of the customer charge are directly related to those costs. It's only the resulting shift of the revenue curve that results from the pricing of the demand charge to recover your total revenue requirement that is not recovered by the other charges that you could get some discrepancies between this theoretical -- the actual cost curve and the revenue curve.

I might add that the method used is precisely the method that we used in, I would say, the last five or six, at least, rate cases, and is the method that was ordered by the Commission in, I think, R.I.D. 438.

Q. Would the company use a different method if it had the choice?

A. No. I think it's a good method.

Q. You think it's the most accurate method?

A. I think you wind up with a pricing of your rate

that is as close to the costs as you can possibly take it, all things being considered.

Q. Thank you, Mr. Sundermeir.

Now I would like to refer you to the Company's response to IR-Staff-RSS-2.

MS. CHESTNUT: Your Honor, I'm not going to mark this as an exhibit because we are going to include it as an exhibit in my witness' testimony. I do want to ask Mr. Sundermeir one clarifying question with respect to it, though.

JUDGE MATUSCHAK: Certainly.

THE WITNESS: I'm sorry. Could you tell me the number again?

MS. CHESTNUT: RSS-2 -- IR.

BY MS. CHESTNUT:

Q. The pages aren't numbered, Mr. Sundermeir, but I would like to refer you to page six of the answers, for the Reading System.

A. Yes.

Q. You have a charge of $13.66 shown -- a customer charge of $13.66 shown; is that correct? That's for the Reading System.

A. Yes.

Q. Should that be $13.36? I have a copy of the tariff.

A. I have one.

(Witness perusing documents.)

A. Yes.

Q. Yes, that should be $13.36?

A. Yes.

Q. And that would carry through to the totals?

A. Yes. It would make a difference of $30 a month times 12.

Q. Would you supply a corrected version of this response, please?

A. Certainly.

Q. Now, keeping with this response, on page nine, also with the Reading System, for the month of May, 1985, and June, 1985, should that number be $13.36?

A. Yes.

Q. And that's because there's only one delivery point?

A. Yes.

MS. CHESTNUT: Thank you, Mr. Sundermeir.

Your Honor, that's all the questions I have for this witness.

JUDGE MATUSCHAK: Consumer Advocate?

MR. WERSAN: Your Honor, if I may I would like to defer my cross-examination of the Company witnesses.

JUDGE MATUSCHAK: Who wants to go next?

MR. SELKOWITZ: I will, Your Honor.

JUDGE MATUSCHAK: Mr. Selkowitz.

MR. SELKOWITZ: Thank you.

CROSS-EXAMINATION

BY MR. SELKOWITZ:

Q. Mr. Sundermeir, good morning. I'm Larry Selkowitz and I represent the University of Pennsylvania. I have just a few questions, also.

Specifically with reference to the demand ratchet for Rate HT customers, do you know how many years that form has been in effect for PECo?

A. I don't know precisely how many years. I know it's quite a few years.

Q. "Quite a few" is seven, eight, ten? An estimate rather than the words "quite a few"?

A. It's at least ten years.

Q. Do you recall a statement that you made in your rebuttal testimony in July of 1983 in a Philadelphia Electric rate case -- and I'm going to read it to you to see if this refreshes your recollection:

"The purpose of the demand ratchet is to send a price signal to HT customers encouraging them to reduce their summer demand. These demand reductions benefit all customers through lower fuel costs and in decreasing the need to add new capacity. Moreover, the ratchet also insures that the company will at least partially recover the costs it incurs

to supply an additional KW of demand during the summer."

Do you recall that statement?

A. Yes.

Q. Does that correctly reflect your present position as to the purpose of the demand ratchet?

A. Yes.

Q. Do you have any other purposes, any additions you would wish to make to that answer today?

A. I think that fairly well sums it up.

Q. Now, again referring to the ratchet, am I correct that the company does not know how much revenue it collects due to the imposition of that form of a rate?

A. That's correct. In order to determine that value it would be necessary to bill every customer twice and take the difference between the two calculations.

Q. And that, of course, gives you the actual dollars collected from it. Have you made estimates of what it is as an approximation?

A. I have not.

Q. Are you aware of anyone else in the company that has and simply hasn't provided it to you?

A. No, I'm not.

Q. In WFS-1 you provide the results of an alternative cost of service methodology, do you not, other than the one being recommended by the company?

A. We provide the result of an average and excess cost allocation.

Q. In the past you have provided -- that is, in past rate cases -- you have provided more than one additional such result, as I recall.

A. That's correct.

Q. Generally, what other ones did you provide in those days?

A. I think it was a single coincident peak, a winter peak, an average demand and a non-coincident peak, if I recall.

Q. Did you supply those in response to regulatory requirements?

A. Yes.

Q. Has that regulatory requirement been dropped?

A. Yes. They only require a coincident peak, which the company uses, a coincident peak. So we are providing that. And also the average and excess.

Q. And that's the reason why you didn't provide any of the other ones?

A. Yes.

Q. Does the company for its own purposes do the other ones?

A. No.

Q. You have been released from any obligation to even

run those for internal research purposes?

A. That's correct.

MR. SELKOWITZ: That's all I have. Thank you, sir.

No further questions, Your Honor.

JUDGE MATUSCHAK: Mr. Kleppinger.

MR. KLEPPINGER: Your Honor, I believe Ms. Pitts would like to proceed before me.

Your Honor, I have another consultant who is probably due in at about one o'clock. So if possible I would like to go this afternoon. But rather than break up the hearing I can go.

MR. O'DONNELL: Your Honor, we would be pleased to follow as the cross-examining attorney following Ms. Pitts.

CROSS-EXAMINATION

BY MS. PITTS:

Q. Good morning, Mr. Sundermeir.

A. Good morning.

Q. I am Mildred Pitts, with the General Services Administration, representing the Federal Executive Agencies.

Referring to the category of cost of service, how long have you been in your present position, Mr. Sundermeir?

A. I believe it's about 13 years.

Q. And would you please describe your basic responsibilities in this position?

A. Yes. I'm the supervisor in charge of the cost

and load analysis section of the Rate Division, and as the name implies, we are responsible for producing cost studies such as the one that we have submitted in this case in WFS-1 and also the supporting load studies that are primarily used for the allocation of many of the costs in the cost study. In addition to that, we get involved in other areas such as rate design, particularly when it's tied in directly with costs.

Q. In the cost of service study that you prepared for this case, WFS-1, what is the time period of that cost of service study?

A. It's the test year ended June, 1986.

Q. June 30, 1986?

A. Yes.

Q. And how was it developed?

A. Well, basically we take the costs for that time period, make the appropriate adjustments to those costs in accordance with the adjustments that are indicated in Exhibit TPH-2, and using the appropriate allocation schedules we allocate those costs to the various classes of service.

Q. And you develop this cost of service study using the costs and expenses from Mr. Hill's Exhibit, TRH-2?

A. TPH-2, yes.

Q. TPH-2.

A. Yes.

Q. Mr. Sundermeir, referring to page five of your direct testimony, you state that the data -- you state explicitly that the data in Exhibit WFS-1 is budget data for the 12 months ended June 30, 1986, adjusted to reflect the adjustments made by Mr. Hill in TPH-2; is that correct?

A. That's correct.

Q. Does this mean that you are taking adjusted expense and revenue data and allocating it among the rate classes?

A. Well, whatever adjustments that are made by Mr. Hill, regardless of to what account they are made to, we do make those adjustments and then allocate those expenses to the appropriate class of service.

Q. Well, if we were to take a figure from your allocation exhibit, we could then identify the derivation of that figure in Mr. Hill's cost of service exhibit; is that true?

A. It may not be -- the figures are all in TPH-2. As I said, we take the book numbers, or the budgeted numbers, for the year ending June 30, 1986, and we use Mr. Hill's adjustments and make certain adjustments to various accounts.

Q. Would you please turn to your Exhibit WFS-1, Section 1, page 6-A, the cost of service study?

A. Yes.

Q. And this particular table on 6-A is the allocation

of revenues, expenses and rate base to the classes for the 12 months ended June 30, 1986; is that correct?

A. Really, what is shown on pages 6-A and 6-B is a summary of the results of the allocation.

Q. Looking at this same page, 6-A, at line one, entitled "Total Operating Revenue" and the first column, this amount is the total revenues anticipated under the present rate schedules for the test year period; is that true?

A. That's correct.

Q. The balance of line one across page 6-A and page 6-B shows the revenues for the different rate cases or voltage levels; is that correct?

A. By the different rate classes, yes.

Q. Since as you stated the schedule on pages 6-A and 6-B is a summary scheduled, the detail behind this schedule is covered in Section 2, specifically pages 7-A and 7-B for the revenue detail; is that correct?

A. Yes.

Q. Also, similar data can be found in those same schedules relating to O&M expenses, depreciation, taxes, et cetera, for the corresponding detail schedules in Section 2; is that correct?

A. The details of all that are shown in Section 2.

Q. In order to find the source of this revenue data we must locate a similar schedule in Mr. Hill's Exhibit TPH-2;

is that also true?

A. I don't know about a similar exhibit. I do know that we have submitted a response to an interrogatory which I could identify for you, but not off the top of my head, that would show the connection between TPH-2 and WFS-1 relative to the revenue.

Q. Do you have that available?

(Witness perusing documents.)

Q. If it's going to take too much time to locate it, would you be good enough to provide it for the record?

A. Yes. As I said, it was information that was given in response to an interrogatory. So we can make reference to that interrogatory.

MR. MacGREGOR: Why don't we look up the specific response at the break and we will give it to you then?

MS. PITTS: Okay.

BY MS. PITTS:

Q. It was an answer to what party's interrogatory?

A. We are looking it up. As soon as you know we will --

Q. Okay.

I would like now to turn to Exhibit TPH-2 that we have been discussing, Mr. Hill's exhibit, page A-5.

A. Yes.

Q. Looking at page A-5 of Exhibit TPH-2, this shows a

breakdown of sales and revenues by rate class; does it not?

A. Yes.

Q. Therefore, Column 6, entitled "Base Revenue", is similar to line one of your pages 6-A and 6-B of Section 1; is that correct?

A. Similar to, but there are adjustments that are made to the revenues and other revenues and so forth that are added. I think, as I explained earlier, we have an exhibit that would tie those values shown on A-5 of TPH-2 explicitly to the values that we show in our cost allocation.

Q. I appreciate that, Mr. Sundermeir, and I would like to return to that exhibit when it's available. Perhaps we can compare a few basic items now.

If you look at TPH-2, comparing the total electric base revenue in TPH-2 with the total revenue in WFS-1, it shows your total to be less by $89,163; is that true, subject to check?

(Witness performing calculations on electronic calculator.)

A. Yes.

Q. Also, in your exhibit, pages 6-A, 6-B, et cetera, they don't have $1,000 in parenthesis there as does TPH-2. That should be added, shouldn't it?

A. Yes.

Q. Therefore, the figure that we referred to as being

$89,163 is actually $89,163,000?

A. Yes.

Q. What effect will this lower revenue figure in your exhibit have upon the rate of return computed on line 31?

A. It really will have no effect. As I said, we bridge the gap between the numbers that are shown in base revenue on TPH-2.

(Witness perusing documents.)

A. In response to Philadelphia Area Industrial Energy Users Group Interrogatory IR-PAIEUG-1-34, it shows the bridge between the values shown in Mr. Hill's exhibit on A-5 and the values used in my exhibit on page 6-A.

(Pause.)

A. Basically, there are several adjustments that are made to the values shown on page A-5. There is an adjustment for state tax adjustment, there is an adjustment for growth that Mr. Hill included on a single line at the bottom.

Q. Excuse me, Mr. Sundermeir. Would you happen to have an extra copy of that that I might look at while you're going through the summary of what the changes are?

(Document handed to Counsel Pitts.)

MS. PITTS: Your Honor, I would like at this time to have this exhibit, which the company is referring to, marked for identification as the next GSA trial exhibit. I believe that's GSA Trial Exhibit 7.

JUDGE MATUSCHAK: Very well. You provide the copies for the record and for us and for the other parties.

(Whereupon, the document was marked as GSA Cross-Examination Exhibit No. 7 for identification.)

MS. CHESTNUT: Your Honor, what's the reference to that response?

MS. PITTS: It is the answer to -- the company's answer to IR-PAIEUG-1-34. And the title is "Reconciliation of the Base Revenue by Rate Schedule for the year ending June 30, 1986, as shown on Schedule A-5 of Exhibit TPH-2 to the Operating Revenue by Cost of Service Class Shown on Pages 7-A and 7-B of Exhibit WFS-1."

BY MS. PITTS:

Q. Now, Mr. Sundermeir, if you will be good enough to enumerate very briefly for us what those adjustments are that are incorporated in this exhibit.

A. Yes. The first adjustment is for the state tax adjustment charge. And the origin of that can be found in TPH-2, page D-1.

The second adjustment is the growth adjustment. And the origin of that is TPH-2, page D-3.

The third adjustment is an energy cost rate adjustment which is described on page D-4 of TPH-2.

There is an adjustment, a time of use adjustment, made to the HT class and the proposed rates for the railroads,

EPA and EPS.

And finally, there is a final adjustment to reflect the fuel savings resulting from Limerick and that is described in TPH-2, page D-21.

Q. Thank you, Mr. Sundermeir.

When you were describing your official duties you mentioned that you performed load surveys. That is from -- I mean, you develop load data, and this load data is either from actual data or from a load survey; is that correct?

A. Yes, it is.

Q. What actual data do you have available, for what major rate classes do you have the actual data?

A. Well, we collect data for Rate HT, PD, the street lighting rates, on the days of the peak.

For Rate R and RH and GS we use prior years' load survey data and we obtain new load survey data on a four year cycle. And that load survey data is then adjusted to reflect the actual conditions on the day of the peak for which we are trying to develop the load.

Q. And what is the time period that you have actual data through?

A. Well, for every rate except the residential and the small commercial and industrial we have current load data on the days of the peaks.

Q. Is the data developed at the meter level?

A. Yes, it is.

Q. Is the data then adjusted one half-hour by one half-hour to reflect voltage level losses?

A. Yes.

Q. And is this contained in the Section 9, line loss study in WFS-1?

A. The study -- the basis for the calculation of the losses is contained in that section, yes.

Q. And that is still in 1984?

A. That's the one we used in 1984, yes.

Q. How is the 1984 data adjusted to 1986 data?

A. I believe that was provided in response to an interrogatory, but basically what is done is we adjust the load data that we develop in 1984 by the ratio of the test year sales to the 1984 sales, annual sales.

Q. Is this ratio a constant for each half-hour of each of the four monthly coincident peak days?

A. No. All we are doing is taking the, for example, the loads at the times of the peaks. And we have the average demand at the time of the peaks in 1984, let's say, for a given class of service. We adjust that one particular number by the ratio of annual sales for the test year ending June of 1986 to the 1984 annual sales.

Q. Is this ratio applied before or after line loss adjustments?

A. The way we do it is we apply it to the meters number and then we increase the value by the same ratio of losses that we developed in 1984.

Q. What is the method used to allocate production and transmission facilities?

A. Well, we use the average of the demands at the time of the peak in each of the four summer months. I might add that that, I believe, is relatively fully explained in my Exhibit WFS-1 and I believe also in my testimony.

Q. Just to clarify our discussion, Mr. Sundermeir, what rate schedules use load survey data?

A. Rate RH, Rate R and Rate GS -- I'm sorry. And Rate OP.

Q. Briefly, Mr. Sundermeir, how is this data developed?

A. You're talking about how do we obtain the data from the field, or how do we take the data that we have obtained from the field and develop the load data?

Q. The latter.

A. The latter?

Q. Yes.

A. For example -- maybe that's the best way to do it -- let's refer to Rate R. We get load survey data for six strata, and it's obtained from a prior year. We then adjust that in accordance with the number of customers that

we have in the current period in each of the strata. We also adjust it to reflect the weather conditions that exist in the current period, and we do that by taking the difference between hot and cool periods in the summertime, assuming that that is air cooling load, and adjust that difference to reflect the actual weather conditions on the day for which we are trying to develop the load.

We do a similar type analysis for Rate GS. There is no weather adjustment for Rate OP. We make a similar adjustment for Rate RH.

Q. Mr. Sundermeir, did you say that the data was obtained on a one half-hour basis for a summer average hot period and the summer average cool period, approximately close to the actual monthly system peak day?

A. No. When the load survey is done -- and what I mean by that, the meters are put in out in the field -- and the data is obtained, after the fact we go back and look at selected hot weeks and selected cool weeks in that year in which the data was obtained. Now, this is after the fact.

Now, let's say for example that we obtain that data in 1982 and we want to develop data for 1984. We adjust the data that we obtained in 1982 to reflect the current distribution of customers by strata and the current weather conditions.

Q. Is this the process used, then, to simulate 1984 four CP day load profile?

A. Well, it's used to develop the residential and small commercial and industrial loads for that period in 1984, yes.

Q. How do you get 1986 four CP data for these load survey schedules?

A. Well, once we develop the data for 1984, as I indicated earlier, we then adjust that in accordance with the 1986 sales versus 1984 sales, making the assumption that the relationship between annual energy use and demand is consistent between the two years.

Q. What adjustment do you make for the weather in 1986?

A. We don't make any adjustment for weather in 1986. We assume that the relationship between demand and energy is constant between the two years.

Q. Are the total requested revenues and projected expenses contained in the cost of service study, WFS-1?

A. Yes.

Q. How is the proposed phase-in accounted for in the cost of service study?

A. It is not. The cost of service study includes the total revenue by class of service as requested by the company.

Q. Now, referring to the average and excess cost of service study, did you perform any additional cost of service study using a different methodology for the allocation of production and transmission facilities?

A. No.

Q. What is the excess based upon?

A. Non-coincident class peaks.

Q. Is it the single annual non-coincident peak or the average of some non-coincident peak?

A. The single class peak.

Q. How are these determined, for example, for Rates PD and HT?

A. We develop loads for all classes of service on the day of the four system peaks in the four summer months. We then look over those data and determine what the maximum demand is for each class on those four days. In the case of HT and PD we also have developed some data in our most recent PURPA filing that was made about two years ago relating the class maximum demand to the maximum demand on the day of the peak. We, as a result, used what I would call a small adjustment to the data that was developed on the days of the peaks.

Q. What about the RH? When did its non-coincident peak demand occur?

A. The RH peak would occur on a cold winter day. So

in developing our data for that we actually look at several cold days in the beginning of the year and several cold days in the end of the year, develop the loads for RH on those days and then select the highest demand that we so determine.

Q. Is the non-coincident peak demand more or less sensitive to weather effects?

A. Well, I think that depends on the class of service you're talking about. The residential class, I would say, would be more sensitive to weather effects than other classes.

Q. Mr. Sundermeir, I would now like to refer you to your response to Interrogatory IR-GSA-1-20, in which you were requested to provide all workpapers supporting the average and excess method of cost allocation, including the derivation of all factors.

A. Yes.

Q. Is it in this schedule that we can find the NCP demand at the generation level?

A. Yes.

Q. Where can we find energy consumption at the generation level?

A. Well, the first line shows the non-coincident class peaks. The second line shows the average demands, which is the energy part of the allocation in that average demands are merely the energy divided by a constant. What

we show on here is not kilowatt hours, though. We show kilowatts.

MS. PITTS: Before we go any further with this questioning I would like to have that exhibit that's being referred to, the answer to IR-GSA-1-20, marked for identification as GSA Cross-Examination Exhibit No. 8.

JUDGE MATUSCHAK: Very well.

(Whereupon, the document was marked as GSA Cross-Examination Exhibit No. 8 for identification.)

BY MS. PITTS:

Q. Mr. Sundermeir, how is the NCP demand by rate schedule utilized in GSA-20 accumulated?

A. I'm sorry. Would you repeat that question again?

Q. How is the NCP demand by rate schedule utilized in GSA-20 accumulated?

A. Well, the annual non-coincident class peak is determined for each class of service and then the total of that value is the total of the non-coincident class peaks.

Q. Isn't this a total of the monthly NCP by rate classes?

A. No.

Q. What is it?

A. It's the total of the annual class peak.

Q. Mr. Sundermeir, I would like now to refer you to your response to IR-GSA-1-17.

MS. PITTS: Your Honor, I would like to have this marked as GSA Cross-Examination Exhibit No. 9.

JUDGE MATUSCHAK: Very well.

(Whereupon, the document was marked as GSA Cross-Examination Exhibit No. 9 for identification.)

BY MS. PITTS:

Q. Mr. Sundermeir, the question posed to you was, "Please provide the monthly non-coincidental peak of each rate class for the most recent 12 month period."

And what was your answer?

A. We said that was not available. For cost allocation purposes we do not use the monthly non-coincident class peak. We use the annual non-coincident class peak.

Q. Mr. Sundermeir, I would like to refer you now to Section 6 of WFS-1, the cost of service study.

A. Yes.

Q. Now, this is page 39. Would you please explain -- it is titled "High Tension Class of Service, Total Annual Unit Cost to Serve Based on 12 Months Ended June 30, 1986." Would you please explain exactly what is contained in this section?

A. Yes. This is a summary of the data as taken from the cost allocation to classify the cost components to serve Rate HT into whether they are demand related costs, energy related costs or customer related costs.

Q. What is this then used for?

A. Well, this would then develop our unit costs to serve, which is shown on the line just above the horizontal line at the center of the page. And those units costs are then used to develop the cost curves.

Once we develop the cost curves we then use the cost curves to develop the pricing for Rate HT.

Q. The tariff charges developed by Mr. Williams?

A. Yes, the energy pricing and the -- as I explained earlier -- the energy pricing and the customer charge are developed directly from this unit cost study.

Q. What method, for example, is used to develop tariff charges for Rates PD and HT?

A. Well, for example, using the unit cost, we develop a cost curve and as you probably know there are three energy price blocks in Rate HT and PD: zero to 150 hours use, 150 to 300 hours use, and over 300 hours use. From the cost curve we can develop the slope of the cost curve between those values, and that is the way we determine the energy pricing by blocks.

As I indicated, the customer charge is directly related to the customer cost. At that point we can determine how much revenue we will collect from those charges, the energy charges and the customer charge. The remainder is recovered from the demand charge and that remainder is

determined by dividing that remainder by the number of demand billing units.

Q. Is what you've been describing, Mr. Sundermeir, generally known as the Bary Curve analysis?

A. Well, the Bary Curve is used for the demand related costs only. The total cost curve is the sum of, actually, three curves: the customer curve, the energy curve and the demand curve. The demand curve is developed using the Bary Curve.

Q. In developing the Bary Curve analysis related to demand does PECo follow the general guidelines as outlined by Mr. Bary in his book Operational Economics of Electric Utilities

A. I'm not quite sure I follow the question. We use the Bary Curve as developed in accordance with the way that it was developed by Mr. Bary.

Q. Now, I'd like to refer you to Section 7 of the cost study, WFS-1.

A. Yes.

Q. How were the cost curves in this section developed?

A. The cost curves were developed by -- from the unit costs that we have previously looked at, and as I indicated, developing a cost curve for each of the cost components and adding them together, and that is the resulting cost curve.

The customer cost curve is not a function of load factor. Therefore, it is actually a horizontal line. The

energy cost curve is a function of energy cost and increases linearly with the amount of energy used. And the demand cost curve is developed in accordance with the relationship between coincidence factor and load factor as developed by Mr. Bary. And the cost curve that is presented is actually the sum of those three cost curves.

Q. The cost curves were at the system rate of return?

A. Yes, they are.

Q. And the Bary Curve analysis and unit costs are at the class rate of return?

A. When we were developing --

Q. The revenue curves we are talking about.

A. When we are developing the actual rate we use the rate of return of the class.

Q. Referring to page 6-A, what is the rate of return associated with the proposed Rate PD revenue curves?

A. Well, the actual return for Rate PD under our proposed rate is 12.4 percent.

Q. Mr. Sundermeir, I would like now to discuss voltage credits, and I would like to refer you to exhibit -- to the company's response to IR-PAIEUG-1-40.

A. Yes.

MS. PITTS: Your Honor, I would like to have this marked as GSA Cross-Examination Exhibit No. 10, the company's response to PAIEUG-1-40.

JUDGE MATUSCHAK: So marked.

(Whereupon, the document was marked as GSA Cross-Examination Exhibit No. 10 for identification

BY MS. PITTS:

Q. In the question you were asked, Mr. Sundermeir, were you not, to update the study used in the last rate case to determine the voltage credits in Rate HT?

A. Yes.

Q. Does the data contained in column one of the response indicate the installation costs for the same type of equipment at the higher voltage levels of 33 KV, 66 KV and 132 KV?

A. Yes.

Q. Column two data is, then, the installation costs for equivalent sized equipment at 13.2 KV?

A. Yes.

Q. And does the data in column one represent a customer's investment in higher voltage service?

A. Yes.

Q. What items are included in installation costs?

A. Well, this was an analysis that was done by our electrical engineering people and they would have looked at -- I can't say that I can tell all of them -- but were required, switches, transformers, equipment such as that in nature. It varies with the size of the customer.

Q. Are labor costs included?

A. Yes.

Q. Are peak demand losses considered in this analysis?

A. No. It's really the cost to the customer at his location.

Q. Are annual KWH losses considered in this analysis?

A. No.

Q. Are the core and/or copper losses associated with transformers taken into account?

A. No. This is only looking at it from the customer's standpoint, the additional money that the customer has to spend to receive service at a higher voltage than 13.2 KV.

Q. Isn't it true, Mr. Sundermeir, that on a per unit basis losses are significantly less at the higher voltages than at 13.2 KV?

A. I'm not sure that I understand what the connection is there. The customer is receiving service at a certain voltage. He's looking at that voltage at his location. The losses to get that energy to him at that location really don't influence these figures.

Q. Referring to Section 9 of the cost of service study.

A. Yes.

Q. Can you please tell me what the peak demand losses are at 33 KV, 66 KV and 132 KV?

A. You wanted it for 33 KV, did you say?

Q. Yes, 33, 66 and 132.

A. It's not broken down into 66 and 132. Perhaps the figures that you're looking at are at the top of page 77.

Q. That's the whole PECo system, is it not, on page 77?

A. By group, by component group.

Q. What does that mean, though?

A. Well, this was an estimate made of the peak losses. Now, if we are tying this in with the losses that we calculated in our load study, we have programmed into our load study program the formula that is shown in Section C of this study, and that formula is what we use to calculate the losses at the various voltage levels.

Q. Could you please tell me, then, what those annual KWH losses are at these three levels: 33 KV, 66 KV and 132 KV?

A. Annual losses?

Q. Right, annual -- for the customers in each category.

A. The annual losses are shown on the bottom of page 72.

Q. Mr. Sundermeir, I still don't see a figure for the

HT customers where it's split up by voltage of 33, 66 and 132.

A. It's not. It's not. It's grouped. If you look at the bottom of page 172 you will see the high tension losses are grouped together. This is high tension being 13.2 KV and above.

Q. Mr. Sundermeir, what is the definition of a loss factor?

A. A loss factor is the percentage of the losses to the total of the energy used.

Q. How does the loss factor vary as a function of voltage level of service?

A. Due to both fixed losses such as core losses in transformers, and also variable losses that are relative to the current carried at the various voltage levels, you would have different losses at the various voltage levels. And also, it depends on the actual physical configuration of your system.

Q. Well, what peak demand loss factor was assigned to the 33 KV, 66 KV and 132 KV customers in the cost of service study?

A. All of those customers are included in the high tension class, and the half-hour by half-hour losses are calculated using the formula under high tension loss factor that is shown on page 67.

A. Mr. Sundermeir, what annual energy loss factor

was assigned to the 33 KV, 66 KV and 132 KV customers?

A. Annual loss factor?

Q. Annual energy loss factor, yes.

A. That's on the bottom of page 72.

Q. But, again, this amount is not broken out, is it?

A. No. They are lumped together. It's high tension. All high tension losses are grouped together.

Q. Are these three categories of customers, then, the 33 KV, 66 KV and 132 KV, all treated the same?

A. They are all -- we have customers that are served at high tension voltage and that includes any voltage from 13 KV and above, and they are listed under high tension. The primary customer are those served at 4 KV. And the secondary customers are those served at secondary voltages.

Q. Are the three categories of customers that I just mentioned, the 33, 66 and 132 KV, averaged in with the 13?

A. Yes.

Q. Do these customers use the 13.2 distribution system?

A. Do all of the customer use the 13.2 distribution system? No.

Q. Well, do the ones that we were concerned about, the 33, 66 and 132, use the 13.2 distribution system?

A. No.

Q. Were they assigned costs associated with this system?

A. For our cost purposes all high tension customers are grouped together.

Q. I'd now like to refer to Section 9, page 70, of your cost of service study.

A. Yes.

Q. What are the KWH losses of Rate HT at 13 KW as a percent of total Rate HT losses for high tension -- as shown in Table 2?

A. Could you repeat that question, or have it read back?

MS. PITTS: Could I please have the reporter read back the question?

(Whereupon, the reporter read from the record as requested.)

BY MS. PITTS:

Q. That is supposed to be KV, not KW.

Do you accept that the amount is approximately 20 percent?

(Pause.)

It's the percent of 98.45 million to the total?

A. Yes.

Q. Mr. Sundermeir, can you indicate for the record where we can find the percentage of KW losses of Rate HT at 13 KV as a percent of total HT losses?

A. I thought that was the number we just calculated.

Q. I'm sorry. KWH. We just did KWH. Now we need to do KW.

A. To the best of my knowledge there is no breakdown.

Q. Mr. Sundermeir, would you be able to supply that figure for us?

A. Well, I'm going to have to answer that that I don't know. This particular analysis that we are looking at was actually done by our systems planning department and we use the results of it. So what information that they can provide, I don't know.

Q. Could you please provide us whatever information on point the company has?

A. We will do the best we can.

Q. Thank you.

Could you please tell me what the voltage levels of service are for Amtrak and SEPTA?

A. Amtrak, I believe, is 13.2 KV, and a portion of SEPTA is 13.2 KV and a portion is 33 KV.

Q. What loss factors, peak demand and annual KWH, were assigned to these customers in the cost of service study?

A. I believe subject to check we used the same losses that we used for the high tension class.

MS. PITTS: Thank you, Mr. Sundermeir. I have no further questions.

Your Honor, at this time I would like to move into

evidence GSA Trial Exhibits 7, 8, 9 and 10.

MR. MacGREGOR: No objection.

JUDGE MATUSCHAK: There being no objection, GSA Exhibits 7, 8, 9 and 10 are admitted into evidence.

(Whereupon, the documents marked as GSA Cross-Examination Exhibits Nos. 7 through 10 were received in evidence.)

JUDGE MATUSCHAK: Let's take a ten minute recess.

(Recess.)

JUDGE MATUSCHAK: Who wants to proceed next?

MR. O'DONNELL: Your Honor, I would be glad to proceed.

Before the cross-examination there is one preliminary matter I wish to raise, Your Honor. On September 23rd Occidental Chemical Corporation sent to the company a series of requests for information. We received the first responses on Friday; a second group of responses arrived Saturday.

We have three problems with the responses so far, which we have discussed with the company already both on Friday and today.

The first problem is that many of the requests for information have not been answered at all. Secondly, a number of the responses are incomplete, some of which pertain to Mr. Sundermeir's testimony. And the third problem is that many of the responses -- four of the responses direct us to

review company records which having only received on Saturday those responses, we haven't been able to review.

We have talked with the company and asked them to make those materials available tomorrow if possible, and also inquired as to when the other questions would be answered.

At this point, Your Honor, we are still trying to work with the company on that, and I simply want to indicate that we would request the right to reserve our opportunity to cross-examine further witnesses of the company, including Mr. Sundermeir, depending on the information which we ultimately receive, and also request that the company advise us by the close of business today when the other questions will be answered and whether the information in their records will be available tomorrow.

JUDGE MATUSCHAK: Well, we expect Counsel to cooperate in these matters and not to approach the Bench on these matters except as a last resort.

We will not preclude you if you haven't gotten some information. We will not preclude you from further cross-examination so long as we are here on this matter.

MR. MacGREGOR: Your Honor, I would just note for the record that the interrogatory responses are not due yet. What the company endeavored to do was to answer all of the questions that related to Mr. Sundermeir's and Mr. William's

testimony and try to get those in Mr. O'Donnell's hands as soon as possible.

JUDGE MATUSCHAK: You try to work that out.

MR. O'DONNELL: I would just note that the answers are due tomorrow and I understand they won't be provided, but we will work with the company to try to get timely answers.

JUDGE MATUSCHAK: Don't overburden the ALJ.

MR. O'DONNELL: Yes, Your Honor. That is a fine a rule of thumb and we will try to adhere to it.

CROSS-EXAMINATION

BY MR. O'DONNELL:

Q. Good morning, Mr. Sundermeir.

A. Good morning.

Q. My name is Earl O'Donnell and I am Counsel for Occidental Chemical Corporation.

Mr. Sundermeir, my questions are going to relate to the Auxiliary Service Rider together with the Night Service Rider for HT customers and the HT tariff itself. I also will ask you some questions pertaining to the data responses that we have received to date.

Do you have in your possession copies of those tariffs as well as the data responses?

A. Yes.

Q. I wonder if I could ask you to turn to the Auxiliary Service Rider. I would like to begin by asking

some questions regarding the availability of that service rider together with some of the terms and conditions.

A. Yes.

Q. So you have that in front of you, sir?

A. I have in front of me the existing Auxiliary Service Rider. Is that what you're referring to?

Q. Yes, sir.

A. Yes.

Q. Let's begin by trying to define the type of service that's being rendered here. Am I correct that this is available to customers who generate their own power and require on occasions either additional back-up or maintenance power from the company?

A. Yes.

Q. This, then, is a -- although the customer generates his own power, this is a retail service provided by the company?

A. Yes.

Q. I note in the applicability section that the reference is to service to customers, including qualified small power production or co-generation facilities, qualifying facilities. Does this provision also apply to facilities that are not qualifying facilities under PURPA?

Do you know what I mean by "PURPA"?

A. Yes.

It applies to, actually, all customers who operate parallel to the company.

Q. The customer need not, then, be a qualifying facility for purposes of PURPA in order to obtain service?

A. No.

Q. The key criteria, then, is that the customer must be operating in parallel with the company?

A. Yes. As it says in the applicability statement, where the company supply can be substituted for that of the customer.

Q. Would the service be available to a customer which purchases power from a co-generation unit owned by another entity? For instance, a customer who has a co-generation facility located at its industrial plant but the facility technically is owned by a third party?

A. No. These services are applicable to the customer and in that case I think you're describing the customer would be the owner of the generation facility.

Q. So in a situation in which a hospital, for instance, has a co-generation facility on its site, the co-generation facility is owned by a third party, the hospital purchases power from the co-generation facility. Would that hospital, the customer in that sentence, be entitled to purchase power under the Auxiliary Service Rider when the co-generation facility is out of service for

A. The owner of the co-generation facility would be entitled to the utility service. The owner of the co-generation facility.

JUDGE MATUSCHAK: And he could make arrangements with the hospital for the benefits of that?

THE WITNESS: We will supply auxiliary service to the owner of the co-generation facility.

BY MR. O'DONNELL:

Q. But not to the hospital?

A. No.

Q. In instances in which the co-generation facility is not operating, the hospital, obviously, would continue to require power to operate. What sort of schedule would be available to them?

A. What the hospital could do is divide its load between the load provided by the co-generator and the service provided by the company. And obviously the company would support its share of the load with all of the reliability as it does any other customer.

Q. Let's assume that the co-generation unit is 1,500 KW and the load is 3,000 KW.

A. Yes.

Q. The customer then would be entitled, as I understood your last sentence, to purchase 1,500 KW from PECo? Is that correct?

A. The customer could contract with the company to provide the total load.

Q. How so?

A. Well, through the regular rate schedule, like Rate HT. When I say "contract", for the company to supply the full 3,000 kilowatts, and we would have a contract to provide that total firm load and all the applicable minimums in the rate would also apply.

Q. So the hospital, in order to have, under those circumstances, back-up or maintenance service would have to incur the full ratchet provisions of the HT service?

A. Contract minimums, yes.

Q. There would be no daily pro ration provisions available to the hospital?

A. No.

Q. In effect, it would be purchasing power from PECo as if it were a full requirements customer?

A. That's correct.

Q. Even though the co-generation facility was meeting its requirements under ordinary circumstances?

A. And I think the policy is consistent with the recent ALCON decision.

Q. Well, putting that aside, is your answer to my question yes?

A. Yes.

Q. Let me direct your attention to the control of supply section in the Auxiliary Service Rider. Do you see that, sir?

A. Yes.

Q. Am I correct that this section permits the company, PECo, to require that a qualifying facility install load limiting devices at the qualifying facility's expense?

A. It says that the company may require that.

Q. And my question was whether it permitted the company to require it. I take it the answer is yes?

A. Yes.

Q. I wonder if you would refer to the Rate HT schedule and indicate to me whether the company reserves a similar right under that schedule, that is, to require a customer to install circuit breakers or fuses?

A. It's really not required for a full service customer because we would have a contract to provide that full service. If it's an Auxiliary Service Rider customer we would have a contract to supply a lower level of service and there would be nothing to stop the customer from using a higher demand than what he had contracted for. So in the case of a co-generator who has some of his own generation, we might have to put demand limiting devices in to ensure that the customer doesn't exceed his contract demand, which he could easily do.

Q. Under the HT rate schedule is there a contract demand fixed by contract?

A. Yes, there is, a maximum contract demand.

Q. What happens if the customer exceeds that contract demand?

A. Well, I think from a practical standpoint our people who would be on top of that, our business service people, would go out and talk to them about that and perhaps as a result of that might indicate that a new contract should be drawn up, as long as we could supply the higher demand.

Q. Why isn't that approach equally available in the case of the auxiliary service customer?

A. Well, the auxiliary service customer has contracted for a certain demand and part of his total demand is provided by his own generation. Now, if he decided that he wanted a higher demand supplied by the company, I think the same arrangement could be made with the co-generator.

Q. I would also like to ask you to turn to the parallel operations provision of the Auxiliary Service Rider, which states that the customer shall not, quote, at any instant, unquote, operate any other source of power in parallel with the company's service until written permission is given by the company for such parallel operation.

A. Yes.

Q. Am I correct that this section would require a

qualifying facility to obtain written permission from the company for the initial interconnection and parallel operation of its facility?

A. That's correct.

Q. Would the section require a qualifying facility to obtain written permission from the company to resume parallel operation after, say, a maintenance outage?

A. I would say no, unless the maintenance outage happened to be for some very, very extended period of time.

Q. Could you explain to me what you mean by an "extended period of time"?

A. Well, I don't have any specific period of time but the company wants to know where and at what locations facilities are operating in parallel with them. Now, I suppose if we got into a situation where somebody had an extended outage over a few years, we would certainly want to know when they were going to go back and start operating in parallel with us.

But if you're talking about a weekend outage, or a week, or two or three, why, that would not be necessary, no.

Q. Would your answer be the same, that is, that written permission wouldn't be needed, in the case of back-up power where the outage is a few weeks or a month or something of that kind?

A. You've got to understand that part of the reason

for that written is that there are a lot of considerations involved. One of them is safety. If we have somebody that is generating, in effect, in our system we would have to know that such generation is there.

Q. But surely that can be accomplished by communications, oral in nature, between the company and the qualifying facility without written notice? I said "surely". Would you agree with that?

A. Well, I can think of instances where customers have operated in parallel with the company and the company didn't know it. And I think, as in many other cases, when it's in writing then it's known and you have something that you can pull out and look at and say, yes, the company knows and is well aware of it.

Q. To your knowledge, have instances in which the company has discovered by parallel operations, have those resulted in any safety problems on your system?

A. Not that I'm aware of, but that doesn't mean that they can't. And it also doesn't mean that those problems, if they do exist -- they can be very, very serious.

Q. Let's assume that we have a co-generation unit that went down briefly, three, four hours, and back-up power is called on by the company in order to maintain its operations, for the customer to maintain its operations. Would the company require that written notice be received by the co-generator

before that co-generator could resume operation of its facility, co-generation facility?

A. No.

Q. Now, you have indicated that you would like to -- under some circumstances it would be helpful to the company to know when a customer is resuming parallel operation. You have also indicated that those things can be more clearly dealt with if something in writing exists.

A. Well, the main thing here is for the initial permission when at first the co-generation facility or small power producer is first going to operate in parallel with us. There are a number of other things that are involved. We want to get written permission. We want to be sure that all of the company's interconnection requirements are satisfied. And once they are satisfied, other than perhaps some periodic inspection of the installation, why, I don't think it's necessary every time the customer unit goes down that he get written permission from the company to resume the service.

Q. I guess the problem I'm having is that it's not clear to me how a qualifying facility would know whether written notice is required. Is there some policy or some written document which would explain how this provision would be applied by PECo?

A. Well, generally when there is a co-generation or small power production facility contemplated, in general,

they would contact the company.

Q. I'm not talking about initial operation. I'm talking about the situation where the unit goes down for some period of time.

A. Yes.

Q. It's repaired, the co-generator obviously wants to have the unit in operation as promptly as possible. My question is in that type of circumstance is there some written document which would explain when notice is required or approval from the company is required?

JUDGE MATUSCHAK: Can't they contact the company and see whether the company is going to require a written contract? It seems to me that the answer to that is very simple. All they would have to do is call the company and ask them whether they need a written contract.

THE WITNESS: I think in most cases that contacting our load dispatcher, so that we have some knowledge -- and in this case we are talking about oral.

The thing that you're referring to in the tariff requiring this written permission is primarily for the initial operation of the facility.

JUDGE MATUSCHAK: Well, I think that is probably resolved very easily if you call the company and ask them whether they can proceed or whether they need another written contract. I mean, it seems to me that if they are not sure

all they have to do is call the company and say we want to proceed again, now do we need another written contract.

THE WITNESS: No.

JUDGE MATUSCHAK: I don't see any problem there.

BY MR. O'DONNELL:

Q. I'm not sure I understood what you're saying "no" to.

A. I'm saying no to the fact that you would not normally -- I can't think of too many circumstances where you would normally need another written permission from the company to do that. I think that it would be a good idea, in some cases, if our load dispatcher were notified that they were coming back on line.

Our initial concern is, number one, we don't want people operating in parallel with us without our knowledge. It has happened and we don't want that to happen.

The other thing that we are concerned about is that the interconnection with the company's facilities is in accordance with the company's standards for that interconnection We would therefore make sure that those interconnection facilities are acceptable before the written permission would be given.

Q. Let me direct your attention to the type of supply section of the Auxiliary Service Rider. First, when is back-up power available to the customer on the PECo system under

the rider?

A. It's available on demand.

Q. Whenever there's an unscheduled outage at the qualified facility?

A. Yes. And I think in accordance with the definition in the Auxiliary Service Rider, it's available to replace the customer's own generating capacity whenever it may be interrupted on an unscheduled basis.

Q. And it's true, is it not, that PECo's generating resources are interrupted because of unscheduled equipment failures at times?

A. If you mean do we have forced outages on our generators?

Q. Yes.

A. The answer is yes.

Q. And the North American Electric Reliability Council compiles generating availability data which includes forced outages of electric utility generating resources? That's true, is it not?

A. I'm not familiar with that.

Q. Utilities typically plan to accommodate unscheduled outages of their equipment through the installation of reserve capacity; isn't that true?

A. Through the installation of reserve capacity or through purchases on an interchange, yes.

Q. Do you know what PECo's current planning reserve margin is?

A. Only approximately. Twenty-five percent.

Q. Assuming that it's 25 percent, if PECo anticipated a 3,000 megawatt load you would install 3,000 megawatt capacity to serve the load and then an additional 750 megawatts of reserve capacity; is that correct?

A. Yes.

Q. I wonder if I could ask you some questions, hypothetical questions, concerning the Auxiliary Service Rider. And just for your convenience and clarity I'm going to refer to a visual aide, which hopefully will keep this from getting confused.

MR. O'DONNELL: I will explain this for purposes of the record, Your Honor.

BY MR. O'DONNELL:

Q. The hypothetical deals with a 10,000 KW qualifying facility. We are dealing with the back-up power provisions of the Auxiliary Service Rider. The customer is served at the 33,000 voltage level, making him a Rate HT customer as well as a purchaser under the Auxiliary Service Rider.

Is that clear so far?

A. Yes.

Q. Let's assume that the customer began initial operation of the co-generation facility in June of a year,

after receiving written permission from the company.

A. Of course.

Q. The outage begins -- this is an unscheduled outage. The unscheduled outage begins at 5:00 p.m. on a Friday in the month of June.

A. All right.

Q. And it ends before 7:00 a.m. on Monday. So it's at most a three day outage.

Now, the hours between 5:00 p.m. on Friday and 7:00 a.m. on Monday are off-peak, are they not?

A. Yes -- I'm sorry. What were the times again?

Q. It was 5:00 p.m. on Friday through 7:00 a.m. on a Monday.

A. Yes.

Q. Those are off-peak hours?

A. Yes.

Q. There are no other outages of the co-generation facility during the 12 month period. So the sole purchase of back-up power during that 12 month period has occurred during this period of time, Friday through Monday.

A. Yes.

Q. The metered demand during the outage was 10,000 KW.

A. Yes.

Q. What would the billing demand be to that customer

in June?

A. Is the company supplying firm or interruptable back-up?

Q. It would be pursuant to the Auxiliary Service Rider. Perhaps you could clarify.

A. Under the existing Auxiliary Service Rider back-up power is supplied on a firm power basis. However, the company just within a little over a week ago filed a new Auxiliary Service Rider that provides for both firm and for interruptable back-up power.

Q. For the moment let's stay within the currently effective rate schedule, which you have indicated provides only for firm back-up power.

What would the billing demand be in the month of June for that customer?

A. If he had contracted to supply -- for the company to supply 10,000 kilowatts, his minimum billing demand would be 4,000 kilowatts in the -- oh, this is June. I'm sorry.

Q. This is June.

A. This is June. So his billing demand in the summer months would be the minimum billing demand required by Rate HT, which is 25 kilowatts.

Q. Now, he takes 10,000 during that month.

A. Okay. I'm going to get to that.

He could purchase his back-up power in the off-peak period on the Night Service Rider. And on the basis of the Night Service Rider, he would get charged the night service capacity charge, which would be the difference between his maximum off-peak demand and his billing demand.

In this case he would be charged his on-peak demand. If he only used it in those days and if it's only in June, he would have an on-peak billing demand of 25 kilowatts and the rest of it would be the difference between the 10,000 and the 25. He could purchase -- be billed under the provisions of the Night Service Rider.

Q. Let me ask you to turn to the Auxiliary Service Rider, rate and billing section.

A. Yes.

Q. Under the heading Maintenance Power there is a sentence, the last sentence, which says qualifying facilities will be billed under the provisions of the Night Service Rider corresponding to the appropriate rate schedule.

A. Yes.

Q. Is there a similar sentence under back-up or supplementary power?

A. No.

Q. Where in this tariff is there an indication --

A. I'm sorry. A similar sentence to that one. I'm sorry.

Q. Yes.

A. Yes. Back-up and supplementary. The monthly billing for back-up or supplementary would be under the provisions of the normal service rate and applicable rider.

Q. So it's your testimony that the reference to the normal service rate and the applicable rider, even though there is no specific reference to night service as there is under the maintenance power, includes the Night Service Rider?

A. That's correct.

Q. Is the billing demand, then, under this factual situation 25 KW?

A. In the four summer months.

Q. In the four summer months.

A. Your specific example was for the month of June.

Q. That's right. So in June it would be 25 KW. What about the minimum contract provision, that is, that under the HT service schedule there is a 40 percent ratchet measured against the contract demand. Would that be applicable?

A. No, it would not and I think it so states in the HT tariff. That 40 percent is only applicable during the months of October through May.

Q. What about in the ensuing -- well, let's take -- let's assume that we are talking about the period October through May. What would his billing demand be?

A. October through May?

Q. Yes.

A. If he had no use --

Q. Beyond the June consumption.

A. Beyond June, yes. He had use in June. In the following October, he would have a minimum billing demand of 4,000 kilowatts.

Q. The demand charge for June, I take it, would be limited to the 25 KW?

A. Yes.

Q. Times the HT demand charge?

A. Yes, plus the Night Service Rider charge, which is also a demand charge.

Q. And that would be the 82 cents per KW?

A. That's correct. Plus a monthly $10 metering charge.

Q. And for the ensuing -- this says the ensuing 11 months. Let's assume we are talking about the eight months.

A. Yes.

Q. What would the demand charge be, 4,000 --

A. Four thousand kilowatts.

Q. Times --

A. His charge would be -- assuming he used nothing, let's say, in October, he would be charged for the 4,000 kilowatts times the demand charge in Rate HT plus the customer charge in Rate HT plus $10 for a meter charge for being on the Night Service Rider.

Q. As a general matter, Mr. Sundermeir, if a customer imposes load on the PECo system during all hours of the year would you say that there is a very high probability that he contributes to the need for PECo to install capacity?

A. Yes.

Q. If the customer imposes no load whatsoever on the PECo system would you say conversely that there is a very low probability that he contributes to the need for capacity?

A. If he has no load he would contribute nothing.

Q. And a customer whose load is random and intermittent statistically has a lower probability of contributing to the need for capacity by PECo than a customer that imposes load at all times; isn't that also correct?

A. That's correct.

Q. Let me ask you, with respect to the hypothetical we have just discussed, what would the energy rate be under the current tariff?

A. Well, he would be billed for the amount of energy he used in accordance with the billing demand, which in your example for June would be 25 kilowatts. So he would pay the first energy block for the 150 hours use of 25 kilowatts. The next block would be 150 hours use of the 25 kilowatts, and all additional energy would be at the end block price.

Q. Now, since we are talking about, at most, a three

day period here --

A. Yes.

Q. Actually it's less than that. The purchases would be less than 150 hours during the course of the month?

A. Yes.

Q. Would the purchases then be, looking at your current tariff -- I'm sorry, your proposed tariff, which has a 9.64 cent per KWH --

A. No, I'm sorry. His purchases wouldn't be less than 150 kilowatts. They would be substantially more than 150 hours use because if actual demand is 10,000 kilowatts and he's only being billed for 25 kilowatts, most of his energy would be at the end block price or rate.

Q. Turning back to the type of supply section of the Auxiliary Service Rider, am I correct that maintenance power is not available on a firm basis under the current Auxiliary Service Rider?

A. Under the current Auxiliary Service Rider that's correct.

Q. Under that tariff the power is interruptable at the sole discretion of the company, is it not?

A. Yes.

Q. In addition, the company retains the right, does it not, to determine when maintenance power will be available, that is, it must be on a scheduled basis that is acceptable

to the company?

A. That's correct.

Q. Can you identify any other tariff in which the company retains both the right to interrupt supply and the right to in effect schedule the usage by the customer?

A. Well, we can interrupt the supply under the provisions of the supplemental energy portion of the Night Service Rider and we can interrupt the supply under the provisions of the Curtailment HT Rider.

Q. Those are your two interruptable tariffs, are they not?

A. That's correct.

Q. The only two?

A. That's correct.

Now, under the provisions of the Auxiliary Service Rider the benefit to the customer in receiving this permission from the company is that it has stated in the tariff that we will pro rate the number of days that the customer uses the maintenance power, which is not a provision of the other interruptable tariffs.

Q. But just to get back to the question I asked, this is the only tariff which has both of those elements present, is it not?

A. Yes, and also includes the provision for pro ration.

Q. Now, with respect to the interruption feature, there is no minimum notice period, is there, for PECo? They can interrupt without providing some minimum period under the tariff?

A. Under the existing provisions it does not indicate a minimum notification period. However, under our Curtailment Rider and under our supplemental energy provision of the Night Service Rider there is a requirement of at least 30 minutes notice. And that is also under the provisions of the proposed Auxiliary Service Rider.

Q. But at the current time this tariff is unique in that it provides for interruption without a minimum notice period? Is that a fair statement?

A. That's a fair statement. However, I have never ever known of anybody being interrupted with less than 30 minutes notice. There is usually substantially more than that. And under our proposed Auxiliary Service Rider we do indicate the minimum requirement for notification to be consistent with our other two interruptable rates.

Q. Are there any restrictions on the total number of hours that PECo can interrupt a maintenance customer under the Auxiliary Service Rider?

A. No.

Q. Are there any -- you have mentioned this new Auxiliary Service Rider which you filed. Are there any

restrictions on the total number of hours that PECo can interrupt in that?

A. No, but the interruptions are limited to those times when the company is experiencing capacity limitations only.

Q. The Curtailment HT Rider also is limited to capacity problems, is it not?

A. The Curtailment Rider, there are actually currently two criteria for interrupting customers on the Curtailment Rider. One is economy, and the other is when the company is experiencing capacity limitations. Under the Auxiliary Service Rider it's only the latter of those two that the company will interrupt a customer for.

Q. But under the Curtailment tariff there is also a maximum number of hours of curtailment, is there not?

A. That's correct.

Q. Turning back to the current tariff for auxiliary service customers, there is no specification of the reasons for which the company may curtail service, is there?

A. No. It merely indicates that it's at the sole discretion of the company.

Q. With respect to --

A. However, under the proposed Auxiliary Service Rider it is defined that it will be at such times when there are capacity limitations.

Q. I don't want the record to be confused because we have moved back and forth between the current and the proposed. Let me summarize what I understand the situation to be with respect to the current tariff, and I would ask you for purposes of this question just to respond within the context of the current tariff.

A. Fine.

Q. It's my understanding that the current tariff does not provide any minimum notice period, it does not place any restrictions on the total number of hours that PECo may interrupt the service, and it does not specify any limitations on the reasons for which PECo can interrupt service under that tariff. Is that an accurate statement?

A. That's an accurate statement as far as the tariff is concerned. Of course, we could assume that the company would have no reason to interrupt the customer unless it was suffering some sort of a capacity limitation. We are still in the business to sell kilowatt hours.

Q. I would like to have some additional insight as to how the provisions of the Auxiliary Service Rider interact. For instance, if a qualifying facility purchased 20,000 KW in back-up power -- had a contract for that amount -- and also had 20,000 KW supplementary service -- are you with me so far?

A. The provisions of the tariff, I believe -- when

you're referring to supplementary service are you referring to it as defined in the Auxiliary Service Rider?

Q. Yes, I am.

A. Yes. Go ahead. I'm with you.

Q. Would both the back-up and the supplementary power service under those circumstances be served under the same provisions of Rate Schedule HT?

A. Yes.

Q. Let me make sure I understand. Would the back-up be under a single contract and the supplemental would be under a separate contract so that the qualifying facility would receive two separate billings for the service?

A. No.

Q. What would it be under?

A. It would be under Rate HT.

Q. A single contract?

A. A single contract, and he would be billed in accordance with the demand that the company sees on its demand recording devices.

Q. Let me make sure I understand how this would operate. Assuming that the customer served under the Rate HT -- I'm going to change the numbers a little bit, so please bear with me -- supplementary power usage is 10,000 KW at a 90 percent load factor in all months of the year. The backup power usage is 10,000, and the usage occurs for

three hours at 100 percent load factor in June. Those takes are coincident with the 10,000 KW supplementary power demand.

Are you with me so far?

A. Yes.

Q. Excluding the time-of-use charges, can you tell me what the Rate HT base rate energy charge would be for -- and let's move out of the summer period into November?

A. You say he took this back-up in the summer?

Q. That's right. In June.

A. In June. And so in June he had a total billing demand of 20,000 kilowatts?

Q. That's correct.

A. Is that correct?

Q. That's correct.

A. And the company, by contract, is required to -- is under contract to supply firm supply to this customer when he needs it?

Q. That's correct.

A. Okay. Then in the months of October through May, following that month of June, there would be a ratchet of 80 percent of 20,000.

Q. Or 16,000?

A. That's correct. Which I might add is the same ratchet that would be applicable to any other customer on

PE Company's system that also had a demand of 20,000 kilowatts in the month of June.

Q. What would the billing of energy be in November?

A. What would the billing of energy be?

Q. He is simply taking the supplementary power now in November, 10,000 KW at 90 percent load factor.

A. His billing in November would be 16,000 kilowatts.

Q. Energy. I'm sorry.

A. Well, then your energy blocks would be 150 hours usage of that in the first block, 150 hours in the second block and then the remainder in the third block.

Q. Would you accept, subject to check, the following calculation for the three blocks: 16,000 times 150 times .0739, which I believe is exclusive of the time-of-use rate, the energy charge, for that first block under the current tariff?

A. Yes.

Q. That equals, subject to check, $177,360.

The next block would be 16,000 times 150 times .0556, which equals $133,440.

The remaining power is billed at .0376, and that equals $63,168, for a total --

A. I'm sorry. What was the last number?

Q. $63,168.

For a total of $372,968.

(Witness performing calculations on electronic calculator.)

Q. For your information, that last tail block was calculated by assuming 10,000 kilowatts times 720 hours in the month times .9, which equals 6,480,000 KWH.

A. Okay. Fine.

Q. Is that an acceptable number?

A. Yes.

Q. Now, one of the things driving this calculation is that the billing demand is 20,000 times .8, for purposes of the ratchet. That has an influence on the energy rate, does it not?

A. Yes, it does.

Q. In effect, by combining the back-up and the supplementary power so that the billing demand -- or the demand -- is 20,000, doesn't the current rate operate so that PECo is able to bill out the supplemental power in November at a higher energy price than it would be able to do if supplemental was under a separate schedule and the demand were 10,000 under that schedule?

A. The demand that the company is feeling in the summertime is 20,000 kilowatts and our rates are set up to recover those demand related costs, not in that one single month but over a period of a year. And that's one of the basic reasons for having the ratchet in there, so that we

can assure ourselves of a certain number of demand billing units to recover those summertime costs. And that is exactly the same as we do it for any other Rate HT customer. There is no discrimination against the customer just because he's buying back-up or supplemental power from the company.

Q. In effect what you're saying is that there is no difference between someone taking under the supplemental and back-up rate and under the firm HT rate?

A. That's correct, and I believe that in accordance with the PURPA regulations the law says that we cannot discriminate against a customer with his own generator, and we really don't in that we charge the exact same rate to that customer that we would charge to any other customer using -- with those use characteristics.

Q. Putting aside the debate that might occur on that point, you would agree, would you not, that if the demand were limited to 10,000 separately for supplemental that the energy rate in November charged to that customer would be reduced as compared to the prior example?

A. I'm not sure I'm clear on your question. You're suggesting that we look at this customer as if he was two customers?

Q. Two separate services.

A. Two separate services?

Q. One of which is firm, essentially, year-round, and

the other which is the company is --

A. Well, I'm not sure you're right on that. I'm not sure I'm clear on your supposition. But if he was looked at as two separate customers, he would still have the 80 percent ratchet applicable to the 10,000 -- I'm not sure that he wouldn't wind up paying more because he would be paying the 10,000 kilowatts in November for the base load and then he would be paying 80 percent of 10,000 kilowatts for his supplemental load, and that comes up to 18,000 kilowatts.

Q. Assume you sell to him as if he's a supplemental service customer. He purchases kilowatts in November under that schedule. The billing demand is 10,000 under that service. His kilowatt hour purchases in November are the same figures that we have indicated before. Wouldn't a larger percentage of those kilowatts hours be billed at the tail block rate?

A. No. I'm not sure that that's true. Because in looking at it, if I'm understanding your supposition here, looking at it that he had 10,000 kilowatts of what you're defining as supplemental energy and he used in the month of June, he would be obligated to pay the 80 percent ratchet on that 10,000 kilowatts.

Q. You're talking about demand charges. I'm talking about the energy. He uses 10,000.

A. That's correct. But he would also be getting billed

if he had a separate bill for 8,000 kilowatts on the supplemental energy.

Q. Let's just take a simple example: the billing demand for a customer is 10,000. Call that supplemental or whatever.

A. Fine.

Q. Energy uses during November, we have already established, is 6,480,000 KWH. That's under the prior example. That's his actual takes during the month of November.

A. Yes.

Q. The energy charges during that month, would they not be as follows: 10,000, times 150, times .0739?

A. For that -- if you're just talking about a 10,000 kilowatt customer, that's correct.

Q. And 10,000 times --

A. And he uses 10,000 kilowatts every month with a 90 percent load factor. I agree.

Q. Ten thousand, times 150, times .0556?

A. That's correct.

Q. And the final one would be, in this case, 6,480,000 KWH minus 3,000,000, the sum of the other two?

A. Yes.

Q. Would you accept subject to check that once you apply those numbers that you would have a figure of 323,000,

roughly, which is some $50,000 less than under the prior example?

A. Subject to check I would accept that. But when you say less than the prior example, now, you have assumed no charge at all for the other 10,000 kilowatts.

Q. For energy.

A. And for the kilowatts. And for the kilowatts.

Q. Assume that 20,000 KW back-up service is required during the summer months.

A. Yes.

Q. What would the minimum bill for the ensuing 11 months be if no further back-up was taken, 16,000? Is that what we have already established?

A. Are you talking about a total of 20,000 kilowatts?

Q. Well, in any one hour.

A. I'm sorry.

Q. In any one hour.

A. You're saying in a summer month the customer has a 20,000 kilowatt demand?

Q. That's correct.

A. And that's his billing demand in the summer months. And then his minimum billing demand in the following eight months of October through May would be 80 percent of that number.

Q. Thank you.

With respect to maintenance power, the rate and billing section states that the maintenance power for self-generators will be billed under the provisions of the normal rate, except the charges will be pro rated and that minimum contract demands and summer month ratchets will not apply; is that correct?

A. That's correct.

Q. The first question is the section also indicates that the qualifying facilities will be billed under the provisions of the Night Service Rider corresponding to the appropriate rate schedule? That's correct too?

A. That's correct.

Q. The Night Service Rider provides, does it not, for HT customers, that Rate HT, including all its terms and guarantees is applicable to service supplied during the on-peak hours?

A. That's correct.

Q. HT includes a minimum contract demand as well as a summer month ratchet? That's also true, is it not?

A. In the months of October through May.

Q. I'm trying to understand how these two provisions work together. One seems to suggest that you would be billed under a service schedule which does have a minimum contract demand and a summer ratchet, and the other one seems to state that the charges will be pro rated and that the minimum

contract demand and the summer month ratchet won't apply. Can you tell me how those two pieces fit together?

A. I'm not sure I understand your problem with the pro ration. Maybe I can just deal with the Night Service Rider first and the regular rate.

Q. Fine.

A. What that merely says is is that the customer will be billed under the provisions of Rate HT, and in your case also the Night Service Rider. All that means is, as we would for any other customer, the customer would be billed on the basis of his maximum on-peak demand and then with the additiona charge for the difference between his maximum off-peak demand and his maximum on-peak demand. That's the same as it would be for any other Rate HT customer.

Q. How do the minimums and the ratchets apply to the maintenance power customer?

A. Well, the minimums and the ratchet would apply to the contract demand and also to the billing demand.

Q. Notwithstanding the statement that the minimum contract demand and the summer month ratchet in the normal service rate will not be applicable?

A. I'm sorry. Under the maintenance power the contract demands and the ratchet demand is waived under maintenance power

Q. So the reference to the Night Service Rider does not indirectly incorporate a summer month ratchet --

A. No.

Q. And a minimum contract demand?

A. No. No. That's not the intention. And the reason for that is that the maintenance power, under the present provisions of the Auxiliary Service Rider, it's interrupable load, that the company can interrupt at such time as it needs it.

Q. Let's turn now to the pro ration provision. Could you explain how that operates?

A. Yes. If the customer needs maintenance power and, say, for the sake of an example, that he needs maintenance power for 15 days out of the month. Then the company would pro rate the customer's bill for the 15 days. In other words, 15 over 30. The billing demand would be multiplied by 15 over 30 -- or I should say the maximum recorded demand would be multiplied by 15 over 30 and the customer would be billed on the basis of that demand, which would be half of his recorded demand in that example.

Q. Let's turn to the energy side of the equation if we could. Let's assume maintenance service is provided during the month of April. Maintenance service is scheduled and taken on a Monday, Tuesday and Wednesday, a three day period in April, during the week.

A. Yes.

Q. The applicable rate is the HT service schedule

with a 33,000 volt service voltage. And the service is taken at 100 percent load factor, by which I mean 10,000 KW, times three, times 24, and you have 720,000 KWH.

A. Yes.

Q. Do you understand the hypothetical?

A. Yes.

Q. Do you have any problems with it?

A. No. I understand.

Q. I take it that the maintenance service capacity charge that is pro rated under the auxiliary service schedule would be 10,000 times $5.30 --that's the HT billing demand -- times 3 over 30?

A. That's correct.

Q. And that works out to $5,300, subject to check?

A. That's the way you would calculate it. I don't know what the answer is.

Q. What is the maintenance service energy charge as pro rated under the Auxiliary Service Rider?

A. That would also be the 10,000 times the energy price, times 150, times 3 over 30.

Q. Would it be appropriate to express it this way, if I could, just to make sure that I understand? You would take 10,000, times 150, times the high tail block rate, .0739?

A. Yes.

Q. You would take 10,000, times 150, times the second block rate?

A. Yes.

Q. And the remainder would be billed at the third block rate. You would then divide the total, or multiply the total, times 3 over 30 and that would be your energy rate, putting aside the time-of-use?

A. I believe you get the same answer. The way I normally look at it is in effect what you've done is you're billing the customer for one tenth of his demand in your example. So the first price block is one tenth of his demand, times 150 hours, times the price. The second price block is the same.

Q. The key, though, is the energy charge if pro rated as well?

A. Yes.

Q. Let me try one more hypothetical and I will relieve you of the duty to go forward with any further ones. Assume that you have a qualifying facility with a maximum demand of 10,000, which has a contract for both back-up and maintenance service.

We have already dealt with the situation where back-up and supplemental are examined together. We are now looking at back-up and maintenance, which are dealt with somewhat differently under the tariff.

Would there be a single contract, assuming the maximum demand is 10,000 KW, for both services or would you have separate contracts for maintenance and for back-up?

A. It would be treated as if it were one customer, not two separate customers, one that is getting maintenance power and one that is getting back-up power.

Q. If the customer took 10,000 KW back-up power in June during off-peak hours -- let's make it during the peak hours -- under the rider the ensuing billing demand would be 8,000 KW during the winter eight months; is that correct?

A. You said that it was back-up power?

Q. Yes, at the peak.

A. Yes.

Q. Now, I assume that even though the contract specifies a rate of -- a contract demand of 10,000 for maintenance, that you don't pay for both billing demand of 8,000 based upon the back-up power takes during June, and 4,000, which is 40 percent of the contract demand. You don't combine those two?

A. No. It's not clear. When you say the 10,000, does that include both back-up and maintenance?

Q. Yes.

A. A portion of that is back-up and a portion of it is --

Q. His maximum demand is 10,000.

A. Yes.

Q. If the unit is shut down for a scheduled reason or unscheduled, he can only take 10,000 KW.

A. Okay.

Q. He actually takes 10,000 KW in the month of June for back-up purposes.

A. But is a portion of that interruptable maintenance power?

Q. No.

A. Okay.

Q. This is an unscheduled outage.

A. Okay. It's an unscheduled outage. You're correct, then, that his minimum billing demand in the following months of October through May would be 8,000 kilowatts.

Q. Now, his contract demand is also 10,000.

A. Yes.

Q. You don't add the 40 percent to that?

A. Oh, no. No. It's the higher of the two.

Q. Referring to the bottom of the Auxiliary Service Rider, which is the distribution facilities section, am I correct that that provides that the customer under the Auxiliary Service Rider is required to pay any investment in distribution facilities required to provide any of the services covered under the Auxiliary Service Rider?

A. The customer is obligated to provide any of the interconnection expenses that are over and above the interconnection expenses that the company would normally experience in serving that customer.

Q. Can you refer me to any portion of the tariff which says "over and above" as you have just used that?

A. "Any investments in addition or changes to the company's distribution facilities required to provide back-up power, supplemental power or maintenance power will be paid by the customer before the interconnection of company and customer facilities."

Q. So your interpretation is that what we are dealing with here is additional equipement which is required to provide back-up, supplementary or maintenance power above and beyond what the customer already has in place for its retail load?

A. I don't know that it necessarily has to be in place. It could be a new customer. Any expenses that are incurred over and above what the company would normally incur to serve that customer must be paid by the customer.

Q. In the case of the new customer, would the company compare the cost of providing service under HT rate schedule to the cost of providing service under the Auxiliary Service Rider and merely bill the difference?

A. I'm not sure I follow that. Under the provisions of the Auxiliary Service Rider the customer, if he is served

at high tension voltage, would be billed under the provisions of the Rate HT schedule.

A. Let's approach it from a different perspective. An HT customer comes to you and wishes to connect to your system -- strictly HT.

A. Yes.

Q. What distribution costs would that customer incur?

A. Do you mean what the customer would incur or what the company would incur?

Q. Customer. Would he be billed under the HT service for the cost of the distribution facilities needed to attach that load?

A. No. He would be billed under the provisions of Rate HT if he's getting services at 13 KV and above.

Q. In the case of the HT customer am I correct that the cost of the distribution facilities would not be billed to him specifically? There would not be a separate bill for those facilities?

A. There could be.

Q. Can you refer me to a portion of your tariff which provides that?

A. I can't refer to anything in the tariff but there are certain revenue tests that are made relative to the cost and if those revenue-to-cost tests aren't satisfied the customer in some cases could be asked to make a contribution.

Q. First, let me ask you, if you will, to provide me with a copy of any written policy or explanation of how those costs are assessed. Could you do that?

A. I think if you refer to the rules and regulations, Section 7.

(Pause.)

Q. Are those provisions, the ones you referred to which are found in Section 7 of the rules and regulations, applicable to auxiliary service customers in the same way that they are applicable to HT customers?

A. Yes. I think it's important to know that we handle customers with auxiliary service the same way that we do any other customers. We have had customers with their own generation that we have been providing service for I don't know how many years, but for many, many years. This is nothing new.

Q. Just to make sure I understand, in the case of distribution facilities, if the customer because of its anticipated purchases of supplementary power, for instance, is able to meet the criteria, revenue criteria, set forth in your regulations, that customer, served only under the Auxiliary Service Rider, would not incur any distribution facilities charges; is that correct?

A. Could you either repeat that or have it read back?

Q. Sure. Let's assume we have an auxiliary service

customer. The company does its revenue calculation pursuant to Section 7 of the rules and regulations. It concludes that using those general standards that the customer has met the revenue requirement. That customer would not be billed for any distribution facilities charges merely because he's under the Auxiliary Service Rider?

A. No, that's not necessarily true because if he were not an Auxiliary Service Rider customer and he meets the revenue test there would be no additional charges to him. However, in the case of the Auxiliary Service Rider customer there could very likely be additional equipment in the way of relays, in the way of metering, that that customer would have to bear because it's over and above the cost that the company would normally incur to serve that customer.

Q. Are you distinquishing between interconnection costs and distribution system costs?

A. I'm not distinquishing. Any additional costs that are incurred by the company in order to serve that customer over and above what it would normally incur must be borne by the customer.

Q. The types of cost items that you just mentioned, relays and that sort of thing, are normally considered interconnection costs, are they not?

A. I think to clarify this, I'm talking about costs over and above. Now, if relays are required and we would

require relays of some kind to serve that customer, he wouldn't have to pay for those. But if we need additional relays or additional metering, which is quite likely to occur, then the customer must pay for those additional costs.

MR. O'DONNELL: I think that clarifies it.

Your Honor, I would be pleased to stop right now.

JUDGE MATUSCHAK: I have about five after one. We will meet back at five after two.

(Whereupon, at 1:05 p.m., the hearing was adjourned, to be reconvened at 2:05 p.m., this same day.)

AFTERNOON SESSION

(2:05 p.m.)

JUDGE MATUSCHAK: On the record.

MR. O'DONNELL: Yes, Your Honor.

Counsel for the Governor's Energy Council indicated he had a preliminary matter, Your Honor.

MR. CLARK: Yes, Your Honor. I would simply like to introduce myself for the record and to the parties here. My name is Roger Clark. I am an attorney with the Governor's Energy Council, and I will be working with Ms. Ferkin.

I earlier signed the sign-in sheet, and I will be filing a formal notice of appearance.

JUDGE MATUSCHAK: Very well.

Whereupon,

WILLIAM F. SUNDERMEIR

having previously been duly sworn, testified further as follows:

CROSS-EXAMINATION (Continued)

BY MR. O'DONNELL:

Q. Referring back to the current Auxiliary Service Rider, and specifically the liability provisions, can you advise me under what circumstances PECo would be responsible for losses suffered by the customer, damage for instance to the customer's equipment, which were caused by PECo's action?

A. That would be caused by PECo's action?

Q. Yes, damage to the customer's facilities caused

by actions of Philadelphia Electric Company.

A. I am afraid I really can't give an answer to that. I suppose this is to protect us against any such eventuality, no matter how it occurred.

Q. Is it the company's position that it is not subject to liability for damage to customer's property or employees of the customer, even in the event Philadelphia Electric Company is negligent?

MR. MacGREGOR: Objection, Your Honor. The question asks for a conclusion of law.

JUDGE MATUSCHAK: Sustained. Rephrase your question.

BY MR. O'DONNELL:

Q. Can you tell me what the purpose of the provision is insofar as damage to the property of the customer is concerned, which damage is caused by the negligence of the company?

A. It is difficult for me to answer that. This is a provision that I know in our latest Auxiliary Rider revision was authored by our Legal Department, and I personally was not involved in it at all.

I am assuming they put in such a paragraph to protect the company.

JUDGE MATUSCHAK: Isn't that a matter that would have to be determined by the courts?

MR. O'DONNELL: I was asking, Your Honor --

JUDGE MATUSCHAK: Isn't this liability rather than what the tariff might say or might not say?

MR. O'DONNELL: It may well, Your Honor, although I am simply trying to determine what the company's purpose is in having a tariff provision of this kind.

JUDGE MATUSCHAK: Well, so many things could arise that I think it's difficult for this witness to commit to tell me, to give up any defenses that it may have if a situation may arise. I dom't think the question is fair.

BY MR. O'DONNELL:

Q. Can you tell me, Mr. Sundermeir, whether this provision is found in other PECo tariffs?

A. Offhand, I don't know if it is included in any other PECo tariff, but you have to understand that the reason it is in the Auxiliary Service Rider is because we have the unique situation here where a customer has the potential of generating onto the company lines.

And that involves some particular hazards that could occur that aren't normal with other customers who don't do that.

Q. Mr. Sundermeir, would you feel qualified -- and if the answer is no, please simply state that --

JUDGE MATUSCHAK: Keep your voice up, please.

MR. O'DONNELL: Sorry, Your Honor.

BY MR. O'DONNELL:

Q. Do you feel qualified to express an opinion on whether the liability, customer's liability for damages to the company would exist even if the customer is not negligent?

MR. MacGREGOR: Objection.

MR. O'DONNELL: I am simply asking whether he is qualified to answer the question.

THE WITNESS: No.

BY MR. O'DONNELL:

Q. Mr. Sundermeir, what type of characteristics does the company consider in determining whether to establish a customer class, in defining customer classes?

A. Well, one of the primary characteristics is the delivery voltage, and also the character of the service, the type of service.

For example, street lighting would be unique from regular residential service, even though they are served at the same voltage.

Q. Can you be more specific as to the attributes which distinguish one class from another?

A. Number one is the voltage at which the service is supplied, and then, as I said, the character of the service. We do have different rates for customers served at the same voltage, particularly at the secondary level where

we have a wide range in the use characteristics of the customer, of the street lighting customers, of the residential customers with space heating, the residential customers that accept interrupted service under Rate OP. All of those things are considered when establishing a rate.

Q. What do you mean by "use characteristics"?

A. Well, for example, a street lighting customer would have different use characteristics than say a residential customer.

Street lighting customers would virtually have no use during the day, and would have their load between the period from dusk to dawn.

Residential customer characteristics would be different. Their load would be significant during the day. Residential heating customers are different than the residential customers without heating in that they consume usually a significant number of kilowatt-hours during the off-peak period.

Q. I gather from your answer -- correct me if I am wrong -- that the time at which the use occurs is a material factor in making decisions of this kind?

A. That would be a consideration, yes.

Q. Coincidence factor, would that be another one, coincidence with the system, for instance? Here I am thinking of the difference between interruptible and firm.

A. That could be a consideration.

Q. Could be; is it a consideration?

A. As I said to you earlier, the street lighting customers certainly don't have much demand at the time of our system peaks, and that is certainly a consideration. And it is recognized when we do our cost work.

Q. Interruptible versus firm, that would be a consideration in distinguishing between those types of customers?

A. Well, I think we distinguish the interruptible from firm in the riders under which we provide interruptible service, and the provisions of those riders in the sense of things like contract minimums, ratchets.

Although it's still applicable under the applicable rate schedule, there are certain concessions made if the load is interruptible.

Q. Mr. Sundermeir, has PECo performed any study of the load characteristics of the Auxiliary Service Rider customers?

A. No. The Auxiliary Service Rider customers would be included under the appropriate rate schedule.

Q. Has PECo performed any study specifically addressing the coincidence factor of Auxiliary Service customers?

A. No. Again, those customers are served under a

specific rate, and they are included under that rate.

Q. Mr. Sundermeir, do you have a copy of the responses of Philadelphia Electric Company to Occidental Chemical Corporation's request for information, IR-Chem-1-1 through 1-5?

A. Yes.

Q. Were those responses, 1-1 through 1-5, prepared by you or under your supervision?

A. Yes, they were.

Q. Are they accurate and correct to the best of your knowledge, information and belief?

A. Yes, and I think it is consistent with the answers which I just gave you to your previous questions.

MR. O'DONNELL: Your Honor, I wonder if I could ask that these be marked for identification. This would be our first hearing exhibit.

JUDGE MATUSCHAK: Very well. How do you want these marked?

MR. O'DONNELL: Would it be OCC Exhibit No. 1, Your Honor?

JUDGE MATUSCHAK: Yes. How do you want to identify this?

MR. O'DONNELL: Your Honor, this consists of five responses from the company, five pages. The pages are marked in the upper right hand corner as IR-Chem-1-1, IR-Chem-1-2,

IR-Chem-1-3, IR-Chem-1-4 and IR-Chem-1-5.

JUDGE MATUSCHAK: They will be marked as Occidental Chemical Exhibit No. 1.

(Whereupon, the documents were marked Occidental Chemical Exhibit No. 1 for identification.)

BY MR. O'DONNELL:

Q. With respect to IR-Chem-1-1, Mr. Sundermeir, the question asks in part for all documents which were considered or relied upon by PECo in developing the Auxiliary Service tariff, and it asks that the company identify assumptions, class load characteristics among other things.

The response indicates that, I gather no such documents were considered or relied upon by PECo.

A. We did not develop separate load characteristic data as was requested in this interrogatory. What we merely do, and the crux of the Auxiliary Service Rider is that the customer will be served under the rate applicable to the service of that customer.

And we believe that is in conformance with the proper regulations, and apparently the Commission did too because they approved the Auxiliary Service Rider.

Q. The question I had was whether any such documents existed showing any of these load characteristics, whether they were relied upon or not by the company.

A. As indicated in the response to that question, there are no such documents.

Q. That answer would also pertain to the IR-Chem-1-2 through 1-5, no such documents exist?

A. That's correct. We do not look at the Auxiliary Service Rider customers as a separate class of service.

Q. Mr. Sundermeir, you mentioned on several occasions the company's proposed new Auxiliary Service Rider.

A. Yes.

Q. Is this the rider that was filed with the Commission by letter dated December 27, 1985 and signed by Mr. Austin?

A. Yes.

Q. With that filing, the company submitted both an Auxiliary Service Rider, a new Night Service HT Rider and a Curtailment HT Rider, isn't that correct?

A. That's correct.

Q. Let me try just to make sure that the record is clear on what the new rider would do if adopted by the Commission.

I gather from your earlier statements that the Auxiliary Service Rider would create a class of firm maintenance power?

A. That is correct. The new Auxiliary Service Rider gives the customer the option of either firm or interruptible

backup, supplemental or maintenance power, at his option.

Q. You testified before that the maintenance power under the current tariff, maintenance power customers can opt to be served under the Night Service Rider, do you remember that?

A. Yes.

Q. Is that option still available for a firm maintenance customer under the new tariff?

A. Yes, it is. If you look under the provisions of firm supply, it states that, "The Auxiliary Service will be billed under the provisions of the rate applicable to the voltage of the service supplied from the company and applicable riders."

Q. You also mentioned that there is an interruptible or I think the tariff refers to it as curtailable supply option.

A. Yes.

Q. Is it possible for a customer to opt to have no firm capacity demand under this option?

A. He can opt for no firm capacity demand, but he would be billed for the minimums on Rate HT, which is 25 kilowatts.

Q. The 25 kw under those circumstances would become the billing demand, would it not?

A. That would be the billing demand in months in

which he takes no service.

Q. Would that be the billing demand which would be used to determine the energy charge under the HT rate schedule in subsequent months?

A. Well, if he didn't take any service, there wouldn't be any energy.

Q. Let's assume that a maintenance customer who takes 10,000 kw maintenance power during the summer is under the curtailable power supply.

A. Yes.

Q. What would his billing demand be during the winter period?

A. If he takes no service in the winter period?

Q. Yes.

A. And his entire 10,000 kilowatts is curtailable load?

Q. That is correct.

A. His billing demand in the winter would be 25 kilowatts in any months in which he did not take any service.

Q. Would this be true even if he took the 10,000 kw during June, during on-peak hours?

A. Yes. And I think that is fairly well described in the tariff.

Q. We have had some questions as to what the tariff means.

A. If you -- well, go ahead.

Q. With respect to the HT Curtailment Rider, the new one, you have provided in there that the total curtailable load to be accepted under this rider would be limited to 120,000 kilowatts, do you see that?

A. Yes.

Q. Is there some cost justification which has been developed for limiting the amount that can be accepted under the rider to 120,000 kw?

A. I don't know that there was a cost justification. It was a limitation that was established by our system planning folks.

Q. Are you aware of whether any study was done to support that?

A. I think they did, but I had nothing to do with that.

Q. You haven't seen the study if it exists?

A. This was established I don't know how many years ago, quite a few years ago. I may have seen something at the time. I don't recall.

Q. The provision also states that the number of curtailment occurrences shall not exceed 20, and the total curtailed hours shall not exceed 200 hours in a 12 month period beginning May 1 of each year?

A. Yes.

Q. Do you know what the basis is for the limit on the number of curtailment occurrences and the total curtailed hours?

A. Well, part of the reason for the limitation is to assure the customer that he won't be interrupted some excessive amount of times.

Q. Don't misunderstand me. I was thinking more in the nature of, why not 10, rather than, why not 30?

A. Again -- and this was established some years ago -- it was analysis that was done by system planning. And they established that criteria.

Q. Has this changed from the current Curtailment HT Rider to the proposed?

A. No.

MR. O'DONNELL: Could we ask for copies of any studies that were done to support the 120,000 kilowatt figure, 20 occurrence limitation, and the total curtailed hour limitation?

MR. MacGREGOR: We will provide whatever is available.

BY MR. O'DONNELL:

Q. Mr. Sundermeir, the Night Service Rider contains a provision for supplemental energy, which states that supplemental energy will be billed at the company's hourly PJM billing rate plus one cent. Is there any cost justification or study which has been performed in support

of the one cent pattern, to your knowledge?

A. No. There was none.

Q. The new Curtailment Rider in Night Service, HT Rider, excuse me, states that the expense to provide PJM dispatch rate to the customer will be paid by the customer.

A. Yes.

Q. What type of expenses does the company incur in providing the PJM dispatch rate?

A. The customer may call into our load dispatcher and get information as to what the projected dispatch rate is for a short period of time in the future.

In addition to that, we have supplied information relating the dispatch rate to billing rate.

Q. You charge the customer for responding to those inquiries?

A. We are saying that if there is any significant expense involved in providing this information, that the customer would have to pay it.

Q. Do you know whether a customer has ever been billed for providing PJM dispatch rate data?

A. I am not aware of whether one has been charged anything for that or not.

MR. O'DONNELL: I wonder if I could ask that, if such a charge has been assessed, that we be advised of that.

MR. MacGREGOR: We will do so. I would just note for

the record and for the benefit of those parties who have not been at previous hearings of the policy approved by the Judge that on-the-record data requests would be supplied to the company in writing at the end of the hearing in order to facilitate and expedite answers to those and to clarify the question.

MR. O'DONNELL: Thank you.

THE WITNESS: Could I go back to that last question that you had in regard to any costs that were involved? Part of that has to do with whether or not the company might have to provide the dispatch rate by some communication device to the customers.

And if the customer would request that type of thing, that is the type of expense that could be involved in providing that information.

BY MR. O'DONNELL:

Q. You are not talking about simply answering the phone and giving a number?

A. No, no. I am sure that we don't charge for simply answering the phone. That is practical as long as you only have a few customers on the rate.

But there was some talk with at least one of the customers that I am aware of of having some sort of a recording device or readout device at his location providing him with the dispatch rate. Now obviously, the company

does not feel that it should pay for that type of device.

Q. As long as the company could advise us whether anyone has been billed for that particular service, I think we would be satisfied.

A. We will check it. My guess is, they have not.

Q. Could I ask you, Mr. Sundermeir, to turn to IR-Chem-1-64?

A. (Witness complying.)

Q. Do you have that in front of you?

A. Yes.

Q. There are a number of pages there. The portion I am concerned with --

A. IR-Chem-1-64? I only have one page.

Q. There was an attachment. Perhaps it's organized separately under your files. It references IR-PAIEUG-1-10, 1-11. Do you have that?

A. Yes.

Q. I am specifically referring to 1-11. Let me give you the complete reference. It's the attachment to IR-Chem-1-64. The pages I am referring to are designated IR-PAIEUG-1-11.

A. Yes.

Q. Do you see there, sir, that there is a list of curtailments for the Curtailment Rider customers on the first page?

A. Yes.

Q. And on the second is a list of curtailments for customers with supplemental energy?

A. Yes.

Q. Down the right hand side of the page on the first page, there are a list of reasons for the curtailments. In all cases, the word "load" appears. Do you see that?

A. Yes.

Q. Can you, based on your experience, tell me what type of load related factors might have led to those curtailments? Are we talking simply about generation capacity problems or are we talking about distribution, transmission, what?

A. This refers to generation of load. And one of the criteria at that time to interrupt a Curtailment Rider customer was when the load got above a certain level. And that is all that that refers to.

Q. Can you tell me what the load figure is or was?

A. I believe it was 4,700 megawatts.

Q. Is that still the load ceiling?

A. We are no longer using load as a criteria for interrupting as of this summer. It's strictly on a cost or max emergency generation situation.

Q. Can you tell me first what the cost is that triggers curtailment?

A. The cost is 95 mills.

Q. What's the max generation --

A. In other words, when we have all our generation on and we are in an emergency situation, then we would curtail the customer.

Q. What do you mean by "emergency"?

A. Well, when we have been called on by the load dispatcher to put all of our units on the line because of the load on the system and the available load to supply that load. It's called max emergency generation. Under those circumstances, our load dispatcher would call for the curtailment by the customers on the Curtailment Rider and on the Supplemental Energy.

Q. Looking at 1984, what was the criteria for curtailment of customers with Supplemental Energy?

A. The criteria with customers on Supplemental Energy is when we are in a max emergency generation situation only.

Q. Is that also the criteria that was applied in 1984 for the Curtailment Rider customers?

A. No. The Curtailment Rider customers can also be curtailed when the cost of generation gets above a certain level, and, prior to this past summer, when the load exceeded a certain level.

Q. So, in 1984, the curtailment criteria were

different as between the Supplemental Energy and the Curtailment Riders even apart from the cost issue?

A. Yes. We will only interrupt the Supplemental Energy customers in times of max emergency generation, while the Curtailment Rider customers can get interrupted at times other than that.

Q. Now, as far as 1985 is concerned, putting aside the 9.5 cost issue, the other curtailment criteria is applicable to both, max generation emergency?

A. Yes, yes.

Q. Could I ask you to turn, sir, to IR-Chem-1-61?

A. Yes.

Q. In that data request, Occidental asked for a copy of the written policies of PECo concerning a number of issues: wheeling power to retail customers; wheeling power from industrial generators to others; availability and price of standby power; and purchases from industrial generators. Do you see that?

A. Yes.

Q. Your answer indicated that while you don't have written policies on these subjects, "The company will consider on an individual basis the wheeling of energy from a private generator to another electric utility."

A. Yes.

Q. You make no mention in here of policies concerning

standby power. You do refer to wheeling and you attach a copy of the payment policy for purchases from cogenerators. Just to make sure the answer is complete, does PECo have a written policy concerning the availability and price of standby power other than the tariff?

A. The Auxiliary Service Rider, I believe, deals with that.

Q. Other than the tariff, is there a written policy other than the Auxiliary Service Rider?

A. Not that I am aware of.

MR. O'DONNELL: Could I have a moment, Your Honor?

JUDGE MATUSCHAK: Yes.

(Pause.)

MR. O'DONNELL: I have no further questions, Mr. Sundermeir. Thank you.

JUDGE MATUSCHAK: Ms. Ferkin, we have examined the petition of the Governor's Energy Council for the extension of the time for filing phase-in testimony from January 14 through January 22.

We have reviewed the answer, and we have reviewed the response to the answer. Counsel for the Governor's Energy Council suggests that if we would extend the time to January 22, that we could likewise extend the time for rebuttal and surrebuttal.

While we have indicated that we are going to try to

be as liberal as we can in these matters so that no one is precluded from submitting their testimony and submitting their position in this matter, we don't think this is a case in which that liberality should be shown as far as changing the scheduled rebuttal and surrebuttal schedules.

If we start doing that, we are in trouble, because everybody will ask for the same thing. However, there is a little gray area in this regard as to the timeliness of the responses to interrogatories.

We will extend the time for filing of the Governor's Energy Council's testimony to Friday, January 17.

MS. FERKIN: Your Honor, if I may make one comment, Your Honor mentioned the proposal that I included in my response, the proposal that mentioned extension of the company's cross-examination time and the rebuttal testimony.

That was simply to try and address the company's concern that its time for examination on our testimony would be truncated.

JUDGE MATUSCHAK: I understand that, but I understand also that we have a very tight schedule here, and in a proper case, we may go along with that. But I don't think this is the case for that.

I think the Governor's Energy Council has sufficient time to prepare its testimony within the time that we allowed in this case, and we would rather not disturb the

other schedules, except in a situation that merits some unorthodox procedure and some change in that schedule.

MS. FERKIN: Thank you, Your Honor.

JUDGE MATUSCHAK: Who wants to proceed now?

MR. KLEPPINGER: I can proceed, Your Honor.

CROSS-EXAMINATION

BY MR. KLEPPINGER:

Q. Good afternoon, Mr. Sundermeir.

A. Good afternoon.

Q. You list on page 7 of your testimony several base rate cases wherein you indicate that no significant changes in cost allocation method have been made, is that correct?

A. Yes.

Q. And am I correct that at least to some extent, you are responsible for the preparation or the data going into the company's cost studies in each of those cases, at least involved in the process?

A. Yes.

Q. And in each of those cases -- obviously there are variations in the results of a cost study from year to year, is that correct?

A. Yes.

JUDGE MATUSCHAK: Excuse me a minute.

Did you want to enter your exhibit into evidence?

MR. O'DONNELL: Yes, thank you, Your Honor, if I could move the admission of OCC Exhibit No. 1 into the record.

MR. MacGREGOR: No objection, Your Honor.

JUDGE MATUSCHAK: There being no objection, the exhibit is admitted into the record.

(Whereupon, the document marked Occidental Chemical Exhibit No. 1 was received in evidence.)

BY MR. KLEPPINGER:

Q. Now, in each of these cost studies referenced at lines 20 and 21 of your testimony, was there consistency in the relative rates of return being shown by the customer classes from year to year, consistency above the system average and consistency below the system average for any one of the classes?

A. I would say with most of the classes of service there was some consistency as far as being above or below the system average.

Q. And was one consistency that the Rate HT class was consistently above the system average?

A. Yes, up until this cost allocation.

Q. This one is not referenced at lines 20 and 21, Mr. Sundermeir.

A. That's correct.

Q. Maybe it won't be.

Am I also correct that in these cost of service

studies at least, for the most part, residential classes of customers were below the system average?

A. Yes.

Q. Then along comes the Limerick 1 case, is that correct?

A. Yes.

Q. And lo and behold, the results have changed a little bit?

A. Yes.

Q. When you derived the HT summer coincident peaks for 1984, did you use the total coincident peak of each HT customer in arriving at their contribution to the peak?

A. We used the demands of the total HT class at the time of the peak, of all customers in the class, if that's the question.

Q. And did you look at each individual HT customer's contribution, their demand at that time?

A. Of all 2,000 and some customers?

Q. To build the load, yes.

A. No. What we do is, we look at the demands of all the customers over 2,000 kilowatts, and then we have a sample of the customers under 2,000 kilowatts, and that is what is used to develop the class load.

Q. Am I correct that the substantial majority of HT customers have loads above 2,000?

A. Not in terms of number of customers, no.

Q. In terms of the percentage of the load of the class?

A. Of the load, yes.

Q. Did you differentiate for the contribution of the HT to the class between firm load and curtailable load or supplemental energy load?

A. We look at the actual load at the time of the peak of all customers served on Rate HT.

Q. You didn't account then for whether any of that load at that time was curtailable or was being provided pursuant to the supplemental energy provision of the HT Curtailment Rider and the Night Service HT Rider?

A. It would have been based on the actual load of those customers at those times.

Q. During the summer of 1984, am I correct that at least one HT customer was taking service pursuant to the terms and conditions of the HT Curtailment Rider?

A. There was at least one customer. There may have been two.

Q. And similarly, were there at least two customers on the Supplemental Energy Rider provision?

A. I am not sure. In the summer of 1984, there may have only been one customer on Supplemental Energy. I'd have to check that. There are three customers on the rider

now. I know that one customer was on prior to the summer of 1984. I am not quite sure of the dates when the other two customers came on to the Supplemental Energy provision.

Q. I believe later on we can clarify that with an interrogatory that is outstanding.

A. Yes.

Q. I believe it has been established before today that pursuant to the HT Curtailment Rider, such a customer -- and there was at least one, as you mentioned -- can be curtailed on a 30-minute notice?

A. Yes.

Q. And I believe you have identified the terms, the conditions under which such a curtailment would be made, and you provided us with those in an interrogatory response, PAIEUG-1-12, is that correct?

A. I believe that number is correct. The interrogatory number is the number I am referring to.

MR. KLEPPINGER: Your Honor, I would like to have marked for identification as PAIEUG Exhibit No. 2 the company's response to IR-PAIEUG-1-12.

JUDGE MATUSCHAK: Very well.

(Whereupon, the document was marked PAIEUG Exhibit No. 2 for identification.)

BY MR. KLEPPINGER:

Q. I believe we have already covered today that these

curtailments will be made when the PECo Lambda reached 95 mills per kwh, or when a max emergency situation is required?

A. Yes.

Q. Is that an either/or situation, or must both conditions prevail before an interruption?

A. No. The Curtailment Rider customer will be interrupted if either one of those conditions exists. The Supplemental Energy customer will only be interrupted when the second condition exists.

Q. Under either of these conditions, is it safe to say that these interruptions would only occur when PECo system loads are high relative to the amount of generating capacity that it has available at any given time?

A. Most likely.

Q. The Supplemental Energy portion of the Night Service HT Rider is also a curtailable service, correct?

A. Yes.

Q. And once again, that is subject to interruption on one half hour notice?

A. Yes.

Q. And in fact that interruption states in the terms of the tariff, does it not, that it will be made in the sole judgment of PE when any capacity limits exist on the system? That language was extracted from the tariff itself, is that

correct?

A. Yes.

Q. In making the decision to curtail these two types of customers, is it only in situations where PECo perceives that the capacity it has generating at that time is needed to continue service to its firm customers?

A. That would be the situation when max emergency generation is called for, not necessarily when the cost exceeds 95 mills.

Q. Is it safe to say then that the company would not install additional generating capacity in order to serve loads pursuant to the Supplemental Energy provision or the Curtailable HT Rider?

A. Well, that would certainly be a consideration in designing the capacity requirements of the system.

Q. Would you consider it good system planning to construct capacity in order to serve load which is in effect interruptible?

A. That would be a question that is better directed to our system planning people than to me as to exactly what they consider under those circumstances.

Q. If you don't have to provide a customer with firm service and can interrupt him at times of maximum generating capacity condition, wouldn't it be somewhat unreasonable to build a generating station to serve

interruptible loads?

A. Well, you have to be a little careful, because you can only interrupt the customer to a certain demand level. He may already be there, in which case your interruption really does you no good as far as increased capacity.

Now, to what extent or how they take that into consideration in designing needed capacity, I really don't know.

Q. Mr. Sundermeir, you were also responsible, were you not, for preparing the response to Interrogatory IR-PAIEUG-1-10, which provides information concerning interruptible loads for December, 1983 through December, 1984?

A. Yes.

MR. KLEPPINGER: Your Honor, I would like to have marked for identification as PAIEUG Exhibit No. 3 the company's response to IR-PAIEUG-1-10.

JUDGE MATUSCHAK: Very well.

(Whereupon, the document was marked PAIEUG Exhibit No. 3 for identification.)

THE WITNESS: Before you leave that, could I point out an error in that response to that interrogatory?

JUDGE MATUSCHAK: Let's correct the error on the exhibit.

MR. KLEPPINGER: Why don't we wait until everyone receives their copy.

JUDGE MATUSCHAK: Let's make the physical change. What exhibit number is this?

MR. KLEPPINGER: This is No. 3, Your Honor.

JUDGE MATUSCHAK: What was the last one, No. 2?

MR. KLEPPINGER: Yes.

JUDGE MATUSCHAK: Can you tell us where the correction is?

THE WITNESS: Yes. Near the bottom of the page, there is a list of five customers, Nos. 1, 2, 3, 4 and 5. Alongside that is a column headed "Interruptible Load." And for customers 3, 4 and 5, that should be Mw instead of kw.

JUDGE MATUSCHAK: Should be what?

THE WITNESS: Mw, megawatts, instead of kw, kilowatts.

MR. MacGREGOR: Just for Nos. 3, 4 and 5?

THE WITNESS: Just for Nos. 3, 4 and 5, yes.

JUDGE MATUSCHAK: We will make the physical change on the exhibits, then.

BY MR. KLEPPINGER:

Q One other area that may require correction, Mr. Sundermeir -- I am not sure, frankly -- in the response to Part C where we requested the amount of firm load per customer's contract --

Q. You indicate in the response, "Firm loads are as follows," and then the caption on the right hand column is "Interruptible Load." Should that be "Firm Load"?

A. No. I think that is the amount of load that is interruptible. In other words, the customer has a firm contract demand which he must interrupt to upon request by the company.

This is the estimated amount of interruptible load available to us. It may not always be available to us at the time we ask for it.

So, in other words, we don't tell the customer, "You interrupt 200 kilowatts" when we call him on the phone. He has a firm contract demand, and we tell him to curtail to the firm contract demand.

Q. What we were asking for, Mr. Sundermeir, in the question is the amount of firm load per the customer's contract, and I just wanted to clarify if what you have given us in Part C, the 200 kw, for example, for Customer 1, is the amount of firm load in their contract.

A. No.

Q. Then what --

A. Let me check that. Let me doublecheck that.

Q. Now, pursuant to this Exhibit No. 3, Mr. Sundermeir -- were you going to check that now, or --

A. No, I will check that and get back to you.

Q. All of these interruptible customers are on Rate Schedule HT, is that correct?

A. Yes.

Q. And you have defined Customer No. 2 in this response as a curtailable customer?

A. Yes.

Q. Would you turn to Attachment 1-10-e?

A. (Witness complying.)

Q. Am I correct that in 1984, during the month of June, Customer No. 2 had a contribution to the peak of 8,664 kw?

A. I'm sorry, you're looking at Customer No. 2?

Q. Yes.

A. And you are looking at the sheet --

Q. Attachment IR-PAIEUG-1-10-e.

A. Oh, okay, I have the right one. What was the question?

Q. In June of 1984, am I correct that Customer No. 2 contributed 8,664 kw to the coincident peak?

A. Yes.

Q. And is that at the meter or at the generator?

A. That is at the meter.

Q. Again, I would like you to flip back to the response to Part C of this question, and bear with me at this point, because I am going to have to make an assumption

on what Part C provides us with. I understand you are going to check.

But if we assume that Part C provides us with the amount of firm load per the customer's contract as was requested in the question, would I be correct that PE was only obligated to supply Customer No. 2 a load of 5,500 kw during that June, 1984 peak?

A. If the number in C is the firm contract, then that is the obligation of the company, yes.

Q. But for cost of service study purposes, I take it the input into the cost study for this customer would have been a load of 8,664 kw?

A. That is correct.

Q. Now, by definition, Mr. Sundermeir, am I correct that a customer's coincident peak should always be less than or equal to his non-coincident peak?

A. Yes.

Q. Continuing with Attachment 1-10-e, I'd now like to focus on Customer No. 3, if you would. In September of 1984, am I correct that this customer imposed a contribution to the peak of 40,035 kw?

A. Yes.

Q. And I'd like you to compare that for the moment to Attachment 1-10-d, page 3 of 5, which provides us with an on-peak regular kw for Customer No. 3 in September of 1984

of 22,560 kw, is that correct?

A. That is correct.

Q. Does this number on page 3 of 5 exclude the demands associated with Supplemental Energy?

A. Yes.

Q. Does that then explain the difference between the 22,560 and the 40,035 kw referenced earlier?

A. Well, of course, the values shown for Customer No. 3 on page 3 of 5 are not necessarily at the same time as the 40,000 shown.

Q. But for September of 1984, the 22,560 is the monthly peak for that customer?

A. Not necessarily, and probably not coincident with the system peak. That is, that customer's maximum could have occurred at any on-peak time in the month.

Q. So that, at the time of the company's peak, it would have to be equal to or less than the 22,560?

A. That's correct.

Q. And once again, would I be correct that for cost study purposes, the contribution of this customer to the system peak of 40,035 kw was utilized?

A. That is correct.

Q. If we previously agreed that the Supplemental Energy provisions and the demands associated with Supplemental Energy are interruptible in nature, would I be

correct that the company was only obligated to supply at the most 22,560 kw at the time of its peak?

A. In this particular instance, the customer was not interrupted and the company was providing the full amount. So, for cost allocation purposes, we used the total customer loads at the time of the peak.

Q. I realize the service continued, but I am concerned with the obligation of the company at the time of the system peak. It was only obligated to provide the 22,560 as a maximum amount for that customer if it was that customer's peak for the month, anyway.

While it did agree apparently to provide the full 40,000, it could have interrupted that differential.

A. The company would only interrupt that customer if the company did not have sufficient generation capacity to meet that customer's need.

The customer has the option of in effect interrupting himself if the cost gets too high. In this particular case, the customer did not choose to interrupt to the lower demand level. And the company did supply the maximum demand required by that customer at that time.

Q. I take it then that the company's peak in September of 1984 did not place them in a maximum generating capacity emergency of any sort?

A. Well, I would have to assume so. If the customer

had been asked to curtail at that time and didn't, the customer would have been billed with a substantial penalty.

Q. Do you have information comparable to Attachment 1-10-d, particularly Column 1, the on-peak regular kw for Customers 3, 4 and 5 on the days of the four summer system peaks in 1984?

A. You are referring to 1-10-d?

Q. Yes.

A. In which for each customer we show the maximum demand and the maximum billed demand and the kilowatt-hours?

Q. You should look with Customers 3, 4 and 5.

A. Yes.

Q. What I am interested in obtaining is the Column 1 data, the column labeled, "REG kw," in the on-peak period for the four days of the company's system peak in 1984, each of those four days.

A. At the time of the system peak?

Q. On the day of the system peak.

A. Regardless of time?

Q. Right.

A. We could supply that.

JUDGE MATUSCHAK: Let's go off the record.

(Discussion off the record.)

JUDGE MATUSCHAK: Back on the record.

JUDGE MATUSCHAK: When you're ready.

MR. KLEPPINGER: Thank you, Your Honor.

We will provide Mr. MacGregor with a written request.

BY MR. KLEPPINGER:

Q. As a general proposition, Mr. Sundermeir, would you agree that curtailable customers or interruptible type customers receive a quality of service lower than what your firm customers receive?

A. That's true.

Q. If such curtailable and interruptible supplemental energy type customers are treated as firm customers in the cost study, would the lower charges which they pay for that lower quality service effectively depress the rate of return of the class?

A. The only lower charges is a credit that results from the Curtailment Rider credit of $2 a kilowatt. That would have a tendency to lower the overall revenue of the class, but as you can see by the size of the two customers that are on that, it would have a negligible effect.

In the case of supplemental energy, the exact opposite could be true; there could be additional revenue to the class that the company would not have otherwise gotten.

Q. But the costs that are associated with those revenues are assigned in the cost study as if all that

energy was being provided on a firm basis; isn't that true?

A. The cost is allocated to that class of service in accordance with the actual demands of the customers at the times of the peak, whether that be firm or curtailed or whatever it happens to be at those particular hours.

Q. And if a customer on the Supplemental Energy Rider perceived that he was going to be paying more per kwh of energy under that rider than under the normal Rate HT tariff, he would opt to be interrupted under the Supplemental Energy, wouldn't he?

A. No; I didn't necessarily say that the customer would pay more. I said the company may actually receive more revenue because the customer may use energy that he would not otherwise have used, and, therefore, the company receives the additional 1 cent a kilowatt-hour that is added onto the PJM billing rate; and I would look at that as being additional revenue that the company may not have otherwise collected.

Q. Now, associated with those additional kilowatt-hours of sales, I take it that a supplemental energy customer, though, would not pay any demand charge associated with that?

A. He would not pay a demand charge on the supplemental energy portion of the load.

Q. Moving to another area, Mr. Sundermeir, are you

familiar with the term "effective degree hours"?

A. Yes.

Q. Is that commonly referred to as EDH?

A. Yes.

Q. Could you define that term for the record, please?

A. Yes. It is the dry bulb temperature minus 75 degrees, plus 2 times the wet bulb temperature minus 65 degrees, divided by 3.

Q. Does that value essentially constitute a weather variable measurement?

A. Yes. It would reflect both temperature and humidity.

Q. Am I correct that Rate Schedules R, RH and GS are the only schedules which are really sensitive to EDH?

A. They would be most sensitive, I believe, to changes in effective degree hours.

Q. Is an EDH value an hour or a one-half hour figure, or is it a simple average value for an entire day?

A. It is calculated hourly and totaled for the day.

Q. So the resulting number is an average of the day?

A. Well, it's a total for the day.

Q. Total for the day.

A. Yes.

Q. Is that developed, then, on an hour-by-hour

basis or an average day basis?

A. It's done on an hour-by-hour basis.

Q. How does the EDH vary over the day, the 24-hour period, when the company experiences its monthly summer peaks?

A. Normally, the effective degree hours would be going up as our load goes up.

Q. Then would there be a tailing off effect after the peak is hit and you start to move out of the peak period?

A. You're looking at it on a daily basis?

Q. On the four coincident peak days used in the cost study, particularly.

A. Well, those four days would normally have a high effective degree hour value.

Q. On an hour-by-hour basis, is there variability in that EDH as you move through the 24 hours of the day?

A. Well, there would be. In developing our cost data and in developing our load data, we never use an hour-by-hour effective degree hours; it is the total for the day, as developed on an hour-by-hour basis.

Q. Mr. Sundermeir, do you know what the EDH values were for the four peak days which were used in the cost of service study?

A. Yes.

Q. Can you provide those?

A. Yes. On the day of the peak in June the EDH value was 143; in July it was 170; in August it was 131; in September it was 86.

Q. You may want to hold on to that page, Mr. Sundermeir. I take it that these numbers were on the peak days in 1984; is that true?

A. That's correct.

Q. Do you examine this EDH data prior to the preparation of your cost study?

A. I'm not quite sure what you mean by "examine." We use these data in adjusting the residential and small commercial and industrial class loads to those values on those days.

Q. But you do look at the EDH prior to preparing your cost study in any of the cases which we referenced earlier?

A. Yes. We have to know that before we can prepare the load data that is used in the cost study.

Q. Would you characterize these EDH values in 1984 as typical or atypical of the EDH values which have been used in prior cost of service studies?

A. Generally, the values in 1984 were lower than what you would normally expect or that we have seen in other years.

Q. As a typical or a normal EDH value on one of your four summer coincident peak days, is the number 213 a typical number?

A. Some years ago there was an analysis made of weather data to look at what a typical hot spell was in the summer, and that analysis showed at that time that 213 effective degree hours was typical.

Q. I believe you were beginning to provide us with EDH values for another year. Do you have the EDH values yet for 1985?

A. Yes, I do.

Q. Could you provide those for the record in the four summer peak months?

A. Yes. In the order of June through September, it is 121, 212, 234 and 182.

Q. September of '84, then, which had a value of 86 EDH, increased by almost 100 EDH between '84 and '85; is that correct?

A. That's correct.

Q. As did the August number, from 131 to 234?

A. Yes.

Q. If we were to look at the year prior to 1984, on the same sheet you're looking at, do you have the EDH value for the September peak in 1983?

A. Yes. It was 216.

Q. Again, considerably higher than what was experienced in 1984?

A. Yes. And it is probably higher than it might frequently be in the month of September.

Q. Just to make the record clear, I believe it was already indicated this morning that you did not weather adjust your '84 data for typical weather conditions anticipated for 1986, the future test year in the cost study; is that true?

A. Only to the extent that the load data was adjusted in accordance with the sales for the test year ending June 30, 1986, and those sales are assumed to be on a normal weather basis.

Q. Am I correct that the time of the peaks in August and in September of 1984 was at approximately 2:00 p.m. in the afternoon?

A. It was 2:00 p.m. in September. It was 3:00 p.m. in August.

Q. 3:00 p.m. in August.

Has the peak in those months in prior years been later in the afternoon than 2:00 or 3:00 p.m.?

A. Just quickly looking back over the list, I see some days when it occurred at 2:00, and some when it occurred at 3:00, and some at later times.

Q. In August and September?

A. Yes. For example, in August and September of 1980, it occurred at 2:00 and 3:00, respectively. In 1981, it happened to occur at 4:00 and 5:00, so that was later than 2:00 and 3:00.

In 1982, it occurred at 3:00 and 5:00, so one of the months did occur at 3:00. In 1983, it occurred at 5:00 and 5:00, so they are later.

So it happens both ways.

Q. Do you know, Mr. Sundermeir, if the company's System Planning Department includes weather variability when projecting its future class system peaks?

A. Yes, I do know that they do that.

Q. Does the company have the data available to it to perform a cost study with a weather adjustment for a normal or a hot spell condition?

A. We could really adjust the load data for the residential and small commercial customers to reflect any desired value of effective degree hours.

Q. Has the company performed a cost study with normal EDH values for the 1986 test year?

A. We made a rough run of one. It was done in a hurry and there were a few errors in it, but we haven't done any that we would at this time present.

Q. If you wouldn't present it in testimony, would you present it in a data request response?

A. Not what we've done so far, no. We're not basing any claim for a cost allocation on that basis.

Q. If we operate from the assumption that the 1984 EDH are below normal, would I be correct that a 1986 cost study would also use abnormally low EDH for the weather-sensitive rate schedules?

A. Not necessarily. What we're dealing with is an unknown when we go to 1986. All we have done is assume that the relationship between the contributions to the peak and the annual energy use in 1984 is the same as it would be in 1986.

Q. And impliedly then do you not assume that the weather will be similar in 1986 to what it was in 1984?

A. No. What we're assuming is that the relationship between energy and demand is the same in '86 as it was in 1984. The change in kilowatt-hours itself for the budget year already reflects a change to the normal weather conditions.

All we are assuming is that the relationship between those normal kilowatt-hours that are in the budget and the contributions to the peak, that relationship is constant.

Q. Isn't the 1984 relationship which you established as the basis for the adjustment dictated by the EDH values experienced in 1984, to a certain degree?

A. To a certain degree; but it is also a function

of the sales in 1984, and those sales would reflect the fact that the summer period was cooler than normal.

Q. I would just like to clarify a few items of load survey data which had been covered this morning. I would again like to focus on Rate Schedules R, RH and GS.

Would I be correct that the load survey data utilized for those classes is based on a selection of average hot weeks and average cool weeks?

A. Yes. When the actual field survey is done, as I think I explained earlier this morning, we go back and we select two hot weeks and two cool weeks in that particular summer, and we develop the average customer demands in those four weeks. We select two hot summer weeks and two cool summer weeks.

Q. For these classes, then, do you also take the average overall daily EDH in order to adjust for temperature on the four days of the peak?

A. Yes. What we do with the load survey data, we take the difference between the selected hot days and the selected cool days, and we also know the difference between the effective degree hours between the hot and cool days, and assuming that the difference between the loads on the hot days and the cool days is air cooling load, and knowing the EDH values from which the test data were obtained, we can make adjustments to those data to reflect different

values of effective degree hours; and that's what we do.

Q. And then a final step before the input into the cost study is to average the results of those four peak days; is that correct?

A. That's correct.

Q. Now, this differs a bit, does it not, from the material utilized for the PD and HT classes, which, as I understood this morning, is essentially an actual one-half hour data without any averaging process involved; is that correct?

A. The difference with the HT and PD data is that we actually obtain the recorded demands of the customers on the days of the peaks, so we don't have to adjust those for weather conditions that existed on the day of the peak because we already know their loads on the day of the peak.

Q. Has the company ever performed a study or an analysis of how EDH varies as a function of hourly demand on the peak days?

A. I'm not aware of -- you're talking about system peak demands, or system demands?

Q. The hourly demand of the system on the peak day.

A. I'm not aware of any study relating system peak with effective degree hours.

Q. The results obtained from the cost study are reflected, are they not, in the unit cost data which you

have included in Section 6 of your Exhibit WFS-1?

A. That is one of the results of the cost allocation; yes.

Q. Could you turn for the moment to page 39 of Section 6?

A. Yes.

Q. This unit cost study breaks down each customer class--and this, in particular, is Rate HT -- into demand, energy and customer cost components, correct?

A. That's correct.

Q. Would a change in the production demand allocation factor affect the energy revenue requirement for this rate schedule?

A. My hesitancy is in the fact that there are a lot of trailing schedules that are developed in the cost allocation, and it is possible -- just possible; I'm not sure -- that some change in one of the trailing schedules could cause a change in -- a slight change, I would think, in the energy value.

Q. The major change, however, would be in the demand cost component?

A. Yes.

Q. So that if we change the four coincident peak allocator, for example, to a single annual maximum demand allocator, which of the columns on this page would you

expect to experience significant changes? Those columns being the "Four Peak," the "Class Peak," the "Energy" and the "Customer" columns.

A. You would expect the most significant change in the "Four Peak" column.

Q. And you would have very insignificant changes, if any, in the remaining three?

A. Yes.

Q. Similarly, if we changed the 4-CP allocator, for example, to a non-coincident peak allocator, a similar result would obtain, only the "Four Peak" column would have a significant change; is that true?

A. This is true as long as we're assuming that when we make these changes and we're using the coincident peak, that we're only changing the schedule that we allocate production and transmission plant on. As we indicate in our cost study, that is Schedule A-1.

That is normally the only schedule that we change when we go from one method to another.

The answer to your question is yes, if that is what you are referring to.

Q. That's what I am referring to.

You stated earlier this morning that the data on page 39 was utilized to generate the cost/revenue curves in Section 7 of your exhibit?

A. The cost/revenue curves in Section 7 are at the system average return.

Q. The revenue curve -- let's take a specific example. For the HT 50,000 kw customer on page 50, is not the revenue curve based on the class rate of return?

A. No. As you can see in the box at the top of the curve there, it says "cost with 12.70 return on original cost rate base element."

Q. That's the cost curve. I'm looking at the revenue curve which is above that.

A. I'm sorry. That's based on the proposed rates.

Q. Which would imply the rate of return for the class.

A. Yes.

Q. Now, the purpose, I take it, of these cost/revenue curves is to show the revenue tracking ability of your rate schedules as a function of load factor at various demand levels; is that correct?

A. Yes.

Q. If we look at each of the Rate HT cost/revenue curves, we see that at proposed rates, at each demand level, and at every hour of use, the proposed rates provide revenue in excess of system average return cost; is that correct?

A. Yes. I think we discussed that earlier today,

some of the reasons for that.

Q. I know you identified one or two of the reasons earlier this morning, but I guess I'm troubled with what value these cost/revenue curves provide us if they tend to contradict the results we would expect from a cost study.

A. No. The value, the basic value for the cost curve is the establishment of the energy price blocks for Rate HT and PD.

Q. And one of the major components of that cost curve is the demand cost curve which you have utilized and defined this morning as the Barry Curve relationship; is that correct?

A. We used the Barry Curve to develop the demand cost; yes.

Q. When you utilized the Barry Curve, you extracted unit costs, did you not, which emanated from the 4-CP cost study?

A. Yes.

Q. So that one of your inputs into the Barry Curve relationship was cost data utilizing a coincident peak allocation method; is that correct?

A. Yes.

Q. Does the use of a coincident peak allocation method, in conjunction with the Barry Curve -- is that consistent with Mr. Barry's unified theory, if you will,

for cost allocation within a rate schedule?

A. Yes, because what we do -- the costs for production and transmission are allocated on the basis of the contributions to system peak.

The distribution costs are allocated primarily on the basis of non-coincident peak.

What we develop there is a total demand-related revenue requirement. We can then divide that by the kilowatts of class peak, and we get a unit cost in terms of dollars per kilowatt of class peak; and then that can be used and is consistent with the data from the Barry Curve.

Q. Are you familiar with Mr. Barry's text, which discusses the general unified theory as he defines it?

A. I have read Mr. Barry's text, but it has been quite some time ago.

Q. I labor through it every case.

Is it your recollection from your review of his text that Mr. Barry actually favored a non-coincident peak allocation of production and transmission plant in order to be consistent with his utilization of the Barry Curve for the development of an intra-class rate design?

A. I'm not really sure that he used a non-coincident class peak for that particular reason, nor do I think that we are being inconsistent when we do it our way. We feel that it is more appropriate to allocate production and

transmission based on a coincident peak method, but then we convert the resulting revenue requirement into dollars per kilowatt of class peak, which makes it consistent for use with the Barry Curve.

Q. Was part of Mr. Barry's goal to identify how best to distribute the benefits of load diversity among individual customers within a rate schedule?

A. That was the purpose of the Barry Curve.

Q. Just for the record, Mr. Barry was a PE employee at the time he prepared his text; is that correct?

A. That is correct.

Q. Now, another difference, if you will, between the cost study in this case and the cost study in the last case is that Rate HT has been split, in the sense that two customers have been removed; is that correct?

A. That's correct.

Q. Those two customers are SEPTA and Amtrak?

A. That's right.

Q. You testified in the last case, did you not, regarding the appropriateness and the methodology to remove a customer or a small group of customers from Rate HT; is that correct?

A. Yes.

MR. KLEPPINGER: Your Honor, I would like to have marked as PAIEUG Exhibit No. 4 an excerpt from the rebuttal

testimony of Mr. Sundermeir at Docket R-842590.

JUDGE MATUSCHAK: Very well.

(Whereupon, the document was marked as PAIEUG Exhibit No. 4 for identification.)

BY MR. KLEPPINGER:

Q. Do you have that before you, Mr. Sundermeir?

A. Yes.

Q. Do you recall this testimony? I think you can focus on the question and answer beginning on page 35 and carrying over to 36 as what I am interested in.

A. Yes.

Q. You indicate in the response that PECo does not routinely develop separate monthly load data for railroads.

Did PECo develop that monthly load data for the railroads in order to prepare the cost study in this case?

A. We obtained the load data on the days of the system peak for SEPTA and Amtrak.

Q. But you did not obtain monthly load data over a 12-month period?

A. No.

Q. You also indicated there that contrary to Mr. Sharma's contention -- and, for the record, do you recall Mr. Sharma testifying on behalf of SEPTA and Amtrak in the last case?

A. Yes.

Q. You indicate that data was not available to develop cost-justified rates applicable specifically to the railroads.

A. Yes.

Q. You responded in this case, did you not, to the Commission's Order requesting you to prepare a cost study for SEPTA and Amtrak; is that correct?

A. Yes, it is.

Q. And that Order came down in late-January of 1985; is that correct?

A. Yes.

Q. This case was filed September 27, 1985?

A. Yes.

Q. In that time period between late-January and late-September, did you develop the data necessary to develop cost-justified rates for SEPTA and Amtrak --

A. Yes.

Q. -- to the same degree that you have data available for HT as a class?

A. We went far beyond any analysis that we would make for HT as a class. We, literally, looked at every delivery point and the distribution system to serve every delivery point for SEPTA and Amtrak. And, as indicated in response to this question, it was a tremendous amount of work.

Q. And you accomplished that between February 1 and September 27?

A. Yes. My recollection was that -- well, the analysis was done by our electrical engineering division; and my recollection is there were some 900-plus manhours involved.

Q. Were the costs of those manhours directly assigned to the Amtrak and SEPTA rate schedule?

A. My answer is: I don't know.

Q. Let's look specifically at a few of the allocations on this point. Could you turn for the moment to page 21b of WFS-1?

A. Yes.

Q. You have an allocation on that page of Account 368, Line Transformers; is that correct?

A. Yes.

Q. And you have a line 24, Primary Transformers, RR-HT.

A. Yes.

Q. Is that "RR" designation for railroads?

A. I think that might have been a carry-over from the designations indicated in the computer printouts that we used formerly. Subsequent to that, when we made this analysis of this specific distribution system, we were able to directly assign into the proper account the dollars

that resulted from that analysis.

Q. And those dollars would be 205,000, I would take it, from line 24 of page 21a; is that correct?

A. Oh, I'm sorry. The "RR" referred to there is "Rental Rider," not "Railroad."

JUDGE MATUSCHAK: If you find a good place to stop, we'll recess.

MR. KLEPPINGER: This is as good as any, Your Honor.

JUDGE MATUSCHAK: We'll take a short recess.

(Recess.)

JUDGE MATUSCHAK: Whenever you are ready, Mr. Kleppinger.

MR. KLEPPINGER: Thank you.

BY MR. KLEPPINGER:

Q. Could you turn, Mr. Sundermeir, to page 20 of the cost study, 20a and 20b.

A. Yes.

Q. Now, on this page, you also have a designation under Accounts 360, 361 and 362 of "RR Sub." Is it safe to say now that at this location the "RR" stands for railroad?

A. Yes.

Q. If we look in particular at Account 361, "Structures and Improvements," am I correct you show a direct assignment to Amtrak of $17,000?

A. That is correct.

Q. But there is no assignment to SEPTA on that account; is that correct?

A. That is correct.

Q. Are there no railroad subs providing the SEPTA Reading station?

A. The value shown in Amtrak is related to the remainder of the 25 cycle equipment that is used to serve Amtrak.

Q. Let's look then at line 11,"Land and Land Rights"

for railroad subs. Again, no dollars have been allocated to SEPTA under this account.

Are there no land and land right railroad subs associated with the service to SEPTA or SEPTA Reading?

(Witness perusing documents and conferring with PECo personnel.)

A. That entry is also related to the 25 cycle equipment.

Q. My question is whether any land and land rights associated with railroad substations are utilized to provide service to SEPTA or SEPTA Reading. It would imply that there are none if no costs have been allocated there, and I would just like verify if there indeed are none.

A. Those lines that were used in the Amtrak line, those accounts were direct assignments strictly of the 25 hertz equipment that the company still owned.

Now, other than a few things like that, the entire dollars assigned to SEPTA and Amtrak were as a result of an analysis of the distribution system itself, and they appear, as you can see, throughout the cost allocation or at least on several pages of it marked with an asterisk.

I guess the bottom-line answer to your question is: no assignment of dollars was made on that line to SEPTA.

Q. And the same is true, is it not, of Account 362, "Station Equipment"?

A. That is correct. The dollars that are in there is also a direct assignment of the 25 cycle equipment.

In other words, that line was used merely to insert the 25 cycle equipment for Amtrak.

Q. When you performed your specific allocation of the distribution system, were there items included in that allocation which would have normally been included in Accounts 360 through 362 and just weren't specifically broken out into those accounts for SEPTA?

A. No. You can see that the total on those lines is also the 151 and the 17 and the 50, and those lines, as I indicated, were merely used as a convenient place to include the 25 cycle equipment.

Q. Would you turn back to page 12b of the cost study.

A. Perhaps before we leave that page, Mr. Kleppinger, you can see that on other lines, there are costs in those accounts allocated to SEPTA.

Q. I understand, but I was focusing on the railroad subs.

A. Fine.

Q. I think what you're telling me is that there are no railroad substation costs under these accounts which are utilized to serve SEPTA or SEPTA Reading.

A. That's right. You referred to page 12 --

Q. 12b. Again, under Account 589, you have an item

"Rent RR."

A. Yes.

Q. Does the "RR" there stand for railroad?

A. Yes, it does.

Q. For SEPTA there has been no cost assignment; is that correct?

A. That's right.

Q. Are there no rental costs associated with service to SEPTA?

A. That's correct. The value shown for Amtrak is associated with the cost at Metuchen.

Q. And I also noted that at Accounts 590, 591 and 592 on this page, there have been allocations to Amtrak and none to SEPTA.

Do I take it once again that this refers to your prior response that there are no railroad substations providing service to SEPTA or SEPTA Reading?

A. As I indicated earlier, the values shown in there for Amtrak are specifically related to the 25 cycle system that the company still owns and operates.

In the case of SEPTA -- at least in the case of Reading -- they own and operate the 25 cycle system.

Q. Now, we discussed Account 361 a little earlier. I would like you to turn back to page 20b.

(Witness complying.)

Q. You've already indicated you've directly assigned $17,000 from Account 361 to Amtrak. Have you also directly assigned the corresponding depreciation reserve for this account?

A. Yes.

Q. And is that shown on page 23b, line 9?

A. Line 9 shows the value for Account 361. Is that the account you were talking about?

Q. Yes. And that figure also is $17,000; is that correct?

A. Yes.

Q. So in other words, for Amtrak there has been zero net investment related to Account 361?

A. Yes.

Q. And is the same true for Account 362?

A. Yes.

Q. No net investment has been directly assigned to Amtrak?

A. That is correct.

Q. Would you look now at page 22 of the cost study and focus on Account 370, "Meters and Installation." Am I correct that you have allocated $16,000 of meters and installations to Amtrak, taking line 10 on page 22b?

A. Yes.

Q. How many meters are associated with that cost?

A. Amtrak has seven delivery points. I don't think I know the exact number of meters. Hold it for just a second.

(Witness conferring with PECo personnel.)

A. I believe that represents 15 meters.

Q. Are you generally familiar with what type of meters those are?

A. Only generally in the sense that they are demand recording meters and kilowatt-hour meters.

Q. You don't know if they are magnetic tape recording?

A. I believe for Amtrak they are all magnetic tape recorders.

Q. Now, you've also allocated the depreciation reserve associated with these meters, have you not?

A. Yes.

Q. And that is reflected on page 24b at line 8?

A. Yes.

Q. And that figure is $48,000?

A. Yes.

Q. If the depreciation allocation is $48,000 and the gross plant allocation was $16,000, wouldn't that mean that a negative net investment has been allocated to Amtrak for meters? And I derived that by taking the $16,000 from page 22b and then subtracting the depreciation of $48,000.

A. Yes.

MR. KLEPPINGER: Thank you, Mr. Sundermeir. I have no further questions. Thank you, Your Honor.

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

MR. RYAN: Yes.

JUDGE MATUSCHAK: You may proceed.

CROSS-EXAMINATION

BY MR. RYAN:

Q. Good afternoon, Mr. Sundermeir.

A. Good afternoon.

Q. My name is Bernard Ryan. I am counsel for Pennsylvania Food Merchants Association, and I will have very little to ask you today. So let's see if we can do it quickly.

At page 11 of your prepared testimony, I think it begins around line 7 or 8, you make the statement "Use of this relationship in establishing the demand component of cost recognizes that customer loads become more coincident as load factor increases."

Do you see that statement?

A. Yes.

Q. Isn't that so because at 100 percent load factor, there really would be no diversity at all?

A. That's correct.

Q. Doesn't that statement, though, assume that the

customer's peak demand or his maximum demand will occur during the company's on-peak hours?

A. Not necessarily. This relationship is established by the Barry curve, which he developed the relationship, which has been subsequently revised, between load factor and coincidence factor.

The way that is done is to look at groups of customers, and the way that analysis is done, it really doesn't look at values differentiated by time.

Q. Let me pursue it for just a minute. What are the on-peak hours for PECo's system?

A. 8 a.m to 8 p.m., Monday through Thursday; 8 a.m. to 4 p.m. on Friday excluding holidays.

Q. If a customer operated a store from 8:00 in the morning to 8:00 during the weekdays when that is your peak period and his demand was constant at 300 kw, would you agree with me that his monthly load factor, if we assume 730 hours in an average month and assume one holiday, his load factor would be 34 percent? Would you accept that figure subject to check?

A. You're saying he only uses energy during the on-peak period and he uses no energy at all during low peak periods?

Q. That's correct.

A. Then his load factor would be approximately --

Q. About 34 or 35 percent?

A. Approximately that, yes.

Q. If that store operator then decided he was going to change his operation to a 24-hour operation and he continued to use at the same level -- in other words, the same demand, same load -- what would his load factor go to then?

A. If he used the same demand every hour of the month, his load factor would be 100 percent.

Q. So it would be at 100 percent?

A. Yes.

Q. Therefore, would that customer's load become more coincident as load factor increased from 34 percent to 100 percent? It was already coincident, wasn't it?

A. That's right, for that customer. You've got to remember that these curves are developed on averages of actual data; and the way the curve is developed, it's developed by grouping customers in ascending load factor. So that a point on the curve of your second example, he would be established or at least be in the group of customers that would establish a point near the 100 load factor customer, while in the earlier case he would be further down, so to speak, on the load factor curve.

MR. RYAN: My colleagues have covered the area so well, I have no further questions, Your Honor.

JUDGE MATUSCHAK: Thank you. Anything further of this witness?

MR. FORT: I have a few questions, Your Honor, if I may.

JUDGE MATUSCHAK: Very well.

CROSS-EXAMINATION

BY MR. FORT:

Q. Mr. Sundermeir, I am Tom Fort of Reed, Smith, Shaw & McClay. My colleague here is Mr. Mike Browne. We represent Amtrak and SEPTA.

A. Yes.

Q. I have a few questions in regard to your development of the A-1 calculator insofar as it applies to SEPTA and Amtrak.

In developing that factor for SEPTA and Amtrak, do I understand you took their total demand at the time of the 4-CP peaks, their contribution to the 4-CP peaks?

A. Yes.

Q. Did you include in their total demand the power which they receive from Safe Harbor?

A. There is an interchange at Perryville and Thorndale from which energy is provided from Safe Harbor. It is also provided when needed by Philadelphia Electric Company at those points, and the demands at those points were included in those demands, yes.

Q. Is it not a fact, Mr. Sundermeir, that on the average, between 30 to 40 percent of the power used by Amtrak comes through the Perryville and Thorndale contact points or metering points?

A. I don't know offhand how much is provided at those points.

Q. Is it fair to say that you did not make any determination of the percentage of the power that you took into consideration at the time of the 4-CP peaks that was coming through Perryville and Thorndale?

A. We did take into account the power that was coming through those points at that time.

Q. My question was: did you determine what percentage of the power assigned to Amtrak at those moments was coming through those points?

A. At those moments?

Q. Yes.

A. I suppose it's a calculation I could make, but my only interest was the total energy used by Amtrak at those particular times.

Q. Do you have any reason to dispute my statement that approximately 50 percent of the power being used by Amtrak at the time of the 4-CP peaks came through the Perryville and Thorndale metering points?

A. I can't say that I honestly know. It is something

that I could check and look up, but I did not make any particular analysis of the demand at each of the billing points, because, quite honestly, I don't need that information for doing my cost study. I am interested in the total demand; no more than I would be interested in any other customer that has more than one delivery point.

Q. Would you please advise us at some appropriate time, if you can do so easily, what percentage of the power being used at Amtrak at those moments was coming through Perryville and Thorndale?

A. We would be happy to provide that.

Q. Is it not a fact that the power that is provided at Safe Harbor is really not handled in any way by PECo, but rather merely metered at these two points?

A. At times when the load at Perryville and Thorndale is provided from Safe Harbor, that's true. However, Philadelphia Electric Company also has to supply that energy at various other times.

There is a flow in both directions at those metering points.

Q. But to the extent that the power flows from Safe Harbor into the PECo service area, PECo does not handle the power; is that correct?

A. Those connections are considered as interchange points on our system just like any other interchange point

and are, in fact, included as part of our system demand.

Q. Fine. I understand that. But isn't it a fact that the power flows along the Amtrak catenaries, it flows through Thorndale and Perryville where it is metered, and then continues on along the Amtrak catenaries; is that correct?

A. The flow can be in either direction at that point.

Q. To the extent that it goes the direction I have described, is my statement fair?

A. To the extent that it is flowing at a particular time from Safe Harbor into the system, yes.

Q. I want to make sure that my request for information is absolutely clear, Mr. Sundermeir. It relates to the time of the system peak. What percentage of the power going to Amtrak at the time of the four system peaks was coming from Safe Harbor into the interchanges at Thorndale and Perryville? Okay?

I want not only the percentage, but the actual kw, too, please.

I just have one other question, really, Mr. Sundermeir. In the course of developing statistics for this proceeding, have you made a computation as to what difference it would make to the proposed HT rates if there were not seperate SEPTA and Amtrak classes?

A. No.

MR. FORT: No further questions.

JUDGE MATUSCHAK: Any other questions?

MR. SQUIRES: Just a few questions, Your Honor.

CROSS-EXAMINATION

BY MR. SQUIRES:

Q. Mr. Sundermeir, my name is Alan Squires. I represent the Pennsylvania Business Utility Users Group. I just have a few questions for you this afternoon.

In developing WFS-1, the unit costs shown on page 39 for the HT service are flat in that there is no structuring, for example, of the three energy rate blocks; is that correct?

A. As shown on page 39, all we are doing is developing the unit costs. Those costs are then used to develop the cost curve, and the cost curve is used to develop the pricing of the energy blocks.

Q. But as developed by the cost of service methodology, there is no differential?

A. I'm sorry; I don't know what you mean by differential. Between what?

Q. In the three energy rate blocks.

A. No, there is differential in the three energy rate blocks. For Rate HT, there is in existing rates and there is in proposed rates.

Q. But those are not developed in the cost allocation?

A. They are developed from data that is developed in the cost allocation. As I think we talked about a little earlier, the values that you see on page 39 or are referred to on page 39 are then used to develop a cost curve. That cost curve is used to develop the energy block pricing; and for Rate HT, the rates that we have filed are 9.64 cents in the first block, 6.68 cents in the second block and 3.75 cents in the third block. So they are not the same.

Q. If you will refer to your response in Staff-DR-RSC-3, please.

A. Yes.

Q. You provided several computer printout sheets which you've indicated represent the workpapers supporting the present and the proposed rate curves and cost curves shown in WFS-1; is that right?

A. The first attachment I'm looking at shows the data used for development of the cost curve and the development of the pricing for Rate HT.

Q. The total cost to serve data points for the curve are shown on page 1 under the column headed "Total Cost to Serve 100;" is that right?

A. That is correct.

Q. Would you tell me the origin and purpose of the

data in column 2 headed "F(M)"?

A. Yes. That's really the data that is obtained from the Barry curve. That shows the relationship between load factor and coincidence factor, the load factor being in the first column.

Q. What is the method of calculation to arrive at the factors shown in column 2?

A. That is a rather extensive analysis of many customers -- I don't know -- let's say a thousand or more customers to develop the Barry curve, which is the relationship between load factor and coincidence factor.

Q. How often do you make that calculation?

A. Not very often. If my memory serves me right, Mr. Barry developed that relationship I would say back in the late '30s or early '40s; and since that time, the relationship has been reestablished or revised several times. The most recent time I would say was approximately in 1975 or 1976.

It generally shows that there really isn't much of a change from one period to the next.

Q. If you will refer to PECo Exhibit IV-D-2, the Question 2 response, "The company has furnished numerous printouts of the effect of proposed rates on monthly billing."

Would you please look at the four sheets prepared for the HT class?

A. Yes.

Q. Correct me if I'm wrong, but I interpret the data as follows: for a customer taking 100 kw of power monthly, the range of revenue increase anticipated is between 59.5 and 22.1 percent depending upon the individual's load factor; is that right?

A. That is correct.

Q. Now, since the percent increase for the HT class as a whole is 29.64 percent, doesn't this mean that a customer taking power at less than 400 hours use will incur a rate increase higher than the class average?

A. Yes, that's what this would show.

Q. Which measurement of demand, actual or billable kw, is used to develop the demand related cost allocators used in WFS-1?

A. The cost allocation values are actual demand.

Q. Which measurement of demand, actual or billable kw, is used as the demand cost divisor on page 39 of WFS-1?

A. The cost divisor on page 39 is in one case the class peak demand, annual class peak demand, at meters, and in the other case, it's the annual contribution of the class to the peaks at meters.

Q. Is that actual or billable? By meter, you mean what?

A. We are talking about the conglomerate, if you

will, demand of the entire class. None of those demands would necessarily have anything at all to do with the customer's bill.

Q. Are actual or billable kwh used in WFS-1 for the energy cost divisor?

A. The energy cost divisor, that's actual energy use.

MR. SQUIRES: Thank you. I have no further questions.

MR. WERSAN: Your Honor, if I may, I have some cross for Mr. Sundermeir. I would request that I do it tomorrow morning.

JUDGE MATUSCHAK: Yes. I think this might be -- is there anyone else who has any short cross-examination?

MR. KLEPPINGER: Your Honor, just a preliminary matter. I neglected to move my exhibits. I would like to move PAIEUG Exhibits 2, 3 and 4 at this time.

MR. MacGREGOR: No objection.

JUDGE MATUSCHAK: The exhibits are admitted in evidence.

(Whereupon, the documents marked as PAIEUG Exhibits Nos. 2, 3 and 4 were received in evidence.)

MR. SELKOWITZ: Your Honor, you asked us this morning to see if we could work out this question of Dr. Perl's returning. I have proposed a stipulation of an

exhibit to Mr. MacGregor, and he will advise us tomorrow whether that is acceptable to the company. If so, we won't be requiring Dr. Perl's presence for any additional cross.

JUDGE MATUSCHAK: Very well.

You will have the witness back tomorrow with Mr. Williams?

MR. MacGREGOR: Yes. Mr. Sundermeir will return tomorrow morning, and then we will proceed to Mr. Williams.

JUDGE MATUSCHAK: Very well.

We will adjourn at this time until tomorrow morning at 10:00.

(Witness temporarily excused.)

(Whereupon, at 4:40 p.m., the hearing was adjourned, to be reconvened at 10:00 a.m., on Tuesday, January 7, 1986, in Philadelphia, Pennsylvania.)

C E R T I F I C A T E

We hereby certify, as the stenographic reporters, that the foregoing proceedings were taken stenographically by us, and thereafter reduced to typewriting by us or under our direction; and that this transcript is a true and accurate record to the best of our ability.

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