take place), at least 450 megawatts (and in fact, over 500 megawatts) remain excess to the Company's capacity needs.

The Company, however, takes the position that it needs all of the capacity of Limerick 1 in 1986 in order to serve its customers. As the OCA will demonstrate below, the Company's position is based on the assumption that its premature retirement of 794 megawatts of usable capacity provides a sufficient justification for the addition of Limerick 1's capacity. The OCA strongly opposes the Company's attempt to prematurely retire inexpensive, reliable units in an attempt to make room for the extraordinarily expensive capacity of Limerick 1.

In addition, as will be shown below, the OCA submits that PECO's own actions demonstrate that it does not need at least 450 megawatts of Limerick 1's capacity. Over the past 4 years, PECO has attempted to sell more than 450 megawatts of capacity to other utilities. Most recently, in 1984, PECO attempted to sell 471 megawatts of baseload nuclear capacity at Salem 2, through 1996. While PECO was unable to consummate such a sale, the Company clearly demonstrated that it did not need this nuclear baseload capacity in order to provide reliable and economical service.

2. PECO's Premature Retirement Of 458 Megawatts Of Usable And Reliable Combustion Turbine Capacity Demonstrates That At Least 450 Megawatts Of Limerick 1 Are Excess Capacity.

The Company's claimed need for Limerick 1 is based in part on the planned retirement of 458 megawatts of combustion turbines (CTs) in

April of 1986.* PECO St. 14, Sch. 7. This capacity represents 16 CTs at the Richmond station (totaling 400 megawatts) and 2 CTs at the Plymouth Meeting station (totaling 58 megawatts). Tr. 793. These CTs were procured by the Company in the early 1970s under a lease which lasts until October of 1996. Tr. 793-94, 797. Thus, at the present time, these CTs are less than 15 years old and can still provide reliable service for another decade.

PECO witness Rush agreed, in the following colloquy, that these CTs are being retired solely for economic reasons (that is, to save money); not because they are incapable of providing service:

> Q. Mr. Rush, looking back at Schedule 7 in your testimony, you characterize the retirements of these combustion turbines as being what you call here "economic retirement;" is that correct?
>
> A. That's correct.
>
> Q. Does this mean that the units are being retired for economic reasons and not because they can no longer physically be operated?
>
> A. That's correct.

Tr. 799.

In fact, this "economic" retirement is costing PECO approximately $40 million in lease-cancellation payments. Tr. 797. And

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* On January 21, 1986, the Commission approved the retirement of these CTs. Petition of Philadelphia Electric Co., etc., P-850055. That Order specifically states that it has no effect on this rate case. Thus, the Commission stated: "It is not our intention to prejudge any rate case proceeding and we do not believe such is the case here. ... [O]ur ruling does not foreclose the OCA or any other party from presenting their positions and arguments in the PE rate case proceeding." Id., Order at 2.

On February 5, 1986, the OCA petitioned for reconsideration of this Order, and requested a stay pending reconsideration. As of the date of this Brief, the OCA's Petition has not been acted upon by the Commission.

this amount must be paid just for the privilege of eliminating this 458 megawatts of 15 year old capacity. Id.

Since 1982, PECO's ratepayers have been paying these lease-cancellation costs. As a result, PECO has already collected from ratepayers nearly the full $40 million. Tr. 797-98. Thus, ratepayers would only have to pay an additional $1 million to $2 million per year in order to fund the remaining lease payments on these CTs if they were not retired. OCA Exh. 38. That is, PECO may use the $40 million it has already collected from ratepayers either (1) to pay for the privilege of prematurely retiring 458 megawatts of capacity or, (2) to pay nearly all of the lease costs to keep this capacity on line for 11 more years.

In addition to the lease costs, if PECO were to keep the CTs, it would have to pay operating and maintenance costs. PECO indicated, however, that these costs would amount to just $2 million to $5 million per year. OCA Exh. 38; Tr. 799.

Obviously, this premature retirement is not "economic." Rather, as PECO stated in an interrogatory answer:

> The addition of Limerick 1 is allowing PECO to retire 458 MW of CT capacity before the end of their nominal lives.

OCA St. 5 at 7 (emphasis added). That is, but for the addition of the multi-billion-dollar Limerick 1, PECO would not be retiring this inexpensive CT capacity. Yet, the total annual cost of retaining the CT's represents little more than rounding error in comparison to the costs of an equivalent amount of capacity in Limerick 1.

The OCA submits that it is inappropriate to justify the need for Limerick 1's capacity based upon a retirement which only took place

because of the addition of Limerick 1. As OCA witness Lanzalotta explained:

> If a utility has excess capacity, it will always have the ability to mothball or prematurely retire certain generating units. The fact that such retirements are possible does not prove the need for a new generating unit. ... I question the line of reasoning wherein the presence of Limerick is used to justify the advancement of generating unit retirements and then the capacity supply situation which results from these same generating unit retirement advancements is used as justification of the need for the Limerick 1 capacity.

OCA St. 5A at 4 (emphasis added).

Similarly, PAIEUG witness Falkenberg stated:

> [T]his capacity did not need to be removed from service and was in fact only removed because the addition of the Limerick generating plant resulted in PECO having excess levels of reserves. By removing this capacity from service PECO has reduced its reserve margins computed on the basis of active capacity. However, the amount of capacity which the Company could have made available to serve load, had it so desired, includes the capacity which was retired by the Company in order to reduce the excess level of capacity reserves accompanying the Limerick Unit 1 generating unit into service. Clearly the fact that PECO was able to take out of service over 900 MW of capacity when the Limerick 1 unit entered service indicates that little (if any) of the Limerick unit capacity was needed to serve customer load.

OCA Exh. 87 (Set II, Q. 9) (emphasis added).*

If PECO's position were accepted by this Commission, the result would be that utilities could justify the need for new, expensive generating capacity by prematurely retiring the cheapest capacity on its system. Thus, in the present case, PECO attempts to justify Limerick 1

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* The 900 megawatts of retirements referred to by Mr. Falkenberg consist of 458 megawatts of CTs, 338 megawatts at Southwark 1 and 2 (plus a diesel unit), and 166 megawatts at Richmond 9--totaling 962 megawatts. PECO St. 14, Sch. 7.

at a cost well in excess of $3000 per kilowatt (Tr. 802) by the premature retirement of CTs which cost just a small fraction of that amount (see OCA St. 5 at 24). As OCA witness Lanzalotta stated:

> The addition of Limerick 1 is not justified on the basis of replacing relatively serviceable generating capacity, that is largely paid for, with very expensive generating capacity which requires a large increase in rates.

OCA St. 5A at 4 (emphasis added).

The OCA submits that PECO's premature retirement of 458 megawatts of combustion turbines demonstrates that at least 450 megawatts of Limerick are not needed for system reliability -- either now or for many years into the future.

3. PECO's Early Retirement Of 336 Megawatts Of Southwark 1 And 2 Demonstrates That All Of Limerick 1 Is Excess Capacity In 1986 And 1987.

When the early retirement of Southwark units 1 and 2 is combined with the premature retirement of the CTs, it is clear that PECO does not need any of Limerick 1 for system reliability until at least 1988.

As late as mid-1982, the Company planned to retire Southwark 1 and 2 (which combined provide 336 megawatts of capacity) in 1988. OCA Exh. 37; Tr. 790-92; OCA St. 5 at 8. Now, however, PECO is planning the retirement of these units before the 1986 summer peak. PECO St. 14, Sch. 7; Tr. 790. PECO witness Rush indicated that the retirement date of these units was accelerated "in order to meet capacity requirements." PECO St. 14A at 7. The OCA submits that this means that the Southwark units were retired because Limerick 1 was available. Again, but for the presence of Limerick 1, these units would not have been retired before 1988.

While the presence or absence of the Southwark units has no effect on the OCA's excess capacity adjustment in this case, the early retirement of these units is a further indication of the excess nature of the Limerick 1 capacity. In fact, if the Southwark units were not retired, PECO would have excess capacity in 1986 and 1987 equal to all of the 1055 megawatts of capacity of Limerick 1. OCA St. 5, Sch. 1. Thus, as Mr. Lanzalotta stated:

> If PECO's available capacity is adjusted to reflect the fact that, except for the presence of excess capacity in the form of Limerick 1, PECO would, at nominal cost, have 458 MW of additional CT generating capacity through at least 1996 and 336 MW of additional oil-fired steam generating capacity through at least 1987 available to it, the amount of excess capacity resulting from Limerick 1 is quite large.
>
> As shown in Schedule 1, when the 458 MW of CT generating capacity is deemed available through at least 1993 and Southwark's 336 MW of capacity is deemed available through 1987, the amount of excess capacity which results from Limerick 1 increases dramatically. In 1986, the first annual peak load period for which Limerick 1 is commercially available, PECO experiences more than 1100 MW of excess generating capacity over and above its PJM reserve requirement. The same is true in 1987. In addition, the excess capacity resulting from Limerick 1 is more than 500 MW or larger through 1990.

OCA St. 5 at 8-9 (emphasis added).

4. The Company's Attempt To Sell More Than 450 Megawatts Of Lower-Cost Baseload Nuclear Capacity At Salem 2 Is A Further Indication That It Does Not Need All Of The Capacity Of Limerick 1.

PECO witness Rush argued in his direct testimony that, even though PECO might have other capacity available (such as the combustion turbines), the Company needed more baseload capacity. PECO St. 14 at 21-22; Tr. 800. Thus, the Company suggested, it can retire its

inexpensive peaking capacity and produce lower overall system costs by adding new baseload nuclear capacity.

This argument, however, completely ignores the fact that PECO was willing and able to sell more than 450 megawatts of baseload nuclear capacity to other utilities. Thus, in mid-1984, PECO actively attempted to sell its 471-megawatt share of Salem 2 to other utilities. Tr. 800-02; OCA Exh. 39. Further, PECO was willing to sell this baseload nuclear capacity through May of 1996. Id. Thus, PECO was willing to forego the low cost energy benefits of Salem 2, even though the capacity from that unit cost only about $1,000 per kilowatt. Tr. 802. Yet now PECO says it needs all of the capacity in Limerick 1 even though the energy savings (per megawatt) would be no greater than provided by Salem 2, and even though the capacity at Limerick will be more than three times as costly to ratepayers. Id.

When questioned about the Salem 2 sale, Mr. Rush responded that he thought the sale was considered for financial reasons. Mr. Rush thus stated:

> Q. Mr. Rush, ... can you tell me why in 1984 the company attempted to sell its 471 megawatt share of Salem Unit 2 through May of 1996?
>
> A. I was not part of those negotiations, but I would assume they were financially related, if you will. I suspect in that case probably Mr. Paquette is the better one to answer that question.

Tr. 800.

Mr. Paquette, the Company's Vice-President for Finance stated, however, that the Company would not have considered selling Salem 2 if it would have jeopardized the reliability of its system. Mr. Paquette stated:

> [O]ffers to sell or share base load capacity considered both the requirements for Philadelphia Electric Company System as well as the derived financial benefits that would have accrued to the Company and our customers....

PECO St. 3C at 6 (emphasis added).

The OCA submits, therefore, that PECO's willingness to sell its 471 megawatt share of baseload nuclear capacity at Salem 2 for 10 years further supports the OCA's position that at least 450 megawatts of Limerick 1 are not needed by the Company now or in the reasonably near future.

Similarly, from 1978 through 1982, PECO approached a number of other utilities in an attempt to sell a portion of Limerick 1 and 2. Tr. 804-07; OCA Exh. 65. The latest such attempt was in July 1982, when the Company offered to sell, for a 10-year period, 250 megawatts of Limerick 1 and 250 megawatts of Limerick 2. Tr. 805; OCA Exh. 65. The Company stated in 1982 that it could make such sales by delaying the retirements of certain units and by keeping the 458 megawatts of CTs in service through 1996 or beyond. Tr. 806-07; OCA Exh. 65.

Of course, the Company was not able to consummate any of these sales. As a result, the Company apparently believes that it is no longer economical to delay the retirement of certain units or to keep the CTs in service. The Company now proposes to retire the inexpensive units and make ratepayers pay for the expensive nuclear capacity provided by Limerick 1.

This is precisely the result to which the OCA objects. Ratepayers should not become the purchasers of last resort. If the Company does not need 450 megawatts of nuclear capacity, ratepayers should not be required to pay the full cost of that capacity.

The OCA submits, therefore, that PECO does not need at least 450 megawatts of Limerick 1. All of Limerick 1 is excess to the Company's needs today and, at all times over the next five years at least 450 megawatts of Limerick's capacity will remain excess. (In fact, it appears that, under the Company's own load growth and reserve margin assumptions PECO will have more than 500 megawatts of excess capacity over and above the Company's reserve requirement in each year through 1990. OCA St. 5 at 10; OCA St. 5, Sch. 1.)* The OCA submits, therefore, that it is reasonable, and indeed conservative, to find that 450 megawatts of Limerick 1 are excess capacity.

D. Ratepayers Would Benefit By More Than $1.5 Billion If PECO Retained The Combustion Turbines Rather Than Adding 458 Megawatts Of Limerick To Rates.

In testimony which is completely unrebutted, OCA witness Lanzalotta found that ratepayers would benefit by more than $1.5 billion over the next 11 years if PECO kept the 458 megawatts of combustion turbines rather than adding an equivalent amount of Limerick. OCA St. 5, Sch. 2.

Specifically, Mr. Lanzalotta showed that under PECO's own assumptions, the CTs would save ratepayers a substantial amount in each year from 1986 through 1994. For instance, in the first year of Limerick 1's operation, ratepayers would save more than $300 million if PECO retained the CTs instead of adding 458 megawatts of Limerick 1 to rates.

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* Even after 1990, it is certainly likely that PECO could meet its reserve requirement without Limerick 1. Thus, UUC/UP witness Chernick found, under certain assumptions regarding life extending fossil-fueled plants, that none of Limerick would be needed until 1991 and that all 1055 megawatts of Limerick capacity would not be needed for reliability purposes until 1998. UUC/UP St. 1, Table 2.1.

Id. Over the 11-year life of the CTs, the total savings would exceed $1.5 billion. OCA St. 5, Sch. 2.

Thus, as Mr. Lanzalotta concluded:

> For the years 1986 through 1996, PECO has projected that Limerick 1 will have a net cost ... of $169.90 per KW per year. I would note that I am not agreeing with all of PECO's assumptions. I am only using these assumptions for purposes of this analysis. If OCA witness Komanoff's assumptions were used, it would show an even greater difference in cost between the CT capacity and Limerick 1.
>
> For the same period, the CT capacity would have a net negative cost, or a net benefit, of $132.71 per KW per year. This assumes that the CT capacity allows PECO to avoid the same capacity charges, on a per-KW basis, as Limerick 1.
>
> If PECO had been able to sell, at cost, 458 MW of Limerick 1 through 1996 and replaced this capacity with the CT capacity, the total benefit, as shown in Schedule 2, would be more than $1.5 billion in total net cost over this 11 year period.

OCA St. 5 at 22-23 (emphasis added).

The OCA would again emphasize that this testimony is unrebutted. The OCA submits, therefore, that the 450 megawatts of Limerick 1 which have been shown to be unneeded for reliability also fail to provide any economic benefit to ratepayers until at least 1995. And over the next 11 years, the presence of these 450 megawatts in rates costs ratepayers approximately $1.5 billion. The OCA submits, therefore, that 450 megawatts of Limerick's capacity fail the Commission's test of "usefulness." Specifically, 450 megawatts of Limerick 1 are not needed for system reliability and do not provide an immediate or near-term economic benefit to ratepayers. PECO, therefore, is not entitled to receive full ratemaking treatment for its investment in 450 megawatts of

Limerick 1. The OCA's rate proposal for these 450 megawatts is discussed in Section IV.F, infra.

E. Limerick 1 Will Not Provide A Current Net Economic Benefit To Ratepayers Until 1994, At The Earliest. Under More Reasonable Assumptions, Limerick 1 Will Never Produce A Cumulative Net Benefit.

1. Introduction

Four parties to this proceeding presented analyses of the net economic benefits which would be provided to ratepayers if all of Limerick 1 were included in rates. Each witness made assumptions about certain key factors. Specifically, these witnesses differed in their assumptions about the following factors, among others:

* Limerick 1 capacity factor
* Fossil fuel costs
* Limerick 1 capital additions expenditures
* Value of Limerick 1 capacity.

PECO presented the testimony of Dr. William Hieronymus (PECO St. 15, PECO St. 15A, PECO St. 15B), who concluded that, under the Company's assumptions, Limerick 1 would not produce a current net benefit until 1994 and would not produce a cumulative net benefit until 2006. GEC Exh. 3, Attach. IR-OCA-2-25b, item 1, page 2.

The OCA presented the testimony of Mr. Charles Komanoff* (OCA St. 6, OCA St. 6A), who concluded that, under assumptions which appear to be reasonable (many of which were specifically accepted by Administrative

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* Mr. Komanoff is a consultant, analyst, and author who specializes in the economics of nuclear power and other energy-related issues. He has been retained by federal and state agencies on "virtually every aspect of energy and electricity policy." OCA St. 6 at 1-2. Mr. Komanoff was the OCA's chief witness in the Limerick 2 Investigation at I-840381 and his positions were adopted to a substantial extent in the Recommended Decision of Administrative Law Judge Allison Turner.

Law Judge Turner in the Limerick 2 Investigation at I-840381), Limerick 1 would not consistently produce a current net benefit until at least 2001 and would never produce a cumulative net benefit. OCA St. 6, Exh. CK-3, page 4. Mr. Komanoff's analysis showed that Limerick 1 would cost ratepayers (that is, Limerick 1 would have negative benefits of) between $2 billion and $2.6 billion over its life. OCA St. 6 at 7.

PAIEUG presented the testimony of Mr. Randall Falkenberg (PAIEUG St. 1, PAIEUG St. 1A), who concluded that, under certain assumptions, Limerick 1 would not produce a current net benefit until 1995 and would never produce a cumulative net benefit. PAIEUG St. 1, Falkenberg Exh. 10. Mr. Falkenberg concluded that Limerick 1 would cost ratepayers approximately $1.2 billion over its life. Id.

Finally, UUC/UP presented the testimony of Mr. Paul Chernick (UUC/UP St. 1, UUC/UP St. 1A), who concluded that, under certain assumptions, Limerick 1 would never consistently produce a current net benefit and would never produce a cumulative net benefit. UUC/UP St. 1, Tables 3.7 and 3.8. Mr. Chernick concluded that Limerick 1 would cost ratepayers between $3.1 and $4.8 billion over its life. Id., Table 3.8.

PECO's witness, Dr. Hieronymus, attempted to place all of these analyses in perspective, by stating:

> Thus, while I continue to believe that the forecasts which I sponsored are quite reasonable, I recognize that the magnitude, and even the existence, of a net life cycle benefit is uncertain. However, whatever uncertainty inheres in PECO's forecast of net gain is at least as present in the intervenors' forecast of net loss.

PECO St. 15A at 21 (emphasis added).

The OCA agrees that there is a great deal of uncertainty in these 40-year forecasts of costs and benefits. The OCA submits, however, that the Company's assumptions regarding the future costs and benefits of Limerick 1 are consistently over-optimistic in favor of Limerick. It is for this reason that many of these assumptions were specifically rejected by ALJ Turner in the Limerick 2 proceeding. Moreover, the OCA submits that the presence or absence of a benefit over a 40-year period is not determinative in this proceeding. What is important, under this Commission's PP&L SSES 2 standard, is whether Limerick 1 will provide a benefit to ratepayers any time in the reasonably near future. All of these analysts, including Dr. Hieronymus, agree that Limerick 1 will not provide a current net benefit to ratepayers for at least the first 8 years of its life. Further, the Company's own analysis shows that it will take at least 20 years for Limerick 1 to show a cumulative net benefit. The other three analyses conclude that Limerick 1 will never show a cumulative benefit.

The OCA submits, therefore, that under any of these analyses, Limerick 1 as a whole fails this Commission's standard of "usefulness," in that Limerick 1 does not provide an immediate or near-term economic benefit to ratepayers. Since, at the earliest, Limerick 1 will not provide a current benefit until 1994, the OCA submits that ratepayers should not be required to fully support in rates any portion of the plant which is not needed for purposes of system reliability. Moreover, because the economic costs of Limerick 1 are so enormous in the early years, the Commission should be particularly careful not to include unneeded capacity in rates.

To the extent that the Administrative Law Judge and the Commission wish to address the reasonableness of the specific assumptions made by these analysts, the following sections present a brief discussion of certain of those assumptions. The OCA would reiterate, however, that under any of these assumptions -- even those which are most favorable to the Company -- Limerick 1 is not presently "useful" to PECO's ratepayers.

2. Limerick 1 Capacity Factor

PECO's long-term analysis of the benefits of Limerick 1 assumes that, over its life, Limerick 1 will operate at a 65 percent capacity factor. Tr. 715. The analysis of OCA witness Komanoff shows that a 60 percent capacity factor is a more reasonable assumption for Limerick 1. OCA St. 6 at 22-23. UUC/UP witness Chernick forecasts a capacity factor ranging between 47 and 57 percent. UUC/UP St. 1, Table 4.3.

These analysts agree that the data on which these analyses are based indicate that the probable Limerick 1 capacity factor falls within a certain range. Thus, OCA witness Komanoff indicated during cross-examination:

> Q. Specifically, I am looking at the company's projected capacity factor of 65 percent for Limerick 1. Would you say that the company's projection lies within a reasonable band that you might draw around your own regression results?
>
> A. Could I again change your words slightly and say within a plausible band? Yes, it does. It's not --
>
> Q. It's not what you would have projected yourself but it falls within a range that could be extrapolated from your regression?
>
> A. Right. And I would say that the 65 ... is about as likely as a 55; and I think both 55 and 65 [are] somewhat less likely than a 60.

Tr. 2875 (emphasis added).

Similarly, Dr. Hieronymus characterized these forecasts as ranging from the very optimistic (PECO) to the somewhat pessimistic (UUC/UP). Dr. Hieronymus thus stated:

> Q. Both Messrs. Komanoff and Chernick criticize PECO's capacity factor forecasts as being excessively optimistic relative to historic data. Are they correct?
>
> A. They are correct that PECO's forecasts exceed the historic average capacity factor performance of BWRs. That fact is not in dispute. The question is, to what extent, if any, will the Limerick capacity factor performance exceed this historic average. Mr. Chernick implicitly assumes it will be worse; Mr. Komanoff believes it will be slightly better, and PECO believes it will be substantially better. These differences stem from different beliefs about the quality of the Limerick plant or about the nature of the operating environment.

PECO St. 15A at 37 (emphasis added).

The OCA submits that Mr. Komanoff's projection of a 60 percent capacity factor is more reasonable than PECO's assumption that Limerick will perform substantially better than the average BWR. Simply, Mr. Komanoff's estimate is optimistic but reasonable. He assumes that Limerick 1 will out-perform the historical average BWR, but will not be a spectacular performer. Thus, as Mr. Komanoff stated:

> Through the end of 1984, U.S. commercial BWRs had averaged only 57 percent capacity factor, and only 54 percent for the five years (1980-84) after the Three Mile Island accident, as Exhibit CK-7 shows. Although data for the full year 1985 aren't yet available, preliminary data indicate that the average BWR capacity factor for 1985 was only 54 percent, matching the 1980-84 performance level. Thus, for Limerick 1 to achieve 60 percent would entail surpassing the historical BWR average.

OCA St. 6 at 23 (emphasis added).

In addition, Mr. Komanoff noted that, based on PECO's experience in operating the Peach Bottom nuclear units, there is no reason to believe that PECO is a better plant operator than the average utility. Mr. Komanoff summarized his conclusions regarding PECO as follows:

> [B]ased on data through 1984, Peach Bottom's performance was 1 to 2 percentage points higher than would have been expected on the basis of overall U.S. BWR experience -- an insignificant difference. Today, following Peach Bottom's poor experience in 1985 -- Units 2 and 3 had capacity factors of roughly 30 and 40 percent, respectively -- Peach Bottom's lifetime average capacity factor equals the U.S. BWR average. Accordingly, PECO's nuclear performance record conveys no reason to impute a higher or lower capacity factor to Limerick 1.

OCA St. 6 at 27-28 (emphasis added).

Additionally, PECO witness John Carroll indicated that under the Company's assumptions, Limerick 1's capacity factor would not average 65 percent for at least the first 3 years of its life. Thus, Mr. Carroll's data assume that for the year ending June 30, 1987, Limerick 1 would have a 55.8 percent capacity factor; for the year ending June 30, 1988, a 71.7 percent capacity factor, and; for the year ending June 30, 1989, a 57.0 percent capacity factor. This would result in a 3-year average, under the Company's assumptions, of 62.1 percent. PECO Exh. JJC-1, Data Request 3(i), Comparison Unit Data Report.

The OCA would also note that, in this Commission's Limerick 2 Investigation at I-840381, Administrative Law Judge Turner found the 60 percent capacity factor proposed by OCA witness Komanoff in that proceeding to be a reasonable assumption for Limerick 2. Thus, Judge Turner concluded:

> The capacity factor position of PECO and the OCA both contain assailable assumptions. However the OCA position on capacity factor for Limerick 2 of 60% appears to be the capacity factor which best depicts what may be expected over the total life of Limerick 2. The 60% includes the early year problems as well as the problems that will undoubtedly occur as the plant ages. In addition, the historical data used by the OCA appears to reflect experienced capacity factors of similar BWR operation. The Company's data appears to reflect selective bias to a greater degree than OCA's. ... For these reasons I recommend that the Commission use a 60% capacity factor in evaluating the decision to complete Limerick 2 versus other alternatives.

Limerick Unit No. 2 Nuclear Generating Station Investigation, I-840381, Recommended Decision at 238 (hereafter cited as Limerick 2 R.D.) (emphasis added).

The OCA would note that the historic data indicate that there should be no significant difference between the performance of Limerick 1 and Limerick 2. Thus, Mr. Komanoff stated:

> BWR capacity factors to date have shown no difference between performance for first and second identical units. Thus, from a strictly statistical standpoint, Limerick 1 should fare no differently from Limerick 2. Nevertheless, Limerick 2 could have been expected to benefit somewhat as a later unit, both from greater accumulation of industry-wide learning and from an easing in the post-TMI environment. Indeed, Limerick 2's late completion date was one of the considerations that led me to increase the statistical projection of the Limerick 2 capacity factor from 50-54 percent to 60 percent. Limerick 1 is less likely to experience these improvements, indicating that a 60 percent capacity factor is at least as much optimistic as realistic.

OCA St. 6 at 27 (emphasis added).

The OCA submits, therefore, that its projected 60 percent capacity factor for Limerick 1 is reasonable and should be used in any long-term analyses of the benefits of Limerick 1. Because the production cost run performed by PECO for the OCA combined the effects of a 60

percent capacity factor with the effects of using Mr. Komanoff's fossil fuel price assumptions, the OCA has not quantified the effect of just changing the Limerick 1 capacity factor. The combined effect of adopting Mr. Komanoff's fuel prices and capacity factor would be to reduce PECO's estimate of the present value of the benefits of Limerick 1 by approximately $1.4 billion. OCA St. 6, Exh. CK-3, page 1.

3. Fossil Fuel Costs

The expected benefit to be derived from Limerick 1's lower fuel costs depends on the amount of energy to be produced by the plant (see Section IV.E.2, supra, for a discussion of the capacity factor) and on the cost of generating that amount of energy from other sources (primarily plants fueled by oil and coal). Thus, in order to quantify the life-cycle benefits of Limerick 1, it is necessary to estimate future oil and coal prices.

PECO's life-cycle analysis of Limerick 1 started with a May 1985 forecast of fossil fuel prices and escalated those prices at real rates (over and above inflation) of 2 percent per year for coal and 3 percent annually for oil. See OCA St. 6 at 30. For consistency, OCA witness Komanoff used the same starting point and inflation rates as PECO, but assumed that prices would increase at a much slower rate. Id.

Initially, the OCA must note that the starting prices for oil and coal are now almost a year old and are sorely outdated. For example, PECO's original projection for the price of coal in 1986 was $48.45 per ton. OCA Exh. 14. In November 1985, PECO decreased its projection by $2 per ton to $46.45. OCA Exh. 15. Similarly, PECO was originally projecting a 1986 oil price of $26.75 per barrel (for No. 6, 1% sulfur fuel oil). OCA Exh. 14. By August 1985, PECO's fuel price consultant,

Data Resources, Inc. (DRI), was projecting that the price would be less than $24 per barrel. OCA Exh. 15. Since August, the price of oil has fallen much further than DRI had projected. Thus, in March 1986, PECO actually paid just $17 per barrel for residual (or No. 6) oil. Tr. 4357. In March 1986, the Company's Manager of Fuel Procurement, Mr. Paul English, stated as follows that the Company did not expect to pay more than $20 per barrel for No. 6 oil in 1986:

> Q. ...[W]hat is your current prediction for the price of residual oil for the rest of 1986?
>
> * * *
>
> A. It may be in the $17 to $20 range; it would be fairly flat.

Tr. 4358.

There is no question, therefore, that the 1986 starting price for oil and coal has been greatly overestimated by the Company. Even if the Company's escalation rates prove to be correct (which, as we explain below, is very unlikely), PECO's analysis will still result in greatly overstated benefits from Limerick 1.

In addition to overestimating the current cost of oil and coal in its economic analysis, PECO has also assumed that the price of those fuels would increase very rapidly. Mr. Komanoff explained as follows that PECO's projections of future increases far exceed those of PECO's own independent fuel price consultant, DRI:

> For coal, PECO's projections exceed DRI's by as much as 25 percent in some years, and by an average of 15 percent over the 20-year period for which DRI projects coal prices. For oil, PECO's projections exceed DRI's by more than 50 percent during much of the 1990s, and by an average of 35 percent over the 20-year period for which DRI projects oil prices.

OCA St. 6 at 31.

Mr. Komanoff stated that his coal price estimates were based, in part, on the consistent decline in the real cost of coal over the past 10 years. Mr. Komanoff described this decline as follows:

> For the Commonwealth [of Pennsylvania] as a whole, from 1975 through 1984, the average delivered price of coal declined at an average rate of 0.7% per year, adjusted for inflation. For plants owned or shared by PECO, the declines in real prices have been greater, averaging 4% at Conemaugh and 2% annually at Eddystone, Cromby and Keystone, as Exhibit CK-8 demonstrates.

OCA St. 6 at 34 (emphasis in original).

PECO witness Hieronymus argued that Mr. Komanoff's data are misleading because they do not go back to 1972. Dr. Hieronymus showed that from 1972 through 1984, the cost of coal increased by more than 5 percent per year. PECO St. 15A, Exh. WHH-47. The OCA submits, however, that Dr. Hieronymus's reliance on data before 1974 is misplaced. Dr. Hieronymus himself stated that there was a significant change in the coal markets following the oil embargo in October 1973. He stated:

> In the period following the oil embargo of October, 1973, it was widely perceived that coal prices would follow the price of oil. Spot prices rose dramatically and many long term contracts were renegotiated or abrogated. Prices rose above the level of new mine costs, prices which could not be sustained in the long run. Since the mid-seventies, a return of relative labor peace, experience with FCMHSA and, especially since 1982, the emergence of a "soft" coal market have caused prices to decline significantly.

PECO St. 15A at 42-43 (emphasis added). Further, an examination of Dr. Hieronymus's data (PECO St. 15A, Exh. WHH-47, WHH-48, WHH-49) shows that the price of coal almost doubled between 1973 and 1974. But, as Mr. Komanoff stated, since 1974 the price of coal has consistently declined. Thus, while the real price of coal is higher today than it was in 1972, it is significantly lower than it was in 1974.

The OCA submits, therefore, that it is not reasonable to assume that the price of coal will increase as rapidly as the Company has projected. In addition, since the starting price of coal is at least $2 per ton higher than the current price, there appears to be no reason to adopt PECO's coal price assumptions.

PECO's oil price assumptions are even more unrealistic than its coal price projections. We already demonstrated that PECO's starting price for oil is much higher than the current market price for oil. Compounding this problem is PECO's estimate that the real price of oil will increase at a very rapid rate. Thus, for example, from a current price of $17 per barrel, PECO projects that by 1990 the price of oil will be nearly $29 per barrel (in constant 1985 dollars). See OCA St. 6, Exh. CK-10. Back in August 1985, PECO's consultant, DRI, however was projecting a constant-dollar price of just $20 per barrel, or less than two-thirds of the price projected by PECO. Id.

In fact, PECO's own oil price expert, Dr. William Hogan, presented data from 35 different forecasters. Those data show that in January 1986 (before much of the recent decline in prices), most of these forecasters were predicting a crude oil price in 1990 of between $21 and $27 per barrel (in 1985 dollars). PECO St. 37A, Exh. WWH-6. This compares with PECO's projection of $29 per barrel and the OCA's projection of $25 to $26 per barrel (OCA St. 6, Exh. CK-10).

The OCA submits, therefore, that the oil price projections of OCA witness Komanoff are conservative and reasonable. For purposes of a long-term economic analysis, the OCA submits that Mr. Komanoff's projections should be used.

Finally, the OCA would note that Administrative Law Judge Turner considered the future cost of coal and oil in the Limerick 2 Investigation. Judge Turner there concluded as follows:

> Mr. Komanoff's approach has flaws as pointed out by PECO. ... However, PECO ignores projections of its own forecasting service, DRI. ... Historically PECO's coal price forecasts were too high. It is reasonable to find that the evidence indicates that coal price growth rates will be lower than PECO predicts, and that Mr. Komanoff's projections are reasonable.
>
> * * *
>
> After reviewing the evidence, I conclude there is sufficient basis to find that PECO's oil price forecast is overstated, and to find that a lower forecast would be more reasonable than PECO's or GEC Staff's. I do not specifically adopt Mr. Komanoff's forecast which is strongly divergent from English and Stauffer as it approaches the year 2000.

Limerick 2 R.D. at 284, 286.

The OCA submits that PECO's estimate of Limerick 1's long-term benefits does not reflect the recent declines in the cost of fossil fuels and is based upon an overestimation of the probable rates of escalation in the price of those fuels. The OCA submits that the energy savings estimate relied upon by Mr. Komanoff more accurately reflects the probable savings to be derived over the life of Limerick 1. When Mr. Komanoff's fossil fuel price estimates are combined with his estimate of the probable generation from Limerick (based upon a 60 percent capacity factor), the effect is to reduce PECO's estimate of the present value of the benefits of Limerick 1 by approximately $1.4 billion. OCA St. 6, Exh. CK-3, page 1.

4. Capital Additions

Another major element of the cost of Limerick 1 is the extent to which capital improvements will need to be made to the plant. PECO has

assumed, for example, that in Limerick's first 5 years, PECO will need to spend an average of just $4.6 million per year--or less than $5 per kilowatt per year--on capital additions to Limerick 1. See OCA St. 6, Exh. CK-3, page 5. OCA witness Komanoff, however, estimated that a more realistic estimate was that PECO would need to procure capital additions averaging $34.5 million per year over that 5-year period. Id., Exh. CK-3, page 4. Similar escalating differences would exist over the life of the plant.

The OCA submits that Mr. Komanoff's estimate of the capital additions which would be required at Limerick 1 is much more reasonable than that of the Company.

During cross-examination, Mr. Komanoff explained as follows the practical effect of his capital additions estimate:

> A. What I am anticipating ... is that by the time Limerick is 25 years old considerable investments are going to have to be made to keep it in good enough shape to keep it running from a sheer performance standpoint and from a safety and regulatory standing. ... The increase or the doubling over this period is something that I expect because of aging problems and the increased cost to keep this plant running as it gets older and faces more wear and tear.
>
> * * *
>
> Q. So it would be some sort of new event or new kind of retrofitting or other kind of problem that would develop in the industry that we haven't seen yet that would cost in the year 2010 twice as much as what we have seen capital additions costs to be on the average up to the present date?
>
> A. I don't think it requires that. I think, again, investments are going to need to be made to keep aging plants on line.
>
> Q. With respect to items that are unclear as of today as to what they are going to be?

A. I can't pinpoint the equipment that will need to be replaced. It's easy to imagine that 25 years after the start of life that perhaps a great percentage of electrical cables will have to be replaced because experience at other plants or tests on the aging of electrical cables or their ability to perform in accident environments will indicate that 25 year old cables can't cut the mustard.

Q. That's one possibility and there's another range of possibilities of things that could occur?

A. We could imagine the same thing for pumps, seals, valves, motors, connectors, for any of the equipment that's inside the plant.

The way I prefer to look at this is -- or to put it in context -- is that in 1985 dollars per kilowatt Limerick 1 plus half of common is about a $3,000 per kilowatt plant. And I am asserting in these numbers that in 1986 about one and a half percent of the plant will have to be replaced, made over or added to. By the time we get to the year 2010 and age 25, it's going to take about three percent of the initial cost that will have to be made over in that year. And that seems to me to be entirely reasonable.

Tr. 2862-65 (emphasis added).

The OCA submits that Mr. Komanoff's analysis correctly recognizes the probability that it will take a significant investment to keep a nuclear power plant operating over the next thirty or more years. PECO's assumption that it would not need substantial additional capital investment at Limerick 1 appears to be based more on hope than on fact. By so projecting, PECO effectively ignores its experience at the Peach Bottom and Salem nuclear plants.

PECO's own information shows that each of its nuclear plants has added substantial capital improvements. In fact, the capital additions at each of those plants have exceeded the annual depreciation expense at those plants. The following table shows the magnitude of capital additions at those plants:

Plant	Date In Service	Original Cost	Total Capital Additions	June 30, 1986 Depreciated Cost
Peach Bottom 2 & 3	1974	$315,945,000	$201,709,000	$387,136,000
Salem 1	1977	223,813,000	79,783,000	233,071,000
Salem 2	1981	350,541,000	53,497,000	352,606,000
Salem Common	1977	152,341,000	93,491,000	196,530,000

OCA Exh. 4. Thus, each of the Company's nuclear units has a higher depreciated cost today than it did when the plant entered service. Further, this experience has occurred in the relatively early years of these plants, when Mr. Komanoff projected that capital additions should be lower.

The OCA submits that there is no question that substantial capital additions have been needed at PECO's nuclear plants -- and Peach Bottom 2 and 3, the oldest of those plants, have operated for less than one-third of their projected life. The OCA further submits that Mr. Komanoff's estimate of the magnitude of capital additions at Limerick 1 is reasonable in light of PECO's experience at its other nuclear plants.

The OCA submits that, while Limerick 1 may not be subjected to every problem which has occurred at Peach Bottom and Salem, there is no reason to believe that Limerick will be free of all of those problems. Similarly, there is no reason to believe that a more complex plant like Limerick will not require other investments to keep it operating safely and efficiently. Thus, as Mr. Komanoff explained, newer plants have consistently required more capital additions than older plants. Mr. Komanoff summarized his analysis as follows:

> [T]he newest group of plants -- those completed roughly in 1976 and thereafter -- have required substantially higher capital additions at each age of their operating lives than their predecessors. Over their first eight years of operation, capital additions at the later-built plants have averaged more than double those at plants completed prior to 1976 ($29/kW versus $14/kW in 1984 dollars). Without controlling for the other contributors to overall variation in nuclear capital additions, it is clear that newer means higher, not lower, cost.

OCA St. 6A at 9-10 (emphasis in original).

The OCA submits that Mr. Komanoff's projection of capital additions expenditures at Limerick 1 is reasonable. Because of PECO's substantial underestimation of those expenditures, Mr. Komanoff's capital additions assumption results in an increase of $1.8 billion in PECO's estimate of the life-cycle, present value cost of Limerick 1. OCA St. 6, Exh. CK-3, page 1.

5. Value Of Capacity Of Limerick 1

Each of the life-cycle economic analyses assumed that the existence of Limerick 1 will save the Company the cost of having to purchase capacity from another source. The obvious reference point for determining the value of Limerick 1's capacity (as opposed to energy) is the PJM capacity deficiency charge. As OCA witness Lanzalotta noted, the PJM capacity charge is "based on the price of CT [combustion turbine] capacity." OCA St. 5 at 28.

OCA witness Komanoff showed that, in fact, PJM's present and projected capacity charges appear to accurately reflect the costs of acquiring additional capacity. Thus, Mr. Komanoff stated:

> The PJM charge for 1985 was $52.93 per kW. During the same year, the approximate capital cost of combustion turbine capacity was $267/kW .... The implied annual fixed charge rate to equate the capital cost to the annual cost is 19.8%, which is probably a reasonable

> estimate of the actual fixed charge rate for combustion turbine capacity. Thus, PJM's 1985 capacity charge adequately reflects the actual cost of peaking capacity. This is also true of PJM's 1986-89 charges, as well as charges calculated beyond 1989 at the rate of inflation ....

OCA St. 6 at 43-44 (emphasis added).

PECO witness Rush agreed with these witnesses that the PJM charge is based on the cost of acquiring CT capacity. The following question and answer indicate Mr. Rush's understanding of the purpose of the PJM charge:

> Q. Mr. Rush, do I understand this interrogatory answer [OCA Exh. 36] to mean that PJM bases this charge on the average carrying cost of a new 50 megawatt combustion turbine?
>
> A. The charges are meant to generally reflect carrying charges on the combustion turbine; that's correct.

Tr. 788-89. See also OCA Exh. 36.

Even though the PJM capacity deficiency charge accurately reflects the cost of adding new peaking capacity, PECO witness Hieronymus assumed, in his life-cycle analysis of Limerick 1, that the PJM charge would be doubled. GEC Exh. 3, IR-OCA-2-25b, item 9, page 1. This doubling, of course, has the effect of overstating the benefit of having Limerick 1's capacity in service.

In addition, as we discussed in Section IV.C, supra, PECO has available to it 458 megawatts of existing combustion turbine capacity. And this capacity is available at least through 1996. In spite of this, however, Dr. Hieronymus assumed that, in the absence of Limerick 1, PECO would incur capacity deficiency charges beginning immediately. Thus, Dr. Hieronymus agreed as follows on cross-examination:

Q. Dr. Hieronymus, does your analysis of capacity deficiency payments which PECO would incur in the absence of Limerick assume that the company would still [retire] all of the peaking capacity which it currently plans to retire even if Limerick 1 were not in service?

A. Yes.

Tr. 719-20. See also GEC Exh. 3, IR-OCA-2-25b, item 9, page 3. Thus, Dr. Hieronymus's analysis has the effect of assuming that, if Limerick 1 did not exist, PECO would throw out perfectly good CTs and then pay to PJM twice as much as the cost of a new CT.

The OCA submits that PECO's assumptions concerning its capacity deficiency payments are plainly illogical. OCA witness Lanzalotta summarized as follows the inherent inconsistency in PECO's position:

Q. Is it reasonable to assume that PECO would pay PJM a deficiency charge which is twice as high as it would have been in the absence of Limerick 1?

A. No. It is illogical.

Q. Why?

A. The present level of the PJM capacity deficiency charge is based on the price of CT capacity. If PJM were to double the level of the charge as suggested by PECO, then PECO could add CT capacity at costs equivalent to one-half the PJM capacity deficiency charge. It is not logical to think PECO would pay twice as much to PJM for capacity it could add at one-half the cost on its own.

Of course, PECO wouldn't even have to add CT capacity for a while. PECO could simply delay its premature retirement of 458 MW of CT capacity at a cost which would be less than 15 percent of what PECO says the PJM deficiency charge could be. The 458 MW of CT capacity would cost about $14.00 per KW per year through 1996 whereas the present PJM deficiency charge doubled is more than $100.00 per KW per year.

OCA St. 5 at 23-24 (emphasis added).

Similarly, OCA witness Komanoff stated:

> PECO has announced its intention to retire 458 MW of combustion turbines in conjunction with placing Limerick 1 in service. However, the turbines still have another decade of economic life left. As OCA Witness Lanzalotta points out in his testimony, the majority of the turbines are only 14 years old. Little additional capital investment and O&M expenses would be incurred by retaining the turbines in service through 1996 -- only $39.6 million, on a present-worth basis, by PECO's own estimate.
>
> Thus, the benefit of averting 458 MW of capacity deficiency through 1996 is not an attribute of Limerick 1, since that many megawatts of deficiency can be averted simply by maintaining the combustion turbines in service for a present-worth cost of just $39.6 million. If 458 MW of capacity deficiency can be averted by keeping the turbines in service, then it is inappropriate to attribute the benefits of the averted deficiency to Limerick 1. If Limerick 1 didn't exist, the turbines would remain in service and 458 MW of deficiency would be averted.

OCA St. 6 at 42 (emphasis added).

In performing his life-cycle analysis of Limerick 1, therefore, OCA witness Komanoff assumed that 458 megawatts of CTs would be available to PECO through 1996. Mr. Komanoff described as follows this portion of his analysis:

> My analysis, therefore, subtracts 458 MW from the capacity benefit of Limerick 1 through 1996. I then add to the benefit of Limerick, as an avoided cost, the annual cost of retaining these combustion turbines in service (since, under PECO's assumptions, the combustion turbines are retired when Limerick 1 enters commercial operation).

OCA St. 6 at 42-43.

In addition, Mr. Komanoff assumed that the PJM capacity deficiency charge would continue to represent the cost of acquiring new CT capacity. Id. at 41. Mr. Komanoff explained as follows why it was unreasonable to adopt Dr. Hieronymus's assumption of a doubled capacity charge:

Q. What could justify PECO's doubling PJM's capacity charge?

A. Either the fixed charge rate would need to double, or the per-kW cost of combustion turbines would need to double (or a combination of the two), or the practice of basing the charge on peaking capacity would need to be altered. I can see no basis for any of these changes.

Moreover, as OCA witness Lanzalotta points out, if PJM ceased to base the charge on the cost of combustion turbines, PECO would not be prohibited from installing new combustion turbines to meet any deficiency. Thus, there is no rational reason for assuming that PECO would pay doubled capacity deficiency charges for 39 years, when it could install new combustion turbines for one-half of the deficiency charge.

OCA St. 6 at 44 (emphasis added).

In rebuttal, Dr. Hieronymus attempted to justify his doubled capacity deficiency charge with a new analysis. See PECO St. 15A at 22-25.

Initially, the OCA must note that neither Dr. Hieronymus nor anyone else from PECO rebutted the analyses of OCA witnesses Lanzalotta and Komanoff which showed that PECO could have 458 megawatts of CT capacity available to meet any deficiency, at least through 1996. Thus, PECO has provided no justification for assuming that the 458 megawatts of CTs would be prematurely retired in the absence of Limerick 1.

Further, Dr. Hieronymus's new analysis shows, at best, that charges equivalent to the PJM deficiency charge might increase to 60 percent above the existing level. PECO St. 15A at 26. This 60 percent increase certainly does not justify Dr. Hieronymus's assumption of a 100 percent increase in the charge. Additionally, even this 60 percent increase is based on the assumption that the existing CTs would not be available to meet PECO's capacity needs. Finally, the OCA would note

that there is no evidence that PJM is even considering such a change. Neither is there any evidence of utility dissatisfaction with PJM's current procedure of assessing a capacity charge and selling energy on a split-savings basis.

The OCA submits, therefore, that there is no support for PECO's escalated value of the capacity of Limerick 1. The OCA submits that Mr. Komanoff's analysis, which shows increases in the cost of capacity consistent with the rate of inflation (and which assumes that the CTs would be available until 1996 if Limerick 1 did not exist), is a far more accurate measure of the capacity value of Limerick 1.

The effect of adopting the OCA's estimate of the capacity value of Limerick 1 is to reduce the present value of PECO's estimate of the benefits of Limerick 1 by approximately $1.3 billion. OCA St. 6, Exh. CK-3, page 1.

6. Summary

There are, of course, other differences between the analysis prepared by Mr. Komanoff and that prepared by Dr. Hieronymus. For the most part, however, those differences are not substantial.* The OCA

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* For example, PECO and the OCA independently estimated the operating and maintenance expenses which would be incurred over the life of Limerick 1. These estimates derived costs which were within 13 percent of each other, over the life of the plant. Compare OCA St. 6, Exh. CK-1, pages 4 and 5. Further, the estimate of OCA witness Komanoff projected lower operating and maintenance costs for Limerick 1 in each year from 1986 through 1994. Id. Thus, over the life of Limerick 1, the difference between the OCA's and PECO's estimates is only $218 million (net present value) out of total estimated costs of between $8 billion and $10 billion. OCA St. 6, Exh. CK-3, page 1.

Similarly, the OCA's unrebutted change in the calculation of the cost of capital over the life of Limerick resulted in a change in the cost of Limerick of $270 million out of the $8 billion to $10 billion total cost. Id.

submits that in determining the near-term and long-term costs and benefits of Limerick, the Commission should adopt the analysis of OCA witness Komanoff. That analysis concludes that, if Limerick 1 has a 39-year life, it will cost ratepayers nearly $2 billion more than the benefits it will provide. OCA St. 6, Exh. CK-3, page 1. If, as Mr. Komanoff found likely, Limerick 1 can only operate for 30 years, then the plant will cost ratepayers nearly $2.6 billion more than it will provide in benefits. Id., page 2.

The OCA would again note, however, that this Commission does not need to make a final determination of costs and benefits for the next 39 years in order to conclude that Limerick 1 will not provide benefits to current ratepayers or to ratepayers in the reasonably near future. All of the analysts in this proceeding agree that it will be at least eight years (and perhaps much more) before Limerick 1 shows any net benefit for ratepayers.

F. Given PECO's Substantial Excess Capacity, This Commission Should Deny PECO An Equity Return On 450 Megawatts Of Limerick 1.

As the OCA discussed in Section IV.B, supra, this Commission's prior decisions establish that, when excess capacity exists, a cost-sharing mechanism must be devised. In PP&L SSES 2, it was found appropriate to require ratepayers to pay all of the prudently incurred costs of supporting the plant except that ratepayers would not pay a return on the Company's equity investment in the plant. PP&L SSES 2, Order at 20-23. The Commission there adopted a plant-specific equity adjustment (rather than the complete removal from rates of a "slice of the system" which was adopted in PP&L SSES 1) because "the cause of the excess capacity on PP&L's system is the addition of SSES 2. ... [W]e hold

that the valuation should also recognize that cause and should be SSES 2 specific." PP&L SSES 2, Order at 21 (emphasis in original).

The OCA submits that there is no question on the present record that Limerick 1 is the cause of the excess capacity on PECO's system. As we demonstrated in Sections IV.C and IV.D, supra, if Limerick 1 had not been completed, PECO would have been able to meet its reserve obligations with existing lower-cost capacity. It is the addition of Limerick 1, therefore, which results in PECO having capacity which greatly exceeds its reserve requirement and which greatly increases overall system costs. Thus, Limerick 1 must be viewed as the cause of PECO's excess capacity.

In addition, as the OCA demonstrated in Sections IV.C through IV.E, supra, there is no question that PECO has at least 450 megawatts of excess capacity now and for at least the next five years.

The OCA's expert accounting witness, Thomas E. Knudsen, summarized as follows the nature of PECO's excess capacity:

> Q. WHAT IS THE BASIS OF YOUR RECOMMENDATION?
>
> A. OCA witness Lanzalotta has testified that all of Limerick 1 capacity is excess to PECO's needs -- including its PJM reserve requirement -- at the present time. He also states that at least 450 megawatts of Limerick capacity is excess through 1990. I would also note that 450 megawatts is less than the 458 megawatts of combustion turbine peaking capacity that PECO is prematurely retiring in 1986 rather than 1996. It is also less than the 471 megawatts of less expensive Salem 2 nuclear baseload capacity that the Company tried to sell through 1996. In terms of reliability or need for power, it is clear that at least 450 megawatts of Limerick 1 represents excess capacity at this time.
>
> Q. HAVE THE OCA WITNESSES ALSO CONSIDERED THE ECONOMIC BENEFITS OF LIMERICK 1 IN THEIR ANALYSIS?

A. Yes. First OCA witness Lanzalotta shows that, even under the Company's economic assumptions, it would be over $1.5 billion cheaper in total nominal dollars for PECO to retain its 458 megawatts of combustion turbines through 1996, rather than add an equivalent amount of capacity of Limerick 1.

Second, OCA witness Komanoff demonstrates that Limerick's cumulative economic benefits are never likely to exceed Limerick's costs. On the contrary -- even without considering other possibly more economic alternatives -- Mr. Komanoff shows that the costs of Limerick 1 and 50% of common facilities are likely to exceed the benefits (in terms of avoided fossil fuel, interchange and capacity charges) by $2.0 to $2.6 billion in 1985 net present value terms.

Third, even the Company's own analysis indicates that Limerick's costs will not exceed its benefits in nominal terms until 1994 and in cumulative present value terms until 2008.

As demonstrated most graphically by the Company's claim in this case -- for roughly $949 million in added revenue requirement specifically due to Limerick Unit #1 offset by only $211 million in energy savings -- the economics of Limerick Unit #1 at this time are extremely poor.

OCA St. 7 at 24-25 (emphasis added).

In light of this Commission's precedent with respect to SSES 2, Mr. Knudsen recommended that the Company be denied an equity return on the 450 megawatts of Limerick 1 which clearly represent excess capacity. Mr. Knudsen noted, however, that the complete removal from rates of a portion of Limerick 1 might be appropriate and would, in fact, provide the same result which PECO itself developed when Salem 2 entered commercial operation. Thus, Mr. Knudsen stated:

Ideally, I believe that the appropriate ratemaking treatment for Limerick Unit #1 excess capacity would match the ratemaking treatment that PECO itself initially utilized for its share of Salem Unit #2. That is, during the period Salem Unit #2 was sold to JCP&L, the entire transaction was below the line. Ratepayers paid none of the costs of the unit, and shareholders received all of the benefits from the

> sales to JCP&L. That is also effectively the treatment that PP&L applied to the 945 megawatts of capacity which that utility has sold to JCP&L.

OCA St. 7 at 26 (emphasis added).

The OCA would also note that, in a recent excess capacity decision, the Kansas Corporation Commission found that risk-sharing required a more severe remedy than that being proposed by the OCA in this case. In three cases involving the Wolf Creek nuclear plant, the Kansas Commission found that a portion of the plant constituted physical excess capacity. Re Wolf Creek Nuclear Generating Facility, 70 PUR 4th 475, 515, 534 (1985) (hereafter cited as Wolf Creek).*

The Kansas Commission concluded that the utilities would not be permitted to recover any return--either debt or equity--on the portion of Wolf Creek which constituted excess capacity. Thus that Commission stated:

> We believe instead that no return should be allowed on that portion of Wolf Creek which is not used and required to be used and represents unreasonably high capital costs. By allowing a return of the costs through depreciation but no return on the costs, we are dividing the economic consequence between ratepayers and shareholders in an equitable manner.

Id., at 534. The Kansas Commission then permitted the utilities to capitalize the debt and preferred return on the portion of the plant disallowed as excess capacity. Id., at 539.

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* On September 27, 1985, the Kansas Commission issued three orders concerning Wolf Creek. All of the orders were docketed under Docket 120924-U. In addition, each order was filed under a separate rate case docket for each of three utilities: Kansas Gas and Electric Company, Kansas City Power & Light Company, and Kansas Electric Power Cooperative, Inc. The portions of those orders dealing with Wolf Creek excess capacity are similar or identical. The OCA will cite herein only to the Kansas Gas and Electric Company (KG&E) order which, as of this writing, is the only order reported in PUR.

In addition, the Kansas Commission reduced the value of the remainder of the plant which was included in rates. First, various construction expenditures were found to be imprudently incurred. Id. at 498-508. Then, the non-excess portion of Wolf Creek was valued for return purposes at the cost of a coal plant ($1290 per kilowatt), rather than the more expensive cost of the nuclear plant actually constructed (over $2600 per kilowatt). Id., at 530, 536-38. The Kansas Commission noted as follows that this approach constituted a valid method of apportioning the risk among ratepayers and investors:

> The approach taken today, however, is a far cry from imposing the excessive costs of Wolf Creek totally on the company. The shareholders will recover almost all the costs of Wolf Creek through depreciation; they will simply not earn as great a reward through return as they would if the reasonable value of Wolf Creek were equal to its historical value.

Id., at 87.

The Kansas Commission thus found that risk-sharing principles required ratepayers to bear less of the plant cost than the OCA is proposing in this case. Under the OCA proposal, ratepayers would be required to pay a debt and preferred return on all of the prudently incurred cost of Limerick 1, as well as the associated depreciation and other expenses. PECO's investors would be required to forego their equity return on a portion of the plant (even though all of the plant is excess capacity in 1986 and 1987). The OCA submits that such a result represents the minimum disallowance of the massive excess capacity costs associated with Limerick 1 in this case.

G. The Quantification Of The OCA's Excess Capacity Adjustment Depends Upon The Rate Base Value Of Limerick 1 And Its Common Facilities And The Cost Of Common Equity. Under The OCA's Proposals, The Excess Capacity Adjustment Results In An Adjustment To Income Of $54,335,000.

OCA witness Knudsen proposed that the OCA's excess capacity adjustment be reflected as an adjustment to PECO's pro forma net income. OCA St. 7 at 26. In order to calculate the income effect of the OCA's 450 megawatt excess capacity adjustment, it is necessary to determine (1) the value of Limerick 1 and common facilities (excluding transmission facilities) for ratemaking purposes, and (2) the weighted cost of common equity. See OCA St. 7A, Rev. Sch. TEK-8.

Specifically, the prudent value of Limerick 1 and common net of transmission facilities is multiplied by the weighted cost of common equity. This yields the equity return on the entire 1055 megawatts of Limerick 1. This total equity return is then divided by 1055 to determine the equity return per megawatt. Finally, the equity return per megawatt is multiplied by the number of megawatts of excess capacity to derive the adjustment to pro forma income. See OCA St. 7A, Rev. Sch. TEK-8.

The following table shows the development of the OCA's recommended excess capacity adjustment. The value of Limerick 1 and 50 percent of common facilities is developed in Section III of this Brief, based upon the testimony of the OCA's experts on the proper cost of constructing Limerick 1, James J. O'Brien and Dr. Stephen Hanauer. (The elimination from current rates of 50 percent of common is discussed in Section II, supra.) The value of Limerick transmission facilities is undisputed and appears in PECO Exh. TPH-2A, C-2 and in OCA St. 7A, Rev. Sch. TEK-8. The weighted cost of common equity is developed in Section

VII of this Brief, based upon the testimony of the OCA's expert financial witness, James A. Rothschild. The result under all of the OCA's recommendations, as shown below and at OCA St. 7A, Rev. Sch. TEK-8, is an adjustment to the Company's pro forma net income of $54,335,000. Obviously, this amount would change if this Commission were to disagree with any of the OCA's recommendations as to (1) the cost of Limerick, (2) the exclusion from rates of 50 percent of common facilities, (3) the cost of equity, or (4) the number of megawatts of excess capacity.

QUANTIFICATION OF OCA'S EXCESS CAPACITY ADJUSTMENT

(1) Value of Limerick 1 + 50% common	$2,376,088,000
(2) Value of Limerick transmission	8,349,000
(3) Limerick net of transmission plant (1)-(2)	2,367,739,000
(4) Weighted cost of common equity	5.38%
(5) Value of equity return on 1055 MW (3) x (4)	127,384,400
(6) Value of equity return on 1 MW (5)/1055	120,744
(7) Value of equity return on 450 MW (6) x 450	54,334,800
Rounded to nearest $1000	$54,335,000

V. LIMERICK 1 ENERGY SAVINGS GUARANTEE

The OCA, through the testimony of its expert accounting witness, Thomas E. Knudsen, has proposed that PECO not be permitted to recoup from ratepayers any shortfall between the level of Limerick 1 "energy savings" incorporated by PECO in this rate case and the level of energy savings actually achieved while the rates from this case remain in effect. That is, the OCA submits that if ratepayers must support all or a substantial portion of Limerick 1 in rates, they should be assured that they will actually receive the level of energy savings which PECO has included as an offset to the proposed base rate increase in this case.

The primary reason for proposing such a guarantee in this case is that Limerick 1 may not be able to operate during some or all of the summer months of 1986 and 1987. This uncertainty over the plant's ability to be "used" is caused by the current lack of a firm supply of cooling water for the plant. PECO's Senior Vice-President for Nuclear Power, Vincent Boyer, discussed during the following cross-examination the uncertainty of obtaining sufficient cooling water for Limerick 1:

Q. ... Would the supplies [of cooling water] as permitted and approved as of January 1, 1986 be sufficient to allow full 100 percent power throughout that summer period of 1986?

A. No.

Q. Am I correct that even with the addition of the Point Pleasant Pumping Station, if water flows in the Delaware River are at very low levels or say there are drought conditions, then absent the completion of the Merrill Creek Reservoir there may again be some limitations on the output of Limerick 1 based on water supply?

A. There could be because the present regulations say that if the flow in the Delaware River at Trenton is below 3,000 cubic feet per second we cannot take water out at Point Pleasant unless we put it in from some other source, which source is planned to be Merrill Creek. Merrill Creek is under construction and expected to be in operation by the summer of ... 1988, or basically two or three years from now. And so we have the summer of 1987 which would be of concern. Yes, 1987 would be of concern.

Tr. 1035-36 (emphasis added).

Just before the close of the record in this case, Mr. Boyer provided an update of the Company's efforts to obtain cooling water for Limerick 1. Thus, Mr. Boyer described an agreement between PECO and the Tamaqua Borough Authority, which he asserted would provide enough water for Limerick 1 to operate for up to 57 days. Tr. 4801-02. This agreement, however, has not yet been approved by the Delaware River Basin Commission (DRBC) (Tr. 4803) and is also subject to an as-yet uncompleted dam inspection by the Department of Environmental Resources (Tr. 4804). Further, even if that agreement is approved by the relevant governmental agencies, the Authority would, in Mr. Boyer's words, "have the right to terminate the agreement if DRBC imposes water restrictions or if there is any potential disturbance to the earth embankment of the dam." Tr. 4802. Even this new agreement, therefore, does not alleviate the uncertainty regarding Limerick's cooling water supply.

In short, as of the close of the record in this case, there is still considerable uncertainty about the Company's ability to obtain cooling water for Limerick during the summer months of 1986 and 1987. Of course, in the absence of cooling water, the plant cannot operate. Ratepayers thus are being asked to bear the risk that Limerick 1 will not

operate during the summer months when energy costs are the highest, even though, as of the end of June, 1986, all or a part of Limerick 1's multi-billion cost is likely to be reflected in their rates.

OCA witness Knudsen summarized these concerns as follows:

> Not unlike the last PECO base rate case in which I urged the Commission to guarantee Salem Unit #2 fuel savings, the question of the future performance of Limerick Unit #1 is equally in doubt, particularly over the summer periods. In addition to the usual concerns that surround the startup and ongoing operation of nuclear plants, there are serious questions regarding whether there will be sufficient water and whether the unit can operate at its full capacity rating. These risks should not be the burden of customers. Management selected the large nuclear centralized generating station as its preferred means of supplying energy. The customers have a right to assume that these plants will operate at a reasonable level of availability.

OCA St. 7 at 27-28 (emphasis added).

The OCA submits that, because of this uncertainty, PECO's ratepayers should receive some assurance that if they are paying for a substantial portion of the plant through base rates, they will actually receive the energy savings projected. Mr. Knudsen summarized this rationale as follows:

> Given the fact that, at least in the near term, this plant might not operate during the Company's peak summer months when energy costs are at their highest, ratepayers require assurance that they will receive some benefit for the substantial level of Limerick Unit #1 investment that may remain in rates, even if the Commission adopts certain disallowances for unreasonable costs and excess capacity.

Id. at 28.

In the last PECO base rate case, the Commission ordered that PECO guarantee the Company's projected energy savings associated with

Salem 2. Pa. PUC v. Philadelphia Electric Co., 58 Pa. PUC 743 (1985) (hereinafter cited as PECO 1985). The Commission there indicated that such a guarantee (to which PECO agreed in its Exceptions) was appropriate because of the significant uncertainty over the plant's ability to operate. Further, since the problem with Salem 2 was associated with a non-nuclear component of the plant (the generator), there was less concern that the plant would be operated unsafely. Thus, the Commission stated:

> In any event, we find it significant that the recent outage was the result of generator problems which are unrelated to Salem 2's nuclear character. Therefore, it is not the type of problem we have come to expect from a nuclear plant, i.e., licensing, safety modification, equipment inspection. However, a similar problem with Salem 1 resulted in a lengthy outage.

PECO 1985, 58 Pa. PUC at 778 (emphasis added).

The application of the Salem 2 holding to the present case would result in the guarantee of Limerick's energy savings. The foreseeable problem with Limerick 1 is that it may not have enough cooling water to operate during the summer months. Just as was the case with Salem 2, therefore, there is substantial uncertainty over the ability of the plant to operate. Moreover, that uncertainty is caused by a problem with a non-nuclear aspect of the plant.

OCA witness Knudsen summarized as follows the similarities between the uncertainties at Salem 2 and those at Limerick 1:

> There is a parallel between the Limerick circumstance and that which existed for Salem Unit No. 2 for which the Commission approved a guarantee of energy savings in the last PECO rate case. In that instance, the Commission found that there was substantial uncertainty as to whether a failed generator could be replaced in a timely fashion and whether the replacement generator would function

> properly. The major present concern is whether the plant will have sufficient water to operate as designed.

OCA St. 7 at 28-29.*

The OCA would also note that its proposal is an interim measure, to remain in place until this uncertainty is removed. In addition, in order to fairly compensate the Company for the additional risk being imposed by an energy savings guarantee, the OCA proposal would permit the Company to retain 50 percent of any energy savings generated by Limerick 1 over and above the level projected. As Mr. Knudsen explained:

> I view my recommendation in this case as an interim one. For purposes of this case I am incorporating the Company's proposed base rate fuel roll-out in its entirety. As I proposed in the Salem Unit #2 case, however, I would further propose that the Company not be permitted to recover through future ECR's any replacement power costs resulting from the Company's failure to achieve its estimated Limerick Unit #1 energy savings. As the Commission ordered in the Salem Unit #2 case, I would propose that, while this guarantee is in effect, the Company be permitted to retain one-half of any additional Limerick Unit #1 energy savings over and above those projected by the Company.

OCA St. 7 at 29.

The OCA would emphasize that this guarantee is necessary in order to prevent a potentially significant future increase in PECO's ECR which would be in addition to the base rate increase of which ratepayers

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* The OCA recognizes that the Commission has rejected energy savings guarantees for other nuclear plants. See Pa. PUC v. Pennsylvania Power and Light Co., 57 Pa. PUC 559 (1983) (Susquehanna unit 1); Pa. PUC v. Pennsylvania Power and Light Co., R-842651 (April 26, 1985) (Susquehanna unit 2); Pa. PUC v. Metropolitan Edison Co., R-842770 (October 24, 1985) (Three Mile Island unit 1); Pa. PUC v. Pennsylvania Electric Co., R-842771 (October 24, 1985) (Three Mile Island unit 1). The OCA submits, however, that PECO's own most recent rate case with respect to Salem 2 represents the most relevant and applicable precedent here for the reasons set forth above.

were notified in this case. Clearly, if PECO does not have cooling water for Limerick during the summer months, the ECR could increase substantially.

The OCA submits, therefore, that an energy savings guarantee is needed in order to (1) prevent ratepayers from paying even more for Limerick through an ECR increase, and (2) protect ratepayers from bearing the risk of PECO being without adequate cooling water supplies for 1986 and 1987.

In rebuttal to the OCA's proposal, PECO's accounting witness, Thomas P. Hill, Jr., asserted that energy savings guarantees were inappropriate. Thus Mr. Hill stated that "such a guarantee is patently inconsistent with traditional ratemaking principles." PECO St. 18D at 12. Mr. Hill expanded on this point by stating:

> In addition, an energy savings guarantee is inconsistent with the establishment of all other elements of the ratemaking formula. For example, the Company receives no guarantee that it will earn its Commission-allowed return on common equity and has not earned this return in recent years. Similarly, ratepayers should not receive any guaranteed operating level for a particular generating unit.

Id.

Mr. Hill neglected to state, however, that the Company has proposed that it be guaranteed recovery of its deferred revenues through its phase-in plan. See PECO St. 18D at 6-7. Thus, the Company is asking that ratepayers guarantee to the Company the recovery of certain base rate revenues. Yet, PECO is unwilling to provide a similar guarantee to ratepayers that they will receive the energy savings utilized by the Company as an offset to that base rate increase.

Mr. Hill also attempted to distinguish this case from the Salem 2 case. Thus, Mr. Hill stated:

> This data fully indicates the Company's firm expectation that water will be available [at Limerick during the summer of 1986]. The same was not true of Salem 2 due to the outage, and I therefore believe the guarantee as suggested by Mr. Knudsen is inappropriate at this time.

PECO St. 18D at 14 (emphasis added).

The OCA submits that Mr. Hill's reference to the Company's position in the Salem 2 case is mistaken. In that case, the Company was equally as firm in its "expectation" that the plant would be operating. The Commission there summarized as follows PECO's position regarding Salem 2:

> In the opinion of the Company, the installation of the new generator, which will be completed by April 1, 1985, is expected to increase the likelihood that Salem 2 will produce the $101 million in energy savings estimated by the Company. PECO further expects the refueling of Salem 2, before its return to service on April 1, 1985, to improve Salem 2's capacity factor. Since the $101 million estimate of Salem 2 energy savings assumed an 11-week refueling outage beginning February 1, 1985, PECO states that Salem 2 will be available approximately 3 weeks longer than originally estimated.

PECO 1985, 58 Pa. PUC at 773 (emphasis added).

In the Salem 2 case, therefore, PECO fully expected the plant to perform in accordance with its projections. Yet, the Commission there found that there was substantial uncertainty that Salem 2 would operate in accordance with the Company's expectations. The Commission held as follows:

> Although the Company expects Salem 2 to be generating electric service by April 1, 1985, the history of outages at either Salem 1 or 2 indicates restart projections are difficult to meet.

Id., at 777. Since that uncertainty was based upon a non-nuclear problem with the plant, the Commission found that an energy savings guarantee was appropriate. Id., at 778.*

The OCA submits that, contrary to Mr. Hill's assertion, the facts of the instant case are indistinguishable from those of the Salem 2 case. In this case, we again have a nuclear plant which may be unable to operate because of non-nuclear problems. While the Company expects the plant to be able to operate during the summer, there is a substantial uncertainty over the plant's ability to do so. The OCA submits, therefore, that PECO's projected level of $207 million of energy savings ($211 million with gross receipts tax; see PECO Exh. TPH-2A, D-21) should be guaranteed to ratepayers during 1986 and 1987.

Finally, the OCA does not believe that its Limerick energy savings guarantee is contrary to the Commission Order in ECR-8 regarding the 80/20 split of energy costs. (OCA's position on the 80/20 split is set forth in Section X of this Brief, infra.) Limerick, itself, was not addressed in the ECR-8 proceeding and -- in the OCA's view -- represents a distinct and separate problem from the Company's overall energy cost situation. Specifically, the Company has proposed the inclusion in base rates of a massive investment in a baseload plant, while providing no assurance that the plant will actually be in service when it is needed. PECO itself has seen fit to reduce its pro forma base rate increase request in this case to reflect Limerick 1 energy savings. OCA seeks to

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* The OCA would note that, as a result of the Salem 2 energy guarantee, ratepayers saved approximately $23 million, as of January 31, 1986. Tr. 4568-70.

hold the Company to this projection so that ratepayers do not run the risk of having a $671 million rate request turn into an $878 million rate increase.

Because PECO has proposed to reflect this level of energy savings in its base rates, the adoption of the OCA's proposal would not affect the level of base rates proposed by either the Company or the OCA in this case. This would, however, have the effect of prohibiting PECO from adjusting its Energy Cost Rate in the future to recover the difference between the projected and actual fuel savings generated by Limerick 1.

The full level of PECO energy savings is incorporated as a reduction to OCA's revenue requirement computation in OCA St. 7A, Rev. Sch. TEK-1.

VI. MEASURES OF VALUE

A. Introduction

In addition to the adjustments to the value of Limerick 1 and its common plant discussed in Sections II and III of this Brief, the OCA recommends four adjustments to the Company's rate base claim.* First, because the Company's fuel price projections are excessive and outdated, the Company's fuel inventory claim should be adjusted to reflect more accurate estimates of its fuel costs. Second, to carry out past Commission decisions, certain costs of the construction of Salem Unit 1 which were not prudently incurred must continue to be excluded from rate base. Third, the Company's claim for land held for future use must be denied because Section 1315 of the Public Utility Code requires that such land be excluded from rate base. Should this argument be rejected, the Middletown substation land must still be excluded from land held for future use because that project is already in service. Fourth, the Company's cash working capital claim must be reduced to reflect the schedule under which PECO legally could pay its federal income taxes without concern that it might incur a penalty.**

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* OCA also presented a fifth proposed rate base adjustment, to deny the Company's construction work in progress claim for the Salem Spent Fuel Storage Capacity Increase project. OCA St. 4 at 10. After further review of this claim, the OCA has determined to withdraw that proposed adjustment at this time. Withdrawal of this adjustment would increase the OCA's recommended rate base by $1,442,000, which results in an increase of approximately $300,000 in the Company's overall revenue requirement.

** OCA would also note that many of its other adjustments affect the Company's cash working capital allowance. If all the OCA's adjustments were adopted, PECO's cash working capital allowance would increase by $2,686,000. OCA St. 7A, Rev. Sch. TEK-9. With the exception of the tax lag discussed below, the calculation of this effect is not disputed.

B. In Order To Reflect More Recent, More Plausible Fuel Price Projections, PECO's Fuel Inventory Claim Should Be Reduced By At Least $1,411,000.

The Company's rate base claim of $94,168,000 for materials and supplies includes $17,979,000 for coal inventory and $19,264,000 for oil inventory. PECO Exh. TPH-2A, C-10. These fuel inventory amounts are based on the Company's projection of its inventory needs and of fuel prices as of June 30, 1986. OCA's expert accounting witness, Michael A. Bleiweis, has not recommended an adjustment to the Company's stated fuel inventory levels for the future test year in this case, presented by PECO witness Carroll. Tr. 301-302; PECO Exh. TPH-2A, C-10. However, OCA submits that the Company's June 30, 1986, fuel price projections for coal at the Keystone Station and for all of PECO's oil inventories are excessive and must be revised.

OCA submits that the Company's projected Keystone coal price of $34.47 is overstated because it has not been revised to reflect current information. OCA witness Bleiweis presented the following prices actually paid for coal at Keystone during each month of 1985:

Inventory Prices

Month	Keystone	Month	Keystone
1/85	$29.93	7/85	$31.89
2/85	$29.36	8/85	$31.17
3/85	$29.63	9/85	$31.61
4/85	$29.84	10/85	$30.34
5/85	$30.35	11/85	$29.39
6/85	$30.41		

OCA St. 4 at 17. As can be seen, the price at Keystone never exceeded $32 per ton. OCA witness Bleiweis observed that:

> [E]ven taking into account the effects of seasonality, Keystone and Conemaugh coal prices appear to have been heading down, or at the very most to be leveling off. It appears doubtful that the inventory price of

> $34.47/ton for Keystone forecast by the Company for June, 1986 will be realized.

OCA St. 4 at 17.

In light of the clear evidence that the Company's Keystone coal price is overstated, Mr. Bleiweis recommended an adjustment as follows:

> Considering the above information for Keystone and Conemaugh coal, I would propose that a price of $32.00 be utilized for Keystone Coal and that the company's estimate of $37.34 be used for Conemaugh Coal. This reflects a slight upward trend to present inventory prices at each station.

OCA St. 4 at 18 (emphasis added). The result of this adjustment is to reduce the Company's coal inventory claim by $300,000. The Company did not rebut this proposed adjustment. See PECO St. 22B.

OCA also recommends that the Company's projected oil inventory prices be rejected and its rate claim adjusted to reflect a more reasonable price in light of the recent drastic decline in oil prices. The Company's claim is based on oil price projections developed in the second quarter of 1985 and based on first quarter 1985 data. Tr. 303. Oil prices have recently taken a dramatic drop, as noted by witnesses for the Company. For example, PECO witness Carroll agreed as early as December 12, 1985, that developments in the world oil market might require a downward revision in oil price projections. Tr. 311-15. However, over the following three months, the Company did not revise its projections at all, and continued to assert that it would pay $26 per barrel for No. 6 1% sulfur oil, $27 per barrel for No. 6 0.5% sulfur oil and $31.92 per barrel for No. 2 oil, during the second quarter of 1986. PECO Exh. TPH-2A, C-10. As OCA will demonstrate below, these prices are

clearly unreasonable in light of current market conditions, and they significantly inflate the Company's oil inventory claim.

The unreasonableness of the Company's claimed oil prices is shown by the fact that the independent fuel price consultant PECO itself uses no longer can support them. According to Company witnesses Carroll and English, Data Resources, Inc. (DRI), is the only fuel price consulting service that PECO uses. Tr. 307; Tr. 4359. Inspection of PECO's May, 1985 fuel price forecast (OCA Exh. 14, Attachment (a)), on which the Company's claim in this case is based, reveals that this forecast tracks very closely the prices predicted in DRI's May, 1985 report (OCA Exh. 14, Attachment (b)). However, DRI revised its oil price prediction downward to reflect more recent data in August, 1985 (OCA Exh. 15, Attachment (b)). As noted by OCA Witness Bleiweis, "DRI reduced its forecast price of oil by more than $1 per barrel across the board," between May, 1985, and August, 1985. OCA St. 4 at 16. PECO did revise its coal forecast after receiving the DRI revised projection, but the Company's oil prediction was not updated. OCA Exh. 15, Attachment (a). Instead, the Company has continued to rely on a prediction that tracks price projections no longer supported by the Company's own consultant.

Further evidence that PECO's claimed oil prices are excessive has been provided by the Company's own witnesses, who testified that current indications are that, at June 30, 1986, oil prices will be at levels far below the Company's projection. Thus, the Company's Manager of Fuel Procurement, Mr. English, testified that in March, 1986, the Company actually paid $17 per barrel for residual (or No. 6) oil. Tr.

4357. Asked for PECO's prediction for the rest of the year, Mr. English predicted a price in the $17 to $20 range for No. 6 oil. Tr. 4358.

Thus, the Company's own witness has contradicted the projections the Company used for its claim in this case. The Company's claim that prices will reach $26 for No. 6 1.0%, $27 for No. 6 0.5%, and $31.92 for No. 2 by June 30, 1986, simply has no support in light of current developments.

OCA therefore submits that the Company's claim must be reduced to reflect more appropriate prices. In early January, 1986, OCA witness Bleiweis recommended use of the latest DRI forecast, presented in OCA Exhibit 15, as the source for more appropriate oil prices in this case. That forecast predicted prices of $30.66 per barrel for No. 2 oil ($0.73/gallon x 42 gallons/barrel), $24.21 per barrel for 1% sulfur No. 6 oil, and $25.15 for 0.5% sulfur No. 6 oil. Mr. Bleiweis stated:

> I believe the Company's forecast for the second quarter of 1986 is unreliable. Since DRI's August forecast is the most current forecast available for the second quarter 1986, I am using that forecast.

OCA St. 4 at 15.

The testimony by Company witness English quoted above indicates that even these later DRI numbers are significantly higher than is justified by current data. While the OCA would not oppose the use of Mr. English's $17 to $20 per barrel prices for No. 6 oil, the OCA submits that at a minimum, Mr. Bleiweis's original proposed adjustment should be adopted.

Adoption of the OCA's proposed revision to coal prices will produce a rate base reduction of $300,000. The revision of the Company's oil price projection leads to a $1,111,000 rate base reduction. See OCA

St. 4, Sch. 4. This results in a total rate base deduction of $1,411,000 and a recommended materials and supplies allowance of $92,757,000 instead of the Company's claimed level of $94,168,000. OCA St. 4, Sch. 4; OCA St. 7A, Rev. Sch. TEK-2.

C. PECO's Rate Base Claim Should Be Adjusted Downward by $4,380,000 To Carry Out The Commission's Ruling In Earlier Cases That Certain Costs Of Constructing Salem 1 Were Not Prudently Incurred.

The Company has not made a deduction from rate base to reflect what the Commission found to be inadequate management practices in the construction of Salem Unit 1. Tr. 466. To be consistent with past Commission decisions, this deduction must be made.

The history of this deduction was described by the Commission in Pa. PUC v. Philadelphia Electric Co., 58 Pa. PUC 7, 15-16 (1983), as follows:

> In R.I.D. 438, we found imprudence on the part of PECO in the construction of the Salem Nuclear Generating Station No. 1 and that the appropriate sanction was a rate base reduction in the amount of $10.5 million. This reduction was held to be res judicata in both R-79060865 and R-80061225. In the appeal of R.I.D. 438, the Commonwealth Court affirmed our decision that the issue is res judicata, but reversed our rate base reduction citing insufficient factual support. Commonwealth Court remanded the cases for further proceedings.
>
> On May 14, 1982, we entered an opinion and order reaffirming our finding of construction imprudence, and reducing our original rate base deduction from $10.5 million to $5.9 million reflecting only what was termed "hard savings" in those proceedings. Accordingly, in R-811626 we stated that the issue was res judicata and we reduced PECO's rate base claim by $5.1 million.
>
> We again find an adjustment appropriate and we adopt the ALJ's recommendation to reduce PECO's rate base claims by $4,837,000.

In PECO's last base rate case, the Commission again adopted this deduction. Pa. PUC v. Philadelphia Electric Co., 58 Pa. PUC 743, 843, Table II (1985).

PECO witness Hill stated that the remaining amount of this deduction as of June 30, 1986, is $4,379,899. Tr. 466; OCA Exh. 26. OCA submits that a rate base deduction of $4,380,000 must be made in order to carry out the Commission's previous decision that this amount reflects costs which were not prudently incurred. See OCA St. 7A, Rev. Sch. TEK-2.

D. PECO's Land Held For Future Use Claim of $8,651,000 Should Be Denied In Its Entirety Under Section 1315 of the Public Utility Code. Alternatively, PECO's Middletown Substation Claim Should Be Denied At This Time.

The Company has claimed a balance of $8.651 million for land held for future use which it seeks to include in rate base. PECO Exh. TPH-2A, C-9. The OCA urges rejection of this claim in its entirety on the basis of Section 1315 of the Public Utility Code. In the alternative, since a Company witness has testified that the Middletown substation project has been completed, the Company's claim for land held for that project must be denied.*

The OCA submits that all land which is not used and useful during the future test year must be excluded from rate base under Section 1315 of the Public Utility Code, 66 Pa.C.S. §1315, which provides, inter alia, that:

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* The OCA would also note that the adoption of its proposed removal from rates of 50 percent of Limerick common plant affects the Company's land held for future use claim. Specifically, if the OCA's Section 1315 argument is rejected, one-half of the Company's claimed land at the Bradshaw Reservoir must be removed as Limerick common plant. See Section II of this Brief.

> [T]he cost of construction or expansion of a facility undertaken by a public utility producing, generating, transmitting, distributing or furnishing electricity shall not be made a part of the rate base nor otherwise included in the rates charged by the electric utility until such time as the facility is used and useful in service to the public. Except as stated in this section, no electric utility property shall be deemed used and useful until it is presently providing actual utility service to the customers.

OCA submits that land held for future use is a utility facility within the meaning of this section and 66 Pa.C.S. §102 (defining "facility"). Since this land is not used and useful in the future test year, it cannot lawfully be included in rate base. OCA is currently seeking review of this issue before the Pennsylvania Supreme Court in Cohen v. PUC, Allocatur Docket No. 619 W.D. 1985, appealing the ruling of the Pennsylvania Commonwealth Court, at --- Pa. Cmwlth. ---, 494 A. 2d 58 (1985). The Commonwealth Court in that case ruled against the OCA and upheld the Commission's position that Section 1315 does not prohibit inclusion of land held for future use in rate base. 494 A.2d at 63.

If this Commission reverses its previous policy, or if the OCA appeal results in a ruling that land held for future use may not be included in rate base, the Company's rate base should be reduced by the amount of its total land held for future use claim of $8,651,000. OCA St. 4 at 12; OCA St. 7A, Rev. Sch. TEK-2.

If the Commission rejects OCA's argument under Section 1315, however, the OCA urges that the Company's land held for future use claim for the Middletown substation should be denied. During cross-examination, Company witness Wright testified:

> The 230/33 kV substation supplied by the Concord-Middletown 220 kV line was placed in service on October 11, 1985 at 3:59 p.m.

Tr. 226. Since the Middletown substation is now included in the Company's plant in service account balance, OCA witness Bleiweis stated that this amount must be removed from the Company's land held for future use claim. OCA St. 4 at 12. The Company did not rebut Mr. Bleiweis's recommendation, but did not reflect this adjustment in its final accounting exhibit. See PECO Exh. TPH-2A, C-9. Accordingly, if the OCA's recommended total disallowance of land held for future use is rejected, the Company's claim must be reduced by $388,000 for the Middletown Substation.

E. PECO's Cash Working Capital Claim Must Be Reduced By $4,217,000 To Reflect The Statutory Schedule Of Federal Income Tax Payments.

PECO's claimed cash working capital requirement of $76,451,000 includes $33,201,000 to cover an alleged average 29 day lag between the payment of taxes and receipt of revenues to cover those payments. PECO Exh. TPH-2A, C-12. This tax lag is based in part on the Company's claim that, to be sure it avoids paying a penalty, it must pay federal income taxes in three 25% installments, one 15% installment, and a final 10% installment. In fact, however, this claim is not correct. The Company could pay its federal income tax on a more efficient schedule without fear of penalty. Accordingly, OCA submits that the Company's cash working capital claim must be adjusted to reflect that legally authorized tax payment schedule.

OCA witness Bleiweis proposed an adjustment reflecting a recalculation of the expense lag for federal income tax expense. He stated:

> It is my understanding that the only legal requirement is that the company pay 90 per cent of its tax liability by the end of the tax year. There is no reason why this amount cannot be paid in four equal installments of 22.5 percent. The final payment would be the remaining 10 percent of the tax liability.

OCA St. 4 at 19-20.

An examination of Section 6655 of the Internal Revenue Code, 26 U.S.C. §6655 (a copy of which is attached to this Brief as Appendix B), establishes that Mr. Bleiweis is correct. The Company can pay its tax on this schedule without fear of an additional tax being imposed as a late payment penalty. Specifically, subsection 6655(a) describes the circumstances under which such a penalty would be imposed on a corporation that fails to make sufficient payments during the taxable year. However, subsection 6655(d) then states three exceptions to the penalty provision, under which a company can estimate its tax and be assured that it <u>will not be penalized</u> even if its actual tax liability later exceeds the estimate on which its payments were based. Under subsection 6655(i)(1), large corporations like PECO may not use two of the three exceptions specified in subsection 6655(d), but <u>the third exception</u>, stated in subsection 6655(d)(3), <u>is available to large corporations</u>.

Thus, subsection 6655(d)(3) allows PECO to estimate its tax based on <u>known data</u> and be sure no penalty will be assessed if the estimate proves to be incorrect. Under this exception, large corporations may estimate their tax liability by <u>annualizing</u> their actual taxable income to date. (For example, at the end of the first three months of the taxable year, the taxpayer can multiply its taxable income

to date by 4 to arrive at an annualized estimate.) Those corporations are then permitted to make quarterly payments which are calculated by dividing the annual tax estimate by 4 (to derive the quarterly amount) and then taking 90 percent of that quarterly amount. As a result, each quarterly payment will be 22.5 percent (one-quarter of 90%) of the estimated annual tax liability. By using such an estimate based on actual known data, PECO can determine the exact amount it needs to pay with complete confidence that, even if its tax liability later turns out to be higher, it will not be penalized.

PECO's assertion that three early payments of 25% are needed is thus in error. PECO's tax witness, Mr. Sileo, testified that the Company has to pay its taxes on that less efficient basis in order to be sure that it avoids a penalty. PECO St. 23A at 8. Mr. Sileo also stated that he believed there were no exceptions to the penalty provisions if the Company's payments during the year were less than their obligation as revealed at the year's end. Tr. 4030-32. As a review of Section 6655 reveals, however, Mr. Sileo's belief was erroneous. On redirect examination, Mr. Sileo revised his testimony to acknowledge the existence of exceptions, but continued to claim that they did not apply to PECO:

> There are exceptions, but unfortunately they don't apply to us. We come under the provisions of large corporations, and those exceptions enumerated in the Code do not apply to us.
>
> But to clarify, there are exceptions that may be available to corporations, but not to large corporations, at least not to us.

Tr. 4032-33. In fact, however, as noted above, there is an exception available to large corporations like PECO.

Accordingly, the Company has no need to pay its income taxes on the accelerated schedule it claims. A more efficient schedule can be used without fear of penalty, and the Company's cash working capital claim should be adjusted in the manner proposed by Mr. Bleiweis.

The decision in Pa. PUC v. Philadelphia Electric Company, 56 Pa. PUC 191 (1982) poses no obstacle to this adjustment. In that case, which was cited by Mr. Sileo (PECO St. 23A at 17-18), the Commission adopted the Company's tax payment schedule. However, at that time, the Commission was not aware that the Company could pay its taxes more efficiently while avoiding the risk of a penalty.

Since it has now been shown that PECO can follow the statutory payment schedule and avoid any penalty, the Commission's decision no longer supports the Company's claim. On the contrary, since the possibility of a penalty was the basis of the Commission's ruling, the demonstrated absence of that possibility supports making the adjustment OCA has proposed. See 56 Pa. PUC at 211.

OCA witness Knudsen calculated and presented the adjustment to cash working capital which would reflect a schedule of quarterly payments of 22.5% of estimated liability followed by a 10% final payment. OCA St. 7A, Rev. Sch. TEK-11. This adjustment reflects the amount of tax the Company actually must pay in order to meet its tax obligation and avoid a penalty. The OCA adjustment produces a lag of 12.8 days between payment of taxes and receipt of revenue to pay those taxes rather than the 29.0 days claimed by the Company. OCA recommends that this corrected lag be reflected in an adjustment of the Company's cash working capital claim.

VII. RATE OF RETURN

A. Capital Structure

The OCA does not challenge the Company's proposed capital structure for the future test year ending June 30, 1986. That capital structure contains 50.9% long-term debt, 10.7% preferred stock, and 38.4% common equity. OCA St. 4A, Sch. 1; PECO St. 28B, Exh. JFB-3, Updated Sch. 1, page 1.

B. Cost of Long-Term Debt

The OCA does not challenge the Company's claimed cost of long term debt of 10.86% as presented at the close of the Company's case. OCA St.4A, Sch. 1; PECO St. 28B, Exh. JFB-3, Updated Sch. 1, page 1.

C. Cost of Preferred Stock

The OCA does not challenge the Company's claimed cost of preferred stock of 10.50% as presented at the close of the Company's case. OCA St. 4A, Sch. 1; PECO St. 28B, Exh. JFB-3, Updated Sch. 1, page 1.

D. Cost of Common Equity

1. Introduction

PECO now faces capital market conditions which are far more favorable than they have been in a number of years. In light of these conditions, and based upon the expert testimony of OCA witness James A. Rothschild, OCA submits that PECO's fair rate of return on equity is no higher than 14.00 percent. As shown by the expert testimony of Mr. Rothschild, this rate of return will fully compensate PECO for its cost of equity, and indeed a lower rate might well be warranted. Accordingly, the OCA submits that 14.00 percent should be the maximum rate of return on common equity allowed to PECO in this case.

PECO in this case has claimed a rate of return of 15.75 percent. PECO's rate of return witness, Joseph F. Brennan, initially claimed that 16.9 to 17.4 percent would be a fair rate of return on PECO's common equity. Mr. Brennan subsequently revised his estimate downward to 15.9 percent, to acknowledge the significant downward change in the cost of capital in recent months. See PECO St. 28B at 1. OCA submits that PECO witness Brennan's analysis relies upon an inaccurate methodology and outdated data. Mr. Brennan's recommendation, therefore, should be rejected by this Commission.

2. Current Market Conditions Are Highly Favorable And Have Reduced PECO's Cost Of Equity.

In determining a fair rate of return for PECO in this case, the OCA submits that it is important to realize that PECO's cost of capital in the financial markets declined even while this case was being litigated. PECO's costs of capital are dramatically lower now than they have been in a number of years.

In February 1986, OCA witness Rothschild described the environment for PECO's common stock as follows:

> As of February 6, 1986 the common stock of Philadelphia Electric closed at $19.625, the book value was about $17.90 and the indicated dividend rate was $2.20. This makes the current dividend yield 11.2% and the market-to-book ratio 1.1.

OCA St. 3A at 15 (emphasis added).

Another indication of PECO's current financial position is that PECO recently issued debt at 11.75 percent. OCA St. 3A at 7. Compare this to past issuances as recent as December 1984 for which investors required a return of 14 percent. See PECO Exh. TPH-2A, B-19.

Furthermore, this stands in stark contrast to the condition of the financial markets in 1982, when PECO issued debt at a nominal 18 percent interest rate. Id.

These recent positive developments build on the considerable strength that was already clear in the financial markets when OCA witness Rothschild filed his direct testimony in early January 1986. At that time, he testified:

> The financial markets have been very strong in 1985. Late in 1985 the Dow Jones Industrial Average closed above 1500 for the first time in history. The utility index was also strong, setting all time highs in December, 1985. On December 31, 1984 the Moody's 24 electric utilities had an average dividend yield of 10.43%. By November 30, 1985, this yield had declined by 1.07% to 9.36%. Since November, yields have declined further. Dividend yields and essentially all money indicators are much lower now than a few years ago.

OCA St. 3 at 4-5 (emphasis added). Mr. Rothschild then indicated the effect which this improvement has had on the market for electric utility equity:

> As of November 30, 1985, the market-to-book ratio of the non-nuclear construction Moody's 24 electrics was a very healthy 1.3 (estimated based upon November 30 market prices and December 31, 1984 book values) which is the highest market-to-book ratio achieved on average by these companies since 1971. Such a high market-to-book ratio indicates that investors perceive future earnings for the electric industry will exceed the levels deemed adequate.

Id. at 5, as corrected at Tr. 2214 (emphasis added).

Market conditions of this sort indicate that investors can be adequately compensated by a rate of return significantly lower than that allowed to PECO in recent cases.

3. In Light Of Recent Developments, 14.00 Percent Is A Fair Rate Of Return For PECO.

a. OCA Witness Rothschild's Analysis Shows That 14 Percent Is The Maximum Fair Rate of Return On Common Equity for PECO.

In his surrebuttal testimony, Mr. Rothschild testified that, when the above-noted recent developments are considered, it is clear that a 14 percent return on equity would provide a fair rate of return to PECO's investors. OCA St. 3A at 3. In fact, it appears that a 14 percent return is a conservatively high estimate of the fair rate of return on common equity for PECO at the present time. Id.

Mr. Rothschild based this final recommendation on the results of Discounted Cash Flow (DCF) analysis he performed using PECO-specific data and a growth rate based on the b x r methodology. He described the results of updating his analysis as follows:

> Schedule 2 included with this testimony shows that an update of the DCF method as applied to Philadelphia Electric based upon the spot price as of February 6, 1986 shows that the cost of equity for Philadelphia Electric is down to about 12%, plus financing costs. This result is confirmed by the update for the Moody's 24 as shown on Schedule 3. On that schedule it is shown that the Moody's non-nuclear construction companies had an indicated cost of equity in the low 12% range before financing costs.

OCA St. 3A at 3 (emphasis added).

Mr. Rothschild's 12 percent result was based upon a PECO-specific DCF analysis which derived a current dividend yield of 11.21 percent. Id., Sch. 2. Mr. Rothschild then adjusted this dividend yield to reflect growth to next year. This adjusted dividend yield falls in the range of 11.22 to 11.28 percent. Id. To that adjusted dividend

yield, Mr. Rothschild then added a growth rate (including new financing growth) ranging from 0.20 to 1.20 percent. Id. He concluded, therefore, that based on data as of February 6, 1986, PECO's investor-expected rate of return fell in the range between 11.42 (11.22 + 0.20) and 12.48 (11.28 + 1.20) percent. Id.

Thus, Mr. Rothschild's analysis indicated a cost of equity for PECO possibly as low as 12 percent. However, Mr. Rothschild did not lower his original recommendation of 14 percent as the fair rate of return for PECO. Instead, to be conservative, Mr. Rothschild testified:

> I will leave my recommendation unchanged. However, the Commission could well be justified in finding a cost of equity below 14%, particularly if the stock price of Philadelphia Electric Common stock is still above $19 per share at the time of this decision.

OCA St. 3A at 3 (emphasis added).*

While Mr. Rothschild did not revise his recommendation, he did provide supplemental support for that recommendation. In his original testimony, Mr. Rothschild stated that 14 percent was a fair rate of return based upon excluding the increase in PECO's cost of equity produced by the risks associated with the construction of Limerick 2. In his surrebuttal testimony, however, he stated:

> Given the current market data, there should be no reason to exceed an allowed return on equity of 14% irrespective of how the Commission decides to treat the Limerick 2 risk impact on the cost of equity.

OCA St. 3A at 3 (emphasis added). Accordingly, a 14 percent rate of return granted to PECO under current circumstances would compensate PECO for its entire cost of equity at this time.

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* The OCA would note that for the week ending March 28, 1986, PECO's common stock closed on the New York Stock Exchange at a price of $19.875 per share.

b. Trial Staff Witness O'Donnell's Analysis Supports A 14 Percent Rate of Return For PECO.

Trial Staff Witness O'Donnell, in his direct testimony, recommended a fair rate of return range of 14% to 15% for PECO. On surrebuttal, "to reflect the most recently available inputs," Mr. O'Donnell revised his recommendation to a range from 14.0% to 14.5%. Staff St. ARO-2 at 6. Mr. O'Donnell also submitted updated schedules based on current data, and stated:

> These updates support a common equity return rate range of 12.3 to 14.7 percent, summarized as follows
>
> | | |
> |---|---|
> | DCF | |
> | PECO | 13.7-14.7% |
> | Four Electrics | 12.4-13.9% |
> | Risk Spread | 12.3-13.8% |

Trial Staff St. ARO-2 at 6 (emphasis added). The OCA would note that Mr. O'Donnell's analysis does not reflect any reduction for risk related to Limerick 2. Tr. 2219.

The OCA submits that Mr. O'Donnell's analysis is fully consistent with Mr. Rothschild's recommended 14 percent return on equity for PECO. The Trial Staff analysis thus provides further evidence of PECO's overestimation of a fair rate of return in this case.

4. Mr. Rothschild's Original Analysis Showed That, Under Conditions Less Favorable Than The Present, PECO's Cost of Equity Was No Higher Than 14.75%.

In his direct testimony, based on data available at that time, Mr. Rothschild testified that a rate of 14.75 percent would fully compensate PECO for its cost of common equity. OCA St. 3 at 4. As noted above, Mr. Rothschild updated his analysis in February 1986 and showed

that PECO's cost of equity is now no more than 14 percent. OCA St. 3A at 3.

Mr. Rothschild's original finding of 14.75 percent was supported by a DCF analysis performed on PECO-specific data. Specifically, Mr. Rothschild performed two analyses: one of which used data as of December 31, 1984; the other of which used data as of November 30, 1985. Mr. Rothschild then gave equal weight to these two analyses to develop a market-derived cost of equity for PECO of 14.31 percent. OCA St. 3 at 43. Mr. Rothschild then added 40 basis points to this estimate to reflect financing costs, and rounded the result to 14.75 percent. Id.

Specifically, Mr. Rothschild's 14.75 percent recommendation was derived by using a dividend yield falling in the range of 13.97 (as of November 30, 1985) to 14.78 percent (as of December 31, 1984). OCA St. 3, Sch. 4, page 1. Mr. Rothschild then adjusted the dividend yield by between -0.05 and +0.04 percent to reflect growth the next year. Id. To this adjusted dividend yield, he added investor-expected growth of between -0.70 and +0.53 percent. Id. His analysis, therefore, resulted in a market-derived cost of equity for PECO within the range of 13.46 to 15.11 percent. Id. Mr. Rothschild determined that, after the addition of financing costs, a reasonable estimate of the market-derived cost of equity for PECO (as of early January 1986) was 14.75 percent. OCA St. 3 at 43.

This 14.75 percent was the rate which Mr. Rothschild stated in his original testimony would fully compensate the Company for its cost of equity, including any risk added by Limerick 2. OCA St. 3 at 4.

Mr. Rothschild's original conclusion regarding PECO's cost of equity was supported by the results of his analysis of data from several comparison groups. He presented the results of DCF analyses using data available through November 30, 1985, for these groups, as follows:

Moody's 24 Electric Utilities Not Engaged In Nuclear Construction	12.96%
Moody's 24 Electric Utilities Engaged In Nuclear Construction	14.12%
Moody's Gas Distribution Companies	14.58%
Telephone Companies	12.89%

OCA St. 3 at 28.

5. Mr. Rothschild Testified That PECO's Cost Of Equity Included 75 Basis Points (0.75 Percent) Of Risk Associated With The Construction Of Limerick 2 Which Should Not Be Collected From Ratepayers.

In his original testimony, Mr. Rothschild noted that, under the Commission's Order in the Limerick 2 Investigation at I-840381, it would be appropriate to exclude from the Company's present rate of return all additional risk associated with the construction of Limerick 2. OCA St. 3 at 11-12. Mr. Rothschild calculated that, under his original analysis, Limerick 2 risk addded approximately 75 basis points to PECO's market derived cost of equity. See OCA St. 3 at 4. Thus, under that analysis, a fair rate of return for PECO (which would exclude Limerick 2 risk) would be no more than 14 percent. Id. at 41.

In its Limerick 2 Investigation, the Commission ruled that:

> [W]e conclude that at a minimum PECO has not carried its burden of proof, which is to demonstrate by a preponderance of the evidence that the unconditioned completion of Limerick Unit No. 2 is in the public interest. Further, based upon the credible and

probative evidence of record, we find that the other parties have satisfactorily demonstrated by a preponderance of the evidence that the unconditioned completion of Limerick Unit No. 2 is contrary to the public interest....

Accordingly, we conclude that based upon the record before us, and in the absence of evidence of changed circumstances, it would be incumbent upon us to deny the registration of any securities certificate which would directly provide funds for, or otherwise facilitate the completion of Limerick Unit No. 2, unless the Company agrees to a capital cost containment and operational incentive plan.

Limerick 2 Investigation, Order at 85. In discussing the type of cost containment program to be required, the Commission then stated:

> [PECO] should be willing to accept various of the risks which are inherent in continuing construction of Limerick Unit No. 2, and not seek to absolve itself of certain risks and, thereby, to place them on the ratepayers.

Id. (emphasis added).

OCA submits, therefore, that current ratepayers must not be required to compensate PECO for the additional costs and risks it must bear during the construction of Limerick 2. One such cost created by the Company's decision to construct Limerick 2 is an increase in the Company's costs of capital. Thus, in the Limerick 2 Order, this Commission recognized that permitting the Company to complete Limerick 2 under a cost cap might result in an increase in PECO's cost of capital. For example, in quoting PECO's Vice-President of Finance, Mr. Paquette, the Commission noted:

> [A] construction cost containment program ... would increase the investor's perceived risk in PECO's securities, which would increase PECO's cost of capital.

Order at 78.

Further, in his Dissenting Opinion, Commissioner Shane stated that "cancellation of Limerick 2 would make PECO a less risky utility, thus decreasing its cost of capital." Shane Dissent at 2.

Similarly, in this case, OCA witness Rothschild explained as follows that there are specific events in the period since 1983 which have alerted investors to nuclear construction risks:

> It has been in this latter period that key events such as the probable disallowance of major portions of the costs in late 1983 of the Marble Hill Nuclear Plant owned by Public Service of Indiana, and the disallowance of over $1 billion of costs from each of the Shoreham nuclear plant owned by LILCO and the Wolf Creek Nuclear plant owned by Kansas Gas and Electric have occurred. Several substantial dividend cuts by electric companies engaged in nuclear construction have also added to investor concern over the issue.

OCA St. 3 at 26.

In his analysis, Mr. Rothschild demonstrated that there is a significant difference between the cost of capital for utilities which are engaged in constructing nuclear plants and those which are not engaged in such construction. Mr. Rothschild described the conclusions of his analysis as follows:

> [T]he market-to-book ratios of the nuclear construction electrics have been consistently lower than the market-to-book ratios of the non-nuclear construction electric utilities. This difference began increasing in 1983 and has recently been between 0.20 and 0.26.

OCA St. 3 at 26; see OCA St. 3, Sch. 5 at 8-9.

Mr. Rothschild presented a summary of his analysis in which he examined market-to-book ratios and the amount of nuclear construction as a percent of common equity. Mr. Rothschild concluded that those companies with market-to-book ratios which were below median "had a significantly higher level of nuclear construction as a percent of equity

than did the group with the higher market-to-book ratios." OCA St. 3 at 27; see OCA St. 3, Sch. 5 at 9. This difference demonstrates that nuclear construction affects an electric utility's cost of equity, since the market-to-book ratio decreases as the relative involvement in nuclear construction projects increases.

Mr. Rothschild then quantified the effect which nuclear construction risk had on PECO's cost of equity. He found, by comparing PECO to a group of non-nuclear-construction companies, that PECO's nuclear construction adds approximately 75 basis point to its cost of equity. See OCA St. 3 at 4. Since, as of the end of the test year, PECO's only nuclear construction is Limerick 2, all of this additional risk is associated with that plant. Id. at 1.

The OCA submits, therefore, that there is no question that the Company's cost of equity is higher because PECO is still involved in the construction of Limerick 2. The OCA submits that current PECO ratepayers should not be required to bear this additional cost of constructing Limerick 2.

Mr. Rothschild did not suggest, however, that investors should never be compensated for the risks of Limerick 2. Rather, he suggested that, in light of the Commission's Limerick 2 Order, the proper time for such compensation would be when and if Limerick 2 is used and useful to PECO's ratepayers. Thus, Mr. Rothschild recommended:

> To the extent that PECO has determined to go forward with Limerick #2, the resultant higher cost of equity needs to be segregated.
>
> If the Company wishes to reflect a higher cost of equity resulting from its Limerick #2 investment, then it should do so in its Limerick #2 AFUDC rate rather than through a subsidy from current ratepayers.

OCA St. 3 at 11-12 (emphasis added).

Mr. Rothschild did not present an updated analysis showing a rate of return which would exclude the risk of Limerick 2 under current market conditions. However, OCA continues to believe that it would be proper to exclude Limerick 2's risk premium from current rates. The OCA submits that, should the Commission conclude that PECO's market-derived cost of equity is higher than 14%, the Limerick 2 risk adjustment should be made to bring that rate down to no higher than 14 percent.

The OCA would thus emphasize that, based on current information, PECO's unadjusted cost of equity is no more than 14 percent. If, however, this Commission were to conclude that PECO's market-based cost of equity is somewhat higher than 14.00 percent, the exclusion of Limerick 2 risk would still result in a fair rate of return of no more than 14.00 percent. To the extent that the Company's decision to build Limerick 2 has inflated its cost of capital, the OCA submits that this increased cost should not be borne by current ratepayers.

6. Mr. Brennan's Criticisms of Mr. Rothschild's Analysis Are Unfounded And Should Be Rejected.

a. The Discounted Cash Flow Method Used By Mr. Rothschild Is A Fair And Reasonable Analysis And Should Be Used For Ratemaking Purposes

PECO witness Brennan criticized Mr. Rothschild's use of a constant-growth DCF analysis, which derives growth rates by using an earnings retention (b x r) approach. PECO St. 22B at 29-30. Initially, the OCA must note that this Commission has routinely relied upon analyses which use a constant-growth DCF analysis. Similarly, those analyses have used growth rates derived by an earnings retention analysis.

Moreover, the Federal Energy Regulatory Commission (FERC) has recently held that the use of the b x r aprpoach provides an accurate estimate of investor-expected growth rates. Thus, in its generic rate of return proceeding, FERC held:

> The fundamental analysis [br + sv] allows the Commission to evaluate the reasonableness of the factors underlying and creating the expected dividend growth. Estimates of investor growth expectations should not be based on unrealistic forecasts of utility returns, retention rates and the like.

Order 442, 51 Fed. Reg. 343, 355 (January 6, 1986).

In addition, Mr. Rothschild stated that the constant-growth DCF model is the most prevalent method of projecting the cost of equity for public utilities. OCA St. 3A at 9. Mr. Rothschild also stated that an earnings retention analysis provides the most accurate means by which to predict future growth rates. Thus, Mr. Rothschild stated:

> A DCF method based upon a b x r method with reasonable estimates used for the b and the r is a highly reliable method. Based on my experience, it is the most accurate and most widely used method available.

Id.

Mr. Brennan's criticism of Mr. Rothschild seems to be based upon Mr. Brennan's belief that the OCA analysis is based upon the use of historic growth rates. PECO St. 28B at 20. This criticism, however, is unfounded. In fact, Mr. Rothschild agreed with Mr. Brennan's argument that historic growth rates are unreliable. Id. Mr. Rothschild, however, continued by stating:

> I did not recommend the use of historic growth rates in this or any other testimony I have ever filed.

Id. (emphasis added). Thus, while Mr. Brennan's criticism of historic growth rates may be valid, it has no application to Mr. Rothschild's analysis.

In his direct testimony, Mr. Rothschild fully described how he developed his growth rates for use in this proceeding. Mr. Rothschild there stated:

> The future growth rate, or "g" is properly determined by multiplying the future earned return on equity by the portion of these future earnings that are retained in the business (retention rate). This results in the ongoing, sustainable growth rate which is appropriate for use in the simplified version of the DCF method because earnings retained in the business are what is available for reinvestment in the used and useful utility assets.

OCA St. 3 at 19 (emphasis added).

Mr. Rothschild then stated that "it is usually acceptable to use the simplified version of the DCF method" if the b x r approach is used to develop the growth rate. OCA St. 3 at 15. Accordingly, PECO's objections to Mr. Rothschild's DCF analysis are without merit.

Mr. Brennan simply has not provided an adequate reason to abandon the DCF method. Moreover, Mr. Brennan's proposed alternative, the risk premium method, has the same "volatility" problem which led him to reject a DCF analysis. That is, as Mr. Rothschild noted:

> The problem of volatility of demand is not corrected by using bond prices instead of stock prices. In fact there have been times in recent years when bond prices have been more volatile than stock prices.

OCA St. 3A at 10. Accordingly, as Mr. Rothschild concluded, difficulties in the use of stock prices which may vary over time are not corrected in Mr. Brennan's analysis and do not provide a valid reason to abandon the DCF method. Id.

b. Mr. Rothschild's Proposal For Deferring The Recovery Of Limerick 2 Risk Is Reasonable.

Mr. Brennan opposed Mr. Rothschild's recommendation that PECO increase its AFUDC rate (rather than its rate of return) to be compensated for risk related to Limerick 2. PECO St. 28B at 23-27. Mr. Brennan also argued that a recent FERC statement regarding a proposal to segregate nuclear and non-nuclear risks demonstrates that Mr. Rothschild's analysis is unsound. Id. at 24. The OCA submits that neither Mr. Brennan's criticism nor FERC's analysis supports the Company's position.

Thus, as Mr. Rothschild testified, Mr. Brennan has misinterpretted FERC's decision. Initially, Mr. Rothschild summarized as follows FERC's actual holding in its generic rate of return proceedings:

> It was proposed to FERC that it should exclude nuclear construction utilities from its analysis group. FERC ruled not to exclude nuclear construction companies because "...the use of the median for calculating dividend yields results in the significantly more or less risky firms having little effect on the benchmark rate of return." FERC also did not feel particularly comfortable with the specific analysis as presented by the proponent of that technique, and stated that it prefers to deal with evaluating whether or not particular companies have more or less risk than the group on a company by company basis.
>
> What I am recommending in this case for Philadelphia Electric with regard to the special risk considerations associated with nuclear construction is not inconsistent with the findings in Order No. 442.

OCA St. 3A at 11-12 (emphasis added).

Mr. Rothschild then indicated that if Mr. Brennan were right about the alleged impossibility of segregating risks, Mr. Brennan's own analysis would have to fail since:

> [He] has attempted to come up with a special risk-based cost of equity determination for Philadelphia Electric because he did not base his conclusion on a broad-based selection of electric utilities.

OCA St. 3A at 11.

The OCA submits, therefore, that Mr. Brennan's criticisms of Mr. Rothschild's analysis are not supported by the record and should be given no weight by this Commission. The OCA again urges this Commission to adopt Mr. Rothschild's recommendation of a rate of return of 14 percent.

7. PECO witness Brennan's proposed rate of return, even as revised, is artificially high and should be given no weight by this Commission.

a. Introduction

In his updated testimony, PECO witness Brennan recommended a rate of return for PECO of 15.9 percent, which represented a downward revision from his earlier recommendation of a rate of return ranging from 16.9 to 17.4 percent. PECO St. 28B at 1. OCA urges rejection of this recommendation for several reasons. First, it is clearly excessive in light of current data, as is demonstrated by market-to-book ratio calculations presented by Mr. Rothschild on surrebuttal. Second, the version of the DCF method used by Mr. Brennan reflects errors and biases which render his calculations invalid. Third, the risk premium method which Mr. Brennan used cannot be relied on in light of the recent unstable relationship between debt and equity markets. Each of the above-mentioned failings is detailed below. Since Mr. Brennan's recommendation is inconsistent with present market indicators and is based upon biased and unreliable analyses, OCA submits that it must be rejected.

b. Mr. Brennan's Recommendation Fails To Reflect Current Market Conditions.

Mr. Brennan's recommendation is simply not reflective of the market conditions currently faced by PECO. Mr. Brennan has stated that the fair rate of return should produce a market-to-book ratio of 1.0. PECO St. 28B at 16-17. Mr. Brennan's return on equity recommendation, however, would produce a market-to book ratio greatly in excess of 1.0. Thus, as Mr. Rothschild stated:

> [E]ven the 14 of the Moody's 24 electric utilities that are the troubled nuclear construction companies have a market to book ratio of 1.04 as of November 30, 1985 and are expected by Value Line and I/B/E/S to earn 13.79% and 14.16% respectively in the future. Assuming that the Value Line and I/B/E/S are reflective of investor expectations, a return on equity anywhere near the 16.9 to 17.4% recommmended by Mr. Brennan would result in a market-to-book ratio greatly in excess of 1.04 and therefore 16.9% to 17.4% is well above the market indicated cost of equity.

OCA St. 3 at 49-50 (emphasis added).

Obviously, if the rate of return which would produce a market-to-book ratio of 1.0 is between 13.79 and 14.16 percent, Mr. Brennan's updated recommendation of 15.9 percent is still much too high. Accordingly, even Mr. Brennan's partial revision of his analysis fails to produce an appropriate rate of return recommendation in light of current market conditions.*

c. Mr. Brennan's Discounted Cash Flow Analysis Results In An Upwardly Biased Result.

The DCF analysis performed by Mr. Brennan necessarily produces excessive rate of return estimates. Specifically, Mr. Brennan used growth rate projections which can be demonstrated to produce an upward

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* The OCA would note that the same criticism would apply to PECO's requested return on equity of 15.75 percent.

bias when used in a DCF calculation. Mr. Brennan's updated analysis made no attempt to correct this error. Moreover, his revised analysis contains additional errors--double-counting and mismatching data--which undercut the corrective effect of his use of more recent data. The OCA submits that these errors invalidate Mr. Brennan's DCF analysis.

Mr. Brennan's DCF analysis is upwardly biased because he used five year historic growth data and Value Line and Merrill Lynch growth projections. PECO St. 28B at 31. Mr. Rothschild explained that both types of growth projections necessarily produce excessive recommendations because they are based on unsustainable levels of growth.

Specifically, the use of five-year historic growth data produces biased DCF results by improperly projecting into the future the unsustainable growth of the most recent five-year period. Mr. Rothschild explained this problem as follows:

> The growth rate that is appropriate for use in the DCF method is one that is reflective of investors' future expectations. An historic period that contains an increasing return on equity profile has a growth rate in which earnings per share (and probably dividends per share) is only sustainable into the future if the earned return on equity continues to increase in the future at the same rate as in the past.

OCA St. 3 at 51-52 (emphasis added). It is simply not plausible to assume that PECO's past rates of increase will continue into the future. Thus, in the past five years, PECO's earned returns on equity have grown as follows:

1980	10.59%
1981	12.22
1982	13.27
1883	13.36
1984	15.08

OCA St. 3 at 51. Mr. Rothschild noted as follows that this trend cannot be expected to continue:

> In the case of Philadelphia Electric, this would mean in order for the five year historic growth rate to be sustained into the future, the earned return on equity in the next five years would have to grow from 15.08% to 21.47% in the next five years. Since few if any rational investors could be expecting at this time that Philadelphia Electric will earn 21.47% on equity in five years, the use of the five year historic dividend growth rates produces an unfair, upwardly biased cost of equity.

OCA St. 3 at 52 (emphasis added). Thus, Mr. Brennan's use of five-year historic growth rates is totally inappropriate in this proceeding.

Mr. Brennan's use of the Value Line and Merrill Lynch growth projections creates a similar upward bias. Mr. Rothschild described the problem with using these growth projections as follows:

> A short term growth rate forecast actually has the same problems as does the five year historical growth rate. This is because a short term growth rate is computed by making a compound annual rate of growth from a base period to a future period. For example, in the case of the Value Line 2% growth, Value Line refers to the growth as the annual rate of increase from 19832-84 to 1988-90. For example, for Philadelphia Electric Value Line shows historic earned returns of 12.3%, 12.5% and 14.1% respectively, for an average of 12.97%. If the 1982-84 base period had a lower earned return on equity than anticipated for the future (as was the case for Philadelphia Electric), then the growth rate as forecast by the investment advisors would not be typical of the future. It would therefore produce a growth rate that would overstate the appropriate "g" in the DCF formula.

OCA St. 3 at 53 (emphasis added).

FERC has recently criticized both types of growth projections used by Mr. Brennan, and confirmed Mr. Rothschild's argument that they produce an upward bias. Thus, FERC rejected as follows the use of five-year historic growth rates:

> Given the increasing earned rates of return on common equity during the last five years, the Commission believes that the five year historical

> dividend growth rates are upwardly biased as a reflection of investors' long-term growth expectations.

FERC Order 420, 50 Fed. Reg. 21802, 21818 (May 29, 1985) (emphasis added).

With regard to the use of analysts' forecasts, such as the projections used by Mr. Brennan, FERC stated, "analyst forecasts for 3-5 years may not capture investors' long run expectations." Id. at 21819. FERC continued by stating:

> With respect to analysts' forecasts, however, the Commission's evaluation suggests that they should be viewed as essentially short term expectations, which is what they in fact purport to be, and that such expectation overstated investors long-term growth expectations during the base year.

Id. at 21820 (emphasis added).

In addition to this incorrect use of historic growth rates, Mr. Brennan's revised recommendation reflects several improper calculations. First, Mr. Brennan's original analysis failed to reflect investor perceptions of a possible PECO dividend cut. As Mr. Rothschild noted:

> In response to OCA interrogatory Set V, question 4, Mr. Brennan was asked if he considered the fact that some investors believed that Philadelphia Electric might have to reduce or cancel the common dividend. He responded by saying that it was impossible to take this factor into account and felt that it was unnecessary because such market price reflects the composite belief of all investors in Philadelphia Electric Company. In other words, he neither adjusted the dividend yield or the growth rate down to reflect what appeared at the time to be a serious possibility of a dividend cut.

OCA St. 3A at 5 (emphasis added). Yet, in his revised analysis, Mr. Brennan made an upward adjustment to reflect a reduction in such perceptions. Id. Since Mr. Brennan never made a downward adjustment to reflect investor expectations of a dividend cut, this upward adjustment is unnecessary and simply increases an already excessive rate of return projection.

Second, in his revisions, Mr. Brennan unjustifiably assumed that investors now expect a growth rate even higher than the projections he originally used. PECO St. 28B at 17-18. Since (as we demonstrated above) his original growth projections were upwardly biased, the addition of further growth expectations in his final analysis is clearly unwarranted. Mr. Rothschild described this flaw in Mr. Brennan's analysis as follows:

> If Mr. Brennan had reviewed the analysis he used to develop his original growth rate, he would have realized that his prior growth rate was based upon an approach that already had optimistically assumed the conditions that have since come to pass to cause the stock price to rise.

OCA St. 3A at 5. Thus, since Mr. Brennan's original growth rate projection was upwardly biased, there is certainly no justification for increasing that projection in his revised analysis.

Mr. Brennan's revised calculations also use dividend yields and growth rates from different periods, resulting in a serious mismatch. Mr. Rothschild detailed this problem as follows:

> He wishes to add a growth rate supposedly derived from the <u>current</u> environment to a dividend yield that was based to a large extent on the market price from back when investors apparently felt the dividend was in more serious jeopardy. His dividend yield includes using stock prices back from <u>January, 1985</u>. This mismatch is an important part of why Mr. Brennan has arrived at such an unrealistically high cost of equity.

OCA St. 3A at 6 (emphasis added). By taking the version of both factors most favorable to PECO, Mr. Brennan's mismatch produces an unreasonably high recommendation that is not reflective of current investor expectations.

To correct for these errors of double counting and mismatching of data, Mr. Rothschild performed an analysis of the sort proposed by Mr. Brennan. Mr. Rothschild described the results of that analysis as follows:

> At 12/31/85 the market price of Philadelphia Electric common stock was $17.375, and it is selling for $19.625 as of February 6, 1986. Based upon the midpoint of these prices, and the current dividend rate of $2.20, the dividend yield is 11.9%. Rounding up to allow for an additional one-half year's growth makes the yield 12.0%, which is 1.2% lower than the 13.2% obsolete dividend yield relied upon by Mr. Brennan. Even if we add the excessive growth rate of 1.7% originally recommended by Mr. Brennan for Philadelphia Electric to this 12.0% dividend yield, the indicated cost of equity based upon a full and consistent update of Mr. Brennan's analysis of Philadelphia Electric produces not 15.9%, but 13.7%.

OCA St. 3A at 6-7 (emphasis added).

Thus, OCA submits that Mr. Brennan's DCF calculation is clearly unreflective of current investor expectations. Further, the adoption of his recommendation would result in a market-to-book ratio greatly in excess of the 1.0 ratio which Messrs. Brennan and Rothschild both indicated is the goal of regulation. The OCA submits, therefore, that Mr. Brennan's analysis (and PECO's requested 15.75 percent rate of return which is derived therefrom) should be rejected by the Commission.

d. Mr. Brennan's Risk Premium Analysis Is Unreliable Because There Is No Consistent Difference Between Returns On Debt And Equity.

The risk premium analysis presented by Mr. Brennan in both his original and his revised recommendation is even less reliable than his DCF analysis.

The risk premium method loses its usefulness in a market in which the relationship between stock and bond prices varies widely.

Thus, Mr. Rothschild, who once used this method himself, commented:

> Unfortunately, in the capital markets of the 1980's this method is invalid. Bonds and stocks have many different characteristics. Unless the factors that make up these differences remain relatively constant, the results for a cost of equity from any debt based costing technique will be unreliable.

OCA St. 3 at 54. Mr. Rothschild demonstrated this instability in the capital market by comparing the average return on equity allowed to electric utilities, the average cost of Aa utility debt, and the difference between them, which is the risk premium. He described the results of this analysis as follows:

> Note that the risk premium allowed hovered around 4% until 1980. Then, it declined rapidly, touching a low of .33% in 1981. Since 1981 it has been up and down in an unpredictable pattern. The appropriate risk premium for 1985 can only be computed by first determining the cost of equity, not vice versa. Therefore, the method has no application in the current financial environment.

OCA St. 3 at 54 (emphasis added).

Two basic factors which make the relationship between debt and equity unstable were described by Mr. Rothschild: "changes in the federal income tax laws and greater uncertainty about future inflation rates." Id. at 55. The tax law changes have altered the relative after-tax values of debt and equity, and thereby rendered historic data on the relative value of each no longer representive of the future. OCA St. 3 at 56. Inflation affects risk premiums because debt holders who are locked into specified returns can be harmed more than stockholders whose returns can fluctuate. Id. at 56-57. Thus, Mr. Rothschild stated:

> Therefore, as the level of uncertainty with regard to future changes in inflation or interest rates vary, the required risk premium between debt and equity also varies.

OCA St. 3 at 57. When this occurs, a risk premium analysis cannot be confidently performed.

FERC has indicated that it will use risk premium analyses as corroborative evidence to support a DCF result, but not as the basis for its generic rate of return determination. 50 Fed. Reg. at 21820. It has thereby noted the inherent weaknesses of risk premium analyses. FERC stated as follows in its most recent generic rate of return order:

> [T]he Commission notes some concerns with the reliability of risk premium estimates of market required rates of return. As the Commission stated in Order No. 420, it is difficult to estimate what risk premiums actually are, because they are not directly observable and because they are likely to vary over time.
>
> First, there are good reasons to question the stability of risk premiums of utility common stock returns over bond yields or other common stock returns, especially for recent years. Electric utilities, along with the energy sector of the economy as a whole, have experienced tremendous changes in the recent past - OPEC, Three Mile Island, etc. These changes have surely had an impact on the relative risk of electric utility investments (both stocks and bonds) to investments in other segments of the economy. Because of this, the relationship between the risk of, and market required rates of return on, utility common stocks and all industry common stockjs has probably changed. The relationship between the risk of utility and all industry bonds has probably also changed...
>
> These changes in relative risk between utilities and other industries and between debt and equity securities arising from these events have probably not produced stable risk premiums.

FERC Order 442, 51 Fed. Reg. 343, 359 (January 6, 1986) (emphasis added).

In its earlier generic rate of return decision, Order 420, FERC also pointed out another problem with placing primary reliance on risk premium analyses:

> The Commission also agrees ... that the accuracy of the risk premium method is entirely dependent upon the accuracy of the required rate of return estimates. Since commenters generally used the same kind of DCF approach as in their primary analyses, and the Commission has already found the results such analyses to be upwardly biased, it follows that the same finding must be made regarding the results of these alternative risk premium approaches.

50 Fed. Reg. at 21822 (emphasis added). This criticism is fully applicable to Mr. Brennan's analysis, since he relied upon his DCF analysis to arrive at prior required risk premiums. See OCA St. 3 at 58.

In addition to his original risk premium methodology being unreliable, Mr. Brennan's updated analysis is unsound because he used a risk premium of 4 percent. The OCA submits that this 4 percent risk premium is clearly excessive. Contrary to Mr Brennan's claim that such a premium was "conservative and uncontroversial" (PECO St. 28B at 14), Mr. Rothschild pointed out that, in reality, this 4 percent risk premium is greatly in excess of that which is reasonable (and that which has been estimated to be reasonable by FERC). Thus, Mr. Rothschild stated:

> In Order 420, FERC found that a reasonable risk premium for public utility common stock in excess to the cost of public utility bonds is 2%. In Order 442, FERC confirmed a slightly lower risk premium than the 2% as reasonable.

OCA St. 3A at 7.

The OCA submits, therefore, that Mr. Brennan's risk premium analysis results in a risk premium estimate which is greatly in excess of that which exists in the current capital markets.

Mr. Rothschild noted that if Mr. Brennan's risk premium analysis had used FERC's more reasonable risk premium estimate, the result would

be fully consistent with the OCA's recommendation. Thus, Mr. Rothschild stated:

> Based upon the 2% risk premium found proper by FERC, and observing that Mr. Brennan has noted Philadelphia Electric recently issued debt at 11.75, the risk premium method indicates a cost of equity of 13.75% for Philadelphia Electric Company.

OCA St. 3A at 7 (emphasis added). Thus, the elimination of Mr. Brennan's unsupportable 4 percent risk premium again results in a recommendation which is fully consistent with Mr. Rothschild's conservative 14.00 percent recommendation.

8. Conclusion

OCA therefore submits that the maximum rate of return which should be allowed to PECO is 14.00 percent. In light of the current conditions in the capital markets, a lower rate may well be justified. PECO's claim for a higher rate is not supported by credible evidence, in that its analysis relies on methods and data which are unreliable or upwardly biased. Moreover, even if the Commission were to find that PECO's current market-derived cost of equity were somewhat higher than 14 percent, the Commission should not allow the Company that high a return to the extent that it is caused by risk related to Limerick 2. The OCA submits that a fair return on PECO's common equity is certainly no higher than 14 percent at this time. OCA therefore recommends that PECO be allowed a return on equity no higher than 14.00 percent.

E. Overall Rate Of Return

Based on the capital structure and costs of debt, preferred equity, and common equity set forth above, the OCA submits that the appropriate overall rate of return to be utilized in this case is no higher than 12.03%. See OCA St. 4A, Rev. Sch. 1.

VIII. REVENUES, EXPENSES AND TAXES

A. Introduction

The Company's claimed levels of revenues, expenses, and taxes require adjustment in a number of respects. First, the Company's projected weather-corrected revenue is known to be understated in light of its actual weather-adjusted sales to date. Accordingly, its revenue projection should be adjusted upward to reflect this known change. Second, OCA recommends adjustment of the Company's operating and maintenance expense claim to reflect a more appropriate estimate of inflation in its outage expenses. Then, in three instances--the Salem 1 Management Audit, certain uranium mine investments, and the Heaton-Byberry line--amortizations sought by the Company ought to be denied. PECO has also proposed a five-year amortization of more than $5 million of expenses from the Limerick 2 Investigation at I-840381. OCA submits that such expenses ought to be excluded from rates at this time and capitalized with the costs of Limerick 2. As a seventh adjustment, OCA urges that PECO's claim for funds to be used in a projected decommissioning of its Peach Bottom 1 unit, which has already been decommissioned once, should be disallowed at this time. Eighth, the Company must comply with the Commission's Keystone Alliance Order. Three adjustments should also be made to reflect the actual taxes which the Company pays: the reflection of savings from its consolidated tax return; the return to ratepayers of the balance held by the Company for accumulated state deferred taxes; and the reflection of the actual tax deduction received from capitalized pensions, benefits, and taxes. Finally, the Company must continue to flow back to ratepayers a $6.9

million dollar payment it received from the sale of Salem 1 tax benefits, as the Commission ordered it to do in the last PECO base rate case.

B. In Light Of Its Weather-Adjusted Sales To Date, The Company's Revenue Projection Is Clearly Understated And Its Pro Forma Income Should Be Adjusted Upward By $3,607,000.

The Company has budgeted total weather-adjusted electric sales of 27,653,130 megawatt-hours for the test year ended June 30, 1986. PECO Exh. TPH-2A, A-5. The Company additionally has shown an annualization adjustment for growth in usage of existing customers and annualization of new customer growth, amounting to approximately 490,000 megawatt-hours. PECO Exh. TPH-2A, D-3a. However, the Company's actual weather-adjusted sales are significantly above its budget. OCA therefore submits that the Company's claimed revenues should be adjusted upward to reflect the known additional weather-adjusted sales above those budgeted by the Company.

The Company's actual weather-adjusted sales during the test year to date have been significantly higher than the budget projection that the Company made on the same weather-adjusted basis. The Company used that weather-adjusted budget to develop its claim in this case. As OCA Witness Bleiweis testified:

> As shown on [my] Schedule 11, for the first five months of the future test year, actual weather adjusted sales have exceeded the budget by approximately 128,000 megawatt hours. Valuing this variance at the average revenue per kilowatt hour by revenue class results in additional weather-adjusted revenues of approximately $11.0 million.

OCA St. 4 at 40.

The OCA would note that its proposed adjustment only reflects the actual known variance between the Company's budgeted weather-adjusted sales and its actual weather-adjusted sales through five months of the test year. Mr. Bleiweis's recommendation does not project any increase

in actual weather-adjusted sales over the Company's budget for the last seven months of the test year. OCA St. 4 at 40.

PECO witness Hill testified on rebuttal that non-weather-adjusted sales have been below budget. PECO St. 18C at 33. However, such non-weather-adjusted sales are essentially irrelevant to this issue. As Mr. Hill himself stated on cross-examination, "the company's claim for sales as shown in the budget are on a normal weather basis." Tr. 487. Mr. Bleiweis's adjustment is calculated using actual data on that same weather-normalized basis. In setting rates, it is necessary to use weather-normalized sales figures in order to avoid giving too much weight to the particular weather in a given year. Thus, Mr. Hill's comparison between unadjusted sales and the budget has no merit, and does not affect the validity of Mr. Bleiweis's adjustment.

Based on a proper comparison between the Company's sales claim in this case, which is derived from its budget, and the actual weather-adjusted sales experienced in the first five months of the test year, it is clear that the Company's claim does not accurately reflect its test year sales. If this trend continues, the Company's weather-adjusted sales will exceed the OCA's adjustment as well as the Company's claim. However, to be conservative, Mr. Bleiweis did not attempt to reflect such a trend in his proposal. Instead, he merely reflected the known increase of actual over budget weather-adjusted sales as of the date of his direct testimony. Thus, he recommended:

> Pro forma revenues should be adjusted to reflect the current variance of actual versus budgeted sales. I am not suggesting at this time that the current variance be annualized for the full test year but rather that the Judge and Commission recognize that sales to date have been underbudgeted.

OCA St. 4 at 40.

Adopting the OCA's adjustment results in an increase to the Company's pro forma revenues of $11.0 million, as shown on Mr. Bleiweis's Schedule 11. Incremental fuel expense and taxes must be subtracted from this figure, in the same manner as the Company's adjustment shown at TPH-2A, D-3b, for an ultimate increase to income of $3,607,000. OCA St. 4A, Sch. 11; OCA St. 7A, Rev. Sch. TEK-3.

C. PECO's Operating And Maintenance Outage Expenses Should Be Adjusted Downward By $646,000 To Reflect Lower, More Accurate Estimates Of Inflation.

In developing its operating and maintenance expense claim, PECO used inflation factors of 5.25 percent for 1985 and 6.4 percent for 1986. The Company applied these inflation factors to its nuclear and fossil plant outage expenses as shown at PECO Exh. TPH-2A, D-10, D-10a, and D-10b. OCA submits that, because these inflation factors are excessive, this claim must be adjusted downward. The OCA would note that it is not proposing an adjustment to the base level of these outage expenses; OCA proposes to adjust only the inflation factors applied to these costs.

The Company's 5.25 percent 1985 inflation rate and 6.4 percent 1986 inflation rate were "'obtained from PECO's Budget and Control Division for use in conjunction with the 1985 budget.'" OCA St. 4 at 42, quoting a PECO interrogatory answer. PECO witness Solecki, Manager of that Division, testified on cross-examination that these rates were finalized in November, 1984. Tr. 71-72.

These Company inflation rates are clearly inappropriate in light of current levels of inflation and the Commission's decision in the Company's last case. Like the factors proposed in the last case, the

Company's inflation factors used here include an alleged PECO-specific wage inflation rate. In the last PECO base rate case, the Commission ruled as follows:

> As accurately noted by the ALJ and Staff, we have [previously] accepted the use of an inflation factor based on the GNP Implicit Price Deflator, thereby rejecting the use by PECO of a calculated or derived inflation factor. See e.g. Pa. PUC v. Philadelphia Electric Company (Gas Division), R-832410 (April 27, 1984) mimeo, p. 51-52; Pa. P.U.C. v. Philadelphia Electric Company (Electric Division), R-822291 (November 23, 1983). Nothing in the record before us would warrant going against established Commission precedent in this matter.

Pa. PUC v. Philadelphia Electric Co., 58 Pa. PUC 743, 792-793 (1985). OCA submits that, similarly, nothing in the record in this case would warrant going against the precedents set in past cases rejecting PECO's use of a Company-specific labor inflation factor. The Gross National Product Implicit Price Deflator (GNP-IPD) is the proper inflation rate for use in this case.

In addition to the unjustified use of a PECO-specific wage inflator, PECO's inflation factor reflects an unsound estimate of national inflation. PECO's projections vary significantly from credible estimates of 1985 and 1986 inflation which were available even at the time of the Company's filing. Thus, as detailed below, Company witness Solecki acknowledged on cross-examination that projections provided by Company witnesses uniformly projected inflation lower than the Company has claimed in this case. The chart below summarizes some of these projections:

1985 PROJECTIONS

GNP-IPD PROJECTION	SOURCE
2.7% to 5.0%	Conference Board Statistical Bulletin (OCA Exh. 2, Attachment 1 at 8-9)
4.0%	Fidelity Bank's quarterly table (OCA Exh. 2, Attachment 2 at 12b)
3.8%	Value Line Investment Survey (OCA Exh. 1 at 4)
3.7%	Standard & Poor's Trends and Projections (OCA Exh. 1 at 6)
2.7% - 4.1% (average 3.7%)	Blue Chip Indicators (OCA Exh. 1 at 8)

1986 PROJECTIONS

GNP-IPD PROJECTION	SOURCE
3.3% to 5.0%	Conference Board Statistical Bulletin (OCA Exh. 2, Attachment 1 at 8-9)
4.9%	Fidelity Bank's quarterly table (OCA Exh. 2, Attachment 2 at 12b)
4.0%	Value Line Investment Survey (OCA Exh. 1 at 4)
3.6%	Standard & Poor's Trends and Projections (OCA Exh. 1 at 6)

Mr. Solecki testified that each of these sources was the type of projection the Company would use in developing its predictions. Tr. 73-83.

These reports were entered into the record on December 10, 1985. The Company has filed no subsequent testimony providing support for its projected inflation rates. In this circumstance, OCA submits that it is unquestionably appropriate to revise downward the Company's claim for plant outage operating and maintenance expenses to reflect a more credible inflation rate.

OCA witness Bleiweis has proposed such rates, based on national figures. Mr. Bleiweis stated:

> To date, that is, through the third quarter of 1985, the annual rate of increase for the GNP price deflator is 2.3%. In comparison, the annual rate of increase for the consumer price index is 3.6%. Considering the stability of the economy, in my opinion, it is proper for this proceeding to utilize a conservative inflation rate of 3.5% for both 1985 and 1986. These inflation rates are consistent with those being projected by many forecasters for 1985 and 1986 (See OCA Exhibits 1 and 2). I have reflected these inflation factors on Schedules 12a and 12b.

OCA St. 4 at 43 (emphasis added).

In addition, the OCA would note that Trial Staff recommended use of a GNP-IPD inflation rate of 3.28%. Staff St. CTW-1 at 3. Similarly, the General Services Administration proposed a rate of 3.3%. GSA St. 2 at 2.

OCA recommends adoption of Mr. Bleiweis's proposed reduction to PECO's inflation claim. The Company's claim is clearly excessive and should be reduced to reflect more reasonable inflation estimates. Mr. Bleiweis summarized his inflation related adjustments to nuclear and fossil outage operating and maintenance expenses in his Schedule 12.

In his rebuttal testimony, PECO witness Carroll suggested a partial reduction of the inflation factors to be applied to these outage expenses.* As shown by a comparison of Company Exhibit TPH-2A, D-10 and D-10b, to the earlier Company Exhibit TPH-2 at the same pages, this partial inflation factor reduction results in a downward adjustment of $669,000 in PECO's total operating and maintenance claim in this case. Mr. Carroll maintained that this amount is the maximum appropriate inflation-related adjustment to be made in this case. PECO St. 22B at 7.

OCA urges rejection of this portion of Mr. Carroll's testimony. First, as shown in his Schedule for this adjustment (PECO St. 22B, Sch. 1), Mr. Carroll has continued to include the inappropriate PECO-specific inflation factor for labor costs. This factor is unsound for the reasons noted above, and contrary to the Commission's judgment in R-842590 that such PECO specific factor should not be used.

Second, Mr. Carroll's adjustment in fact gives more weight to the improper PECO specific labor inflation factor than that factor had in PECO's original claim. Mr. Carroll, in his rebuttal testimony, introduced a new method of weighting PECO-specific and national inflation factors. This new methodology gives 57.9% to 68.8% weighting to the PECO labor inflation factor. PECO St. 22B, Sch. 3 at 2. In Mr. Carroll's original analysis, the PECO labor factor only had a 50% weighting. Since this Commission has rejected the use of any PECO-specific labor inflator, it is certainly inappropriate to give even greater weight to this factor.

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* Mr. Carroll in his rebuttal also proposed an additional $947,000 inflation adjustment to other portions of the Company's operating and maintenance expenses. PECO St. 22B at 2-10. OCA has not challenged this other adjustment or the level of those other portions of the Company's operating and maintenance claim. This $947,000 has no effect on OCA's inflation adjustment to PECO's outage expense as proposed above.

Instead, OCA urges adoption of Mr. Bleiweis's reasonable estimate of 3.5% inflation. Application of this inflation rate to the Company's operating and maintenance outage expenses results in an expense reduction of $646,000 to the Company's revised claim, as presented in its final accounting exhibit. PECO Exh. TPH-2A, D-10; PECO St. 22B, Sch. 3 at 2. ($268,000 of this adjustment is to nuclear operating and maintenance outage expense, and $378,000 is to fossil.) OCA St. 4A, Rev. Sch. 12. This adjustment produces a $324,500 increase to income which is reflected as part of the increase to income for "Nuclear & Steam Production O&M" shown at OCA St. 7A, Rev. Sch. TEK-3.

D. PECO Should Not Be Allowed To Amortize Costs Of A Management Audit Undertaken In Response To The Salem 1 Breaker Incident.

The Company has claimed a two year amortization of its share of a $7,283,000 Salem Management Evaluation Program expense. PECO Exh. TPH-2A, D-10d. The program in question was carried out between March and August, 1983. OCA St. 4 at 45. OCA recommends that this claim be rejected in its entirety because ratepayers ought not to bear this expense.

PECO witness Carroll explained the circumstances under which this "management evaluation" audit was conducted, as follows:

> At the time of the Salem No. 1 breaker incident, Public Service Electric and Gas Company (PSE&G) was questioned by the Nuclear Regulatory Commission on the Company's ability to operate and manage a nuclear facility. When PSE&G addressed this question, it took advantage of the timing to perform a complete management review of their procedures and policies with regard to nuclear power operation. PSE&G in conjunction with Management Analysis Company, a consultant hired for this project, developed an Action Plan for operation and management of their nuclear facilities.

PECO St. 22 at 18-19. At Docket No. P-830453, the Commission considered the Salem 1 breaker incident, which occurred in February, 1983, and

denied recovery of the Company's resulting replacement power costs because the Commission found:

> [W]e are not satisfied that PECO's management involvement in establishing a safety perspective, in requiring attention to detail and in ensuring adherence to procedures represented the degree of care we require of a public utility in the operation of a nuclear generating facility.

Re Salem Nuclear Generating Station, 70 PUR 4th 568, 599 (1985). The Salem Management Evaluation Program costs resulted from this failure of PECO to maintain proper management. Like replacement power costs incurred when this management failure resulted in the breaker incident and outage, these imprudently incurred costs should not be recovered from ratepayers. See Metropolitan Edison Co. v. Pa. PUC, 62 Pa. Commw. 460, 468, 437 A. 2d 76 (1981), where the Court held that imprudently incurred fuel expenses could not be recovered from ratepayers.

The specific reason for the management audit was that the Company had to respond to the Nuclear Regulatory Commission's inquiry into the breaker incident. The NRC found that:

> Based on [review of the record of the Salem breaker incident and preceding history], the root causes of the maintenance problems were failures in the following features necessary to assure adequate plant reliability:
>
> (1) a strong, clear management policy mandating effective programs for preventive maintenance;
>
> (2) components designed for maintainability and maintenance systems designed for effective accomplishment of maintenance;
>
> (3) detailed understandable procedures to facilitate timely, effective performance of maintenance activities;

(4) adequate numbers of trained qualified personnel to perform the maintenance activities, to plan, schedule, and manage those activities, and to assure their effective performance, considering the estimated 30-50 maintenance work requests per day at the Salem station;

(5) effective management controls to assure timely, proper, and complete performance of maintenance activities.

NUREG 1000, as quoted at 70 PUR 4th at 586 (emphasis added). Under cross-examination, Mr. Carroll explained how the Management Audit was part of the response to the NRC inquiry, as follows:

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

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

Tr. 373. The audit was thus undertaken under the impetus of the Salem Unit 1 breaker incident and the NRC's questioning of PSE&G's management competence in the wake of that incident. OCA St. 4 at 45.

OCA witness Bleiweis summarized these concerns as follows:

> Though management audits have previously been conducted by the company, they have not been in response to a serious operational problem such as that as occurred at Salem #1. We are not considering here a general overall company management audit, but rather an extensive investigation as to the cause of the Salem #1 breaker incident with expansion of this investigation to include a management evaluation program.

OCA St. 4 at 46.

Such an audit is not part of the Company's normal operating procedures which ratepayers ordinarily support. In fact, the Company itself stated:

> The purpose of this adjustment is to amortize over a two-year period the costs associated with the Salem Management Evaluation Program that are non-recurring.

PECO Exh. TPH-2, D-10d (emphasis added). This Commission has frequently held that previously incurred, non-recurring expenses may not generally be recovered from ratepayers. Thus, in Pa. PUC v. Duquesne Light Co., 54 Pa. PUC 695 (1981) the Commission stated:

> If not the first, the most widely accepted maxim of regulation is that it is prospective rather than retrospective looking. There have only been two areas in which the Commission has traditionally permitted the amortization of unusual recorded expenses: (1) the flood and storm damage; and, (2) rate case expense, both of which upon the basis that they are recurring in nature, although at significantly separated intervals.... In our view, the recorded results of operations, whether they be within or without a test year, are to be looked to for the purpose of providing guidance to the future, not for the purpose of correcting the ills of the past.

Id. at 718. Similarly, in its Order of Clarification in Pa PUC v. T.W. Phillips Gas and Oil Co., R-811615 (May 30, 1984), the Commission reaffirmed the impropriety of examining a single item in a utility's past operations in establishing that utility's prospective revenue requirement:

> The fact of the matter remains that with any new or increased expense incurred by a utility there exists a delay in time before the existence of that expense is recognized expressly in an updated determination of revenue requirement, i.e., in that utility's next general rate case. The Commission's function, however, is not to attempt to "regulate the unregulated past".... Instead, the ratemaking process involves the construction of an operating scenario intended to determine that level of revenues which will make the utility seeking increased rates whole on an ongoing, current basis and provide concomitantly, the opportunity for a fair return on common equity investment.

Id., Order at 4.

The Commonwealth Court reached a similar conclusion in the context of reviewing the propriety of a rate refund when it stated:

> Ratemaking principles require prospective ratemaking based upon a test year. The rates at issue in the instant case were found to be just and reasonable, and retrospective analysis of PG&W's actual returns is not required in determining the propriety of refunds.

Pennsylvania Gas & Water Company v. Pa. PUC, 79 Pa. Commw. 416, 427, 470 A.2d 1066, 1072 (1984).

Simply stated, the general rule is clear: A utility is not required to be reimbursed for expenses incurred in the past. The ratemaking process looks at the past in order to project the future; not to conduct retroactive ratemaking.

Mr. Bleiweis therefore concluded that:

> [S]ince the audit was not a voluntary action on the part of the company, because costs of the audit are non-recurring, and because the action which forced the audit was found by this Commission to be imprudent (Docket No. P-830453, et al.), such costs should not be reflected for ratemaking purposes.

OCA St. 4 at 46.

OCA submits that the costs of the Salem Management Evaluation Project were incurred as a result of the Company's imprudence and are clearly non-recurring. Moreover, recovery of these expenses would constitute impermissible retroactive ratemaking. These expenses therefore must not be paid by ratepayers. PECO's expenses should therefore be adjusted downward by $3,642,000. OCA St. 4 at 46; OCA St. 4A, Sch. 12. The resulting income increase of $1,829,000 is reflected in the $2,154,000 income adjustment for "Nuclear & Steam O&M" at OCA St. 7A, Rev. Sch. TEK-3.

E. PECO's Expense Claim Should Be Adjusted Downward By $2,445,000 To Deny The Amortization Of The Company's Investment In Three Uranium Mines Which Never Served Ratepayers.

The Company seeks in this case to amortize over five years its investment in its failed Sequoyah, Lee, and Homestake mining ventures. PECO Exh. TPH-2A, D-24. OCA opposes these amortization claims in their entirety because these mines have never provided service to ratepayers and, therefore, are not used and useful.

It should be stated at the outset that the adjustment sought here by the OCA is separate from the adjustment proposed in the Commission's current proceeding at C-850128. At that docket, the Commission is considering a complaint entered by the Commission on its own motion, which alleged:

> PECO had improperly failed to disclose certain information about its nuclear fuel investments, in particular about the active or inactive status of various uranium mining projects, in violation of Sections 505 and 315(d) of the Public Utility Code (Code), 66 Pa.C.S. §§505 and 315(d) and Section 53.53 of the Commission's regulations, 52 Pa. Code §53.53. The Commission ordered PECO to file an answer, or offered it the option to pay instead both civil penalties in the amount of $1,000.00 a day after November 23, 1983, and refunds to ratepayers.

Recommended Decision of ALJ Turner, November 6, 1985, at 1. That proceeding does not deal with the prospective ratemaking issue considered here, but rather the refund of returns allowed on that investment in prior years. At present, ALJ Turner has recommended Commission acceptance of a settlement agreed to by the Company and the Trial Staff. Any ruling in that case, however, will constitute an additional adjustment to rates, independent of OCA's proposal here to reject the amortization PECO has sought in this case.

The OCA opposes any attempt to recover these failed investments from ratepayers. The OCA submits that only "used and useful" utility assets may be reflected in rates. As recently stated by the Pennsylvania Supreme Court in Pennsylvania Electric Co. v. Pa. PUC, __ Pa. __, 502 A.2d 130, 135 (1985):

> The "used and useful" concept ... continues to be of application in this Commonwealth. In Barasch v. Pennsylvania Public Utility Commission, 507 Pa. 496, 491 A.2d 94, 104 (1985), we noted the legislature's long-standing policy that current ratepayers should shoulder only the costs of providing current utility service, with such costs to be determined by reference to such property as is "used and useful" in service to the public.

See also Scranton v. Scranton Steam Heat Co., 405 Pa. 397, 401, 176 A.2d 86, 88 (1961).

The mining ventures in question are not now and have never been used or useful. As OCA witness Bleiweis indicated in his direct testimony:

> It is the position of the OCA that this portion of nuclear fuel in process never provided service to ratepayers and is not used and useful property. Ratepayers should not bear the cost of investing in projects of this nature.

OCA St. 4 at 38. Accordingly, the amortization sought by the Company is inappropriate and should be denied. The OCA acknowledges that PECO was permitted to amortize the costs of another earlier failed uranium mining project in the last PECO base rate case. 58 Pa. PUC at 800. However, the OCA urges the Commission not to permit the Company to recover a return of the costs of these additional failed ventures in this case.

OCA recommends rejection of the entire claim for these amortizations shown at PECO Exhibit TPH-2A, page D-24. Exclusion of this amortization will produce an expense reduction of $2,445,000 and an increase to income of $1,532,000. OCA St. 7A, Rev. Sch. TEK-3.*

F. Since The Heaton-Byberry Line Has Never Been Used Or Useful In Providing Utility Service, PECO's Claim Of $89,000 Per Year To Amortize Its Costs Should Be Denied.

The Company has requested amortization over a five-year period of $445,000 in accumulated engineering costs for the Heaton-Byberry 230 kV line, a line which the Company has abandoned its intention to construct. PECO Exh. TPH-2A, D-12, D-12a. PECO witness Hill testified that this project was suspended initially in 1976. Tr. 503. Since this project has never served ratepayers, and has not even been pursued for the last ten years, OCA submits that this amortization must be denied.

OCA Witness Bleiweis recommended rejection of the Company's Heaton-Byberry claim, saying:

> In my opinion, preliminary expenditures for a project that was never in service should not be funded by ratepayers, especially one for which there has been no expenditures since 1976. Ratepayers should not be required to reach back 10 years for recognition of expenditures for a project that never came to fruition.

OCA St. 4 at 37.

OCA submits that the used and useful doctrine, discussed in Section VIII. E, also governs this issue. As the Pennsylvania Supreme Court stated when they reaffirmed the used and useful principle in

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* At Revised Schedule TEK-3, this adjustment is described as covering Sequoyah and Lee Mines. Although Homestake is not mentioned, the adjustment amount in fact removes the Company's claim for the Homestake venture as well at the Sequoyah and Lee ventures. See PECO Exh. TPH-2A, D-24.

Pennsylvania Electric Company v. Pa. PUC, "current ratepayers should shoulder only the costs of providing current utility service." 502 A.2d at 135. Since the Heaton-Byberry line does not now provide, and has never provided, such "current utility service," ratepayers ought not to be asked to shoulder its costs. The Heaton-Byberry line clearly never became used and useful, and accordingly, its costs cannot be recovered in rates.

This OCA adjustment produces an expense reduction of $89,000. OCA St. 4A, Sch. 10; OCA St. 4 at 37. This adjustment is included in the $642,000 increase to income for "Miscellaneous Adjustments and Amortizations" shown at OCA St. 7A, Rev. Sch. TEK-3.

G. PECO's Income Should Be Adjusted Upward So That Costs Of The Limerick 2 Investigation Will Not Be Recovered From Current Ratepayers.

The Company seeks a five-year amortization of $5.5 million it expended for the Limerick 2 Show Cause Investigation. This results in an annual rate adjustment of $1,100,000. PECO Exh. TPH-2A, D-12. OCA submits that these Limerick 2 expenses ought not to be paid by current ratepayers.

As OCA witness Bleiweis pointed out:

> It is difficult enough for ratepayers in this proceeding to have to fund the inclusion in rates of the Limerick #1 plant without also having to pay an investigation proceeding to justify the construction of a second nuclear plant. The costs of the Limerick 2 proceeding should be included in the cost of Limerick Unit 2.

OCA St. 4 at 36.

Mr. Bleiweis presented an alternative way to deal with these expenses for ratemaking purposes. He proposed that "the company should

capitalize such costs over the life of Limerick Unit 2." Id. He also noted that NRC licensing proceedings are already treated this way. Id. Mr. Bleiweis noted that this alternative approach would have the following effect:

> In this way, those who are supporting Limerick 2 in rates will pay all of the costs associated with that unit, including the costs of legal proceedings which were necessary to continue constructing the plant.

Id.

PECO witness Hill's objections to this adjustment are without merit. Mr. Hill relied upon the Commission's decision in the last PECO base rate case, which permitted recovery of the costs of the then most recent Energy Cost Rate investigation. That case, however, is clearly inapposite. The services at issue in that case had already been received by the time the base rate case was decided. In contrast, the services from Limerick 2 will not be received by ratepayers for many years, if at all.

Mr. Hill also claimed that:

> Mr. Bleiweis's proposal to capitalize the expenses associated with the Limerick Unit No. 2 investigation would be completely inequitable since the Commission's Order in the Limerick No. 2 investigation has allowed the Company to proceed with construction under a strict cost containment program whereby the cost of Limerick Unit No. 2 is capped at a specific cost of $3.197 billion.

PECO St. 18C at 29. OCA submits that the applicability or non-applicability of the cost cap is not at issue here. What is at issue is when the costs of the Limerick 2 investigation should be recovered from ratepayers. What would be "inequitable" in this case would be to ask current ratepayers to subsidize costs of a plant which does not serve them now but which may serve others later.

OCA submits that the treatment proposed by Mr. Bleiweis for PECO's Limerick 2 investigation expenses is fair to current and future ratepayers. OCA further submits that the Company's attempt to require current ratepayers to pay a cost of a plant not yet in service should be rejected. OCA thus urges denial of the Company's claim to amortize the Limerick 2 investigation expenses at this time, and recommends an expense reduction of $1,100,000 and an increase to income of $553,000 to exclude these expenses from current rates. OCA St. 4A, Rev. Sch. 10. This amount is reflected in the $642,000 increase to income shown at OCA St. 7A, Rev. Sch. TEK-3.

H. The Company's Expense Claim Of $691,000 Per Year To Pay For A Second Decommissioning Of Peach Bottom 1 Should Be Denied At This Time.

The Company has claimed a $691,000 annual expense for contributions to a fund for decommissioning Peach Bottom 1. This figure is included in the costs shown in PECO Exhibit TPH-2A, D-15. The portion of this cost attributable to Peach Bottom 1 is shown in the first footnote on page 2-4 of PECO Exhibit NBM-1. Indeed, that footnote, in combination with a previous footnote at PECO Exh. NBM-1 at 2-2, constituted virtually the Company's entire direct case on its Peach Bottom 1 decommissioning claim. OCA urges complete rejection of PECO's request to collect these projected Peach Bottom 1 costs from current ratepayers. The OCA submits that the Company has failed to justify its current claim.

1. The Information Provided By The Company Does Not Demonstrate Why These Expenses Are Necessary.

Peach Bottom Unit 1 has been described by PECO as:

> a nuclear generating unit powered by a high-temperature, gas cooled reactor and having a

> capacity of 40 megawatts. The unit was constructed as a prototype under an Atomic Energy Commission demonstration program pursuant to a contract between [Philadelphia Electric Company] and the Atomic Energy Commission, whereby [Philadelphia Electric Company] undertook to construct the unit and operate it for a period of five years.

OCA Exh. 54. Peach Bottom Unit 1 stopped producing power in 1974 and was officially retired from service on June 1, 1975. OCA St. 4 at 51. Citing a Company interrogatory answer, OCA witness Bleiweis stated, "The unit has been decommissioned and placed in 'protective storage.'" Id.

PECO witness Wright has stated that "Peach Bottom Unit No. 1 is currently in a safe storage (SAFSTOR) condition." PECO St. 20A at 7. SAFSTOR is one of three major classifications of decommissioning alternatives recognized by the Nuclear Regulatory Commission. See 50 Fed. Reg. 5600, 5603 (February 11, 1985).

Thus, ratepayers have already paid for one decommissioning of this plant. The Company apparently plans to decommission the plant again in 2008, however, and is asking ratepayers to begin funding that work now, some 12 years after the plant ceased to serve ratepayers and 22 years before the work will be done. OCA submits that the Company has failed to show why this claim should be allowed at this time.

Trial Staff witness Martin J. Mayer similarly stated:

> I propose to eliminate the collection of ratepayer funds for the commissioning of Peach Bottom Unit 1. Peach Bottom Unit 1 is not currently used and useful; it does not provide a value to the current ratepayers, and it is not even included in rate base.

Staff St. MJM-1 at 8.

The information the Company has provided about this second decommissioning project is sketchy, at best. In its direct case, it presented no evidence on the nature of the work to be paid for by this

fund. Indeed, in the Company's direct case, the only information on the cost of this work appeared in two footnotes in PECO Exhibit NBM-1, one stating that figures stated in the text for the nuclear portion of Peach Bottom decommissioning did not include Peach Bottom 1 costs (PECO Exh. NBM-1 at 2-4) and the other making a similar representation regarding total decommissioning costs (Id. at 2-2). PECO has not explained why the decommissioning done after Peach Bottom 1 was retired from service twelve years ago was not sufficient or why a second decommissioning project should be funded by current PECO ratepayers.

The Company's presentation of its Peach Bottom 1 claim thus is quite different from its other decommissioning claims. For its Limerick 1, Salem 1 and 2, and Peach Bottom 2 and 3 claims, the Company presented the detailed results of the study of N. Barrie McLeod, PECO Statement 27 and PECO Exh. NBM-1. See also PECO St. 20 at 23. The OCA does not oppose these other claims.

In light of the Company's failure to explain either the work to be done or the costs involved, the OCA submits that the Company has failed to justify its request for current ratepayers to fund another ecommissioning of Peach Bottom 1.

2. The Company Has Not Shown Why Other Parties Benefitting From Peach Bottom 1 Do Not Share Responsibility For Costs Of This Second Decommissioning.

A number of parties other than PECO ratepayers appear to have benefitted from Peach Bottom 1. The Company shows no reason why those other parties should not share these Peach Bottom 1 decommissioning costs.

First, Peach Bottom 1 was not built solely by PECO or solely to benefit PECO ratepayers. Instead, as mentioned above, it was a prototype

reactor built under contract with the Atomic Energy Commission. OCA Exhibit 53, Attachment (c), is a copy of this contract. Moreover, 52 utility companies, jointly known as High Temperature Reactor Development Associates (HTRDA) contributed $16.5 million toward the construction of Peach Bottom 1. See OCA Exh. 53, Attachment (c) at 10. In return for this financial contribution, the HTRDA members were to "receive such technical knowledge, information and experience as will assist them in future years to design, construct and operate large nuclear plants of improved efficiency." Id. Under a PECO-AEC letter of intent dated February 16, 1959, of the total of $44,210,000 expected costs of developing Peach Bottom 1, the AEC was to provide $17 million in addition to the $16.5 million provided by HTRDA. Id., Attachment (b); Tr. 1030-31.

Thus, Peach Bottom 1 benefitted 52 other utility companies and was constructed under the partial sponsorship of the Atomic Energy Commission. Under these circumstances, it appears that it might be appropriate for those parties to contribute to Peach Bottom 1's decommissioning costs. PECO agreed that it has not attempted to obtain such contributions either from the federal government or from the other utility companies which benefitted from the construction and operation of Peach Bottom 1. Tr. 174. Instead, PECO in this case asks PECO ratepayers to pay the full costs of the nuclear portion of the decommissioning. Id.

Further, the Company has provided no documentary support for Mr. Wright's allegation on rebuttal that:

> It is neither practical nor contractually possible to require that the members of HTRDA contribute to the decommissioning cost of Peach Bottom Unit No. 1.

PECO St. 20A at 9. The contract itself has not been offered as evidence of this claim. Mr. Wright offered no evidence to support this assertion of a legal judgment. The Company has therefore shown no adequate reason why the other parties who participated in the construction of Peach Bottom 1 and benefitted from its experience should not share in its costs (or at least be asked to share those costs).

A second group that may benefit from Peach Bottom 1 is the other owners of Peach Bottom 2 & 3. The Company has not asked that group to contribute to Peach Bottom 1 decommissioning expenses either. Peach Bottom 1 is part of the same site as Peach Bottom 2 and 3. In his rebuttal, PECO witness Wright stated:

> Final decommissioning of this unit [Peach Bottom 1] cannot be completed while Peach Bottom Units No. 2 and 3 remain in operation since certain facilities at Peach Bottom 1 are critical to the operation of Peach Bottom station as a whole.

PECO St. 20A at 7. Thus, it appears that the final decommissioning of Peach Bottom 1 may have been delayed for the benefit of Units 2 and 3. PECO, however, only owns 42.49% of Units 2 and 3. PECO Exh. NBM-1 at 11. If Units 2 and 3 cause additional Unit 1 expenses, it might be appropriate for the other owners of those units to share the additional costs. Thus, the Company failed to explain why the first decommissioning was done in a way it now considers inadequate. It also failed to show what portion of the second decommissioning costs is related to Units 2 and 3, and therefore, might appropriately be apportioned among those Units' owners.

PECO, which has the burden of proof in this proceeding, has failed to explain the special circumstances of Peach Bottom 1 or to show

that it has explored whether other parties benefitting from that unit should contribute to these decommissioning costs.

3. PECO Has Not Shown Why Current Ratepayers Should Bear Peach Bottom 1 Decommissioning Costs.

The Company has also shown no proper reason why Peach Bottom 1 decommissioning expenses should be borne by its current ratepayers.

Unlike the other units PECO seeks funds to decommission, Peach Bottom 1 does not serve current ratepayers. The Company's argument for current funding for decommissioning those other units is as follows:

> Q. Why is it appropriate for the Company to recover decommissioning costs in this proceeding?
>
> A. Decommissioning is a known cost that the Company will incur when nuclear units are retired. Decommissioning expenses are an integral part of the costs of providing low cost nuclear generation. The Company's claim equitably recovers the cost of decommissioning over the life of the nuclear units.

PECO St. 20 at 22 (emphasis added). That justification simply does not apply to Peach Bottom 1. That unit's useful life ended twelve years ago, and it now provides no "low cost nuclear generation." In its claims for decommisioning costs of its other nuclear units, the Company asks current ratepayers to cover costs of units providing current benefits. The claim for Peach Bottom 1, however, asks them to pay a cost related to a unit which provides no such benefit.

Further, contrary to PECO witness Wright's claim on rebuttal, the Nuclear Regulatory Commission does not require that funds now be collected for this decommissioning. First, as pointed out by Trial Staff witness Mayer, Mr. Wright referred only to a proposed rulemaking which has been published for comment. If the NRC does adopt that rulemaking, it will not to do so until at least October, 1987. Staff St. MJM-2 at

1. Second, even if adopted, the draft rules will give utility companies two years to submit their funding plans. Thus, even if the rules are adopted in their present form, no funding would be required until at least 1989. See 50 Fed. Reg. at 5619 (Proposed §50.54 (cc) (2)).

Third, it is not clear that under the proposed rules an external funding reserve of the kind PECO has proposed would even be required for Peach Bottom 1. In publishing its proposed rules, the NRC stated:

> Funding methods considered acceptable in providing reasonable levels of assurance may be different for different types of facilities. For example, the situation of a large power reactor can be significantly different than for a small research or testing facility....
>
> Based on the above considerations, this proposed decommissioning rule permits a range of options which are expected to provide reasonable assurance of the availability of funds for decommissioning. The acceptable options are specified in the proposed rule. Planned regulatory guides will provide guidance on how these funding methods will be implemented.

50 Fed. Reg. at 5608. The proposed rules themselves discuss three specific methods other than the trust fund planned by the Company. The proposal also states that "other funding methods which are demonstrated by the applicant or licensee to provide comparable assurance" will be accepted. 50 Fed. Reg. at 5619 (Proposed §50.33 (k)(4)). PECO has not explored whether a less expensive funding plan could meet the NRC's proposed requirements.

Fourth, the NRC has stated its willingness to take differences among units into account, but the Company has not investigated what this flexibility might mean for Peach Bottom 1. For instance, the Company apparently believes the nuclear portion of the proposed Peach Bottom 1 decommissioning project will cost about $13 million (see, for example, PECO Exh. NBM-1, at 2-4, footnote). This is far less than the $100

million figure the NRC has selected as a default figure to be used by companies which fail to perform site-specific analyses of decommissioning costs. This difference is not surprising since the NRC has stated that:

> The specific amounts are chosen to provide sufficient funds for most of the licensees in each category. For power reactors the amount of $100 million (1984 dollars) was chosen based on data in NUREG/CR-0130 and -0672 (References 2 and 3), which analyze the costs of decommissioning PWRs and BWRs respectively.... For research and testing facilities a specific amount is not set due to the large diversity of facility types.

50 Fed. Reg. at 5606 (emphasis added). Peach Bottom 1, of course, is a "gas cooled reactor ... having a capacity of 40 megawatts" and was "constructed as a prototype." OCA Exh. 54. Thus, even under its proposed rules, the NRC might well accept a significantly less costly approach to assuring such funding for Peach Bottom 1.

In summary, even if the proposed NRC decommissioning funding rules are adopted, it cannot be assumed that they would require PECO to collect these costs in an external sinking fund paid by current ratepayers. Of course, since those rules have not been adopted, they do not currently put any constraint at all on PECO or this Commission. Mr. Wright's reference to that proposed rulemaking does not establish any Company obligation to provide current funding of a plan to conduct additional decommissioning work at Peach Bottom beyond that done when the unit was first taken out of service.

4. The Company's Claim For A New Peach Bottom 1 Decommissioning Project Should Not Be Allowed At This Time.

OCA submits that the Company has entirely failed to meet its burden of proof in justifying its claim for Peach Bottom 1 decommissioning. It has offered no explanation of why the first decommissioning was not adequate. It has offered no support for the

amount it alleges will be needed for another decommissioning. It has not shown why other parties benefitting from the construction of Peach Bottom 1 or current use of Peach Bottom 1 facilities ought not to carry a share of the costs. Finally, since current ratepayers receive no benefit from the unit and the work is not currently being done, the Company has made no showing of why current ratepayers ought to pay for this work. OCA submits that the entire Company claim should be denied, for an expense reduction of $691,000 and an increase to income of $347,000. OCA St. 7A, Sch. TEK-3; OCA St. 4A, Sch. 14.

I. The OCA Interprets The Keystone Alliance Order As Requiring An Income Adjustment At Least $2,068,000.

In its final accounting exhibit, PECO Exh. TPH-2A, the Company has made no adjustment to comply with the Commission's decision in the case of Keystone Alliance v. Philadelphia Electric Company, C-78080459, which mandated the disallowance of specified lobbying and promotional expenses. The Commission has indicated, in a Tentative Amended Order, that it intends to require refunds to ratepayers of payments made for those expenses under rates set in the last two PECO base rate cases. Id., Tentative Amended Order entered February 18, 1986, at 1. Those disallowances and refunds are to be implemented in this case.

The exact amount of the adjustment to be made is still under litigation at C-78080459. As noted above, the Commission has entered a Tentative Amended Order in the Keystone Alliance case, clarifying the Opinion and Order entered September 4, 1985. In that Tentative Amended Order, with regard to the rates set at R-842590, the Commission stated:

> [W]e find that, on an annual basis, the amount of $4,723,000 is the correct expense disallowance to be refunded to PECO customers relative to the base rates currently in effect.

Tentative Amended Order, at 3.

Specific amounts for the refund with regard to rates set at R-822291 and the prospective disallowances in this case were not set in that Tentative Order, but the Commission directed that the Company file information on the expenses covered by the Keystone Alliance order in this, the current rate case. PECO and the OCA have filed exceptions and reply exceptions respectively to that Tentative Amended Order.

Final action by the Commission determining the adjustment amounts is still pending as of the writing of this Brief. OCA's proposed adjustment as stated in this Brief reflects the OCA's understanding of the Commission's original Order and the indication of Commission intent given in the Tentative Amended Order. Accordingly, the OCA's adjustment may require revision consistent with further developments at C-78080459.

OCA Witness Bleiweis has quantified these adjustments, and presented them in his direct testimony. OCA St. 4 at 47-49; OCA St. 4, Sch. 13. These quantifications rely on information provided by the Company. See OCA Exh. 31; PECO St. 18A at 1-7; PECO St. 18A, Schs. 2-4.

Mr. Bleiweis's proposal would result in three adjustments to the Company's claim. First, $2,644,672 in pre-tax expenses for the future test year must be disallowed. Second, $2,095,490 collected under rates set at R-822291 should be refunded to ratepayers, which, under a three-year amortization, would produce a $698,497 pre-tax expense reduction. Third, at least $2,326,412 from rates set at R-842590 should be refunded, for a $773,471 pre-tax expense reduction over a three-year amortization. Thus, OCA's total recommended expense reduction is $4,117,000, which results in an increase to income of $2,068,000. OCA St. 7A, Rev. Sch. TEK-3; OCA St. 4A, Rev. Sch. 13.

J. The "Actual Taxes Paid" Doctrine Requires Three Adjustments To The Company's Tax Claims.

1. Tax Savings Resulting From Use of A Consolidated Return Must Be Reflected In PECO's Rates.

Philadelphia Electric Company files a consolidated federal income tax return in which the incomes of other PECO subsidiaries are combined with the income of the Electric Division. PECO Exh. 1, II-D-23c provides a copy of the Company's 1985 federal income tax return. Under the holding of Barasch v. Pa. PUC, 507 Pa. 561, 493 A.2d 653 (1985), savings accruing to regulated companies from consolidation of tax returns must be reflected in rates. Since PECO's Electric Division receives savings as a result of participating in the consolidated return, an appropriate adjustment to reflect those savings must be made in this case.

In Barasch v. Pa. PUC, the Pennsylvania Supreme Court ruled:

> Our Courts have consistently held it to be improper to include, for ratemaking purposes, tax expenses which, because of the filing of a consolidated return, are not actually payable. All tax savings arising out of participation in a consolidated return must be recognized in rate-making, otherwise we would be condoning the inclusion of fictitious expenses in the rates charged to the ratepayers.

507 Pa. at 568, 493 A.2d at 653 (emphasis added). Accordingly, in this case, since savings can be expected to result from PECO's filing of a consolidated return, those savings must be reflected in rates.

The record in this case indicates that PECO will receive tax savings from its consolidated tax return in the future test year. Eastern Pennsylvania Exploration Company (EPEC), a PECO subsidiary, has had negative taxable income in each of the last five years. Mr. Bleiweis described this situation as follows:

> During cross-examination of Mr. Sileo, it was noted that the company stated in its last two cases that EPEC was budgeted to be profitable. However, to date, EPEC remains in a loss position. It is only fair that the PUC recognize the facts as they stand - this subsidiary has been in a loss position for at least five years. Though losses have somewhat diminished, the hard facts are that, contrary to company budgets, the subsidiary remains unprofitable. Until the company can show that EPEC actually has made a profit, its continual losses should be recognized for ratemaking purposes.

OCA St. 4 at 31-32. In this case, PECO has not even argued that EPEC's situation will change in the future test year. The Company has also indicated that PECO's Electric Division will have positive taxable income, and therefore will benefit from the tax savings produced by the consolidated return. Accordingly, a reflection in rates of these projected savings is required.

Mr. Bleiweis calculated the benefits of PECO's consolidated tax return and presented an allocation of those benefits, which he showed in his Schedule 8. OCA St. 4A, Sch. 8. Mr. Bleiweis's analysis allocates the tax savings generated by PECO subsidiaries which showed a loss in both 1983 and 1984, to those subsidiaries which showed positive taxable income in 1984. This allocation is based on the percentage each such positive income subsidiary contributed to the total income of all positive income subsidiaries in 1984. Mr. Bleiweis described his methodology as follows:

> Schedule 8 details this calculation. The basic methodology is to, first, reflect two-year total taxable income or loss data for Philadelphia Electric company and its subsidiaries (column 3). The two years utilized were 1983 and 1984 and the source of such data is the company's tax returns - Schedule M-1. A two year period should give a representative picture of the taxable status of the subsidiaries.

> Second, average taxable income or loss is calculated for each subsidiary (column 5). Columns 6 and 7 then develop an allocation factor to be utilized in allocating the taxable loss back to those subsidiaries in a positive taxable situation over the two-year period. Column 6 shows a 89.19% allocation factor for PECO. Column 7 totals the average tax losses available from Adwin Equipment Co., Eastern Pennsylvania Development Co. and Eastern Pennsylvania Exploration Co.
>
> After taking 46% of the adjusted total average tax losses, 89.19% of the tax savings is allocated to PECO and 86.18% is further allocated to the Electric Division to be utilized as a tax savings applicable to the current portion of the company's federal tax liability for ratemaking purposes.
>
> * * *
>
> Column 6 develops an allocation factor based upon only those subsidiaries in an average positive taxable position during the 1983-1984 time period. Therefore, each subsidiary in a positive taxable position only receives a pro rata share of the total average taxable losses of those subsidiaries in a negative taxable position.

OCA St. 4 at 29-31.

As noted above, Mr. Bleiweis conservatively used a two-year average to determine average taxable losses. He testified that this was appropriate because:

> The use of a longer period of time would have distorted the average taxable losses of Eastern Pennsylvania Exploration Co., the principle source of taxable losses within PECO. Losses in years prior to 1983 were much higher than those in 1983 and 1984. Therefore, to be conservative, I utilized only those losses for the most recent two years.

OCA St. 4 at 30 (emphasis added).

Mr. Bleiweis's recommendation is also conservative in its selection of which subsidiaries to project as loss companies in the future test year. He thus did not reflect in his recommendation the

$50,925 average tax loss incurred by PECO subsidiary Adwin Equipment Company in 1983 and 1984. As he noted:

> This subsidiary has been in a loss position in only two of the past six years. Therefore, to be conservative, I have not reflected a two year average loss for purposes of this computation.

OCA St. 4 at 32.

Based on this analysis, Mr. Bleiweis recommended allocation to the Electric Division of a tax savings of $342,000. OCA St. 4A, Sch. 8. OCA submits that the Company's projected expenses must be reduced by that amount.

Company witness Sileo's opposition to this adjustment lacks merit. Mr. Sileo claimed: "[I]t is inappropriate for PECO ratepayers to receive the benefits of tax losses which were generated by expenses which ratepayers did not incur or support." PECO St. 23A at 6. In the Barasch case, however, the Pennsylvania Supreme Court specifically rejected this argument. The Court held that losses generated by such subsidiaries reduce the taxes actually paid by PECO and therefore also reduce the expenses for which ratepayers can be held responsible. As noted above, the Court ruled that: "All tax savings arising out of participating in a consolidated return must be recognized in ratemaking." 507 Pa. at 568, 493 A.2d at 653.

Further, as OCA witness Bleiweis pointed out:

> [Mr. Sileo's] statement is clearly in opposition to the principle that taxes for ratemaking purposes should be reflected on an "as paid" basis. If the taxes actually paid by the company reflect the benefits generated by the tax losses of its subsidiaries, then for ratemaking purposes, ratepayers should share in these benefits.

OCA St. 4A at 4 (emphasis in original).

The policy of reflecting taxes "as paid" in rates also explains why it is irrelevant to this adjustment that, as Mr. Sileo notes:

> [Eastern Pennsylvania Exploration Company, the main source of tax savings] is a wholly owned subsidiary of PECo which is engaged in natural gas exploration and drilling, and consequently, has no impact on the Company's electric operations.

PECO St. 23A at 7. As Mr. Bleiweis pointed out: "EPEC does have a direct impact on the amount of federal income taxes paid by the consolidated entity." OCA St. 4A at 5 (emphasis added). This tax reducing effect must be reflected in PECO's rates.

Mr. Sileo also referred to the fact that a larger adjustment for consolidated tax savings was made to PECO's gas division rates in Pa. PUC v. Philadelphia Electric Co., 60 PUR 4th 101, 130-131 (1984). PECO St. 23A at 7. OCA would note, first, that Mr. Bleiweis's adjustment reflects the portion of total savings from the consolidated return which are allocable to PECO electric division. Similarly, the Commission's adjustment to gas division rates reflected an allocated portion of total savings at that time. Id., 60 PUR 4th at 130-131. Accordingly, there is no double counting between these adjustments. Moreover, rates set in the last gas division case were properly based on then-current facts, from an appropriate test year for that case. Those rates reflected the consolidated tax savings mentioned by Mr. Sileo, and many other costs of service which may have changed in the interim. A single change in those costs to the gas division like the one noted by Mr. Sileo, isolated from other costs, provides no basis for rejecting a legally mandated adjustment to electric division rates at this time.

Finally, contrary to Mr. Sileo's assertions (PECO St. 23A at 7), Mr. Bleiweis's use of 1984 data, rather than two-year data, to develop

allocation factors for consolidated tax savings is entirely proper. Mr. Bleiweis testified:

> [A]ctual 1983 tax data were distorted by large tax losses incurred by PECO's utility operations (see Schedule 8) and ... it was, therefore, necessary to use only 1984 data as a surrogate.... I checked the accuracy of this allocation methodology by comparing it to allocations I had computed previously for PECO and its subsidiaries and found my present allocation to be reasonable.

OCA St. 4A at 5-6. Mr. Bleiweis made a reasonable selection of an allocation factor based on actual PECO data from a year in which PECO's utility divisions had positive taxable income. PECO has stated that, under its rate increase request, it anticipates substantial positive income tax liability. PECO Exh. TPH-2A, A-1. It is appropriate, therefore to select the most recent available year in which PECO's utility operations reported positive federal income tax liability. It would be highly inequitable to require ratepayers to pay several hundred million dollars in taxes through rates and deny them the benefit of consolidated tax savings because the utility did not have positive taxable income in a previous year.

Thus, OCA submits that each of PECO's claimed objections to Mr. Bleiweis's calculation and allocation of consolidated tax return savings is invalid. Mr. Bleiweis's recommended adjustment should be adopted. This adjustment reduces the Company's tax expense by $342,000, and increases the Company's income available for return by the same amount. OCA St. 4A, Sch. 8; OCA St. 7A, Rev. Sch. TEK-3.

2. PECO's Balance For Accumulated Deferred State Taxes Should Be Refunded To Ratepayers.

In the Company's last base rate case, the Commission ordered that the Company flow through all the benefits of tax timing differences for state income taxes. 58 Pa. PUC 743, 811-812 (1985). While PECO is no longer collecting additional state income tax deferrals, the Company continues to maintain a balance of previously collected accumulated deferred state income taxes based on Commisison orders allowing normalization of such tax benefits in certain prior cases. The OCA submits that there is no further need for this balance, and recommends that the remaining balance be refunded to ratepayers over a period of five years.

The Commission recently ordered a similar adjustment in Pa. PUC v. Bell of Pennsylvania, R-842779 (October 24, 1985). In that case, the Commission explained that this adjustment is needed:

> to maximize the opportunity for a refund of those funds to the ratepayers who provided them over a reasonable period of time without creating a hardship for the company.

Id., Order at 106. Accordingly, the Commission adopted an OCA adjustment which, like the one proposed here, amortized the funds in question back to ratepayers over five years. Id., Order at 104. OCA St. 4 at 23.

It is clear that a similar adjustment is needed in this case. Without it, ratepayers will be unfairly treated. They will be left to wait for the tax timing differences which produced the deferrals to become reversed, which will only occur as straight line depreciation on assets becomes greater than accelerated depreciation. This will occur

only in the late years of those assets' lives. As Mr. Bleiweis pointed out, "such a process may take many years." OCA St. 4 at 24.

The adjustment proposed by the OCA will return to ratepayers in a reasonable period of time the funds which they paid to create this balance. Mr. Bleiweis pointed out that a five-year amortization was more likely to return the funds to the same ratepayers who paid them. As Mr. Bleiweis stated:

> My recommendation of amortizing the accumulated deferred state income tax balance over five years will benefit those ratepayers who previously paid for such tax timing differences in rates.

OCA. St. 4 at 24. This is precisely the result which the Commission stated that it desired in the Bell case.

Accordingly, Mr. Bleiweis presented his Schedule 5, showing an expense reduction of $5,658,000 for a five-year amortization of the deferred state income tax balance. Mr. Bleiweis also calculated the required corresponding increase in rate base to reflect the fact that the Company no longer has the use of these ratepayer-supplied funds.

PECO witness Sileo's objection to this adjustment is without merit. He asserted on rebuttal that:

> The amortization of these deferred tax balances over a period of time shorter than over the associated life of the property is contrary to past decisions of the Commission and is clearly retroactive ratemaking. In past Commission decisions which established these balances, normalization was specifically ordered. Implicit in the normalization methodology of setting rates is the flow back of the deferred taxes over the life of the associated property.

PECO St. 23A at 4-5.

Mr. Sileo apparently failed to recognize, however, that the normalization method is no longer Commission policy with regard to state income taxes. Accordingly, there is no basis for maintaining this balance rather than giving the benefits of this balance to the ratepayers who originally paid to create it. Rather than constituting retroactive ratemaking, this amortization results in a full prospective implementation of this Commission's flow-through policy.

These adjustments result in an annual expense reduction of $5,658,000 and an upward adjustment to income of $3,055,000. In addition, to complete this adjustment, PECO's rate base must be increased by $7,167,000, which is included in the $23,375,000 liberalized depreciation adjustment at OCA St. 7A, Rev. Sch. TEK-2.

3. As Proposed By The Commission Trial Staff, PECO's Claim For Deferred Taxes Relative To Capitalized Pensions, Taxes, And Benefits Should Be Denied, And The Accumulated Balance For Such Deferred Taxes Should Be Refunded To Ratepayers.

The Company has submitted a claim for $9,578,000 for deferred taxes relating to capitalized pensions, taxes and benefits. Trial Staff witness Heverling recommended that this claim be denied in its entirety and that the Company's accumulated balance for deferred taxes relating to these capitalized items should be refunded to ratepayers over a five-year period. Staff St. JMH-1 at 5. OCA agrees with Trial Staff that this adjustment should be made. OCA St. 4A at 7; OCA St. 4A, Sch. 15.

The normalization of these tax expenses is not required by the Internal Revenue Code. Further, these deferred taxes are not actual tax expenses. The OCA submits, therefore, that they should not be reflected for ratemaking purposes. In fact, their reflection in rates would be in

direct contravention of the Pennsylvania Supreme Court's decision in Barasch v. Pa. PUC, 507 Pa. 496, 492 A.2d 94 (1985). As we noted above, that decision mandates the reflection of actual taxes in rates.

The applicable rule on this issue was clearly stated by the Commisison in Pa. PUC v. Metropolitan Edison Company, R-842770 (October 25, 1985), as follows:

> [S]ince the advent of Barasch, flow through of state income tax benefits to ratepayers is now mandated by the Supreme Court.
>
> Consequently, we agree with OCA's conclusion that "the allowance of normalization of capitalized overhead's violates the actual taxes paid doctrine" ... and that "the issue of the tax benefits for capitalized overheads falls squarely within the ambit of the Supreme Court's analysis concerning the normalization of state income tax benefits."

Id. at 69-70.

Denial of the Company's current claim for such deferred taxes will produce an expense reduction of $9,578,000, and an increase to income of $4,811,000.* Return of the accumulated balance for these taxes over five years will reduce expenses by $6,630,000, and increase income by $3,330,000. The total income adjustment therefore will be $8,141,000. A corresponding rate base increase of $16,208,000 is also required, as shown on OCA St. 4A, Sch. 15, and reflected in the $23,375,000 adjustment for liberalized depreciation at OCA St. 7A, Rev. Sch. TEK-2.

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* OCA St. 4A, Sch. 15, and OCA St. 7A, Sch. TEK-3 do not show this amount correctly. Sch. 15 correctly shows the expense reduction of $9,578,000 and the tax amount of $4,767,000, but incorrectly shows $4,767,000 as the income adjustment as well. The correct number, as noted above, is $4,817,000. This error has been carried over to Sch. TEK-3, where the total income adjustment figure of $8,097,000 is therefore incorrect. It should be $8,141,000, as stated in the text above.

K. PECO Must Continue To Amortize To Ratepayers The Profit Which It Received By Selling The Salem 2 Tax Benefits.

In the last PECO base rate case, the PUC directed PECO to amortize to ratepayers a $6.9 million payment it received from the Hercules Corporation as part of the sale of tax benefits from Salem Unit 2. The return to ratepayers mandated by the Commission was to made over the course of 15 years. 58 Pa. PUC at 809-811. In addition, the unamortized balance was to be removed from rate base because it does not represent investor-supplied funds. In this case, the Company has failed to reflect this Commission-ordered amortization of the $6.9 million payment to ratepayers and the corresponding rate base adjustment. PECO St. 23 at 7. OCA submits that this amortization and rate base reduction must continue to be made in this case.

The issue of this payment was fully litigated and thoroughly considered by the Commission in the last case. The Commission's Opinion and Order speaks for itself. Since it was entered, there has been no change in the facts about that payment, and no relevant change in the law. The Company did not appeal the Commission decision on this issue. PECO witness Sileo acknowledged all of these facts on cross-examination. Tr. 271-73.

Accordingly, OCA submits that there is no basis for reconsideration of the Commission's decision in this case. The Commission's determination that ratepayers should receive this $6.9 million is now established. OCA urges therefore, that the amortization to ratepayers, ordered by the Commission in the last PECO base rate case, be continued in this case.

This adjustment results in an annual expense reduction of $228,000 and an increase to income in the future test year of $115,000. OCA St. 7A, Rev. Sch. TEK-3; OCA St. 4A, Sch. 7. It also requires a rate base reduction of $6,098,000, reflecting the remaining unamortized balance. OCA St. 7A, Rev. Sch. TEK-2; OCA St. 4 at 26; OCA St. 4, Sch. 7.

IX. RATE STRUCTURE

A. Introduction

As part of its rate increase request in this case, the Company has presented a proposed revenue allocation to the various customer classes. PECO Exh. TPH-2, A-5. This revenue allocation is based, in part, on the Company's cost of service study. PECO Exh. WFS-1. The Company has proposed that any increase be allocated to all classes on an across-the-board basis with the stipulation that no class be allocated an increase which would cause its class average rate of return to exceed 140% of the system average rate of return. Further, any revenues which would have been allocated to a class but for the 140% cap, are instead allocated to those classes which have a class average rate of return below 100% of the system average rate of return.

The Office of Consumer Advocate has presented testimony by Mr. Bruce R. Oliver contesting both the Company's cost of service study and, in part, its proposed revenue allocation. The OCA has agreed with PECO that any increase in this case should generally be allocated across-the-board to all classes based on total revenues. However, the OCA has proposed that the Company's cost of service study be modified to properly classify and allocate production and distribution investment.

The OCA has also proposed an "essential-use" rate design for the Residential Class. PECO's residential rates are already the highest in Pennsylvania. The addition of a further substantial rate increase would greatly increase the burdens of PECO's low-income customers. Some moderation of the rate increase for electric usage which is essential to daily living is therefore necessary in this case. The residential rate

design the OCA proposes is based upon cost of service principles and results in both proper price signals to residential ratepayers and some moderation of the rate increase for essential uses of electricity.

B. PECO's Cost Of Service Study Improperly Classifies Investment In Power Production Facilities As Being Solely Related To Meeting Coincident Peak Demands.

1. Introduction

The Company, through its witness Mr. William F. Sundermeir, has presented a cost of service study based upon an average of the highest system coincident peak hour in each month from June through September. This 4 coincident peak (4CP) analysis is used to classify and allocate all of PECO's power production and transmission investment and related expenses. PECO St. 24 at 6. The 4CP approach measures class demands at the time of the 4 system monthly peak hours. It classifies all production and transmission expenses as related to meeting those 4 peak hours, and it allocates all investment in such facilities to classes based upon the measured coincident class demands. The Company's use of this approach is premised on the assertion that its power production and transmission system is sized and built solely to meet summer peak loads. PECO St. 24A at 1, Tr. 1783.

The OCA submits that the Company's approach to the classification of power production investment and expenses fails to consider all of the relevant factors which caused the Company to design and build its system and, in particular, Limerick 1. Specifically, the Company's cost of service study ignores the fact that a baseload power plant is designed to meet not only coincident peak loads, but also to generate energy throughout the year. While the OCA agrees that the total number of

megawatts of capacity on the PECO system is designed to meet peak demands, the generation mix built to supply those megawatts will vary in cost depending upon year-round energy usage on the system.

2. Generation Planning Principles Indicate That Power Production Investment Is Related To Both Peak Loads And Energy Use Throughout The Year.

A cost of service study is an analysis of the types of costs or investments a utility incurs, the reasons for that cost incurrence, and the allocation of those costs to the classes which prompt the incurrence. The central focus of the discussion at hand is the second step, the classification of costs based on the reasons for incurrence. Classification of power production and transmission investment and expenses should be based upon an understanding of the generation planning process. Mr. Oliver discussed this process as follows:

> PECO's generation planning must consider both reliability and economics of the capacity that it builds and maintains to serve its customers. PECO's concerns with respect to reliability are primarily a function of the amount of capacity installed and available at any point in time. The Company's decisions with respect to the type(s) of capacity on which it will reply are based on joint consideration of (1) the frequency and duration of system loads and (2) the costs and operating characteristics of alternative generating technologies.

OCA St. 8 at 11 (emphasis in original).

The OCA submits that a review of the actions of PECO, and of statements of Mr. Rush, PECO's Chief System Planning Engineer, will show that the Company has devoted substantial investment to power production above and beyond the investment needed to meet peak demands in 4 summer hours. As discussed in §IV of this Brief, a substantial portion of the Limerick 1 investment represents excess capacity which may never provide

net economic benefits to ratepayers. The massive Limerick 1 investment, however, was certainly not incurred to simply meet 4 summer peak hours.

Mr. Rush discussed in general terms the considerations affecting power production investment by PECO in his Direct Testimony as follows:

> A. Rational generation planning, therefore, must consider both reliability and economics. The Company considers these economic factors in both the amount and type of capacity to be utilized on its system.
>
> * * *
>
> Similarly, we carefully consider economics in the type of capacity which is installed, i.e. base load generation, intermediate (cycling) generation, and peaking generation. In order to satisfy the requirement of varying loads on an electric power system in the most economic manner, the available generation must have different load carrying functions (i.e. must be able to satisfy different portions of the demand for electricity). To minimize the revenue requirements associated with capital charges and production costs, the optimum mix of generation must include base load generation, intermediate generation, and peaking generation.

PECO St. 14 at 17-18 (emphasis added).

The OCA submits that it is improper for Mr. Sundermeir to classify and allocate power production investment in his cost-of-service study in a manner completely contradictory to the Company's stated rationale for the incurrence of that investment.

Limerick 1 represents possibly the prime example of a PECO generating station built for energy production as compared to solely meeting peak demands. Review of ALJ Klovekorn's Recommended Decision in the Limerick Investigation, I-80100341, substantiates that Limerick has been justified on the basis of energy savings and not capacity/peak demand considerations. Thus, the ALJ stated as follows:

> Finally, and most significantly, the company argues that the issue of capacity and reserve margins are not relevant here.
>
> * * *
>
> Under these circumstances, it appears that the economic desirability of Limerick's installation is unrelated to capacity levels, since the primary purpose of the plant now is to reduce PECO's dependence on oil-fired generation (Tr. 233-35), and not to supply new or additional load.

Limerick Nuclear Generating Station Investigation, I-80100341, I.D. at 99-100 (emphasis added).

Similarly, the Commission's Order at the same docket stated as follows:

> No party to this investigation has attempted to justify the continued construction and completion of Limerick on the basis of growing system demand and the need to add new capacity. The central controversy turns on whether the Limerick Units are the most reliable and economic method of replacing PECO's fossil fuel fired generation. The cost of continued use of the Company's fossil fuel plants, as contrasted to replacement of these units with Limerick or some other alternative (e.g., conservation, smaller coal-fired units, purchase of capacity at PP&L's Susquehanna Steam Station), has been extensively debated by the parties.

56 Pa. PUC at 63 (emphasis added).

The costs incurred to construct Limerick 1 are substantial. These costs were not incurred solely to meet demands on 4 coincident summer peak hours. Mr. Oliver discussed these costs as follows:

> Q. What portion of PECO's generating unit investment costs can be attributed directly to the Company's efforts to achieve lower production costs?
>
> A. The portion of investment that is incurred to gain lower energy costs will vary by plant. For a new base load generator, such as Limerick Unit 1, however, the portion of total investment that is incurred in an attempt to achieve energy cost savings may exceed 90

> percent. For example, Appendix A of the Company's Petition in this case shows a total rate base cost of Limerick Unit 1, including common plant, of $3,710,373,000. This represents a cost of more than $3,500 per kW of installed generating capacity. By comparison, if PECO was only concerned with having sufficient capacity available to meet peak requirements on a few high load days each year, it could have installed an equivalent amount of combustion turbine capacity at a cost of approximately $267 per kW. (OCA Statement 6, page 43) Thus, in building Limerick 1, the Company has incurred more than thirteen times the investment cost necessary to obtain a sufficient amount of capacity to meet coincident peak requirements, and this calculation does not address the retirement of existing generating units. We must, therefore, conclude that for each kW of Limerick capacity, at least $3,233 (i.e., more than 92 percent) were incurred to obtain lower production costs.

OCA St. 8 at 23 (emphasis added).

The use of the 4CP for classification and allocation of power production and transmission investment completely fails to account for the reasons the investment was incurred. The 4CP looks at only one part of the process, coincident peak demand, and uses it to try to explain total investment. That is a feat beyond its limited capability. The OCA submits that it must therefore be rejected as the basis for classifying and allocating total power production and transmission investment.

3. Mr. Oliver's Methodology Properly Recognizes Both The Demand And Energy Components Of Power Production Investment.

A cost of service study should properly reflect cost causation. As discussed above, Mr. Sundermeir's 4CP does not accomplish this goal. OCA witness Oliver presented a Peak and Average cost of service study. The OCA submits that this methodology more appropriately reflects cost causation. Mr. Oliver discussed his proposal as follows:

> I propose the use of the Peak and Average Demand Methodology for allocation of production plant related costs in this proceeding. I believe that this method of cost allocation reasonably reflects the duality of the Company's generating capacity planning decisions. The Peak portion of the Peak and Average Method recognizes the amount of capacity required, while the Average portion of the Peak and Average Method gives weight to the Company's decisions regarding the type(s) of capacity required. Neither an all-energy (average demand) allocation nor an all-demand (coincident peak) allocation of the Company's production plant related costs is acceptable because neither, by itself, captures both essential elements of the capacity planning process. I also note that the significance of the portions of the Company's recent investments in generating plant that are clearly in excess of those required simply to meet peak requirements suggests that reasonable weightings of capacity type and capacity amount considerations should probably yield a result that is weighted more toward an all-energy result than toward a strictly demand oriented allocation.

OCA St. 8 at 15 (emphasis added).

Mr. Oliver's Peak and Average methodology serves to weigh the A1-demand and C1-energy allocators in Mr. Sundermeir's cost of service study. The A1 allocator represents class contributions to the four summer month coincident peaks. The C1 allocator measures customer class annual energy requirements, and represents each class' proportionate contribution to system average demands. OCA St. 8 at 16. The weighting of the A1 and C1 allocators is based upon system annual load factor. OCA St. 8 at 16. Load factor is a measurement of the relationship of average demand to peak demand. This weighting, therefore, accurately reflects the energy portion of production investment as measured against peak demand investment.

4. Classification Of Production Investment On An Energy/Demand Basis Has Been Adopted By A Number Of State Utility Commissions.

The need to properly classify utility investment in power production plant between demand and energy has been recognized by both this Commission and other state commissions. As will be seen from the following discussion, variations of the peak and average methodology, as proposed by the OCA in this proceeding, have been adopted in numerous jurisdictions.

The Pennsylvania P.U.C. has, in the past, acknowledged the importance of energy costs in classifying and allocating power production investment. In the case of Pa. P.U.C. v. West Penn Power, 54 Pa. PUC 602 (1981), the Commission stated as follows:

> We agree with the Consumer Advocate that West Penn must construct generation and transmission plant which provide energy on a fairly constant basis throughout each day and that the types and sizes of transmission facilities are also determined by the amount of megawatt hours. We are persuaded that Consumer Advocate Miller was correct in his conclusion that:
>
> > [T]he excess of the installed cost of a base-load generating unit over the cost of the same quantity of peaking capacity is thus a substitute for higher fuel costs that would have to be incurred if all the installed capacity were peaking units and they had to be run throughout the day, week and year to supply base loads. Since the additional capacity costs of base-load generating units is thus incurred to serve base loads, it is appropriate that this cost be allocated on the basis of average demands rather than some measure of responsibility for the system peak demands. This corresponds to the energy basis on which fuel costs are allocated.
>
> The single peak demand allocation method used by West Penn fails to recognize that bulk power supply costs are caused by peak demand requirements as well

> as by average demands. West Penn's method benefits large customers at the expense of the small user because the large users are not paying their share of the additional cost of generating units which are constructed to provide the lower cost base-load generation.

Id. at 634 (emphasis added).

The Commission has also approved a demand/energy split for allocating the costs of Three Mile Island Unit I (TMI-1). In the case of Pa. PUC v. Metropolitan Edison Co., 56 PUR 4th 230 (1983), the Commission adopted ALJ Matuschak's Recommended Decision in which he approved Met-Ed's 55% demand/45% energy allocation for TMI-1. ALJ Matuschak there stated as follows:

> Bethlehem Steel Corporation and some other industrials, relying on the testimony of their witness Eisdorfer, contend that the TMI-1 investment should be allocated on a demand basis.
>
> Bethlehem's argument is premised on the untenable assertion provided by witness Eisdorfer that TMI-1 was constructed almost exclusively for capacity reasons. Mr. Eisdorfer admitted, however, that the planning of a particular base load unit does consider lower cost energy as a significant consideration. This was the case concerning Met-Ed's decision to construct TMI-1. As Met-Ed witness Carter expressly noted, it was not only capacity but the total cost for meeting the system generation requirements that was considered during the planning of TMI-1.
>
> Thus, the 45% energy-related allocation proposed for TMI-1 properly allocates those portions of the capital costs incurred in order to provide a least cost system. The industrial customers of Met-Ed are the principal beneficiaries of lower energy costs, and hence it was not improper to allocate on energy part of the cost of TMI-1, which created those savings.

R.D. at 116-117 (emphasis added).

In the case of Pa. PUC v. Metropolitan Edison Co, R-842770 (October 25, 1985), the Commission re-affirmed its earlier approval of an energy/demand allocation for TMI-1. In so doing, the Commission

stated as follows:

> We maintain our position expressed in our last Met-Ed decision (R-822249 at 82-84) where we found that TMI-1 related costs should be based on the resulting benefits of operating the generating unit. The energy savings that will be realized from the operation of TMI-should be recognized by the Company through the allocation of the costs of this facility. We therefore reject the GPU Industrials' position that costs be allocated based on the Company's initial intent for constructing the unit.

Id. at 96 (emphasis in original).

The New Jersey Board of Public Utilities has adopted the use of an "average and excess" methodology, based upon coincident system peak, in the case of Re Atlantic Electric Co., 44 PUR 4th 270 (1981). In so doing, it stated as follows:

> The board is convinced that construction of base-load plants is undertaken to furnish less expensive energy on a yearly basis as opposed to meeting an increased peak demand for electricity. Building more base-load capacity results in less reliance on costly peaking facilities during the times of the year when demand exceeds the ability of existing base-load plants to meet the energy needs of a utility's customers.
>
> Thus, system planning considerations dictate that both class year-round energy use and coincident peak demand be used in allocating plant at the generation and bulk transmission levels. The coincident peak methodology fails to consider both factors in that it allocates investment costs solely on the basis of an individual class' demand at the time of system peak.
>
> The average and excess method presented by the public advocate is better suited to reflect the dual-dimensional aspect of system planning.[1] The

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[1] The average and excess allocation factors adopted by the board are derived by weighting a class' share of system average demand by system load factor; and weighting class' coincident peak share of the system peak demand by (one-system load factor); and adding these together.

company elects to add base-load capacity for the purpose of providing economical energy. It, therefore, spends large amounts of money per kilowatt because of the capital intensive nature of base-load plants; this should be reflected in the costing methodology chosen to distribute the responsibility for those costs to its service classifications. The average and excess methodology takes into account average demand as well as coincident peak demand in allocating costs.

44 PUR 4th at 272 (emphasis added).

The Maryland Public Service Commission, in a Delmarva Power & Light Company case, similarly adopted both energy and demand factors for classifying power production investment. The Commission, in adopting Delmarva's proposed energy/demand allocation methodology, cited the Company's rationale as follows:

> Mr. Gerritsen [company witness] noted three reasons for the proposed change in the Company's allocation methodology: changing system load characteristics, the capital costs of new production plant, and recent regulatory decisions on this issue.
>
> * * *
>
> With respect to the second reason, Mr. Gerritsen stated that base-load plants include additional capital costs beyond those that would be incurred for intermediate or peaking plants and that these costs are incurred so that the plants can use lower cost fuel. The Company's proposal to incorporate average demand or energy usage in the allocation procedure is intended to address this aspect of capital cost incurrence. With respect to the third reason, Mr. Gerritsen said that recent decisions in Delmarva cases and other cases indicate a shift away from a pure coincident peak allocation method toward methods that recognize some measure of energy use in the allocation process.

In the Matter of the Application of Delmarva Power & Light Company to Increase its Rates for Electric Service. Case No. 7734, Order No. 66488 at 5 (Dec. 1983) (emphasis added).

The Delaware Public Service Commission has also approved the use of a demand/energy based methodology. In a Delmarva Power and Light Company case, the P.S.C. approved a 65% demand/35% energy allocation using system coincident peak demand and average energy use. In the Matter of the Review of the Electric Rate Design of Delmarva Power and Light Co., PSC Docket No. 82-23 (May, 1984). In that case the P.S.C. stated:

> In making our decision as to the appropriate allocation methodology to approve in this docket, we seek to approve a methodology which produces rates more closely based on a proper recognition of cost responsibility. We believe this goal will be better met by the adoption of an allocation methodology which recognizes both the quantity of production capacity installed by this utility, as well as the type of facilities used. Generating plants are normally designed to serve the utility's entire load at the lowest total cost. This involves a consideration of fuel or energy costs, as well as plant construction costs. Allocating production plant solely on the basis of peak responsibility recognizes the quantity of facilities needed by the utility to meet peak demand. However, it does not address the types of generating units which are necessary to service that demand, as well as other loads on the system, at the lowest total cost.

Mimeo at 3-4 (emphasis added).

The above three cases are of particular import because the Commissions involved regulate Atlantic Electric, Delmarva Power & Light, and Public Service Electric and Gas, each of which is a joint owner with PECO of the nuclear units Salem 1 and 2 and Peach Bottom 2 and 3. The four companies together are sole owners of these four nuclear units. The Maryland, Delaware and New Jersey Commissions have each held that utility investments in these exact plants include both energy and demand considerations. Of all the owners, only PECO continues to classify and allocate that plant as though meeting peak load were the sole relevant

factor for cost classification of these jointly owned baseload plants. Only PECO classifies and allocates investment in these nuclear baseload plants as if they were built for the same reason as a combustion turbine. Every other owner, and related regulatory authority, recognizes the dual nature of power plant investment.

The North Carolina Utilities Commission has, since 1981, used the peak and average allocation methodology. In the case of Re Carolina Power & Light Co., 41 PUR 4th 315 (1981), the Commission stated as follows:

> Company witness Nevil stated that the P&A allocation method promotes cost-based rates by better matching the cost of production plant with each jurisdiction's or class's use of specific types of plant. The quantity of production plant necessary is related to the coincident peak whereas the type of facilities to be installed--i.e., peak, base load, etc.--depends on the average use of these facilities.
>
> * * *
>
> Base-load generating units are significantly more complex, more expensive, and more efficient than peaking generating units. It has been said that the extra expense of a base-load unit above the cost of a peaking unit is spent to improve efficiency and reduce fuel consumption and, for that reason, the extra cost should be considered as a fuel item--not plant--and that only the cost of an equivalent number of peaking units should be allocated as a demand-related cost. It logically follows that this extra cost should be allocated on an average use basis.
>
> * * *
>
> The Commission concludes that the peak and average method for making a cost of service allocation is the most appropriate method for use in this proceeding. While the other methods proposed may have merit, the commission concludes that cost and technological relationships in electric generation are important for reflecting cost causation in the design of rates and, consequently, the peak and average method which emphasizes both such relationships is appropriate based on the evidence in this case.

Id. at 324-327 (emphasis added). The peak and average approach in that case resulted in a 41.9% demand/58.1% energy split.

In a subsequent Carolina Power & Light Company case, the North Carolina Commission reaffirmed the use of a peak and average approach. Re Carolina Power & Light Co., 55 PUR 4th 582 (1983). In that case the NCUC used a summer and winter peak and average approach. This resulted in a 40% demand/60% energy split. In so doing, the NCUC rejected arguments by industrial intervenors that a peak and average approach improperly allocated costs to high load factor customers. The NCUC stated:

> Another area for discussion is the assertion by several parties to this proceeding that allocation of energy-related fixed costs (of production plant) by means of kilowatt-hour usage, as provided by the summer and winter peak and average method, will cause high load factor customers to bear a greater share of responsibility for such fixed costs, and that such high load factor customers will not at the same time be given a greater share of credit for the lower fuel costs associated with the fixed costs.
>
> The summer and winter peak and average method allocates energy-related fixed costs for base-load plants by kilowatt-hour usage in the same proportions as the low cost fuel for said base-load plants is allocated by kilowatt-hour usage. The Commission must reject any assertion that such allocation of energy-related fixed cost is not consistent with allocation of low cost fuel, because both types of costs are allocated in exactly the same proportions.
>
> The summer and winter peak and average method allocates demand-related fixed costs for base-load plants and for peaking plants by means of peak responsibility; i.e., by one or more system peaks. There has not been any serious assertion by proponents of the peak responsibility methods that the fuel costs for said peaking plants (or for base-load plants) should also be allocated by peak responsibility.

55 PUR 4th at 594 (emphasis in original). See also Re Carolina Power & Light Co., 49 PUR 4th 188 (1982) and Re Virginia Electric & Power

Co., 48 PUR 4th 327 (1982) in which the NCUC restated its preference for the peak and average approach.

The Kentucky Public Service Commission has also approved the use of a peak and average methodology. Re Kentucky Utilities Company, 52 PUR 4th 408 (1983). In accepting the utility's 45% demand/55% energy split based on average demand and coincident peak, the Commission stated:

> The embedded joint production costs, to the maximum extent possible, should be allocated based on the factors which caused the investment. In explaining the generation investment decision, KU [Kentucky Utilities] witness Ronald Willhite, director of rates and economic research, testified, "there are [trade-offs] between the different types of units, trade-offs between capacity and energy costs and that's what we have tried, as best we could, with our model, to reflect in our cost of service model." Kentucky Utilities Company's embedded production costs are clearly the results of the consideration of many different factors and not solely the system coincident peak demand. If the commission accepted [intervenor] Westvaco's coincident peak methodology it would clearly violate the principle of cost causation by allocating additional generation costs, caused by duration of load and not system peak, to a class which could have been served at a lower cost by peaking units. Kentucky Utilities Company's study in this case better reflects the principle of cost causation and therefore is preferable to Westvaco's study.

52 PUR 4th at 431-432, (footnotes omitted, emphasis added).

Similarly, the Wisconsin Public Service Commission has recognized the validity of allocating plant on both a demand and energy basis. Re Wisconsin Public Service Corporation, 52 PUR 4th 389 (1983). In that case, the PSC stated as follows:

> Industrial intervenors argued that staff's embedded studies, by allocating a portion of some plants based on energy, inappropriately allocated production plant costs and should, therefore, be rejected. The industrial intervenors maintained that applicant's production plants were built solely to meet demand and thus should be allocated on demand only.

> It is clear that generation plants are planned and approved to achieve adequate, safe, and reliable power at the lowest total cost. This implies that both a construction cost component (demand) and an operating cost component (energy) are considered in determining what type of plant will be built to achieve this goal. Thus, the commission believes that allocating a portion of production plant based on energy is a reasonable approach to cost of service.

52 PUR 4th at 399 (emphasis added).

The Massachusetts Department of Public Utilities has also approved the use of a peak and average approach. Re Boston Edison Co., 53 PUR 4th 349 (1983). The peak and average approach, as presented by the Company, was based upon class average demands for energy-related costs and class contribution to annual system coincident peak for demand-related costs. The Department stated its holding as follows:

> We find the peak and average method an appropriate one for the allocation of demand-related power supply costs for BECo at this time. We have already indicated why some power supply costs should be allocated on the basis of energy. However, for a company with a strong peak which in the recent past has consistently occurred in the same season (in this case, summer), it is appropriate to allocate some costs on the basis of contribution to the system peak.

53 PUR 4th at 418.

Finally, the Texas Public Utility Commission has also approved the use of a peak and average method. In the case of Re Houston Lighting and Power Company, 50 PUR 4th 157 (1982), the TPUC found that the use of an average and excess method based on 4CP was appropriate "because it takes into account the summer peaking characteristics of HL&P as well as a customer's year-round energy requirements." Id. at 204.

As the above cases show, the use of a peak and average approach is an accepted methodology for reflecting the considerations which go

into system planning and expansion. The OCA submits that it is an approach which is also appropriate for use in the present proceeding.

C. The Company's Method For Classification Of Distribution System Costs Is Outdated And Should Be Replaced.

In addition to the problems with PECO's 4CP analysis for allocating the costs of power production and transmission investment, the Company's cost of service study also improperly classifies costs relating to its distribution system. The distribution system is classified by PECO as either demand or customer related. To determine the customer related portion of its investment in the distribution system, PECO uses a costing methodology called the predominant minimum size approach.

This method determines the predominant minimum size facility in a particular distribution plant account and uses the average installed cost of that facility as the basis for calculating the customer component. Tr. 1812. Costs above the cost of the predominant size facilities are classified as demand related. Tr. 1815-16. The OCA submits that the Company's predominant minimum size methodology substantially overstates the customer component of the distribution system.

The NARUC Cost Allocation Manual specifies that the customer component of the distribution system should be measured based on the identification of facilities necessary to serve "nominal" load. OCA St. 8 at 18. PECO witness Mr. Sundermeir has stated that the Company's predominant size approach is consistent with the NARUC "nominal" load standard. PECO St. 24A at 6. The OCA submits that the predominant minimum size approach is the least favored of the possible approaches

available. Further, PECO improperly specifies the costs which should be considered as minimum.

Mr. Oliver commented on the discussion of distribution system costs in the NARUC manual as follows:

> The NARUC Manual on which the Company relies for support for its minimum system approach for classifying distribution plant costs was published in 1973. At that time nearly thirteen years ago, NARUC recognized only two approaches for identifying the customer component of distribution system costs, the minimum-intercept method and the minimum size method. The NARUC Manual, which generally is not a prescriptive document, however, stated a clear preference for the use of the Minimum-Intercept Method. Thus, even in 1973 the minimum size method used by the Company was the less preferred approach, at least in part, because of the greater amount of judgment it requires. Essentially the minimum system method was viewed as a fall back position when sufficient data were not available to perform a minimum-intercept analysis.
>
> Since the publication of the NARUC Manual, at least two other approaches to distribution cost classification have gained some acceptability. Like the preferred Minimum Intercept Method, both of these newer alternatives tend to produce lower measures of customer-related costs than the Company's method. One is the Modified Zero Intercept Method, which has been used in various forms in recent filings by at least three other electric utilities in Pennsylvania, including Duquesne Light Company, Pennsylvania Power Company, and Pennsylvania Power and Light Company. The other method is one which has recently gained acceptance with the New Jersey Board of Public Utilities. That method is based on a determination that only meters and services have customer related components and all other elements of distribution costs are most appropriately allocated on the basis of demand measures.

OCA St. 8 at 18-19 (emphasis added).

The error in Mr. Sundermeir's predominant minimum size approach is that the facilities it identifies as customer related can carry significant demands. Further, as the demands on the Company's system

grow, the predominant minimum size also could possibly grow. This growth, however, only serves to indicate that there is a significant demand component which the Company measures as customer related. Mr. Oliver noted the problems inherent in Mr. Sundermeir's approach as follows:

> Q. Does PECO's predominant minimum system approach actually identify just the customer-related portions of distribution system costs?
>
> A. No, it does not. As Mr. Sundermeir stated under cross- examination, certain portions of the Company's predominant minimum system specification, such as customer service drops, actually contain sufficient load carrying capabilities to meet the maximum demands of most residential customers. (Tr. 1813) Furthermore, Mr. Sundermeir also stated that the "predominant" minimum size equipment for the PECO system may change over time as the demands on the system increase. (Tr. 1826-27) Thus, increases in customer demands can result in an increase in the portion of distribution costs that PECO classifies as customer- related costs.
>
> For example, Mr. Sundermeir stated under cross-examination that in some prior time period the "predominant minimum size" transformer for PECO may have been 10 kVa. (Tr. 1826-27) Today PECO's "predominant minimum size" transformer is considered to be 25 kVa. In the future, according to Mr. Sundermeir, the Company's "predominant minimum size" transformer may be even larger if increasing demands on the system caused the Company to install proportionately more transformers over 25 kVa in size. (Tr. 1827)

OCA St. 8 at 20-21 (emphasis added).

The Company asserts that the predominant minimum size approach is proper because it reflects "real world conditions". PECO St. 24A at 6-8. This, of course, is exactly the problem with PECO's method. Distribution facilities in the real world are sized to meet area peak demands. By explicitly including demand related investment in the

measure of the customer component of costs the Company distorts the very purpose of the analysis, i.e., to separate demand costs from customer costs. OCA St.1 8 at 22.

Due to the fact that PECO's measure of customer costs on the distribution system includes such a large demand component, the Company's allocation process serves to double count the demand responsibility of smaller customers. Mr. Oliver explained this double count as follows:

> While it is apparent that the Company's predominant minimum size facilities include substantial ability to serve customers' loads, the Company's allocators for the demand-related portions of distribution system costs make no allowance for customers demands that are fully satisfied by minimum size facilities. As a result, customers who make no contribution to the need for facilities in excess of minimum system specifications are allocated a portion of the cost responsibility for those excess facilities. This is clearly inequitable.

OCA St. 8 at 23 (emphasis added).

This double counting is particularly apparent in PECO's calculation of the customer component of the larger Primary Distribution system. Thus, Mr. Oliver stated as follows:

> Since the predominant minimum sizes of equipment at the primary level specified by the Company frequently have even greater load carrying capabilities than the predominant minimum size secondary system facilities, the amount of double counting included in PECO's minimum size primary system facilities must necessarily be greater. Only through the imputation of further demand-related considerations can a requirement to increase the sizing of primary facilities be justified. Absent demand-related considerations, there can be no basis for distinguishing between primary and secondary system requirements.

OCA St. 8 at 23-24 (emphasis added).

The OCA's recommendation for correcting PECO's approach to measuring the demand and customer components of the distribution system

is two-fold. For the present case, Mr. Oliver first reduced the level of double counting of demand investment included in PECO's customer component calculations. This was accomplished by eliminating from the Company's demand allocators for secondary lines, transformers, and services, amounts of demand equal to the maximum requirements of the smallest size residential customers. OCA St. 8 at 24. Second, Mr. Oliver recalculated the customer component of the primary distribution system based upon the costs of the smaller secondary system. The results of these two changes help to reduce, though not eliminate, the infirmities in PECO's predmoninant minimum size methodology.

For the longer term, the OCA recommends that the Commission order PECO to undertake a study similar to the one required of PP&L in its rate case at Docket R-822169. In that case the Commission ordered PP&L to re-examine its methods for determining customer class responsibilities for distribution costs. In its subsequent rate case, PP&L presented a Modified Zero Intercept Method in place of its minimum system measure. OCA St. 8 at 20-21. In so doing, it joined both Duquesne Light Company and Pennsylvania Power Company in the use of the modified zero intercept method.

D. The OCA's Cost Of Service Study Results In Certain Changes To Class Relative Rates Of Return.

Employment of Mr. Oliver's distribution system classifications and the peak and average methodology for power production and transmission costs results in the following changes in the relative class rates of return at PECO's present rates:

Percent of System Average Rate of Return

Rate	PECO Study	OCA Study
Residential	100	106
Rate R	96	114
Rate RH	116	80
Rate OP	343	31
General Service	96	94
Rate GS	126	135
Rate PD	97	108
Rate HT	84	77
Street Lighting	197	163
Septa & Amtrak	135	104

OCA St. 8 at 28.*

As can be seen, the OCA's proposed cost of service study makes adjustments to all classes' relative rates of return. Of note is that the Rate R class return moves from 96% to 114% of system average while the Rate HT class return moves from 84% to 77% of the system average. The OCA submits that these returns are most indicative of the costs imposed on the system by each rate class and should be accepted for cost of service and revenue allocation purposes in this case.

E. The Cost Of Service Study Presented By PAIEUG Should Be Rejected. Further, PAIEUG's Criticisms Of The OCA Cost Of Service Study Are Without Merit.

The Philadelphia Area Industrial Energy Users Group (PAIEUG) presented Mr. Jeffery Pollock and Dr. Melvin Bloom on rate structure issues. Dr. Bloom's Direct Testimony presented PAIEUG's proposed cost-of-service methodology. Mr. Pollock presented PAIEUG's revenue allocation proposal in his Direct Testimony and presented PAIEUG's

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* The OCA cost of service study also incorporates a correction in the Company's allocation of rental revenues. This issue is addressed at OCA St. 8 at 26-28, but only has a minor effect on the comparative class rates of return.

rebuttal on all rate structure issues.

Dr. Bloom presented a 4 coincident peak cost of service study in which he altered class demands based upon elimination of curtailable HT class demand and weather-normalized revised peaks. PAIEUG St. 2. As the OCA discussed in section IX. B. above, use of a 4CP method is improper for allocating all of PECO's investment in power production and transmission investment. Dr. Bloom's 4CP study, however, is also flawed due to the manner in which he attempted to weather-normalize demands. Mr. Oliver addressed the errors in Dr. Bloom's study as follows:

> Weather normal conditions can only be determined for this type of analysis through the examination of weather data over many years.
>
> Typically, measures of weather normal conditions are based on averages of weather data collected over periods of 20 years or longer. Dr. Bloom, however, presents EDH measures for only 6 years, 1980 through 1985, and the portion of Dr. Bloom's analysis on which Mr. Pollock relies is based on the use of weather data for a single alternative year, 1985. Although Dr. Bloom presents an EDH measure for a "typical hot period," no explanation of the derivation of that measure is provided. No clear indication of the number of years for which data was examined to derive that measure is offered, and no details regarding the specific mathematical formula, assumptions, or data inputs used in the development of that measure are presented.

OCA St. 8A at 11-12 (emphasis added).

Further, Dr. Bloom only weather-normalized demands for the R and GS classes. PAIEUG St. 2 at 8. This fails to account for substantial weather sensitive demands in the PD and HT classes. PECO's load forecast indicates that for HT and PD customers, air conditioning accounts for over 10% of total annual energy requirements. OCA St. 8 at 13. In summer months, air conditioning may account for as much as 25-30% of HT

and PD average monthly demands. Id. Thus, Dr. Bloom's weather normalization is biased in its selective adjustments to only certain class demands.

In Rebuttal and Surrebuttal, PAIEUG witness Pollock criticized OCA witness Oliver's Cost of Service study. PAIEUG St. No. 3A. The OCA submits that the criticisms by Mr. Pollock are misplaced.

Mr. Pollock first asserted that the peak and average method double counts cost responsibilities. PAIEUG St. No. 3A at 17. This position is in error, and as noted in section IX.B.4. above, has been rejected by other state commissions which utilize the peak and average. Mr. Oliver responded to Mr. Pollock on this issue as follows:

> Mr. Pollock's position, once again, stems from his failure to recognize the duality of a utility's system planning and capacity expansion decisions. An identified need for additional generating capacity is not in itself a justification for building additional base load capacity. The type of capacity to be constructed must be justified by the frequency and duration of incremental load requirements, by the existing mix of generating capacity available to the Company, and by the present-valued capital and operating costs of generating technology alternatives.

OCA St. 8B at 9 (emphasis added).

Mr. Pollock also asserted that if a cost of service study included energy allocators for production plant investment, symmetry would require that energy costs be allocated on a demand basis. PAIEUG St. 3A at 22. He therefore presented a cost comparison using baseload nuclear and peaking combustion turbines to develop what he believed were symmetrical costs.

Apart from the theoretical inadequacies of Mr. Pollock's analysis, it was a technically inaccurate cost comparison of baseload and

peaking plants. For example, Mr. Pollock used outdated 1981 costs for his baseload plant, he failed to provide for differing operating cost characteristics of the two kinds of plants in his analysis, and he used the same levelized carrying charge for both plants. OCA St. 8 at 11. The OCA submits that Mr. Pollock's arguments on cost of service should be rejected.

F. Any Rate Increase Granted In This Case Should Be Allocated Across-The-Board, With Certain Modifications To Bring Class Rates Of Return Closer To System Average.

PECO has proposed to spread its revenue increase request on an equal percentage basis to all classes; with three exceptions. For classes with an indexed relative rate of return above 140%, including the street lighting classes, a zero net increase was proposed. For the RH class the revenue increase is slightly less than the average in order to prevent movement further above the system average rate of return. Finally, SEPTA and AMTRAK's rates are set to equal the system average return, which results in a lower than average revenue increase. PECO St. 17 at 9.

The OCA basically agrees with PECO's proposed revenue allocation methodology. The major differences between the OCA's revenue allocation proposal and the Company's stem from the fact that under the Peak and Average Cost of Service Study, the relative class rates of return are different from those developed by PECO's 4CP method. The OCA also agrees with the Company that fuel costs should be considered in the distribution of the proposed revenue increase.

The OCA recommended five modifications to PECO's revenue allocation proposal. Each of these proposals stem from the results of the OCA's cost of service study. Mr. Oliver listed these five changes as follows:

- Greater increases should be applied to SEPTA, AMTRAK, and the Street Lighting classes to raise their respective rates of return to the system average level. It should be noted that each of these classes still receives a less than system average net percentage increase;

- The net percentage increase to Rate OP customers should be raised to equal the system average increase as partial compensation for that class' very low relative rate of return under the OCA cost allocation results;

- The additional revenues derived from SEPTA, AMTRAK, and the Street Lighting classes should be used to reduce the revenue increase for Rate GS customers;

- The additional revenues from Rate OP customers should be kept within the residential class and used to reduce the revenue increase for Rate R customers;

- The remaining discrepancy between the rates of return for Rate R and Rate RH should be addressed within the framework of residential rate design considerations since the charges applied for those two classes have been closely linked in recent years.

OCA St. 8 at 31-32.

The OCA's proposed revenue allocation by class can be seen from the following table:

OCA PROPOSED ADJUSTMENTS TO THE DISTRIBUTION
OF THE REVENUE INCREASE BY CLASS
($1,000's)

Rate Class	PECO's Proposed Increase	OCA Proposed Adjustment	OCA Proposed Increase
Rate R	270,054	(7,450)	262,604
Rate RH	46,791	0	46,791
Rate OP	2,967	7,450	10,417
Residential	319,812	0	319,812
Rate GS	129,762	(10,076)	119,686
Rate PD	75,129	0	75,129
Rate HT	357,255	0	357,255
General Service	562,146	(10,076)	552,070
Street Lighting	1,301	2,763	4,064
Septa & Amtrak	9,712	7,313	17,025
Other Utilities	3	0	3
TOTAL	892,974	(0)	892,974

OCA St. 8, Sch. BRO-6, based on PECO's response to IR-PBUUG-1-12, Col. 3.

The relative class rates of return that result from Mr. Oliver's revenue allocation recommendation under his cost of service study are as follows:

Rate Class	Percent of System Average Rate of Return
Rate R	108
Rate RH	85
Rate OP	67
Residential	103
Rate GS	119
Rate PD	106
Rate HT	90
General Service	99
Street Lighting	100
Septa & Amtrak	100

OCA St. 8 at 32.

To the extent the Commission grants PECO less than its total rate increase, the OCA recommends that the percentage reductions for classes GS, R, and PD should be greater than for classes HT, OP and RH. All classes, however, should benefit from a reduction to the rate request, regardless of class rates of return. The OCA therefore proposes that 80% of any rate reduction be spread across the board, and the remaining 20% should be applied to those classes with above average rates of return (i.e., rates R, GS, and PD) in order to achieve further balancing of the various class rates of return. OCA St. 8 at 33-34.

PAIEUG witness Pollock has recommended that any revenue increase be allocated on a zero-fuel basis. PAIEUG St. 3 at 18. The OCA submits that such an approach would be inappropriate in this case. Mr. Pollock's proposal would have at least three adverse consequences.

Mr. Pollock's proposal would have the effect of increasing class rates of return for certain classes already above 100% of the system average return. This would be the case for Class R. Conversely, Mr. Pollock's proposal would decrease the class rate of return for the HT class, which is already below 100% of the system average. OCA St. 8A at 4-5.

Mr. Pollock's proposal also ignores the fact that energy costs are integrally related to the overall rate increase request. As discussed in Section IX.B. of this Brief, Limerick 1 was constructed not only to meet peak load but to supply energy throughout the year. A rate increase based upon the Limerick plant costs, therefore, must take into account fuel costs in any revenue allocation. OCA St. 8 at 5-6. In

fact, large high load factor HT customers receive the predominant benefit of the lower energy costs of baseload power plants.

Finally, Mr. Pollock's proposal would be disruptive and inequitable. Under Mr. Pollock's proposal, Class R customers would receive an increase of 35.5% while HT customers would receive an increase of 23.3%. Considering the size of the increase being considered in this case, such a disparity is plainly unfair.

G. The RH Winter Tail Block Rate Should Be Modified.

The OCA recommends that the tail block charges for winter use by RH customers be allocated a rate increase equal to 92% of the average increase for the Residential Class as a whole. This increase would be more than the increase recommended by PECO, but less than the overall increase for all residential customers.

A primary reason for this proposal is to prevent the already large disparity between the RH tail block and other residential rate blocks from increasing further. Mr. Oliver explained the OCA's concern as follows:

> The Company's response to Interrogatory IR-OCA-7-4 indicates that the charge for the Rate RH winter tail block (i.e., use in excess of 500 kWh) was set simply to recover the balance of the revenue requirement after all other charges for Rate R and RH were determined. Thus, there is no direct tie between the level of the Rate RH winter tail block charge and the costs to the Company of providing service to those customers.
>
> The present Rate RH winter tail block charge is approximately 4.4 cents per kWh less than the comparable Rate R charge for the same service. That existing differential is based on PECO's argument that Rate RH tail block use during winter months is of a "seasonally off-peak nature". When more than 92 percent of the costs of new generating plant are

> incurred in an attempt to provide energy cost savings on a year-round basis, the significance of such seasonal off peak differentials should be diminished. The Company's proposed residential rate designs, however, substantially and unjustifiably increases that differential to approximately 6.6 cents per kWh.

OCA St. 8 at 38 (emphasis added).

The revenues generated by the additional increase to the rate RH winter tail block would be added to the remaining R and RH class revenues to lower the first 500 Kwh rate block in both of those classes. OCA St. 8 at 40.

H. An Essential Use Rate Should Be Adopted In This Proceeding.

Philadelphia Electric Company's current rates for residential customers are the highest in Pennsylvania. If granted in full or in substantial part, the requested rate increase will, even if phased in, further exacerbate the economic burdens imposed on customers by PECO's charges. The effects of the proposed rate increase on essential uses of electricity, however, has not been adequately considered by the Company in establishing its rate proposals in this case. Mr. Oliver addressed this as follows:

> Under the phase-in proposal set forth by the Company the average customer will experience rate increases of approximately 9 to 10 percent per year for each of the next four years. If PECO finds the need to request another rate increase within that time frame, the annual increases that customers experience may be even greater. Recent increases in the general cost of living have only been in the range of 3 to 5 percent on an annual basis, and it appears that inflation rates are generally expected to rise only slightly over the next few years. Since there tends to be a fairly high correlation between increase in the general cost of living and increase in average incomes, it is likely that PECO's electric rates for residential customers will consistently outpace the rate of growth in the average customers' income in each of the next four years and maybe longer. This

will require that customers steadily increase the portions of their incomes that are dedicated to paying their electric bills.

Where customers can reduce nonessential uses of electricity, the effects of these increases can be moderated. Customers cannot, however, be expected to reduce essential uses of electricity. Thus, customers with some nonessential electrical uses may be able to avoid some of the impact of the proposed rate increase by once again trimming those requirements, but the full impact of this rate increases will be unavoidable for customers' essential uses.

OCA St. 8 at 36-37 (emphasis added).

The impact on low income customers will be especially severe. The testimony of George Grier on behalf of CEPA, et al., is particularly revealing with respect to the number, status, and electricity usage characteristics of low-income customers in PECO's territory. CEPA St. 1. Testimony from the public input hearings in this case is also quite informative on this issue.

Mr. Grier testified that there are approximately 226,100 ratepayer households in PECO's service territory, representing nearly 600,000 people, which have incomes at or below 150% of the poverty level. CEPA St. 1 at 12. Of PECO customers in the City of Philadelphia, low-income ratepayers represent nearly 30% of the total. Id. Further, of the 226,100 low-income households, nearly two-fifths are single persons living alone with average annual incomes of only $4,641, or $387 per month. CEPA St. 1 at 12-15.

Mr. Grier's testimony analyzed the expenses of PECO's low-income ratepayers, looking at such items as mortgage, rent, and food costs. Based upon his analysis he stated as follows:

I conclude that a large proportion of low-income ratepayers are operating close to or even past the

edge of solvency. Any increase in their electric bills must be drawn from budgets which, in most cases, are squeezed to the limit and often beyond the limit by recent years' increases in the costs of such essentials as housing, food, and energy--including electricity itself.

* * *

The increase will be extremely serious for many, in light of both the large amount of the increase and their already-overtaxed household budgets.

CEPA St. 1 at 22 (emphasis added).

The rate increase PECO is requesting in this proceeding will have extremely serious impacts on low-income customers. CEPA St. 1 at 22. The additional revenue PECO would seek from each customer is quite large in comparison to the monthly income poor ratepayers have left after meeting basic food and shelter requirements. Mr. Grier compared PECO's requested rate increase to:

- The $2 per month left after shelter and food costs for low-income single person homeowner ratepayers.
- The $26 per month deficit for low-income single person renter ratepayers.
- The $52 per month remaining after food and shelter costs for low-income homeowner ratepayers of all household sizes.
- The $116 per month left after food and shelter costs for low-income renter ratepayers of all household sizes.

These are meager amounts at best, and PECO's requested rate increase will cut severely into even the largest of them. Under the new rate, if granted, electricity will cost the average low-income ratepayer about $655 per year. This will be more than eight percent of the total income of the average low-income ratepayer (all household sized combined); over 14 percent of the total income of the average low-income single person living alone; and 15 percent of the AFDC benefit for a family of three in Philadelphia. These percentages must be evaluated in the context of the fact that

these incomes are now strained to the limit, and beyond, by essential living expenses.

CEPA St. 1 at 23-24 (emphasis added).

Mr. Grier also addressed the effect of PECO's large rate increase request on low-income customers in response to questions from ALJ Matuschak as follows:

> JUDGE MATUSCHAK: Do you think that these ratepayers, low income ratepayers, are burdened much more than any others?
>
> THE WITNESS: I do, Your Honor. They are already at the limits of their spendable income. I note, incidentally--and this very much interested me because I had come up with figures from the governmental sources that I examined showing that these people, many of them had a deficit in income. They actually had higher expenses than incomes. And I note that the company's report on its CAP customers shows exactly the same finding: that after verifiable expenses are subtracted from verifiable incomes these people have a negative amount left. In other words, they spend and must spend on verifiable expenses more than they receive. This is true from governmental data and it is also true from the company's own data.
>
> JUDGE MATUSCHAK: There's no doubt that that situation shouldn't be tolerated. There's no doubt about that. But there are already people who have that problem right now under the present rates.
>
> THE WITNESS: That's correct. It will get much worse under this increase, Your Honor, and that's why I'm saying that because of the magnitude of this increase and the situation which already exists for so many of these customers where the company now has 70,000 customers on deferred payment agreements, this situation could become out of hand very fast if this rate increase goes through and no rate relief is given to these customers.
>
> JUDGE MATUSCHAK: It would magnify the situation especially with the PECO ratepayers?
>
> THE WITNESS: I think so, yes, sir, very much so.

Tr. 3745-3746 (emphasis added).

The problems of low-income customers in PECO's service territory discussed by Mr. Grier are more than just statistics on a page. Numerous ratepayers testified at public input hearings about the effect of PECO's requested rate increase on their household budgets. Ms. Sarah Juhas, for example, testified as follows:

> MS. JUHAS: I live with my husband and five children. My husband is unemployed and presently my family's income is $514 a month.
>
> I came today because I want the Commission to know about my circumstances, which are like those of many other low-income families.
>
> I cannot afford a 30 percent increase in my electric bill. Right now I have a payment agreement with PECO to pay off approximately $212 which I owe them. If my bills go up by 30 percent, I will not be able to keep that agreement, which I have kept until now.
>
> In short, this increase will cause me to be shut off. It is that simple.
>
> I already do not have a phone because I can't afford it. It is unfair to take electricity away from my children as well.
>
> The Commission must help to protect the ratepayers from PECO's unfair rates. I would ask the Commission to please remember the poor families.

Public Input Feb. 4, 1986, Tr. 57 (emphasis added).

Mr. William DeFrates also testified on the difficulties of low-income customers, as follows:

> I am a human being. I was brought up in school to believe in my government. I fought in the Korean War. I served you, the general public, as a Philadelphia police officer who was injured in the line of duty, and I am living on a $6,000 a year pension. I am keeping a wife and a retarded handicap.

* * *

> My home contains 25-watt and 40-watt bulbs throughout. Each rate increase that they request comes from my budget for food. There is not much more you can take from $6,000.
>
> Yes, the company must be profitable. We understand that. That is our society; that is what we're all about. But they get one rate increase and a couple months later they're back in here again asking for more. You've bled me till I can't bleed no more.
>
> * * *
>
> Well, I'll tell you, we're standing in a church, and I hope that the people who run Philadelphia Electric, if they don't have compassion, find some sense of decency and sanity to stop this or none of us -- what's the use in having electricity if I can't use it. I don't use air conditioning now. I have cut back on everything I can. There is nothing more except to go back to candles. You have bled me dry; there is nothing more I can give.
>
> So if you put this rate increase through, you will have nailed my family in the coffin.

Public Input, Feb. 4, 1986, Tr. 111-113 (emphasis added).

Mr. Leon Johnston testified with regard to the increase in PECO's rates as compared to his Social Security payments as follows:

> Within a few years since retiring in 1980, I have seen my monthly budget bill to PECO increase from $28 a month to $45 a month.
>
> On the other hand, my Social Security checks have -- and will -- remain the same amount except for a small cost of living adjustment, and that of course is at the whim of our President, who when he decides to postpone it six months does that and says: we'll hold it for six more months.

Public Input, Feb. 4, 1986, Tr. 127.

As can be seen, the effect of PECO's rates on low-income customers is both real and substantial. The OCA submits that the PUC cannot turn a blind eye to their plight. Some measure must be taken in this rate case to assist low-income customers.

Due to the serious impact PECO's proposed rate increase would have on low-income customers if implemented, the OCA has proposed a restructuring of the Residential class rate blocks. The restructuring is based upon basic cost of service principles and provides proper pricing signals, while at the same time restraining the percentage increases to the lower usage essential use based blocks. Mr. Oliver explained the essential use rate block structure as follows:

> Based on my review of appliance usage information in the Company's 1984-1994 Electric Forecast, as well as appliance usage data from the Edison Electric Institute (EEI) and other utilities, I have developed the following monthly Kwh use allowances for the three categories of essential uses identified above:
>
> | | |
> |---|---|
> | Basic Uses | 350 Kwh per month |
> | Water Heating | 350 Kwh per month |
> | Space Heating | 700 Kwh per winter month |
>
> Under my proposal for rate blockings based on customers' essential requirements for electricity, these Kwh allowances form the basis for establishing the length of the initial use block for each customer. Thus, instead of providing an initial block of 500 Kwh per month for all customers, the amount of usage in each customers' initial, or essential use, block is tied to the customers' essential needs for electricity.
>
> Customers who do not use electricity for either space heating or water heating will find their initial rate block shortened to 350 Kwh per month (i.e., the basic use allowance). Customers with electric water heating will receive an additional 350 Kwh per month. Likewise, electric space heating customers will be allowed an initial rate block of 1,050 Kwh per month during winter billing months if they do not also have electric water heating, or 1,400 Kwh per month if they use electricity for both space heating and water heating.
>
> Using these initial rate block definitions, the increases in rates for essential uses of electricity are established at levels which are more comparable to increases in the overall cost of living. Since greater increases will almost necessarily be applied

> to all other residential electric use, the net result is more refined application of the inverted rate concept which is already incorporated in PECO's residential rate design.

OCA St. 8 at 41-42 (emphasis added).

Mr. Oliver expanded on the conservation benefits of the change in the structure of the residential rate blocks in his Surrebuttal Testimony as follows:

> [T]he essential use rates that I have proposed place greater percentage increases on the charges for tail block use than on charges for the initial rate blocks. Thus, those customers having the greatest opportunities to conserve are given the greatest incentives to utilize conservation measures. This concept was explicitly recognized by the Commission when it first implemented lower initial block charges for PECO's residential customers. The essential use rate design proposals that I have set forth in this proceeding are not asking for a departure from the Commission's existing residential rate design policy, but rather a refinement of that policy to recognize variances in the inelastic portions of customers' electricity requirements that are associated with customers' dependence on major electric appliances.

OCA St. 8B at 7 (emphasis added).

The OCA submits that the essential use rate blocks proposed by Mr. Oliver are appropriate and will provide a proper price signal and also be of some assistance to low-income customers.

The implementation of an essential use rate will not be burdensome to the Company. The Company has billing information as to which customers are on rate R and which are on rate RH-heating. Mr. Williams also testified that PECO's water heating customers are predominantly on the rate OP, a restricted use lower rate for which no essential use rate is necessary, or on rate RH. Tr. 4115. Any remaining electric water heating customers not already known to PECO could be

informed through general bill stuffers and required to notify the Company of the existence of an electric water heater in order to qualify for the essential use water heating rate.

The Commission has, in the past, questioned whether essential use tariffs will actually benefit low-income customers. The testimony in this proceeding shows that low-income customers, on average, use substantially less electricity than customers of all income levels combined and also much less than high-income customers. CEPA St. 1 at 25.

Mr. Grier presented evidence that customers with incomes under 125 percent of the poverty line use an average of 4.4 thousand Kwh annually as compared to 6.1 thousand Kwh for customers of all income levels. Moreover, customers with 1981 family incomes of $35,000 or more consume an average of 8.6 thousand Kwh per year, almost twice that of low income consumers. CEPA St. 1 at 26. Mr. Grier also reported that "83.1 percent of households under 150 percent of poverty in Rate Class R use less than 500 Kilowatt hours." Tr. 3727 (emphasis added). Moreover, Mr. Grier noted a strong correlation between high income and high electricity usage. CEPA St. 1 at 29-30. Mr. Grier also testified that low-income customers have considerably fewer air-conditioners than wealthy customers. Thus, low-income customers contribute much less to summer peak demands and also have lower consumption levels. CEPA St. 1 at 30-31.

The OCA submits that based upon the testimony of Mr. Grier, an essential use rate blocking, as proposed by Mr. Oliver, will properly respond to the needs of low-income customers.

The OCA recognizes that the Commission has previously rejected essential use rate proposals. The OCA submits, however, that the present rate case requires a re-analysis of essential use rates. PECO has the highest rates in the state. It also has one of the largest populations of low-income customers. The effects of the current rate increase could be devastating to these customers. Mr. Oliver addressed this issue during cross-examination as follows:

> Q. Am I correct that you proposed similar essential use provisions for PP&L's residential rates in that proceeding?
>
> A. That's correct.
>
> Q. Am I correct, Mr. Oliver, that the Commission rejected that proposal in its final order?
>
> A. Yes, that is correct. I believe that given, once again, the magnitude of the increase in this case, the greater proportion of residential customers who are below 150 percent of the poverty level, as I believe was indicated in Mr. Grier's testimony, and the higher rates that are already charged in the PECO service territory compared to the PP&L service territory that the need for such a rate is even more pressing here than it was in PP&L's case.

Tr. 3825-3826 (emphasis added).

Implementation of the essential use rates are partially dependent, in this proceeding, upon a reduction in PECO's overall increase request. Absent such a reduction, the increases to the tail block charges for rate R under an essential use rate might be too great to permit the implementation of substantially reduced essential use blocks. Mr. Oliver explained this problem as follows:

> Should the Commission grant the entirety of the Company's requested increase, I expect that it will find itself in a most untenable position. Due to the magnitude of that increase, there will be no way for the Commission to ensure the affordability of

> essential uses of electricity without placing even higher increase on other customers, either by further increasing the charges for the existing excess use (tail) blocks in rates R and RH or by shifting revenue requirements to other classes. If no action is taken to moderate the rate increases for essential electricity requirements of PECO of customers, then many customers on low or fixed incomes may be unable to continue their electrical use and meet their other basic subsistence needs (e.g., food, clothing, and shelter).

OCA St. 8 at 42-43.

The preferred implementation of the essential use rates as proposed by Mr. Oliver would be through a targeted application of Commission-ordered reductions in the Company's overall rate increase request. Specifically, as the revenues allocated to the residential class are reduced, the OCA proposes that those reductions would be applied first to the essential use blocks. The goal is to attempt to keep the increase to essential use blocks as close to the rate of inflation as possible. Under this method, the tail block increase proposed by PECO would be allowed, but reductions in the initial essential use block would be implemented until the increase in that block was no greater than the rate of general inflation. Under this approach no customer would receive an increase greater than that proposed by PECO, and customers who stay within or near their essential use allowance could receive substantial benefits. Thus, some rate relief will be provided to those uses of electricity which are most inelastic and thus least amenable to conservation efforts. Further, all customers receive the initial benefit of a rate reduction in the first block since all customers use the basic use blocks. OCA St. 8 at 42.

To measure the effect of an essential use rate on customers with usage above the new rate blocks, Mr. Oliver presented a sample analysis of the effects of an essential use rate based on a hypothetical assumption that PECO received one half of its rate request. This analysis showed the following break-even points below which a consumer paid less and above which a consumer paid more as a result of the implementation of an essential use rate:

MONTHLY ALLOWANCES AND BREAKEVEN POINTS
FOR ESSENTIAL USE RATE DESIGN

	Essential Use Allowance	Break Even Point
Summer		
Basic Use Customer	350 Kwh	532 Kwh
Water Heating Customer	700 Kwh	1,002 Kwh
Space Heating Customer	350 Kwh	532 Kwh
Space Heating & Water Heating Customer	700 Kwh	1,002 Kwh
Winter		
Basic Use Customer	350 Kwh	542 Kwh
Water Heating Customer	700 Kwh	1,083 Kwh
Space Heating Customer	1,050 Kwh	2,134 Kwh
Space Heating & Water Heating Customer	1,400 Kwh	2,747 Kwh

OCA St. 8B at 5. This analysis shows that substantial use above the essential use blocks is provided before the proposed rate design results in any additional costs to a ratepayer as a result of the revised rate design.

For low income customers with usage levels above the break even points, the OCA submits that PECO should implement, or greatly expand current programs to promote conservation. Through efforts such as weatherization and appliance efficiency programs, low-income customers

who cannot afford conservation investments, could be assisted in reducing consumption to the levels of the lower use blocks.

The Company has taken the position that the problems of low-income consumers should be addressed only through targeted programs and not rate designs. Tr. 1775. The OCA submits, however, that PECO's current programs to help low-income customers are inadequate to their assignment. Mr. Grier discussed each of the programs available to low-income customers in his Direct Testimony. CEPA St. 1 at 31-37. His conclusion was that the programs serve far too few customers to be of much benefit to the large majority of low-income customers. Id. at 31. By Mr. Grier's calculation, only 15,000 customers were served by energy and utility assistance programs in 1985. Id. at 36. Further, of this amount, the predominant aid was from the Low-Income Home Energy Assistance Program (LIHEAP), a government grant program which served 10,800 PECO customers. Id. at 32. PECO's own programs served only two percent of the total number of low-income ratepayers. Id. at 36. One need only compare the total customers assisted, 15,000, to the number of customers for whom service was terminated by PECO in 1984 of 31,758, to see that PECO's programs are not meeting the need which exists. CEPA St. 1 at 37.

For all of the above reasons, the OCA submits that an essential use rate design for Residential customers should be adopted in this proceeding.

X. PECO'S ENERGY COST RATE FILING MUST BE ADJUSTED TO REFLECT CURRENT OIL PRICES.

On October 30, 1985, this Commission issued an Opinion and Order in the case of Re Salem Nuclear Generating Station, 70 PUR 4th 568 (1985) (ECR 8). In that Order, the Commission required PECO to file a revised energy cost rate mechanism in the current rate case in which 20% of energy costs would not be subject to reconciliation under Section 1307 of the Public Utility Code. 70 PUR 4th at 656. The Commission also ordered PECO to file certain information in support of its new energy cost rate. Id. at 657.

On December 30, 1985, PECO filed supplemental Direct Testimony presenting its case on issues related to the revisions in the energy cost rate. (PECO Sts. 18B, 22A, 28A, and 30, and Exhs. JFB-2 and JJC-1.) Included as part of the Company's testimony was a proposal to place a "cap" on the total level of energy costs which would not be subject to reconciliation. PECO St. 18B, 28A.

On January 23, 1986, the Commission Trial Staff filed a Motion to Strike certain portions of the Company's testimony on the grounds that it constituted an improper collateral attack on a Commission order and that it was not in compliance with the ECR 8 Order. In particular, the Staff asserted that PECO's testimony requesting a "cap" went beyond the scope of the Commission's ECR 8 Order and was an attempt to modify that Order.

On March 10, 1986, ALJ Matuschak issued a ruling on Staff's Motion to Strike. The ALJ's ruling stated as follows:

> As we view it, the Commission directed us to ensure that the correct "ingredients" were included in PECO's ECR, for without proper ingredients the Commission's

> 80%/20% provision would be meaningless, could be manipulated, and would fail to establish the effect intended.
>
> However, nowhere in such assignment do we read a mandate to review, modify, "second guess", or overrule the Commission's 80%/20% provision. Any attempt on our part to modify the Commission's ECR 8 Order, whether by imposing a $35 million cap, or otherwise, would be presumptuous and contrary to the Commission's assignment.

Mimeo at 9 (emphasis added).

Based upon his ruling, the ALJ granted Staff's Motion to Strike in part and denied it in part. Mimeo at 9. The OCA's discussion of the Company's energy cost rate filing will focus, therefore, on the "proper ingredients" to be used in the development of the rate to be charged.

The OCA submits that there is one particular ingredient of PECO's energy cost rate filing which requires careful review by the Commission in this case. That ingredient is the price of oil which PECO has included as part of its forecast of annual energy costs.

The Company's claim for energy costs to be collected under the new 80%/20% methodology is based upon outdated oil price forecasts from May of 1985. Tr. 4509; see OCA Exh. 14, 15. These prices are set, for example, at over $27/bbl. for No. 6 0.5% sulfur oil, and $32/bbl. for No. 2 oil. OCA Exh. 88. The OCA submits that the oil prices which PECO has included in its energy cost rate projection are highly inflated compared to current oil markets and current prices, including prices which the Company is now paying for its own oil. If these prices are not adjusted, the Company will receive a totally unjustified windfall through the operation of its ECR by retaining 20% of the difference between the actual and projected cost of oil.

The path by which PECO has come to present $27 a barrel oil prices for use in its energy cost rate projection is a tortuous one. The Company originally filed oil price information in this case as part of its rate base claim for material and supplies fuel inventory balances. PECO Exh. TPH-2, C-10. The Company used the same fossil fuel forecast in developing fuel prices for use in a production cost run prepared as an input to its life-cycle cost analysis of Limerick 1. OCA Exh. 14. That analysis was presented in the Direct Testimony of PECO witness Heironymus. See PECO St. 15; GEC Exh. 3. The oil prices presented by the Company for these two purposes were based upon May, 1985, oil price projections by PECO which, for 1985 and 1986, were nearly identical to the May forecasts of its independent oil forecasting consultant, Data Resources, Inc. (DRI). OCA Exh. 14. From the date of the May, 1985, oil forecast, oil prices declined by a small amount through the summer and into the fall of 1985. In its August oil forecast, therefore, DRI reduced its oil price forecast for 1986 by more than $1 per barrel across the board. OCA St. 4 at 16; compare OCA Exh. 14 attachment (b) and OCA Exh. 15 attachment (b). PECO, however, made no revisions to its oil price inputs as used in this rate proceeding. Compare OCA Exh. 14 attachment (a), and OCA Exh. 15 attachment (a). When the Company filed its 80%/20% energy cost rate in December, 1985, it used its revised coal price forecast (which was approximately $2 per ton lower than its May forecast; see OCA Exhs. 14 and 15), but made no revisions to its oil prices. Tr. 2315.

Beginning in December, 1985, (Tr. 311) and continuing to the present, oil prices have fallen dramatically. PECO, however, did not revise its oil price projections for use in the development of its energy

cost rate filing. The prices included in the Company's analysis were $27.108/bbl.for No. 6, 0.5% sulfur oil, $26.107/bbl. for No. 6, 1.0% sulfur oil, and $32.088/bbl. for No. 2 oil. OCA Exh. 88. The only change PECO made in its energy cost rate analysis was to remove escalation from its oil price projections for the period subsequent to July 1, 1986. PECO St. 22D at 10. In so doing, PECO claimed it was adopting Staff's proposed oil prices. Id. The Staff's oil prices, however, were based upon PECO's own initial projections. Tr. 4508-9. When asked about the oil prices used by the Company in its latest energy cost rate production cost run, PECO witness Carroll responded as follows:

> Q. So you agree that the Staff was simply using your oil prices, only was not escalating them beyond July 1986?
>
> A. The Staff accepted our prices and did not escalate it; that's right.
>
> Q. Are you testifying today that you believe that the Staff's oil prices in their testimony are the prices the company is going to pay in 1986?
>
> A. No, I am not testifying to that at all.

Tr. 4519 (emphasis added).

The OCA submits that the oil prices which the Company has included in its energy cost rate projection are substantially higher than current oil prices. Moreover, no PECO witness has supported these prices as representative of what PECO actually expects to pay for oil over the coming ECR year. In fact, the two witnesses that PECO presented for oil price forecasting both testified that current oil prices are below $20/bbl. On March 11, 1986, PECO's Manager of its Fuel Procurement Department, Paul English, testified that the Company had paid $17 a barrel for residual (or No. 6) oil in March 1986. Tr. 4357. Mr. English's prediction for oil prices for the remainder of 1986 was that

"for '86 I see a slight upkick, but certainly nothing phenomenal." Tr. 4358. He amplified this projection by stating that the price "may be in the $17 to $20 range; it would be fairly flat." Tr. 4358. For 1987, Mr. English stated that "I think you will see an increase that will move up into the $20s." Tr. 4359.

PECO's other oil price forecasting witness, Dr. William Hogan, also confirmed that current oil prices are well below $20 a barrel. In fact, Dr. Hogan testified that the most recent spot price for crude oil as of the day he testified was "$13, $12, something like that." Tr. 4395. As Mr. English noted, residual oil prices are generally comparable to crude oil pirces but tend to lag crude prices on the way down and then lag them on the way back up. Tr. 4356.

The development of an accurate oil price forecast is essential to the reasonableness of the Company's energy cost rate projection. With the establishment of the 80%/20% ECR in which 20% of energy costs are not reconciled, it is crucial that the ingredients of the cost projection not bias the results in favor of either the Company or the ratepayers. The purpose is not to create a built-in windfall or penalty. Rather, the ingredients must be based upon the most reasonable information available to the Commission.

Establishing a portion of energy costs which are nonreconcilable places those costs on much the same basis as other expenses in a base rate case. Thus, the Company makes a presentation of the costs which it believes are representative of the future, and the Commission adjusts those expenses where appropriate. Company witness Hill agreed that the Commission could review the inputs to the ECR in this proceeding when he stated in his testimony as follows:

> It is quite clear, in my opinion, from the Commission's order, that the company's estimates for fuel and interchange expenses submitted in this proceeding, will upon investigation, be utilized to develop an Energy Cost Rate Factor for prospective application to customers' bills.

PECO St. 18F at 9 (emphasis in original).

Mr. Hill also agreed that any revisions which the Commission makes to PECO's proposed ECR would be incorporated in the Company's compliance filing in this case. Thus, on cross-examination he stated as follows:

> Q. And to the extent that the Commission ordered the company to introduce a different element or change an element of its Energy Cost Rate projection, the company would do that in its compliance filing just as it does for all compliance filings for other Commission adjustments, is that correct?
>
> A. If it was an item that was developed in this proceeding and incorporated, yes, properly.

Tr. 4564.

The OCA submits that a review of the inputs to PECO's new ECR is particularly important in this case as it is the first time an 80%/20% ECR will be used in Commission proceedings.

Due to the importance of this issue and the unprecedented drops in world oil prices that were occurring almost daily, the OCA made a transcript request of the Company on March 12, 1986, to prepare a production cost run for use in the development of an ECR which reflected current oil prices. Tr. 4524. The Company objected to the OCA's request initially, but after discussion, stated it would rerun its production cost model at oil prices of $24 and $23 per barrel for residual oil. Tr. 4534. This production cost run produced total annual energy costs of $448,780,713 for the year ending 6/30/87, or $10 million less than the

prior analysis which used slightly higher oil prices. PECO St. 22D, Sch. 3, page 2 of 4 revised. It is not at all clear, however, whether PECO will use the output of this production cost run as the basis for its energy cost rate price in this case as compared to its earlier $27/$26 per barrel analysis. Further, these oil prices are still substantially above the current and reasonably anticipated market prices for residual oil.

The OCA recommends that the Commission should not be constrained by the intransigence of the Company on this issue. As of the close of the record, PECO had most recently paid $17 per barrel for residual oil. No Company witness has testified that oil prices are expected to be significantly higher than this amount in the next 12 months. The OCA therefore suggests that the Commission should require PECO to present as part of its compliance filing in this case an energy cost rate based upon a price of no more than $17 per barrel for residual oil. This represents the most recent actual data as of the close of the record. Certainly the results of the Company's initial production cost run filed with PECO St. 22D must be rejected for setting the energy cost rate in this case.

As the ALJ stated in his ruling on the Staff's Motion to Strike regarding the energy cost rate issues in this case:

> [W]ithout proper ingredients the Commission's 80%/20% provision would be meaningless, could be manipulated, and would fail to establish the effect intended.

Mimeo at 9.

The Commission must not allow PECO to begin its first 80%/20% ECR with data that are clearly inaccurate and unrepresentative of prices for the coming ECR year.

XI. CONCLUSION

Philadelphia Electric Company's Supplement No. 15 to its Tariff Electric Pa. P.U.C. No. 26 must be rejected as unjust, unreasonable, and therefore unlawful. The Company should be required to file tariffs or tariff supplements consistent with the revenue requirement and rate structure recommendations of the Office of Consumer Advocate set forth in the preceding sections of this Brief.

Respectfully submitted,

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DATED: April 7, 1986

APPENDIX A

OCA Accounting Schedules

PHILADELPHIA ELECTRIC COMPANY

TABLE I

INCOME SUMMARY

($000)

	PRO FORMA PRESENT RATES	RECOMMENDED ADJUSTMENTS	ADJUSTED PRESENT RATES	REVENUE ADJUSTMENT	TOTAL ALLOWABLE REVENUES
	$	$	$	$	$
OPERATING REVENUES	2,501,993	11,004	2,512,997	347,302	2,860,299
DEDUCTIONS:					
O&M EXPENSES	1,646,682	(30,310)	1,616,372		1,616,372
DEPRECIATION	261,163	(39,294)	221,869		221,869
TAXES OTHER	87,264	221	87,485	6,946	94,431
INCOME TAXES					
STATE		19,676			
FEDERAL		62,184			
INC TAX-TOTAL	59,549	81,860	141,409	169,388	310,797
TOTAL DEDUCTIONS	2,054,658	12,477	2,067,135	176,334	2,243,469
EXCESS CAPACITY		54,335	54,335		54,335
NET INC AVAIL FOR RETURN	447,335	52,819	500,154	170,968	671,122
RATE BASE					5,578,739
RECOMMENDED RATE OF RETURN					12.03%

NOTE:DOES NOT ADD DUE TO $44,000 ERROR ON SCH. 15.

PHILADELPHIA ELECTRIC COMPANY
TABLE II
SUMMARY OF ADJUSTMENTS
(0000)

RECOMMENDED ADJUSTMENT	EXHIBIT REFERENCE	RATE BASE EFFECT $	REVENUE EFFECT $	EXPENSE EFFECT $	DEPRECIATION EFFECT $	EFFECT UPON TAXES OTHER $	STATE TAX EFFECT $	FEDERAL TAX EFFECT $
LIMERICK #1 & 50% COMMON	TEK-4	(1,443,912)						
LIM #1 DEP RESERVE	TEK-5	(14,641)						
NON-REV PROD CWIP	SCH. 3	(1,442)						
LAND HELD FF USE		(8,651)						
M&S	SCH. 4	(1,411)						
CASH WORKING CAPITAL	TEK-9	2,686						
ACCUM DEF INC TAX								
LIB DEPREC	SCH. 5 &6	(23,375)						
LIMERICK #1	TEK-6	(60,043)						
SALEM UNIT #1		4,380						
SALEM #2 TAX BENEFITS	SCH. 7	6,098						
ANN'N FOR GROWTH & CUST	SCH. 11		11,004	3,601		221	501	3,074
PRO FORMA INTEREST	TEK-14						5,256	32,237
NUC & STM PROD O&M	SCH. 12			(4,288)			299	1,835
KEYSTONE ALLIANCE	SCH. 13			(4,117)			287	1,762
MISC ADJUSTMENTS	SCH. 10			(1,189)			77	470
DECOMMISSIONING	SCH. 14			(691)			48	296
SALEM UNIT #2	SCH. 7			(228)			16	98
ACC DEF STATE INC TAX	SCH. 5			(5,658)			365	2,238
CAP'D PENSION, ETC.	SCH. 15			(16,288)			1,131	6,936
CONSOL INC TAX	SCH. 8							(342)
SEQUOYAH & LEE MINES				(1,532)				
DEPRECIATION-LIMERICK	TEK-5				(39,294)			
TAX DEPREC-LIMERICK	TEK-6						11,696	71,734
TAX DEFERRAL-LIM	TEK-6							(60,043)
I.T.C.-LIMERICK	TEK-7							1,889
EXCESS CAPACITY								
TOTAL ADJUSTMENTS		(1,365,149)	11,004	(30,310)	(39,294)	221	19,676	62,184
COMPANY RATE BASE		6,943,888						
RECOMMENDED RATE BASE		5,578,739						

NOTES: SOURCE FOR TEK SCHEDULES IS OCA STATEMENT 7A.
SOURCE FOR ALL OTHER SCHEDULES IS OCA STATEMENT 4A.

PHILADELPHIA ELECTRIC CO. REV. SCHEDULE TEK-9
CASH WORKING CAPITAL- SUMMARY
TEST YEAR AT JUNE 30, 1986
($000)

	COMPANY (1)	ADJ (2)	O.C.A. (3)	SCHEDULE
O&M EXPENSE	$91,954	($647)	$91,307	TEK-10
TAXES	33,201	(4,217)	28,984	TEK-11
INTEREST PAYMENTS	(38,489)	7,566	(30,923)	TEK-12
PREFERRED DIVIDEND PAYMENT	85	(16)	69	TEK-13
AVERAGE BANK BALANCES	9,700	0	9,700	
TOTAL	$96,451	$2,686	$99,137	

PHILADELPHIA ELECTRIC CO.
CASH WORKING CAPITAL- O&M
TEST YEAR AT JUNE 30, 1986
($000)

REV. SCHEDULE TEK-10

	WAGES & BENEFITS	
D-5	WAGES	5,695
D-18	LIM O&M	6,408
		12,103

	NET INTERCHANGE	
D-3	OP.EXP	17,406
D-19	FUEL	(3,775)
D-21	FUEL-R.O.	(206,990)
		(193,359)

	OTHER INVOICES	
D-10	PROD O&M	6,326
D-11	O&M RETIR	(10,556)
D-12	RATE CASE	(4,300)
D-15	DECOMM'G	7,335
D-16	SP FUEL	3,803
D-18	LIM O&M	69,332
B-13	UNCOLL	(16,472)
	KEYSTONE	(4,117)
		51,351

	ACTUAL	PRO FORMA ADJ	PRO FORMA EXP	LAG DAYS	LAG DOLLARS
PAYROLL	275,564	5,270	280,834	10.5	2,948,757
NET INTER	421,472	(193,359)	228,113	35.0	7,983,955
NUC FUEL	136,823		136,823	46.5	6,362,270
COAL	84,660		84,660	31.2	2,641,392
COAL FRT	16,766		16,766	15.0	251,490
OIL	120,360		120,360	19.3	2,322,948
BENEFITS	19,276	6,194	25,470	1.8	45,846
PENSIONS	29,009	639	29,648	15.0	444,720
OTH INV	315,051	51,351	366,402	15.4	5,642,591
A&G	87,912		87,912	15.4	1,353,845
TOTAL	1,506,893	(129,905)	1,376,988	21.8	29,997,814
RESIDENTIAL			928,292	47.7	44,279,528
SMALL C&I			359,462	47.6	17,110,391
LARGE C&I			1,174,680	43.5	51,098,580
TOTAL			2,462,434	46.0	112,488,499

AVE LAG IN RECEIPT OF REVENUE	46.0
AVE LAG IN PAYMENT OF EXP	21.8
NET LAG	24.2
PRO FORMA TEST YEAR O&M	$1,376,988
PER DAY	$3,773
REQUIREMENT	$91,307

PHILADELPHIA ELECTRIC CO.
CASH WORKING CAPITAL- TAXES
TEST YEAR AT JUNE 30, 1986
($000)

REV. SCHEDULE TEK-11

	TAXES OTHER	
A-4	GRT @4.5%	15,629
D-3	GRT @4.5%	2,240
D-14	FICA	741
D-21	GRT @4.5%	(9,753)
		8,857

	INCOME TAXES	STATE	F.I.T.
A-4	REV-PROP	(10,321)	(63,302)
D-3	REV	2,189	13,425
D-5	WAGES	(397)	(2,437)
D-7	TAX DEP	5,418	33,226
D-9	INT	(8,436)	(51,738)
D-10	PROD O&M	(441)	(2,707)
D-11	O&M RETIR	736	4,518
D-12	RATE CASE	(187)	(1,153)
D-14	FICA	(52)	(317)
D-15	DECOMM'G	(512)	(3,138)
D-16	SPENT FUEL	(265)	(1,628)
D-18	LIM O&M	(5,284)	(32,410)
D-19	NON-JURIS	767	4,707
	CONSOL TAX		(342)
	KEYSTONE	287	1,762
	ACC DEF ST		2,603
	SALEM #2 TAX	16	98
	CAP'D ITEMS	1,131	6,936
	LIM#1 TAX DP	11,696	71,734
		(3,655)	(20,163)

	ACTUAL (1)	PRO FORMA ADJ (2)	PRO FORMA TAXES (3)	LAG DAYS (4)	LAG DOLLARS (5)
AD VALORUM	69,124	1,212	70,336	26.2	1,842,803
TAXES OTHER	130,713	8,857	139,570	-30.8	(4,298,756)
STATE INC	26,900	(3,655)	23,245	63.6	1,478,382
F.I.T.	105,773	(20,163)	85,610	59.0	5,050,990
TOTAL	332,510	(13,749)	318,761	12.8	4,073,419

AVERAGE LAG IN RECEIPT OF REVS	46.0
AVE LAG IN PAYMENT OF TAXES	12.8
NET LAG	33.2
PRO FORMA TEST YEAR TAXES	$318,761
PER DAY(/365)	$873
REQUIREMENT	$28,984

PHILADELPHIA ELECTRIC CO REV. SCHEDULE TEK-12

CASH WORKING CAPITAL- INTEREST OFFSET

TEST YEAR AT JUNE 30, 1986

($000)

RATE BASE	$5,578,739
% FINANCED BY DEBT	50.90%
RATE BASE FINANCED BY DEBT	$2,839,578
COST OF DEBT	10.86%
INTEREST ALLOCATED TO RATE BASE	$308,378
AVERAGE DAILY INTEREST	$844.9
NET LAG DAYS	36.6
DECREASE IN CASH WORKING CAPITAL	$30,923

PHILADELPHIA ELECTRIC CO. REV. SCHEDULE TEK-13
CASH WORKING CAPITAL- PREFERRED DIVIDEND OFFSET
TEST YEAR AT JUNE 30, 1986
($000)

RATE BASE	$5,578,739
% FINANCED BY PREFERRED	10.70%
RATE BASE FINANCED BY PREFERRED	$596,925
COST OF PREFERRED	10.50%
DIVIDENDS ALLOCATED TO RATE BASE	$62,677
AVERAGE DAILY DIVIDENDS	$171.7
NET LAG DAYS	-0.4
INCREASE IN CASH WORKING CAPITAL	$69

NOTES CONCERNING LIMERICK COMMON PLANT ADJUSTMENT

The adoption of OCA's $639,512,000 adjustment to Plant-in-Service to remove 50 percent of Limerick common plant, has the following additional effects:

* A reduction in depreciation expense of $17,395,000, which results in an increase in income available for return of the same amount. (This amount is calculated by multiplying the reduction in plant in service by the composite depreciation rate of 2.72%.) See OCA St. 7A, Rev. Sch. TEK-5.

* A reduction in depreciation reserve of $6,481,000. (This amount is calculated by multiplying the annual depreciation expense by 37.26%, which represents the portion of the future test year for which Limerick 1 will be in commercial operation and, thus, accruing depreciation.) See id.

* An increase in tax depreciation of $74,247,000, which results in a decrease in income available for return of $36,951,000. (This amount is calculated by multiplying the reduction in plant in service by the tax depreciation rate of 11.61% and multiplying the result by the income tax factor of 49.768%.) See id., Rev. Sch. TEK-6.

* An increase in excess tax depreciation of $57,812,000, which results in an increase in income available for return of $26,593,000 and a reduction in rate base of the same amount ($26,593,000). (This amount is calculated by taking the difference between liberalized and straight line depreciation, then multiplying the result by the federal income tax rate of 46%.) See id.

* An increase in the allocation of Investment Tax Credit amortization of $837,000, which results in a decrease in income available for return of $837,000. (This amount is calculated by taking the ratio of the plant in service adjustment to the Company's original plant claim for all of Limerick, then multiplying that ratio by the full I.T.C. amortization applicable to all of Limerick.) See id., Rev. Sch. TEK-7.

APPENDIX B

Section 6655 of Internal Revenue Code, 26 U.S.C. §6655

estimate for various years was greater than amount shown on his returns for preceding taxable years, though taxpayer's returns did not report full amount of income required to be included. Schwarzkopf v Commissioner (1957, CA3) 246 F2d 731.

Under exception of predecessor to 26 USCS § 6654(d)(1), estimated tax is compared to amount actually shown on previous return and not as reconstructed by IRS when taxpayer fraudulently understates income. O'Commor v Commissioner (1967) 26 TCM 820, affd 412 F2d 304, cert den 397 US 921, 25 L Ed 2d 102, 90 S Ct 908; Casciani v Commissioner (1967) 26 TCM 997.

5. Exception for farm income [26 USCS § 6654(d)(2)]

Addition to tax for underpayment of estimated tax imposed by 26 USCS § 6654(a) will apply to joint return, filed March 1 for preceding calendar year for which no estimated tax had been paid, by husband who derived all of his income from farming and his spouse, whose income was from nonfarm sources and was 35 percent of their aggregate gross income; taxpayers did not qualify for special treatment under 26 USCS § 6073(b). Rev Rul 75-356, CB 1975-2 p 497.

6. Actual facts [26 USCS § 6654(d)(4)]

Computation of income under income averaging provisions of Internal Revenue Code by taxpayer is fact shown on his return for preceding taxable year for purposes of 26 USCS § 6654(d)(4). Rev Rul 69-307, CB 1969-1 p 304.

Termination of credit is change of rate within meaning of Income Tax Regulations and taxpayer may not take into consideration credit shown in preceding year's tax return for purpose of determining whether it qualifies for relief from addition to tax for underpayment of estimated tax under exception provided by 26 USCS § 6654(d)(4). Rev Rul 72-91, CB 1972-1 p 400.

Increased standard deduction for 1971 may not be used for purposes of exception to addition to tax for underpayment of estimated tax for 1971 provided by 26 USCS § 6654(d)(4). Rev Rul 72-210, CB 1972-1 p 400.

7. Miscellaneous

Fact that taxpayer was general contractor, whose income varied sharply each year, did not excuse failure to file declaration of estimated tax. Barnwell v United States (1958, DC SC) 164 F Supp 430.

III. ASSESSMENT AND COLLECTION

8. Procedure

Addition to tax under provisions of 26 USCS § 6654 is "deficiency" within meaning of 26 USCS §§ 6212, 6213; it is mandatory under § 6213(a) that Commissioner issue 90-day letter granting appeal to Tax Court prior to making any assessment of tax deficiency; contention of United States that determination of penalties or additions to tax for underestimation or underpayment of estimated tax are mere "mathematical errors" appearing upon return, so that under provisions of 26 USCS § 6213(b) it was relieved from restrictions on assessments of tax contained in § 6213(a), is wholly untenable. Muse v Enochs (1958, DC Miss) 164 F Supp 561, affd (CA5 Miss) 270 F2d 528.

Appeal procedure of Rev Proc 78-1 does not apply to penalties that are not subject to reasonable cause determination which includes 26 USCS § 6654. Rev Proc 78-1, CB 1978-1 p 550.

9. Amount of underpayment

Existence and extent of liability under predecessor to 26 USCS § 6654 should be determined on basis of recomputations of income made based on net worth computation. Morrow v Commissioner (1967) 26 TCM 1222.

Fact that there may be loss carrybacks which may eliminate any tax for particular year does not wipe out existence of deficiency for purpose of computing any addition to tax under 26 USCS § 6654. Swafford v Commissioner (1973) 32 TCM 528.

10. Period of underpayment

Filing of final return stops monthly penalties for failure to make payments under estimated tax return. Stephan v Commissioner (1952, CA5) 197 F2d 712.

§ 6655. Failure by corporation to pay estimated income tax.

(a) Addition to the tax. In case of any underpayment of estimated tax by a corporation, except as provided in subsection (d), there shall be added to the tax under chapter 1 for the taxable year an amount determined at an annual rate established under section 6621 upon the amount of the underpayment (determined under subsection (b)) for the period of the underpayment (determined under subsection (c)).

(b) Amount of underpayment. For purposes of subsection (a), the amount of the underpayment shall be the excess of—

(1) The amount of the installment which would be required to be paid if the estimated tax were equal to 80 percent of the tax shown on the return for the taxable year or, if no return was filed, 80 percent of the tax for such year, over

(2) The amount, if any, of the installment paid on or before the last date prescribed for payment.

(c) Period of underpayment. The period of the underpayment shall run from the date the installment was required to be paid to whichever of the following dates is the earlier—

(1) The 15th day of the third month following the close of the taxable year.

(2) With respect to any portion of the underpayment, the date on which such portion is paid. For purposes of this paragraph, a payment of estimated tax on any installment date shall be considered a payment of any previous underpayment only to the extent such payment exceeds the amount of the installment determined under subsection (b)(1) for such installment date.

(d) Exception. Notwithstanding the provisions of the preceding subsections, the addition to the tax with respect to any underpayment of any installment shall not be imposed if the total amount of all payments of estimated tax made on or before the last date prescribed for the payment of such installment equals or exceeds the amount which would have been required to be paid on or before such date if the estimated tax were whichever of the following is the lesser—

(1) The tax shown on the return of the corporation for the preceding taxable year, if a return showing a liability for tax was filed by the corporation for the preceding taxable year and such preceding year was a taxable year of 12 months.

(2) An amount equal to the tax computed at the rates applicable to the taxable year but otherwise on the basis of the facts shown on the return of the corporation for, and the law applicable to, the preceding taxable year.

(3)(A) An amount equal to 80 percent of the tax for the taxable year computed by placing on an annualized basis the taxable income:

(i) for the first three months of the taxable year, in the case of the installment required to be paid in the 4th month,

(ii) for the first 3 months or for the first 5 months of the taxable year, in the case of the installment required to be paid in the 6th month,

(iii) for the first 6 months or for the first 8 months of the taxable year in the case of the installment required to be paid in the 9th month, and

(iv) for the first 9 months or for the first 11 months of the taxable year, in the case of the installment required to be paid in the 12th month of the taxable year.

(B) For purposes of this paragraph, the taxable income shall be placed on an annualized basis by—

(i) multiplying by 12 the taxable income referred to in subparagraph (A), and

(ii) dividing the resulting amount by the number of months in the taxable year (3, 5, 6, 8, 9, or 11, as the case may be) referred to in subparagraph (A).

(e) Definition of tax. For purposes of subsections (b) and (d), the term "tax" means the excess of—

(1) the tax imposed by section 11 or 1201(a), or subchapter L of chapter 1, whichever is applicable, over

(2) the credits against tax provided by part IV of subchapter A of chapter 1.

(f) Short taxable year. The application of this section to taxable years of less than 12 months shall be in accordance with regulations prescribed by the Secretary.

(g) Excessive adjustment under section 6425.

(1) Addition to tax. If the amount of an adjustment under section 6425 made before the 15th day of the third month following the close of the taxable year is excessive, there shall be added to the tax under chapter 1 for the taxable year an amount determined at an annual rate established under section 6621 upon the excessive amount from the date on which the credit is allowed or the refund is paid to such 15th day.

(2) Excessive amount.—For purposes of paragraph (1), the excessive amount is equal to the amount of the adjustments or (if smaller) the amount by which—

(A) the income tax liability (as defined in section 6425(c)) for the taxable year as shown on the return for the taxable year, exceeds

(B) the estimated income tax paid during the taxable year, reduced by the amount of the adjustment.

(Aug. 16, 1954, ch 736, 68A Stat. 825; Feb. 26, 1964, P.L. 88-272, Title I, Part II, § 122(c), 78 Stat. 28; June 28, 1968, P.L. 90-364, Title I, § 103(c), (d)(2), (e)(1), 82 Stat. 262; Jan. 3, 1975, P.L. 93-625, § 7(c), 88 Stat. 2115; Oct. 4, 1976, P.L. 94-455, Title XIX, Subtitle A, § 1906(b)(3)(A), (B), (C)(i), (b)(13)(A), 90 Stat. 1833; Nov. 6, 1978, P.L. 95-600, Title III, Subtitle A, § 301(b)(20)(B), 92 Stat. 2824.)

HISTORY; ANCILLARY LAWS AND DIRECTIVES

Amendments:

In '78, P.L. 95-600, Sec. 301(b)(20)(B), substituted new subsec. (e) for one which read:

[illegible] installment of estimated tax due before end of corporation's taxable year; however shareholder may use entire portion of allocable ... in order to determine applicability of exception in case of installment due after corporation's taxable year ends. Rev Rul 81-144, IRB 1981-19, 18.

Procedure.

Taxpayer is estopped from asserting that income taxes due United States were due on January 15, 1973, rather than April 16, 1973, where he failed to furnish IRS with information indicating that installment payment of taxes were required under former 26 USCS § 6153, and that earlier due date BCD 733.

Income to beneficiary who receives more than two-thirds of yearly gross income from trust engaged solely in business of farming is considered to be gross income from farming for estimated tax purposes. Rev Rul 63-26 modified. Rev Rul 80-366, IRB 1980-52 p 18.

10. Period of underpayment

Except for elections made prior to 1984, period of underpayment of estimated tax runs from due date of installment of estimated tax to date election to apply overpayment is made where underpayment is satisfied by overpayment applied from previous year. Rev Rule 77-475 is revoked. Rev Rul 83-111, IRB 1983-31 p 6.

§ 6655. Failure by corporation to pay estimated income tax.

(a) Addition to tax. Except as provided in subsections (d) and (e), in the case of any underpayment of tax by a corporation—

(1) In general. There shall be added to the tax under chapter 1 for the taxable year an amount determined at the rate established under section 6621 on the amount of the underpayment for the period of the underpayment.

(2) Special rule where corporation paid 80 percent or more of tax. In any case in which there would be no underpayment if subsection (b) were applied by substituting "80 percent" for "90 percent" each place it appears, the addition to tax under paragraph (1) shall be equal to 75 percent of the amount otherwise determined under paragraph (1).

(b) Amount of underpayment. [Introductory matter unchanged]

(1) The amount of the installment which would be required to be paid if the estimated tax were equal to 90 percent of the tax shown on the return for the taxable year or, if no return was filed, 90 percent of the tax for such year, over

(2) [Unchanged]

(c) [Unchanged]

(d) Exception. [Introductory matter unchanged]

(1), (2) [Unchanged]

(3)(A) An amount equal to 90 percent of the tax for the taxable year computed by placing on an annualized basis the taxable income:

(i)–(iv) [Unchanged]

(B) [Unchanged]

(e) Additional exception for recurring seasonal income.

(1) In general. Notwithstanding the preceding subsections, the addition to the tax with respect to any underpayment of any installment shall not be imposed if the total amount of all payments of estimated tax made on or before the last date prescribed for the payment of such installment equals or exceeds 90 percent of the amount determined under paragraph (2).

(2) Determination of amount. The amount determined under this paragraph for any installment shall be determined in the following manner—

(A) take the taxable income for all months during the taxable year preceding the filing month,

(B) divide such amount by the base period percentage for all months during the taxable year preceding the filing month,

(C) determine the tax on the amount determined under subparagraph (B), and

(D) multiply the tax computed under subparagraph (C) by the base period percentage for the filing month and all months during the taxable year preceding the filing month.

(3) Definitions and special rules. For purposes of this subsection—

(A) Base period percentage. The base period percentage for any period of months shall be the average percent which the taxable income for the corresponding months in each of the 3 preceding taxable years bears to the taxable income for the 3 preceding taxable years.

(B) Filing month. The term "filing month" means the month in which the installment is required to be paid.

(C) Limitation on application of subsection. This subsection shall only apply if the base period percentage for any 6 consecutive months of the taxable year equals or exceeds 70 percent.

(D) Reorganizations, etc. The Secretary may by regulations provide for the determination of the base period percentage in the case of reorganizations, new corporations, and other similar circumstances.

(f) Definition of tax. For purposes of subsections (b), (d), (e), and (i), the term "tax" means the excess of—

(1) [Unchanged]

(2) the sum of—

(A) the credits against tax provided by part IV of subchapter A of chapter 1, plus

(B) to the extent allowed under regulations prescribed by the Secretary, any overpayment of the tax imposed by section 4986 (determined without regard to section 4995(a)(4)(B)).

(g) Short taxable year. The application of this section to taxable years of less than 12 months shall be in accordance with regulations prescribed by the Secretary.

(h) Excessive adjustment under section 6425.

(1) Addition to tax. If the amount of an adjustment under section 6425 made before the 15th day of the third month following the close of the taxable year is excessive, there shall be added to the tax under chapter 1 for the taxable year an amount determined at an annual rate established under section 6621 upon the excessive amount from the date on which the credit is allowed or the refund is paid to such 15th day.

(2) Excessive amount. For purposes of paragraph (1), the excessive amount is equal to the amount of the adjustments or (if smaller) the amount by which—

(A) the income tax liability (as defined in section 6425(c)) for the taxable year as shown on the return for the taxable year, exceeds

(B) the estimated income tax paid during the taxable year, reduced by the amount of the adjustment.

(i) Large corporations required to pay minimum percentage of current year tax.

(1) Minimum percentage.

(A) In general. Except as provided in subparagraph (B), in the case of a large corporation, paragraphs (1) and (2) of subsection (d) shall not apply.

(B) Transition rule. For taxable years beginning before 1984, in the case of a large corporation, the amount treated as the estimated tax for the taxable year under paragraphs (1) and (2) of subsection (d) shall in no event be less than the applicable percentage of—

(i) the tax shown on the return for the taxable year, or

(ii) if no return was filed, the tax for such year.

(C) Applicable percentage. For purposes of subparagraph (B), the applicable percentage shall be determined in accordance with the following table:

If the taxable year begins in:	The applicable percentage is:
1982	65
1983	75.

(2) Large corporation. For purposes of this subsection, the term "large corporation" means any corporation if such corporation (or any predecessor corporation) had taxable income of $1,000,000 or more for any taxable year during the testing period.

(3) Rules for applying paragraph (2).

(A) Testing period. For purposes of this subsection, the term "testing period" means the 3 taxable years immediately preceding the taxable year involved.

(B) Members of controlled groups. For purposes of applying paragraph (2) to any taxable year in the testing period with respect to corporations which are component members of a controlled group of corporations for such taxable year, the $1,000,000 amount specified in paragraph (2) shall be divided among such members under rules similar to the rules of section 1561.

(As amended Dec. 5, 1980, P.L. 96-499, Title XI, Subtitle B, § 1111(a), (b), 94 Stat. 2681; Aug. 13, 1981, P. L. 97-34, Title VI, Subtitle A, § 601(a)(6)(B), Title VII, Subtitle D, § 731(a), (b), 95 Stat. 336, 346; Sept. 3, 1982, P. L. 97-248, Title II, Subtitle B, Part VIII, § 234(a), (c), (d), 96 Stat. 503; Jan. 12, 1983, P.L. 97-448, Title II, § 201(j)(4), 96 Stat. 2396.)

HISTORY; ANCILLARY LAWS AND DIRECTIVES

Amendments:

In '83, P.L. 97-448, Sec. 201(j)(4), in subsec. (e)(2) [now subsec. (f)(2)], substituted

APPENDIX C

Exhibits Entered by the Office of Consumer Advocate

Exhibits Entered by the Office of Consumer Advocate

OCA Exh. Number	Date Entered	Contents of the Exhibit
1	12/10/85	Answer to IR-OCA-5-13
2	12/10/85	Answer to IR-OCA-10-1
(OCA DID NOT ENTER AN EXHIBIT #3 INTO THE RECORD)		
4	12/11/85	Answer to IR-OCA-15-6
5	12/11/85	Answer to IR-OCA-8-47
6	12/11/85	Answer to IR-OCA-8-5
7	12/11/85	Answer to IR-OCA-18-27
8	12/11/85	Answer to IR-OCA-8-15
9	12/11/85	Answer to IR-OCA-8-33
10	12/11/85	Answer to IR-OCA-8-28
11	12/11/85	Answer to IR-OCA-1-6
12	12/12/85	Answer to IR-OCA-14-5
13	12/12/85	Answer to IR-OCA-14-6
14	12/12/85	Answer to IR-OCA-1-11
15	12/12/85	Answer to IR-OCA-1-11 (revised)
16	12/12/85	Answer to IR-OCA-16-8
17	12/12/85	"Wharton EFA Projections of PECO Oil & Coal Costs, 1982-1985," entered in the record in the first Limerick Investigation, I-80100341, as PECO Exh. GRS-1.
18	12/12/85	Excerpt from PECO St. 19A in the Limererick 2 Investigation, I-840381
19	12/12/85	Answer to IR-OCA-15-6
20	12/12/85	Answer to a transcript data request made in Pa. PUC v. PECO, P-830453

OCA Exh. Number	Date Entered	Contents of the Exhibit
21	12/12/85	Transcript excerpt from Pa. PUC v. PECO, R-842590
22	12/12/85	Answer to IR-OCA-6-15
23	12/12/85	Answer to IR-OCA-6-5
24	12/13/85	Answer to IR-OCA-1-2
25	12/13/85	Answer to IR-OCA-1-3
26	12/13/85	Answer to IR-OCA-1-52
27	12/13/85	Answer to IR-OCA-1-26
28	12/13/85	Answer to IR-OCA-3-7
29	12/13/85	Answer to IR-OCA-3-7 (revised)
30	12/13/85	Answer to IR-OCA-3-8 (revised)
31	12/13/85	Answer to IR-OCA-13-13
32	12/13/85	Answer to IR-OCA-3-19
33	12/13/85	Answer to IR-OCA-20-10
34	12/16/85	Answer to IR-OCA-15-8
35	12/16/85	Answer to IR-OCA-18-17
36	12/16/85	Answer to IR-OCA-9-12
37	12/16/85	Excerpt from ALJ Klovekorn's Initial Decision at the first Limerick Investigation, I-80100341
38	12/16/85	Answer to IR-OCA-2-22
39	12/16/85	Answer to IR-OCA-5-6
40	12/16/85	Answer to IR-OCA-6-19
41	12/16/85	Copy of OCA Exh. 8 from the Limerick 2 Investigation, I-840381
42	12/16/85	Answer to IR-OCA-9-10
43	12/16/85	Answer to IR-OCA-15-2

OCA Exh. Number	Date Entered	Contents of the Exhibit
44	12/16/85	Excerpt from testimony of Dr. Perl in the first Limerick Investigation, I-80100341
45	12/16/85	Excerpt from Dr Perl's rebuttal testimony in the first Limerick Investigation, I-80100341
46	12/16/85	Answer to IR-OCA-16-9
47	12/16/85	Answer to IR-OCA-16-2
48	12/16/85	Answer to IR-OCA-16-5
49	12/16/85	Answer to IR-OCA-16-1
50	12/17/85	OCA Exh. No. 67 from the Limerick 2 Investigation, I-840381
51	12/17/85	Answer to IR-OCA-2-67
52	12/17/85	Excerpt from supplementary testimony of OCA at R.I.D. 438
53	12/17/85	Answer to IR-OCA-15-15
54	12/17/85	Answer to IR-OCA-15-13
55	12/17/85	Excerpt from PECO Bimonthly Report to the Pa. PUC, No. 10, dated 11/27/86
56	12/17/85	Excerpt from direct testimony of Mr. Boyer in Pa. PUC v. PECO, R.I.D. 438
57	12/17/85	Document provided in response to Answer to IR-OCA-2-21 from the Limerick 2 Investigation, I-840381
58	12/17/85	Letter from Edward G. Bauer to Secretary Susan Weisman of the Delaware River Basin Commission dated 4/24/85, and attachment
59	12/17/85	Excerpt of Mr. Boyer's October, 1985, testimony before the Delaware River Basin Commission
60	12/17/85	Affadavit of Mr. Boyer from PECO Brief in PECO v. Pa.PUC, Docket No. 2365 C.D. 1982

OCA Exh. Number	Date Entered	Contents of the Exhibit
61	12/18/85	Answer to IR-OCA-4-22
62	12/19/85	Excerpt from answer to IR-OCA-4-29
63	12/19/85	Excerpt from Forecast 5 For Limerick Generating Station
64	12/19/85	Additional excerpt from answer to IR-OCA-4-29
65	12/20/85	Four letters from PECO's files, with attachments
66	12/20/85	Memo from PECO files regarding meeting on August 12, 1976
67	12/20/85	Excerpt from PECO Annual Report for 1977
68	12/20/85	Excerpt from PECO Annual Report for 1978
69	12/20/85	Memo from PECO files regarding meeting of August 16, 1976, signed by David M. Hunt
70	12/20/85	Attachment to testimony of Mr. Paquette from Pa. PUC v. PECO, R.I.D. 438
71	12/20/85	Answer to IR-OCA-3-5
72	1/7/86	Answer to IR-OCA-21-4
73	1/7/86	Answer to IR-OCA-21-5
74	1/7/86	Answer to IR-OCA-7-17
75	1/7/86	Answer to IR-OCA-21-8
76	1/7/86	Answer to IR-OCA-6-18
77	1/8/86	Answer to IR-OCA-11-9
78	1/8/86	Answer to IR-OCA-23-6
79	1/8/86	Discussion by Dr. Perl of correction to addendum to his testimony
80	1/8/86	Answer to IR-OCA-23-4
81	1/8/86	Answer to IR-OCA-23-5
82	1/8/86	Excerpt from 50 Federal Register, No. 248

OCA Exh. Number	Date Entered	Contents of the Exhibit
83	1/8/86	Answer to IR-PAIEUG-2-64
84	1/8/86	Answer to IR-OCA-15-5
85	1/8/86	Answer to IR-UUC/UP-2-22
86	2/11/86	OCA Answer to PECO's IR-10-1
87	2/14/86	PAIEUG answer to PECO's IR-2-14
88	3/12/86	Answer to IR-OCA-29-1
89	3/17/86	Answers to DR-OCA-6-1, DR-OCA-7-2, and DR-OCA-4-1

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April 9, 1986

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Jerry Rich, Secretary
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North Office Building
Commonwealth & North Streets
Harrisburg, PA 17120

Re: Pennsylvania Public Utility Commission v.
Philadelphia Electric Company
Docket No. R-850152

Dear Secretary Rich:

Enclosed please find ten (10) copies of a page from the Philadelphia Electric Company Initial Brief, which was inadvertently missing from some of the Briefs distributed April 7, 1986. Please include the enclosed page, labeled as D-72, in the Appendix portion of the Company's Initial Brief.

Sincerely,

David B. MacGregor
Counsel for
Philadelphia Electric Company

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Enclosures

cc: Honorable Joseph P. Matuschak
All Active Parties

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appropriate rate at which to evaluate investment decisions. Assuming that the goal is to minimize the expected cost of generation, any other rate, whether the pre-tax cost of money as Mr. Falkenberg argues or the consumers' private rate as Mr. Chernick argues, will lead to less than optimal results."

(PECO St. 11A, pp. 7-8).

In light of the above discussion, the Company's after-tax cost of capital, as used by Dr. Hieronymus, is certainly the appropriate discount rate for use in determining the present value of revenue requirements in the Limerick life cycle cost-benefit analysis.

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April 9, 1986

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Public Utility Commission

Jerry Rich, Secretary
Pa. Public Utility Commission
Room B-18, North Office Bldg.
Harrisburg, PA 17120

RE: Philadelphia Electric Company,
Docket No. R-850152

Dear Secretary Rich:

Enclosed herewith for filing in the above-referenced docket please find an original and nine (9) copies of the Reply Brief of United States Steel Corporation.

Please acknowledge receipt of the enclosures by having the extra copy of this transmittal letter time-stamped and returned to me in the enclosed self-addressed envelope.

Very truly yours,

Kenneth R. Pepperney

Kenneth R. Pepperney

/klm

Enclosures

cc (w/encl.): All Parties of Record

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SECRETARY'S OFFICE
Public Utility Commission

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY
COMMISSION, et al.

R-850152

v.

PHILADELPHIA ELECTRIC COMPANY

FOLDER

DOCKETED
APR 10 1986

REPLY BRIEF OF
UNITED STATES STEEL CORPORATION

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BEFORE THE
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PENNSYLVANIA PUBLIC UTILITY
COMMISSION, et al.

R-850152

v.

PHILADELPHIA ELECTRIC COMPANY

REPLY BRIEF OF UNITED STATES STEEL CORPORATION

I. INTRODUCTION

United States Steel Corporation ("USS") filed its Initial Brief in this proceeding on April 2, 1986. That brief set forth USS's position regarding the rate treatment of Limerick Unit I, an appropriate rate structure for the Philadelphia Electric Company ("PECO"), and a proper design for Rate HT.

USS has now received and reviewed initial briefs filed by other parties to this proceeding. The briefs of USS and other parties exhaustively cover the various issues of rate structure and design that have arisen in this case. Accordingly, this reply brief is limited to those few points concerning rate structure and design which require additional discussion.

II. ARGUMENT

Several parties propose to allocate various amounts of PECO's investment in baseload generating plant on the basis of energy.[1/] These proposals all rest upon a fundamental misapprehension of the generation planning process. They all ignore proper application of the principles of cost causation. The Commission, therefore, should reject them.

The proposals to allocate the capital costs of baseload generating plants on the basis of energy rest upon the argument that PECO builds such plants, with their relatively high capacity costs, in order to secure lower cost energy. However, this argument misapprehends the true nature of the generation planning process. As Mr. Pollock pointed out, utilities must justify additional baseload generating capacity and they rarely, if ever, attempt to do so without a demand forecast. (Pollock Rebuttal, at 5.) The fact that in many cases baseload plants are cancelled or postponed when forecasted demand shrinks also establishes the irrefutable tie between generation plant investment and demand. (Id., at 6.)

The arguments in favor of an energy allocation of capacity costs confuse the effect of operating baseload units at high capacity factors (fuel savings) with the cause of their

---

1/ The Office of Consumer Advocate, CEPA, the Utilities User's Committee/University of Pennsylvania, and the Philadelphia Business Utility Users Group.

construction. (Id.) Utilities choose to invest in generation facilities first and foremost to meet anticipated demand. Once the decision to construct is made, the utility then determines the most efficient type of plant to serve its load pattern. However, the utility never arrives at this second step of the planning process unless it passes the first step, and the first step rests upon demand. The proponents of allocating capacity costs on the basis of energy fail to recognize that the relative costs (both investment and fuel) for different types of generating units come into play in the planning process only (1) after the utility satisfies the system peak demand criterion, and (2) within the limits set by the utility's load pattern.

Stated another way, the fundamental flaw in the energy allocation argument is that it begins with the end of the generation planning process rather than with the beginning. It conveniently ignores the fact that PECO would have no generating units at all if PECO did not first have a requirement to meet a certain peak demand on its system. It also conveniently ignores the fact that PECO would not be building baseload units if its load pattern called instead for the construction of peaking units (or vice-versa). The proponents of energy allocation claim that their preferred allocation methodology is premised on the generation planning process. In fact, it ignores the truly significant part of that process with respect to cost causation.

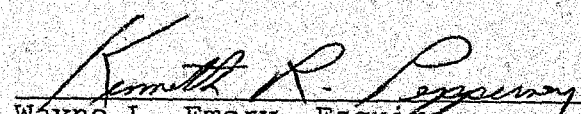
The parties who argue for an energy allocation also rely upon an alleged need to "match" the burden of the capital costs of PECO's nuclear generating plants with the "benefits" of those plants. They argue that high load factor customers get more of the fuel savings from such plants and, therefore, should pay more of the capacity costs of such plants. However, this argument ignores the fact that there is no entitlement to energy produced from particular types of generation for which capacity cost responsibility has been allocated. It also ignores the fact that the relatively low load factor of certain classes both explains and justifies the difference between the capacity costs allocated to them and the use which they make of the capacity available to them.

The "cost-benefits" theory is completely at odds with the accepted principle of cost-causation. (Pollock Reubttal, at 3.) In addition, the proponents of the cost-benefit approach fail to accord the full benefits of their theory to the customer classes which would be saddled with the burdens of it. If certain customers are to pay a greater share of above-average capacity costs from baseload units, then those customers should receive a greater share of below-average cost energy from those units. (Id., at 3-4.) The proposals to allocate the capital costs of PECO's baseload units on an energy basis fail to achieve this necessary result and should be rejected. (Id., at 7-11.)

III. CONCLUSION

The Commission should reject the various rate structure and design proposals in this case which rest upon the erroneous allocation of capacity costs on the basis of energy. Instead, the Commission should adopt the recommendations made by USS in its Initial Brief.

Respectfully submitted,



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CERTIFICATE OF SERVICE

I hereby certify that on this 9th day of April, 1986, I served a copy of the Reply Brief of United States Steel Corporation on all parties of record by placing the same in the U. S. mail, first class, postage prepaid.

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April 9, 1986

Mr. Jerry Rich, Secretary
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North Office Building
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Re: Pennsylvania Public Utility Commission v. Philadelphia Electric Company
Docket No. R-850152

Dear Secretary Rich:

Enclosed for filing with the Commission please find the original and nine copies of CEPA, et al's Reply Brief in the above action.

The Reply Brief will be served on all parties as demonstrated by the attached certificate of service.

Sincerely,

John Hanger

John Hanger,
Counsel for CEPA, et al

JH:rp

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John Hanger
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DATED: April 9, 1986

BEFORE THE
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PENNSYLVANIA PUBLIC UTILITY COMMISSION	:	
v.	:	DOCKET NO. R-850152
PHILADELPHIA ELECTRIC COMPNAY	:	

DOCKET
APR 11 1986
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REPLY BRIEF ON BEHALF OF

ACTION ALLIANCE OF SENIOR CITIZENS
ASSOCIATION OF COMMUNITY ORGANIZATIONS FOR REFORM NOW
CONSUMERS EDUCATION AND PROTECTIVE ASSOCIATION
PHILADELPHIA CITIZENS IN ACTION, AND
MR. BRADSHAW

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I. INTRODUCTION

PECO's Initial Brief in its section on Residential Rate Design (p.7-183 to 7-188) leaves the impression that the essential use rate reform proposed by OCA witness Mr. Oliver would penalize up to 62% of low-income-ratepayer households. (See p. 7-184). Apparently, PECO would have the Commission believe that the Action Alliance of Senior Citizens (AASC) which works daily with senior citizens has endorsed an essential need rate reform that would harm the vast majority of the 72,000 senior citizen households with incomes below 150% of the poverty level (33% of low-income households in PECO's service territory are elderly). Also, seemingly PECO would have the Commission believe that CEPA, ACORN, and PCIA (whose former director is now the state senator representing North Philadelphia), which also have urged adoption of essential use rate reform, have taken a position that will harm the majority of low-income customers. PECO's effort to mislead the Commission is as unbelievable as it is insulting.

The remainder of this Reply Brief addresses several, serious distortions in PECO's Initial Brief.

A. OCA WITNESS OLIVER'S ESSENTIAL NEED PROPOSAL BENEFITS THE VAST MAJORITY OF LOW-INCOME HOUSEHOLDS

One thing should be clear: low-income families use less

electricity than families which are not low-income. Indeed, Mr. Grier's analysis indicated that 87% of low-income households who do not use electricity for water or space heating use less than 532 Kwh which is the "cross-over point" for OCA witness Oliver's Rate R essential use block. This conclusion should not surprise the Commission. Common sense (and data) tells all of us that low-income households do not have the income (average annual income for low-income households is $7,662) necessary to purchase many of the electric appliances, like air-conditioning, central air-conditioning, washers and dryers and so on, that contribute to higher annual electric consumption.

CEPA, et al recognize that a very small percentage (13%) of low-income households in Rate R have usage greater than 532 Kwh and will not be assisted by Mr. Oliver's essential need rate. Three things should be said about these high-use-low-income households. First, even these households would pay less under Mr. Oliver's rate proposal than they would pay under PECO's proposed rates. Why? Mr. Oliver's essential need rate reform is premised on substantial downward revenue adjustments in PECO's revenue request which are then largely allocated to the essential need blocks. As a conseuence, when one compares PECO's rate proposal to Mr. Oliver's proposal, one sees that every household, to some degree, benefits from Mr. Oliver's residential rate design.

Second, CEPA et al recommend that high-use,low-income households be placed in PECO's Customer Assistance Program which is already serving many high-use, though not necessarily low-

income households. (Tr. 4194). In CAP, these households would be protected from termination and easily targeted for all available programs to reduce consumption. CEPA et al's proposal, therefore, is comprehensive and protects all low-income households.

Third, the fact that Mr. Oliver's essential need rate proposal does not assist 13% of low-income households with usage bove 532 Kwh (remember, as compared to PECO's rate proposal, Mr.Oliver's proposal does benefit even the 13% of low-income households with high use) is not reason to deny the 87% of low income households the benefits they would receive from essential need rates. A policy initiative that helps 87% of the target population is very efficient and helpful.

B. AN OPTION AVAILABLE TO THE COMMISSION IS RESTRICTING ESSENTIAL NEED REFORM TO HOUSEHOLDS WITH INCOMES BELOW 150% OF THE POVERTY LEVEL

PECO's Initial Brief argues that essential need reform should be rejected, because it would benefit 520,000 households which have incomes above 150% of the poverty level. CEPA et al. find it curious that essential need reform is attacked on the basis that it benefits too many households. One would think that such widespread benefits would make the proposal more attractive.

Also, CEPA et al believe many households with incomes marginally above 150% of poverty will have ability-to-pay problems given implementation of PECO's proposed rates.

Obviously, PECO's rates are now so high that they have begun to threaten families who are struggling to enter the middle class. Indeed, Mr. Grier stressed that, while families with incomes below 150% of the poverty level would be particularly harmed by PECO's proposed rates, many customers with incomes above 150% of the poverty level would be burdened. (See, CEPA, et al., Stmt. No. 1, p. 8-9). Consequently, the fact that essential need reform benefits many households which are not so poor that they are eligible for energy subsidies, like the Low-Income Home Energy Assistance Program, is positive. Many of these households who live just above poverty levels, nonetheless, need assistance in paying PECO's exorbitant rates.

If the Commission, however, wants to target essential need assistance to only those households with incomes so meager (150% or less of the poverty level) that they are officially defined as low-income by the United States government and the Commonwealth of Pennsylvania, the Commission can restrict eligibility for essential need rates to households with verified incomes below 150% of the poverty level. In short, to get an essential need rate a household would have to prove to PECO at one of its customer service offices that its income was below 150% of poverty. Households which did not supply such verification would not be entitled to essential need rates.

While the prospect of verifying income may sound burdensome, the Commission should undestand that PECO already is verifying the income of more than 70,000 customers each year who request a payment agreement. (Tr. 3740). That number represents

fully one-third of the total number of low-income households. Consequently, PECO has now the necessary personnel with great experience experiecne in verifying households' income to implement a requirement that essential need rates be available only to households with incomes at or below 150% of the poverty level.

C. ALL LOW-INCOME FAMILIES HAVE IN VARYING DEGREES AN ABILITY-TO-PAY PROBLEM

PECO asserts that "there is no evidence that simply because a person is defined as low-income that that person is in fact having difficulty paying his or her electric bill". (See, PECO Initial Brief, p. 7-186). The statement is incredible and indicates that PECO has no idea what are the day-to-day realities of living in poverty. Moreover, the record is full of evidence that proves the girm circumstances of households with incomes at or below 150% of the poverty level. One such reality is difficulty paying the electric bill.

To start, Mr. Grier notes that both the governments of the United States and the Commonwealth of Pennsylvania have determined that households with incomes at or below 150% of the poverty level are so poor that they have trouble paying their energy bills. (See, CEPA, Stmt. 1, p. 6 and p.8). Both governments, therefore, make available energy subsidies through the Low-Income Home Energy Assistance Program (LIHEAP) to low-income households. Unfortunately LIHEAP is gravely under-funded and serves only 10,800 PECO customers. (See, CEPA, Stmt 1, p. 32). Moreover, the average LIHEAP grant declined from $289 in

1984-1985 to $185 in the 1985-1986 program; that cut equals 35%. (See, CEPA, Stmt. 1A, p. 8).

Apart from the fact governments throughout America have determined that households with incomes below 150% of the poverty level have an ability-to-pay problem and should be assisted, other evidence that all low-income households have difficulty paying their electric bill is Mr. Grier's conclusion that low-income households must spend 8% to 15% of their total income just on electricity. (See, CEPA, Stmt., 1, p. 24). If PECO's executives (and attorneys) were spending the same, enormous proportions of their families' income on electricity, they would not have the nerve to suggest that such allocations of income do not necessarily create an ability-to-pay problem. Indeed, its painfully obvious that, when households each and every month must spend 8% to 15% of their income on electricity, that households are going to have difficulty paying their electric bill.

Finally, Mr. Grier looked at not only the proportion of income required to purchase service but also the household budgets of low-income families. Pages 17 to 24 of Mr. Grier's Direct Testimony (CEPA, Stmt., 1) compare the incomes of low-income households with just food and shelter expenses (before medical, clothing, transportation, repairs and any PECO rate increase are considered). The highlights" of that testimony are:

(1) low-income single person homeowner renter ratepayers have $2.00 per month left after food and shelter expenses.

(2) low-income single person renter ratepayers have $26.00 per month deficit after just food and shelter costs.

(3) low-income homeowner ratepayers have $52.00 per month remaining after food and shelter costs.

(4) low-income renter ratepayers have $116 per month left after just food and shelter costs.

(See, CEPA, et al., Stmt., 1, p. 23).

Given this evidence PECO's statement that not all low-income households "have difficulty paying" their electric bill is misleading and insentive to the plight of poor households who are seeing PECO price its electric service out of their reach.

D. LOW-INCOME HOUSEHOLDS IN PECO'S SERVICE TERRITORY HAVE UNIQUELY GRAVE ABILITY-TO-PAY PROBLEMS, AND THE COMMISSION, THEREFORE, SHOULD ADOPT ESSENTIAL NEED RATE REFORM

PECO's Initial Brief quotes at length from the Commission's decision in the PP & L rate structure investigation at Docket No. R-830374 which rejected an essential need rate proposal for the PP & L service territory. That decision should not bind the Commission in this case, because the ability-to-pay problems of PECO's low-income customers are much more serious.

The seriousness of those problems are apparent by looking at just the number of PECO customers who are being forced into payment agreements or shut-off. Mr. Grier stated that 70,000 PECO customers now have deferred payment agreements. (Tr. 3747). Additionally, since 1980, the number of PECO customers with payment agreements more than tripled. (Tr. 3747)

PECO does two-thirds of all residential electric

terminations done in Pennsylvania. (CEPA, Stmt., 1A, p. 8). In 1985, PECO terminated 41,853 households. PECO's rate of terminations increased by 24% from 1984 to 1985. Given the same annual increase (24%) in terminations for the next four years, PECO will terminate 98,947 households by 1989. These termination data starkly demonstrate that the issue of access to electricity is particularly acute in PECO's service territory.

Additionally, PECO's electric rates are the highest in the state. Its proposed rate increase is enormous and can, only make even worse what is already the most dangerous ability-to-pay problem in Pennsylvania.

The Commission should also remember that 30% of PECO's customers in Philadelphia and 20% of PECO's total customers are low-income and live daily without electricity, with the threat of termination,, or, at best, without some other necessity so the electric bill can be paid. To make matters more threatening and ominous, 33% of low-income households in PECO's service territory are elderly (65 years or older). (Tr. 4282). In fact, 49,000 senior citizens are low-income and living alone in PECO's service territory. (See, CEPA, Stmt.,No. 1, p. 13-14).

The very large number of low-income households in PECO's service territory, however, get virtually no assistance from existing grant or conservation programs. Indeed, 93% of all low-income PECO households receive no assistance to pay or reduce their electric bill. (See, CEPA, Stmt., 1, p. 36). Even the 7% of low-income households who receive some assistance got sharply less help in 1986 than in prior years. LIHEAP's average grant

was cut by 35% or from $289 to $185.00. Consequently, the energy assistance available to PECO low-income ratepayers is much less than was available to PP & L ratepayers at the time of the Commission's decision in docket No. R-830374.

In conclusion, the rapidly increasing number of PECO households who are delinquent, the enormous number of households shut-off by PECO, the total inadequacy of assistance programs, the very high price of current PECO service, the huge requested rate increase, and the large number of poor and elderly households in PECO's service territory all are very substantial reasons for distinguishing this case from the PP & L case. Essential need rate reform is desperately needed as part of a comprehensive response to the uniquely acute crisis of access in PECO's service territory that confronts this Commission.

Respectfully Submitted,

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ORIGINAL

COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA PUBLIC UTILITY COMMISSION
P. O. BOX 3265, HARRISBURG, Pa. 17120

April 11, 1986

IN REPLY PLEASE
REFER TO OUR FILE

Jerry Rich, Secretary
Pa. Public Utility Commission
Post Office Box 3265
Harrisburg, PA 17120

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Public Utility Commission

Re: Pennsylvania Public Utility Commission
v.
Philadelphia Electric Company
Docket No. R-850152

Dear Secretary Rich:

Enclosed please find an original and nine (9) copies of Commission Trial Staff's Reply Brief for filing in the above-captioned proceeding. Copies have been served upon the Administrative Law Judge and all active parties of record as per the attached Certificate of Service.

Very truly yours,

Marlane R. Chestnut
Assistant Counsel

Enclosures

MRC:gdp

cc: Honorable Joseph P. Matuschak
All Active Parties of Record

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SECRETARY'S OFFICE
Public Utility Commission

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

ADMINISTRATIVE LAW JUDGE JOSEPH P. MATUSCHAK PRESIDING

PENNSYLVANIA PUBLIC UTILITY COMMISSION

v.

PHILADELPHIA ELECTRIC COMPANY

DOCKET NO. R-850152

COMMISSION TRIAL STAFF REPLY BRIEF

Investigation upon Commission Motion into Supplement No. 15 to Tariff Electric-Pa. P.U.C. No. 26, pursuant to Section 1308 of the Public Utility Code, 66 Pa. C.S. §1308.

DOCKETED
APR 15 1986

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I. INTRODUCTION

Many of the issues and arguments raised by the other parties to this proceeding, in the opinion of the Trial Staff ("Staff") of the Pennsylvania Public Utility Commission ("Commission"), have been adequately discussed or rebutted in its Main Brief and need not be repeated here. Several issues raised in the various briefs, however, do require response. Staff submits that any omission of an argument in this Reply Brief does not represent an agreement with PECO or any other party to the proceedings. Staff seeks simply to avoid unnecessary duplicative or repetitive arguments and has not waived its right to file exceptions or reply exceptions on any issues set forth in its Main Brief.

II. THE COMMISSION MUST BALANCE THE INTERESTS OF BOTH THE COMPANY AND ITS RATEPAYERS IN THIS CASE.

The submission of this case for adjudication by the Presiding Officer and the Commission requires the establishment of a delicate balance in fashioning a final result. The balance must take into account the interests not only of the Company's shareholders, ably represented by the Company's massive presentation in this matter, but also of the ratepayers who must in the final analysis contribute to the revenue requirement to be established in this proceeding. It is submitted that this case with its complex issues and large record must turn on this fundamental fact.

The Pennsylvania Supreme Court recently considered this balancing in Pennsylvania Public Utility Commission v. Pennsylvania Gas and Water Co., 492 Pa. 326, 424 A.2d 1213 (1980) cert denied 454 U.S. 824 (1981), where it stated:

> In construing the statutory norm of fair valuation, we must, of course, view that standard within the context of the enactment as a whole. Accordingly, we find that the overriding principle governing the PUC's performance of its duty is to determine 'just and reasonable' rates pursuant to Public Utility Law. Thus, the 'fair value' must reflect rates that are 'just and reasonable.' The rate making function consists of a two-step process to effectuate the paramount responsibility of fixing 'just and reasonable' rates: fair valuation of utility property and the ascertainment of a reasonable rate thereon. There is ample authority for the proposition that the power to fix 'just and reasonable' rates imports a

> flexibility in the exercise of a complicated regulatory function by a specialized decision-making body and that the term 'just and reasonable' was not intended to confine the ambit of regulatory discretion to an absolute or mathematical formulation but rather to confer upon the regulatory body the power to make and apply policy concerning the appropriate balance between prices charged to utility customers and returns on capital to utility investors consonant with constitutional protections applicable to both.

492 Pa. at 331, 424 A.2d at 1219 (emphasis added, citations omitted).

The Company's shareholder have the right to a reasonable return on their investment, one which does not effect a confiscation of their property. The ratepayers have an equal right to be charged rates for utility service which are not oppressive or unreasonable. As developed the Trial Staff's main brief at pages 226-32, in balancing this interest the Commission also has the obligation to protect the public from being victimized by the monopoly power of a public utility. In the present case the Commission has previously determined that PECO's decisions to delay Limerick construction in 1976 and 1978 were imprudent. The final result in this matter must protect the ratepayers from the costs of PECO's imprudency. The Staff believes that its proposed Limerick rate base adjustment identifies in a reasonable manner the economic consequences of the Company's imprudent actions. It is submitted a balanced result in this matter will protect the ratepayers from these imprudent costs.

A. The Company's Interests Are Not Paramount In This Matter.

The Company has devoted the initial section of its brief to describing how its interests require that its requested rate increase be granted in full exactly in the manner in which it was filed (PECO brief pages 2-1 to 2-64). As previously developed, however, the Public Utility Code contemplates that not only the Company's interests but also those of its ratepayers must be taken into account in establishing utility rates. The Company has also again raised the spector of its financial doom should any intervenor's adjustments be accepted by the Presiding Officer or the Commission (PECO brief pages 2-3 to 2-16). As developed in pages 229 to 232 of the Staff's main brief, the Company's predictions of the economic consequences of acceptance of the Staff's proposed Limerick adjustment are simply not persuasive in view of PECO witness Pacquettee's admission that the predictions contemplated no reduction in expenses by the Company (Tr. 4831-2).

The Company's imprudent delays in constructing Limerick have raised the risk of a substantial rate base disallowance for Limerick Unit 1 in this case. As noted by the Pennsylvania Supreme Court in Pennsylvania Electric Co. v. Pennsylvania Public Utility Commission, ____Pa. ____, 502 A.2d 130 (1985), it is not the role of regulation to protect utilities from all business risks.

> In cases where the balancing of consumer interests against the interests of investors causes rates to be set at a 'just and reasonable' level which is insufficient to ensure the continued financial integrity of the utility, it may simply be said that the utility has encountered one of the risks that imperil any business enterprise, namely the risk of financial failure. The express language of the Hope decision weighs against regarding utilities as a protected class of business enterprises which are to be relieved of such normal business risks. Specifically, it was stated in Hope, 320 U.S. at 603, 88 L.Ed. at 345, that investment returns to utility owners 'should be commensurate with returns on investments in other enterprises having corresponding risks.' (emphasis added). In addition, the Hope decision observed, 'regulation does not insure that the business shall produce net revenues.'
>
> ____Pa. ____, 502 A.2d at 134 (citation omitted).

In this matter the Company's interests are not paramount. Its predictions of financial hardship simply are not determinative factors in this case's resolution. A just result in this matter must equitably balance the interests of all parties.

III. RATE OF RETURN

A. Trial Staff's Cost of Common Equity Recommendation is Reasonable and Should be adopted by the Presiding Officer.

The Trial Staff's position on the fair rate of return for the Company is advanced in Trial Staff witness Andrew R. O'Donnell's Direct, and Updated and Surrebuttal testimonies (Trial Staff Sts. ARO-1, ARO-2) and accompanying exhibits (Trial Staff Exs. ARO-1, ARO-2A, and ARO-2B). The Trial Staff's rate of return recommendation is discussed in detail in pages 8-21 of the Trial Staff main brief. In this section of its reply brief, the Staff will respond to the Company's criticisms of its cost of common equity recommendation.

1. Trial Staff witness O'Donnell's Discounted Cash Flow Calculation utilizes an appropriate Dividend Growth Factor.

In its brief, the Company has criticized the Dividend Growth Factor used by Mr. O'Donnell in his discounted cash flow (DCF) calculations as being understated and unrealistic. The Trial Staff submits that the dividend growth factors used to determine its cost of common equity recommendation are well supported and reflective of prevailing economic conditions. The points of criticism raised by the Company only serve to demonstrate the serious flaws in its own cost of common equity claim.

On page 7-61 of its brief, PECO observes that its recently falling dividend yield is indicative of increased dividend growth rate expectations. In support of this theory, the Company states that Value Line and others once projected a possible dividend cut for PECO, resulting in a depressed stock price. These factors caused a relatively high dividend yield. Then the Company concludes that with the Commission's decision to allow the completion of Limerick 2, the threat of an immediate dividend cut was eliminated, and that investor expected growth rate in dividends therefore increased. Value Line did not go any further than the statement that the immediate risk of a dividend cut was eliminated. The conclusion that the dividend growth rate therefore increased is the Company's own. The question is, to what level has it increased? Could it be from negative to zero? Does the elimination of an immediate risk mean that there may be a risk down the road? Trial Staff Witness O'Donnell viewed his own growth rates as "optimistic" (Trial Staff St. ARO-1, p. 20). Mr. O'Donnell stated upon cross examination that the elimination of the immediate risk does not necessarily mean that the risk does not exist somewhere down the road (Tr. p. 2110). Value Line itself qualifies its statement by observing that with a lengthy period of capital expenditures and high dependence upon responsive regulatory treatment, that they regard PECO's high-yielding shares as unsuitable for conservative accounts. In addition, Mr. O'Donnell demonstrated in his updated testimony (T.S. Exh. ARO-2B, Schedule 5, p. 2) that

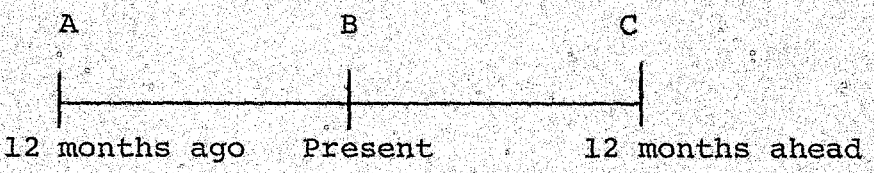
the three sources, Value Line, Saloman Bros. and Merrill Lynch, did not increase their estimated growth rates in lieu of the Limerick 2 continuance order and resulting dividend yield decrease. Therefore, PECO's position that the growth rate should increase should be limited to the fact that an immediate dividend cut is less imminent than before, but not that the optimistic-to-begin-with estimates should increase.

On Page 7-70 of its brief, the Company states Trial Staff Witness O'Donnell's "most serious error" is failing to adjust the dividend yield upward to reflect next period dividend growth. Mr. O'Donnell, however, did not fail to reflect the next period dividend growth. What has occured is that the Company and its rate of return witness, Joseph F. Brennan, have failed to utilize the evidence presented by Mr. Brennan relative to this matter. In his surrebuttal testimony, Staff witness O'Donnell stated that the next period dividend growth is zero (Trial Staff St. ARO-2, p. 4). A zero next period dividend growth is in direct conflict with Mr. Brennan's hypothetical, generic adjustment that in effect adjusts the present dividend, Do, upward by 1/2 the five year expected dividend growth rate to arrive at D1.

When asked during cross examination what he meant by the "next period", Mr. Brennan responded "the next 12 months" (Tr. p. 23). Mr. Brennan presented evidence that clearly demonstrates that investors do not expect dividends to grow during the next 12 months. This evidence can be found in his

rebuttal testimony exhibit JFB-4, Schedules 1, pages 2 and 3. On page 3 of Schedule 1 of JFB-4 is the Value Line description for the Philadelphia Electric Company. The expected 1986 year-end annualized dividend is $2.20 per share. The 1985 annual dividend was $2.20. The 1984 annual dividend was $2.20. In fact, one can observe that PECO has a number of multi-year periods where the dividend was not increased during the years 1970-1985 (See Value Line). Mr. Brennan's upward adjustment to the current dividend, Do, to arrive at D1 is contrary to PECO's position that the Commission "must act in the context of the real world" (PECO brief, p. 7-49). It is symptomatic of the flaws in Mr. Brennan's analysis that the Company must contradict itself to support it (PECO Brief, p. 7-70 to 7-71).

There is another reason other than the fact that dividends don't always increase from one year to the next that Mr. Brennan's hypothetical, generic adjustment will result in double counting. Consider the following time line:



PECO correctly observed that the DCF formula is equal to:

$$k=D1/Po+G,$$

where: k=required common equity
D1=year ahead dividend
Po=current stock price
G=dividend growth rate

Trial Staff Witness O'Donnell presented that same formula in his direct testimony (T.S. Stmt. ARO-1, p. 16). Accordingly, the DCF formula requires that the price at point "B" discounts the dividend at point "C". Mr. Brennan not only adjusts the current dividend yield at point "B" to reflect the expected dividend at point "C", but he also felt the need to adjust the yield that occurred at point "A" to reflect the dividend that will occur at point "C". Observe that point "C" is 24 months ahead of point "A". The attempt to double count is obvious. In his surrebuttal testimony (Trial Staff St. ARO-2, p. 4) Witness O'Donnell observed that the Commission recognized this double counting in its Penn Power Order (R-832409, adopted May 11, 1984, p. 38).

Staff Witness O'Donnell properly reflects what will occur in the real world, i.e., a zero growth rate over the next 12 months. As has been demonstrated previously, it could be argued that investors expect a zero or even negative growth rate indefinitely. It must be recognized that where Value Line in September 1985 alluded to dividend cuts to ease financial pressures, in December 1985 Value Line stated that the immediate risk of a dividend cut was eliminated because of the Commission's favorable Limerick 2 order. Value Line qualified this opinion, however, in that PECO still faces a lengthy period of heavy capital expenditures and will be highly dependent on responsive regulatory treatment (PECO Exh. JFB-4, Schedule 1, p. 3). Staff's position is clear. PECO's attempt to willfully reflect double counting

or any other unrealistic position in its proposed rate of return is clearly unsupportable. Objectively examining published market data, one should not expect any dividend growth for the Company.

Keeping the above in mind, PECO, on page 7-71 of its brief (bottom of page), observes that Mr. O'Donnell's 1.5% mid-point of the security analyst forecasted dividend growth rates "completely ignores PECO's historic dividend and earnings growth." PECO argues that Mr. O'Donnell's method is inconsistent with the method he used in the most recent Duquesne Light case. Witness O'Donnell, however, stated in his surrebuttal testimony that he used the same inputs that were used in the Duquesne case (Trial Staff St. ARO-2, p. 4). The company is obviously misinformed about an analysis that is clearly straightforward. Mr. O'Donnell simply viewed the past and the estimates of the future in both cases, using the same inputs, however, observing that the future growth rates are not reflective of the past for PECO. If PECO had reviewed the entire record of Duquesne case it would have seen that Mr. O'Donnell arrived at the same conclusion. Mr. O'Donnell also observed that it was not he but PECO witness Brennan that had changed his growth rate methodology from the Duquesne case. Indeed Mr. Brennan's so-called two stage model was not presented in this case. Cf. Pennsylvania Public Utility Commission v. Philadelphia Electric Co., 58 Pa. PUC 743, 819-20 (R-842590, 1985).

PECO's 5 and 10 year dividend growth rates are skewed by unrealistic dividend increases that occured during the period 1981-1983. Staff has already demonstrated that this behavior is not consistent with PECO's past dividend policy of not increasing the annual dividend during a period of weakened financial condition. Since 1984 the dividends have not increased. Considering the heavy construction expenditures and continued weakened financial condition that lies ahead, one would be by any standard optimistic in suggesting an increase in the dividend (Trial Staff St. ARO-1, p. 20), let alone considering unrealistic increases that occurred on a mere three year historic period that skews the whole picture.

2. Trial Staff witness O'Donnell used an appropriate Barometer Group in developing his cost of common equity recommendation.

On page 7-72 of its brief, the Company criticizes Mr. O'Donnell's barometer group for containing companies that the Commission in a past order considered dissimilar to PECO. The Commission may have been unconvinced at that time that Mr. O'Donnell's analysis successfully isolated similar risk companies. Things can change. With the favorable Limerick 2 order, "suddenly" PECO is similar in risk to the Barometer group companies. Mr. O'Donnell's analysis, however, demonstrated that the companies were similar all along. The factor that pointed most toward dissimilarity was the dividend yield. Mr. O'Donnell demonstrated in his Direct and Surrebuttal

testimony that PECO's historic dividend yield was aberrational and not reflective of security analyst positive dividend growth rates (Trial Staff St. ARO-1, p. 20 and Trial Staff St. ARO-2, p. 5). The DCF analysis of Mr. O'Donnell's barometer group and his risk spread analysis fully demonstrated that fact (Trial Staff St. ARO-2, p. 5). Observe also that two of Mr. Brennan's four barometer group companies, Ohio Edison and Duquesne Light, are identical to two of Mr. O'Donnell's barometer group companies! Here again the company's criticism cannot withstand scrutiny.

3. Trial Staff Witness O'Donnell's Risk Spread Method is Properly Calculated and Reliable.

PECO has criticized Witness O'Donnell's risk spread method (PECO Brief, p. 7-73 (bottom)). PECO takes exception to the fact that according to the bond market, PECO is considered slightly less risky than the average risk of Mr. O'Donnell's barometer group, when in fact the evidence is that a similar bond of PECO yields less than the average of the barometer group. PECO hypothesizes that Witness O'Donnell agreed on cross-examination that his risk spread approach should be given little weight (Tr. p. 2115). PECO is advised to go back and re-read page 2115 of the transcript. The transcript does not read that Mr. O'Donnell said that little weight should be given to his risk spread method. Mr. O'Donnell was referring to any risk spread method, including Mr. Brennan's.

Mr. O'Donnell stated that the DCF method was the more credible method, that prior Commission orders over the past two years considered the risk spread method too DCF-dependent, and that he didn't think the Commission gave the risk spread method as much weight as the DCF either.

The Presiding Officer and the Commission should accept the positions of the Staff and PECO at face value. The Trial Staff position is based upon an honest, straightforward, and realistic analysis. PECO's position is based on a deceptive, unrealistic analysis that is intent upon overstating the required rate of return on common equity. The bar charts presented on pages 23 and 25 of the Trial Staff main brief demonstrate the Company's consistent overstatement.

The bar charts demonstrate the overstatement of Mr. Brennan's and the Company's rate of return on common equity claims relative to appropriately rated average bond yields. In his sur-surrebuttal testimony, Mr. Brennan criticized Mr. O'Donnell's analysis because of utilization of inconsistent time periods. On page 1 of PECO Statement 28C, Mr. Brennan observed that Mr. O'Donnell compared his (Mr. Brennan's) rate of return recommendations to appropriately rated average bond yields that occurred in the six-months prior to the historic Commission decisions. Mr. Brennan's primary criticism is that Mr. O'Donnell used a spot (February 5, 1986) bond yield relative to the current case and therefore that Mr. O'Donnell's time periods were inconsistent. Mr. Brennan observed that Mr. O'Donnell should have used six-month average bond yields

relative to the current case to be consistent. Staff does not agree. If the Commission would like to use the six-month average yield to compare recommendations at the time of its decision in June, 1986, fine. Using six-month historic data that occurs five months prior to the Commission decision would clearly not be consistent with the analysis. The best data to consider at February 5, 1986, was the most recently available data, i.e., the data that occurred on that date. This is especially important when it has been clear throughout the case that bond yields and other interest rates have been declining. The bar charts demonstrate the Company's consistent overstatement, which continues in this case. The Trial Staff's recommendation is reasonable and should be adopted by the Presiding Officer. This recommendation will give the Company, if efficiently and economically managed, the opportunity to earn a fair return on its investment. The Staff however, alternatively recommends that if the Presiding Officer and Commission find that the proposed Limerick rate base adjustments sponsored by the Staff and the OCA are too extreme, the reduction of the allowed rate on equity to the minimum level reasonably found on this record should be considered. This alternative adjustment is discussed in detail in Section V-C of this Brief.

IV. REVENUE REQUIREMENTS

A. RATE BASE

1. PECO's Claim For 100 Percent Of Common Plant Will Result In An Overcharge To Current Ratepayers.

Trial Staff does not dispute PECO's contention that a significant portion of common plant is being used in the operation of Unit 1. Staff's adjustment is only a regulatory adjustment which recognizes and addresses the shared responsibility for these costs between current and future ratepayers. The disallowance of 50 percent will not preclude the continued accrual of AFUDC on the disallowed portion and, therefore, will not harm PECO.

It is the function of this Commission to allow just and reasonable rates based on the company's used and useful plant. The function of Staff's adjustment is only to split regulatory recognition of the common plant between the two Limerick Units. Staff maintains that the total inclusion of common plant in rates would result in an overcharge to the ratepayers for Limerick Unit 1 generation and an undercharge to subsequent Unit 2 ratepayers.

2. PECO's Philadelphia - Area Coal Units Require Only 50 - Days Of Inventory.

Staff witness Powell proposed a reduction to PECO's coal inventory level from 60 days to 50 days in recognition of PECO's reduced reliance on coal. (Trial Staff Statement TVP-1). PECO, however, has argued that it has already recognized the reduced importance of Philadelphia area coal and that Staff's adjustment double counts the effect of Limerick 1 in coal inventory requirements. (PECO Main Brief, p. 7-32 to 7-33).

There is no double count. PECO's reduced reliance on Philadelphia-area coal should be reflected in two ways. The first way is through the reduction to the burn rate which relates to the operation of the units. The second way it should be recognized is through the number of inventory days for which a supply of coal should be maintained. PECO has limited its recognition to an adjustment of burn rates. This is an incomplete response to the reduced importance of these units. Furthermore, PECO's constant reference to burn rates as associated with Staff's adjustment is clearly intended to obfuscate the issue.

As Staff has already stated, the burn rates does not effect the number of days of inventory that will be needed at a particular unit.

Staff's adjustment clearly reflects the current needs of PECO's Philadelphia-area coal units and should be adopted.

3. Staff's Proposed Adjustment For Entry No. 9 Is Based Upon The Proper Application of the Uniform System of Accounts.

One of the contested issues in this proceeding involved a commission audit report finding in which certain items of property were found to be improperly capitalized. Although three proposed adjustments were made, adjusting entries 4, 9 and 13, the most significant adjustment was adjusting Entry No. 9. The principal contention raised concerning No. 9 was whether the work performed resulted in a substantial addition to property or whether the work was in fact, maintenance. The issue centered around the application of the Uniform System of Accounts.

Staff witness Prego has maintained that a detailed review of the actual work performed demonstrated that the work included:

- additions of minor items of property
- repair and reinforcement of minor items of property
- replacements of minor items of property

Mr. Prego maintained that these items were clearly matters of maintenance expense and that substantial additions did not result. The effect of his review and analysis of the applicable sections of the Uniform System of Accounts was to conclude that PECO had capitalized the cost of performing

certain work which was in fact maintenance work. (Trial Staff Statement JPP-2, pp. 1-5).

Although PECO refers to the area of dispute as ambiguous and open to differing interpretations (PECO Main Brief, p. 7-21), Staff contends that there is no ambiguity and that the Uniform System of Amounts clearly requires that the costs incurred for this work should have been accounted for as maintenance expense. As Mr. Prego testified:

> Support for this position may be found in the Operating Expense Instruction 1A which states:
>
> Operating Expense Instructions
>
> 1. Maintenance.
>
> A. The cost of maintenance chargeable to the various operating expense and clearing accounts includes labor, materials, overheads and other expenses incurred in maintenance work. A list of work operations applicable generally to electric plant is included hereunder. Other work operations applicable to specific classes of plant are listed in functional maintenance expense accounts.
>
> * * *
>
> Items
>
> 1. Direct field supervision of maintenance.
>
> 2. Inspecting, testing, and reporting on condition of plant specifically to determine the need for repairs, replacements, rearrangements and changes and inspecting and testing the adequacy of repairs which have been made.

3. Work performed specifically for the purpose of preventing failure, restoring service ability or maintaining life of plant.

4. Rearranging and changing the location of plant not retired.

5. Repairing for reuse materials recovered from plant.

6. Testing for, locating and clearing trouble.

7. Net cost of installing, maintaining, and removing temporary facilities to prevent interruptions in service.

8. Replacing or adding minor items of plant which do not constitute a retirement unit. (See electric plant instruction 10).

(Trial Staff Statement JPP-2, p. 2-3).

Staff maintains that the work completed pursuant to Adjusting Entry No. 9 did not result in a substantial addition and that it was not properly capitalized. Staff further maintains that the items should have been expensed at the time the costs were incurred and that proper rate-making treatment precludes the retroactive recovery of these expenses.

4. Cash Working Capital

(a) Federal Income Taxes

PECO criticizes Staff's proposed adjustment to its cash working capital claim for taxes because it does not recognize the company's actual payment schedule. (PECO Main Brief, p. 7-44 to 7-45) Staff addressed this issue in its Main Brief at pp. 34-36. Staff would reiterate, however, that the company does not prepay 25 percent of its rate case pro forma federal income tax levels and that its actual payment schedule will be less than that indicated by Staff. Staff would point out that the company's claim should be for the actual cash it will need for payments and not for a hypothetical claim. PECO should follow the statutory payment schedule.

(b) GRT-Capital Stock-PURTA

PECO has criticized Staff witness Hosler's use of a growth rate in his calculation of PECO's tax liability. (PECO Main Brief, pp. 7-45 to 7-46). Again, Staff addressed these issues in its Main Brief and will not restate them here. Staff would point out, hoever, that the growth rate is based on PECO's historical tax liability and that the result of its use is a better indication of what the test year tax liability will be for PECO.

(c) Late Payment Charges

Staff has also made a reduction to the Company's revenue lag for late payment charges received from customers. As Mr. Hosler testified:

> A double benefit occurs to the Company due to its use of an excessive number of lag days. First, when a customer pays late, the Company is compensated for the revenue lag by the late payment charge. PECO's current late payment or finance charges are 1.25 percent for residential, small commercial and industrial customers and 2 percent for large commercial and industrial customers. As stated by the Company in response to staff interrogatory IR-Staff-REL-1 (Exhibit DPH-1, Schedule 5, page 3), "late payment charges are a rate for the service of carrying delinquent accounts." The second benefit occurs because the Company is also claiming a CWC allowance for the lag days subsequent to the date the finance charge is applied.

(Trial Staff Statement DPH-1, p. 10-11).

PECO has argued that there is no benefit to the company as provided by the late penalty charge since these revenues are booked to Account 450 - Forfeited Discounts and are included as part of the "Other Operating Revenue" in its income statement. (PECO Main Brief, p. 7-40).

A similar adjustment was proposed in Pa.P.U.C. v. UGI Corporation, R-832331 and was adopted by the Commission. In that case, the company raised the same argument as is presented by PECO in the current proceeding. The Commission in UGI stated:

> In our 1978 Order (76 P.R.M.D., Order entered April 21, 1978), we specifically determined that the imposition of a late payment charge was "not for the purpose of producing revenue, but rather to cover carrying and collection costs caused by overdue accounts. (Emphasis supplied). Clearly, we considered two types of cost that a utility incurs when a utility bill is not paid by the due date. As we intended therein, and shall so state now, carrying costs are costs incurred by the utility in providing service while payment is overdue. Therefore, we agree with the ALJ that to provide investors with a return for outstanding payment days and still charge the customer involved directly would result in a double recovery for the Company.
>
> Further, we also note, as the OCA did, that the cost of collection is in fact being claimed by UGI as an O&M expense (TR. 1947). It is therefore inconsequential that these revenues are already being used to offset base rate revenue requirements. We do not accept the Company's argument that it would be "doubly penalized" if the proposed adjustment is made.

(R-832331, p. 16).

Staff maintains that the arguments adopted by the Commission in UGI are clearly applicable to this case and that Staff's adjustment should be adopted.

B. REVENUES

1. PECO's Forced Outage Rate Is Excessive and Revenues Should Be Adjusted.

PECO has criticized Staff's proposed forced outage rate adjustment based upon its analysis of Staff witness Gruber's data. (PECO Main Brief, p. 7-11 to 7-12). Staff would note, however, that Mr. Gruber's adjustment was based upon the additional reserve capacity margin that PECO is required by PJM to maintain as a result of PECO's higher than average forced outage rate. (Staff Main Brief, p. 48-51).

PECO does not argue that the 3.21 percent applied by PJM is inaccurate. The company simply argues that the high forced outage rate is due to a number of factors such as environmental constraints, salt water cooling of major generating stations, high proportion of nuclear units, the technical complexity of its base load units and the unique design of certain plants which are susceptible to greater forced outages. While this is an interesting defense, the fact remains that other PJM members have provided systems which are less susceptible to forced outages and do not penalize their ratepayers with additional reserve requirements from PJM.

The operation of PECO's system and the decision as to what components shall comprise the system is solely within the control of management. A higher forced outage rate which requires additional reserve margin beyond the PJM requirement, penalizes PECO's ratepayers by requiring additional generation capacity. Staff's adjustment prevents PECO from being rewarded for its high forced outage rate. Staff's adjustment is reasonable and should be adjusted.

C. EXPENSES

1. PECO's O&M Outage Expense Claim is Overstated.

PECO has criticized Staff's use of historic data in determining future levels of O&M outage expenses. PECO has pointed out that historic data may include periods of unusual or abnormal experiences or may not reflect adequate refueling cycles. (PECO Main Brief, pp. 7-95 to 7-98).

Staff recognizes that historic data may at times include experiences which are non-recurring. Staff's adjustments, however, have included a recognition of these events by either eliminating the high and low years or by expanding the data to include budget data. Staff would argue that even with the problems attendant to the use of actual experience, this data still provides a better reflection of prospective costs for PECO than the claims of the company. As was noted in the Main Brief, PECO has not reached its budgeted levels in the past and has not demonstrated that it will meet the budgeted levels on which its current claim is based.

Staff's adjustment is appropriate and should be adopted.

2. Staff's Decommissioning Expense Adjustments Should Be Adopted.

Staff witness Mayer has proposed an adjustment to PECO's decommissioning claim based upon a recognition of the retirement dates of the plants rather than the license expiration dates (Staff Statement MJM-1). PECO has criticized Staff's adjustment as inconsistent with proposed NRC regulations and speculative with respect to PECO's intention to seek license extension for its plants. (PECO Main Brief, p. 7-129 to 7-130).

Staff maintains that the regulations referred to by PECO are proposed regulations with no fixed date for implementation and no guarantee that they will be in the same form on implementation as they are today. If there is speculation involved on this issue, it is on PECO's part as to the effect of proposed regulations on future decommissioning.

As for Mr. Mayer's assertion that PECO will seek extensions on its licenses at its nuclear facilities, this assertion was supported by PECO's own witness. (Tr. 4342).

Finally, with respect to PECO's request for decommissioning expenses at Peach Bottom Unit No. 1, the company's statement that "it was not unit 1980 that the Commission allowed the recovery of decommissioning costs" fails to recognize that the company was not precluded from seeking such costs prior to 1980 and that the costs for decommissioning have been allowed since 1980. It should be noted that for six years PECO has not attempted to collect these costs. For twelve years PECO has allowed these costs to remain uncollected

and now seeks to obtain them from ratepayers who never received the benefits of Peach Bottom Unit No. 1.

3. PECO Has Failed To Meet Its Burden Of Proof On The Issue Of The Salem Management Evaluation Program.

PECO has argued that Staff's adjustment to the claimed amortization of the Salem Management Evaluation Program should be rejected because no request was made for a breakdown of the incurred costs. (PECO Main Brief, p. 7-99). There are, however, two serious problems with PECO's position on this matter. The first problem is that the Staff does not have the burden of proving that the costs incurred were unreasonable. The law is quite clear on the matter of burden of proof and the burden is clearly on the utility. It never shifts to the other parties. It was incumbent upon PECO to demonstrate that the costs were just and reasonable.

The second problem with PECO's argument rests with its own presentation of the facts through the filing and its direct testimony. A review of these materials contain references only to the retention of MAC. It was reasonable based upon a review of these items to conclude that all costs were attributable to MAC. Interrogatory requests by Staff clearly mirrored this belief. Information which identified the limited participation of MAC came first on cross-examination of the company's witness. Responses to Staff interrogatory, though timely served, did not come until after Mr. Carroll was cross-examined. There was, therefore, no way for the parties to know the claim

included costs involving any group other than MAC. With respect to Mr. Carroll's response on cross and his rebuttal testimony, the statements made still failed to contain a breakdown of the costs on a specific basis and lacked any substantiation.

Staff maintains that the arguments presented by PECO are hollow and ignore its statutorily mandated duty to meet the burden of proof.

4. PECO Has Misstated The Amount Of Staff's Customer Accounts Expense Adjustment.

Staff witness, Keith I. Laudenslager, originally proposed an adjustment to PECO's customers accounts claim in the amount of $21.5 million. This adjustment was reduced to $17.6 million after Staff adjusted its calculation based upon the application of a 9.6 percent increase in average costs experienced by the Staff's comparison group from 1983 to 1984.

PECO's main brief, which lists Staff adjustment at the original $21.5 million level, is in error.

D. Taxes

1. Trial Staff's Tax Adjustments Are Reasonable And Should Be Adopted By The Presiding Officer.

The Trial Staff's adjustments were sponsored by Trial Staff witness Jeffrey M. Heverling (Trial Staff Sts. JMH-1, JMH-2; Trial Staff Ex. JMH-1) and are discussed in detail in pages 93-105 of the Trial Staff main brief. This section briefly responds to pages 7-135 to 7-140 of the Company's brief which addresses Mr. Heverling's proposed adjustments.

The Company initially criticizes the Staff's proposed flow through of capitalized overheads stating that since current ratepayers have paid none of the overheads which gave rise to the tax benefit, it is unfair to future ratepayers to flow through these tax benefits now. (PECO M.B. p. 7-157). In effect, the Company is raising the "matching" argument which is discussed at pages 97-98 of the Staff's main brief. Briefly, the Staff responds that its proposed adjustment does match expenditures (capitalized overheads) to tax deductions and to revenues in the period in which the expenditures were made. Although the Company asserts that the Staff's proposed flow through of the normalized overheads will have a significant effect on the Company's financial condition in view of its cash needs, such assertions are inconsistent with the testimony of its own tax witness. As detailed on pages 101-2 of the Staff's

main brief, PECO witness Sileo admitted on cross-examination that the revenue related to capitalized overheads amounted to .6% of the total operating revenues claimed by the Company in the case (Tr. p. 4028). The Company's attempt to distinguish the Philadelphia Suburban Water Co. case at R-842592, which was cited by Mr. Heverling, is not supported by its own evidence.

The Company has also argued that the proposed flow-through of capitalized overhead tax benefits is inconsistent with the established practice of setting rates on an annualized and normalized basis. Although it is true that the Commission has previously permitted the Company to normalize such overheads (See Pennsylvania Public Utility Commission v. Philadelphia Electric Company, 55 Pa. P.U.C. 78 (R-80061225, 1981)), the Commission must now conform its tax allowances in rate cases with the guidance given by the Pennsylvania Supreme Court in Barasch v. Pennsylvania Public Utility Commission, 507 Pa. 496, 491 A.2d 94 (1985). In that case, the Court relied upon an "actual taxes paid" doctrine in rejecting the normalization of state income taxes (507 Pa. at 520, 491 A.2d at 106). The Staff's adjustment is consistent with that direction since it avoids the collection of tax revenues in excess of the amount required by law. The suggestions in the Company's brief (p. 7-139) that the Commission's previous normalization treatment of capitalized overheads somehow estops the Commission from changing this practice since these have now

become "Commission-made" rates is so divorced from Pennsylvania law on that issue (See e.g. Metropolitan Edison Co. v. Pennsylvania Public Utility Commission, 62 Pa. Commonwealth Ct. 460, 437 A.2d 76 (1981)) and the Commission's authority under the Public Utility Code (See Section 703(g), 66 Pa. C.S. §703(g)) as to require no serious consideration.

The Company has also objected to Trial Staff witness Heverling's proposal to implement a five-year amortization of previously deferred state income taxes. As developed in the Staff's main brief (p. 102-5), the Staff's proposal is consistent with the Supreme Court's Barasch decision and also consistent with the recent Commission precedent (See Pennsylvania Public Utility Commission v. Bell Telephone Co. of Pennsylvania, Dkt. R-842779 (1985)). The Company's brief fails completely to identify any compelling reasons why the Staff's proposed five-year amortization of previously deferred state income taxes should not be adopted.

V. LIMERICK ISSUES

A. The Company's Imprudence in Delaying Limerick Construction Has Already Been Determined by the Commission.

The Company has devoted a substantial portion of the third section of its brief to espousing its prudence in the construction of Limerick Unit 1 (PECO brief, p. 3-1 to 3-21). The Company's imprudence in delaying Limerick construction, however, has already been determined by this Commission. As developed in pages 112 to 117 of the Staff's main brief, the Commission has considered Limerick related issues in a number of proceedings. The Commission's conclusions concerning the Company's imprudency in delaying construction in 1976 and 1978 reached in its opinion in Re: Limerick Nuclear Generating Station, 56 Pa.PUC 47, 61 (I-80100341, 1982) have been incorporated in this proceeding by virtue of the Presiding Officer's and Commission's ruling on the Trial Staff's Motion in Limine. It is submitted that those sections of the Company's brief which attempt to reargue this issue are in violation of the Motion in Limine rulings and the Presiding Officer's rulings on the Staff's Motion to Strike and must be disregarded.

1. The Burden Is On PECO To Demonstrate The Reasonableness Of Its Limerick Rate Base Claim.

As developed in pages 4-7 and 110-12, the Public Utility Code unambiguously places the burden on PECO to

demonstrate the reasonableness of its Limerick rate base claim. In many places in its brief, the Company states that the intervenors have failed to prove imprudence on the part of the Company. Yet the burden remains primarily on PECO. As noted by the Pennsylvania Supreme Court in Berner v. Pennsylvania Public Utility Commission, 382 Pa. 622, 116 A.2d 738 (1955), the burden is on the utility to establish the reasonableness and necessity of its rate base claim. Moreover this burden must be carried by clear and convincing evidence. The Staff submits that in view of the Commission's prior conclusions concerning the Company's imprudence in the construction of Limerick Unit 1 and the alternative quantifications of the costs of those delays presented by the Staff and the OCA in this proceeding, PECO has failed to carry its burden of establishing the reasonableness of its Limerick Unit 1 rate base claim.

B. The Company's Comparisons Of Limerick's Cost and Construction Schedule are Seriously Flawed and Must Be Disregarded.

The Company has presented a number of studies in this case which purport to establish the reasonableness of Limerick's cost and construction schedule by virtue of comparisons with other nuclear plants under construction. These studies are described in pages 4-2 to 4-15 of the Company's brief. It remains the Staff's position that these studies are simply another attempt by the Company to relitigate

in this case the prudency of its 1976 and 1978 construction delay decisions and they should therefore be stricken pursuant to the ruling on the Trial Staff's motion in Limine. Alternatively, the Staff submits that these surveys are of little practical value and must be disregarded.

Initially it must be noted that the Commission itself has noted that such comparisons have little value in reviewing the construction of a particular nuclear plant. See Pennsylvania Public Utility Commission v. Philadelphia Electric Co., 52 Pa. PUC 772, 787 (R.I.D. 438, 1978). The substantial flaws and weaknesses contained in the statistical analyses presented by PECO witnesses Perl and Hieronymus are detailed on pages 176 to 200 of the Staff's main brief and need not be repeated here.

PECO witness Clarey presented "unadjusted" plant comparisons in his testimony (PECO Sts. 4, 4A) which purport to establish the reasonableness of Limerick's construction schedule and expense. A substantial weakness in those comparisons, however, is that they deal in only direct costs and exclude the compounding effect of AFUDC. The Company's Limerick rate base claim contains a significant AFUDC component which substantially increases its costs to rate-payers and which is not reflected in witness Clarey's comparison. Such an omission is doubly significant since the amount of AFUDC ultimately contained in the rate base claim is dependent on length of the period of construction, the reasonableness and effects of which are at issue in this

case. It is submitted that PECO witness Clarey's comparisons are simply not relevant to the delay quantification issue in this case.

C. PECO's Delay Cost Quantification is Contrary to Traditional Ratemaking Principles and Inconsistent With Its Own Evidence.

The Company has presented a substantial amount of financial evidence in this proceeding concerning its ability to finance continuous construction of Limerick Unit 1. This evidence is discussed in pages 4-69 to 4-74 and on pages 4-167 to 4-179 of the Company's brief. As developed on pages 200-215 of the Trial Staff's main brief, the Company's Delay Cost Quantification is contrary to traditional rate-making principles and inconsistent with its own testimony concerning alternative methods of financing. In this section of its reply brief, the Staff will briefly respond to the financial issues raised in the Company's main brief.

1. The Company was capable of financing continuous Limerick construction.

The Company has argued inconsistently that it could not finance continuous Limerick construction in its direct case and then returned on rebuttal to sponsor through Mr. Pacquette's rebuttal testimony a hypothetical OKA Financing Plan. It is submitted that such inconsistencies pervade the Company's financial evidence in this case.

Initially it must be noted that the Commission considered and rejected in the first Limerick Investigation the Company's claims that it could not finance continuous Limerick construction in 1976 and 1978. This prior holding

is discussed in detail in the Trial Staff's main and reply briefs in support of its motion to strike and is recognized in the Presiding Officer's March 10 ruling resolving that motion. To the extent that the Company presently argues that it could not finance continued construction in 1976 and 1978, that argument is inconsistent with the Presiding Officer's motion to strike ruling and should be disregarded. PECO's TBA discussion in pages 4-61 to 4-71 of its brief are responded to in detail in pages 169-72 of the Staff main brief and that discussion will not be repeated here.

On pages 4-72 of its brief, PECO recites the testimony of its witness William A. Abrams (PECO St. 10) on its financing ability in the late 1970's. It is submitted that Mr. Abrams' credibility was severely impeached during his cross-examination such that his testimony should be disregarded. Even the Company's own Rate of Return witness Brennan agreed that an individual with Mr. Abrams' position with a utility rating firm has a impartiality problem in testifying in utility rate cases when they simultaneously rate that utility's securities (Tr. 15). In view of the limited nature of Mr. Abrams review of available financing options available to the Company in the period and his wholesale acceptance of all of the Company's data, it is submitted his testimony is fatally biased and worthless in this proceeding.

The Company's proposed Quantification of Delay Costs is discussed in detail in pages 200-15 of the Staff's

main brief and that discussion will not be repeated here. As developed there, PECO's Delay Cost Quantification is inconsistent with traditional ratemaking concepts and inconsistent with Mr. Pacquette's testimony concerning alternative financing vehicles for the Company. It is submitted that the Company's Delay Cost Quantification Exercise must be rejected as worthless in this proceeding.

2. As an alternative Limerick imprudency adjustment, the Company's rate of return should be lowered.

The Company claims that the Company deferral announcements had no effect on Limerick cost and schedule (4-2). It is interesting to note the contention of the Company on this point, that its actions had no impact on the course, schedule or cost of the project. The fact that they allegedly chose a course of action which provided insufficient funding for the project to remain on its announced and intended schedule seems incoherent and inconsistent with the stated excellent managerial organization and control found by TBA.

By noting that most NRC regulation changes were imposed beginning in 1979 on a plant which was forecasted in 1975 to have all bulk installation except wire and cable/and connections at 90% or better completion, the Company has disregarded the time juxtaposition of the impact of the imprudent delay decisions. To claim no impact borders on the unreality and displays a myopic view of the forces

affecting the project as never being under the control of this company. This pointing to the influence of external forces as the sole source of Company overruns and the cause of the Company's inability to meet budget, schedule and cost forecasts must be rejected. This Company has been shown to disregard beneficial ratepayer analysis, self-servingly protect stockholder interests to the detriment of ratepayers, hide facts from the Commission as to the status of rate case claims, and this Company has yet to adopt strategies which are aimed to lower the cost of service to ratepayers. They adopt wage and compensation strategies designed to ensure that rates must rise at levels above the rate of inflation, because management refused to ensure that productivity gains result from the added compensation. The ultimate result is that the Company places all emphasis on becoming the first $3 billion in revenue electric utility in the state independent of the fact that the rates will be unreasonably high and approach the highest in the nation.

It is respectfully suggested that if the Presiding Officer or Commission seeks to recognize the imprudent decision making this Company made in the past, yet believes that a prudency disallowance of the level of Staff's or OCA's recommendation is of a variety, due to writeoff impacts, such as to contribute to a Company weakened to a level that the current management of the firm cannot cope, then Staff suggests that the return on equity allowed be reduced to a minimum level reasonably found on the record in this proceeding.

The lower bound presented by Staff Witness O'Donnell is 12.2% on equity. The added feature of the lower return on equity is the incorporation of the finding into the AFUDC calculation, reducing the ultimate cost of Limerick Unit 2 and positively impacts on the ability of the Company to work within the "cap" constraints.

V. LIMERICK ISSUES

D. PECO Has Failed to Demonstrate any Flaws in Staff's Delay Quantification.

In its Main Brief at pages 4-81 through 4-92, PECO asserts that Staff's Limerick delay quantification "contains serious methodological errors." In support of its assertions, PECO has attempted to present numerous "errors" which it says invalidate Staff's quantification. Each of these contentions has been addressed at length in Staff's Main Brief at pages 127-138 and shown to be irrelevant, immaterial or incorrect. A brief further response, however, is in order.

It is interesting that PECO never challenges the accuracy of Staff's adjustment, nor does it dispute that the cost escalation identified by Staff as associated with the delay period actually occurred. Rather, PECO simply continues to misstate the basis for Staff's recommendation.

It is not now and never has been Staff's position that Limerick could have been completed and in service on April 30, 1981. PECO seems unable or unwilling to understand that there are alternate methodologies which can be used to quantify the delays. Staff did not go back and attempt to recast what the completion date would have been had the two construction delays not occurred. Instead, Staff simply identified the escalation in costs that occurred

due to inflation during the delay period. No adjustment was made for rework, faulty workmanship, contract overruns, etc., because it would be extremely speculative to attempt to disaggregate the costs caused by increased regulatory requirements and those costs caused by management inefficiencies. The delay period was defined as the company's own in-service date at the time of the imprudent delay through actual fuel load, which was begun in October 1984. The result is that what is recognized for ratemaking purposes is the actual, as-built 1986 plant, which incorporates all labor and material quantities actually utilized and which reflects all NRC-mandated changes. The specific contentions with respect to project cash flow, project scope, capitalization and AFUDC therefore are irrelevant.

At page 4-80, PECO misstates Staff's quantification methodology. The staff auditors did not compare actual October 31, 1984 project to date expenditures with Staff's "own computation of project costs" had the April 30, 1981 in-service date been achieved. Instead, Staff compared the actual project to date costs as of April 30, 1981 and October 31, 1984 and de-escalated the difference based on the actual cost increase percentages throughout that period. Staff did not compute the cost of Limerick pursuant to an April 1981 in-service date; the result of Staff's calculations is the actual plant completed in 1986 at 1981 prices.

The company's other assertions, with respect to the post-October 1984 costs (PECO Brief, p. 4-87) also have

been addressed at length in Staff's Main Brief and shown to be no merit. First, the company seems unwilling to understand that because Staff's analysis went only through fuel load (begun in October 1984), all direct costs after that time are not disallowed:

> Q. So is Staff recommending that those post-October 1984 costs be reflected in the allowable costs of Limerick Unit 1?
>
> A. (by Mr. Dougherty): They are included in the company's claim for Limerick Unit 1 and common.
>
> Q. And what your quantification does, Mr. Dougherty, is you quantified the cost at a certain date and Staff is recommending that the quantification be deducted from the company's claim in this case?
>
> A. That is correct.
>
> (Tr. 2701-02).

Nor is it correct that the AFUDC should be spread over 57 months. AFUDC associated with start-up costs would not have been incurred until after the plant's completion. Therefore, such accrual would have been incurred over the 15-month actual time period required, or the more reasonable 6-month period the company included in the bi-monthly reports to the Commission up through January 31, 1985. For a complete discussion of this issue, see Staff's Main Brief, pp. 135-138.

Finally, Staff again must protest against PECO's misuse of the SALP reports. At p. 3-19, the company states, "The effectiveness of PECO's cost and schedule control programs was also reflected by the frequent laudatory statements, concerning PECO"s project management effectivness, contained in the NRC's Systematic Appraisal of Liscencee Performance reports." As discussed in more detail in Staff's Main Brief (pp. 152-157), these reports are concerned with a liscencee's effectiveness in complying with NRC requirements, not the avoidance of unnecessary costs.

Staff respectfully submits that PECO has been unable to demonstrate any flaws in Staff's methodology. As PECO has not challenged the accuracy of Staff's analysis, the quantification presented by Staff as representing the escalation in costs that accrued during the delay period should be accepted by the Commission as the most reasonable effectuation of its Limerick #1 order.

E. Staff's Recommendation Is a Cost-Based Adjustment.

PECO in its Main Brief at p. 4-83 has challenged Staff's Limerick adjustment because, in the company's words, "Staff fails to establish any causal relationship between the allegedly imprudent acts (i.e., the deferral decisions) and the costs which it requests this Commission to disallow." This argument of PECO's is without merit for several reasons.

First, there are no "allegedly imprudent acts." The acts have already and unequivocably been found imprudent by both Administrative Law Judge Klovekorn and the Commission as the result of the lengthy and exhaustive Limerick #1 investigation.

Second, the "deferral decisions," as discussed in more detail below, involve more than just "decisions" or "announcements." The company actually delayed construction for a number of years.

Third, as explained in Staff's Main Brief at pp. 226-228, causal connection is a negligence requirement that has no place in regulatory proceedings. This is not a tort action; it is a Section 1308 proceeding which is to incorporate the Commission's prior findings of imprudence. To accept the requirement that a utility's actions must be causally connected to increased costs would greatly restrict the exercise of Commission authority over utilities. Imprudency findings would become meaningless if a utility knew it could evade the responsibility for its own actions simply by pointing to some factor - which in this case, is explicitly outside the company's control - which may have overlapping cost effect. Indeed, this "yes-but" argument was rejected by the Commission in its ECR #8 and Beaver Valley decisions. (Staff Main Brief, pp. 149-50).

Finally, and most importantly, Staff's adjustment is cost-based. There is no dispute that the in-service date

projected by the company was April 1981; there is no dispute that construction was completed in October 1984. Therefore, that is the delay period to be used to quantify the Commission's Limerick #1 order. Nor does the company disagree that the escalation in costs identified by Staff as occurring during that delay period actually took place (Tr. 5079-80).

The fact is that because of its reliance on actual data taken directly from PECO's books of account, Staff's adjustment is more directly connected to the effects of delay than PECO's simulated, hypothetical construction schedule. In addition, Staff's adjustment affects primarily the AFUDC component of PECO's claimed investment. Since the most direct effect of the imprudent delays was to inflate the AFUDC accrual, Staff's recommendation is even more appropriate.

Therefore, Staff respectfully submits that for the reasons explained above and at pp. 112-127 of its Main Brief, its Limerick adjustment is based on a reasonable and accurate quantification of construction costs caused by PECO's imprudent delays.

F. The Claim that the 1976 and 1978 Delays Resulted In No Schedule Extension Is Inherently Incredible.

It is interesting how PECO refuses to admit that the 1976 and 1978 delays actually occurred; the company repeatedly refers to "delay decisions" or "delay announcements" (See, e.g., PECO Main Brief 4-181). This is an obvious attempt to mislead the Commission.

The fact is that construction was delayed in 1976 and 1978, and these delays had already been put into effect by the time of the Limerick #1 investigation. As noted in the OCA's Main Brief at pp. III-39-42, it was the construction delays themselves that were found unreasonable by the Commission. In order to effectuate these delays, funding was decreased, with the result, of course, that construction was slowed down.

The relationship between the escalating costs and extended construction schedule of Limerick #1 was recognized by your Honor a number of years ago. As set out in more detail in Staff's Main Brief (at pp. 114-115), the Recommended Decision rendered in the PECO 1978 rate case at R.I.D. 438 was the impetus for the Limerick #1 investigation. The Recommended Decision stated in part:

> Cross-examination established that the delay of the completion of these units would increase the cost to the Company's customers in the sum of $1,600,000,000 over their projected life span.
>
> The Company explained that it was delaying completion of these projects for

> two years... By the testimony of its witness, Joseph F. Pacquette, Jr., it contended such delay would reduce construction spending by $270 million over the next three years....
> Recommended Decision, pp. 148-50.

For reasons it presented to the Commission in the Limerick #1 investigation, PECO made a series of decisions in 1974, 1976 and 1978 that the in-service date of Limerick #1 would be extended, and the company, by the time of the 1982 Commission order, had actually implemented those decisions by delaying construction. The delays occurred, and the 1976 and 1978 deferrals were found unreasonable by the Commission. The only issue in this proceeding is to identify the costs associated with those delays.

PECO's fall-back position apparently is that the 1976 and 1978 delays did not result in any additional costs (PECO Main Brief, pp. 4-178-181). Staff respectfully submits that this contention is inherently incredible and should be rejected out of hand by the Commission.

First, PECO's own witness in the Limerick #1 investigation agreed that a six-month delay would result in a cost increase of $250 million (Commission Limerick #1 order p. 24, fn. 20). Similarly, testimony presented in a prior PECO rate case by Dr. Perl, a witness in the case at bar, established that the estimated effect on revenue requirements of a six-month slippage in Limerick construction had a present value of $274 million. (OCA Exh. 45). These admissions are relevant because they were made before PECO's

attempt in this proceeding to claim that virtually all of the increased costs of Limerick #1 were the result of NRC-mandated changes.

The fact is that where AFUDC is permitted to be accrued and included in rate base, time is literally money, money to be recovered over the next thirty years from PECO's ratepayers. The compounding effect of AFUDC with respect to construction completion delays was recognized by PECO's own most senior nuclear witness, Vincent Boyer. (Tr. 5043, 5050, 5052).

The company attempts to shift responsibility for the delay away from itself onto outside factors; it lists them on p. 4-179 of its Main Brief. While these contentions have been addressed at length in the Briefs submitted by Staff and the OCA, a brief response is in order.

First, the company claims that the plant could not have been completed before October 1984 because of the high population density surrounding the Limerick site and the contested nature of the licensing procedure. The obvious response is that the company was aware of the population density when it made the decision to locate the plant so near Graterford Prison and Philadelphia. These factors were present when PECO made its forecasts and presumably were taken into account.

Second, PECO refers to the "late-imposed NRC regulatory and licensing requirements" and "the substantial

increase in project scope." First, under the Staff's quantification methodology, these factors are taken into account; it is not necessary to speculate on their impact, if any, on the construction schedule. Second, as discussed in Staff's Main Brief at pp. 152-165, it simply is not correct to blame the NRC for the construction delays and cost overruns. "Skillful management," to use the Congressional Office of Technology Assessment's term, could have overcome "delays that otherwise might result from the licensing process" (Staff Main Brief, pp. 158-59). The record in this proceeding is clear beyond the shadow of a doubt that "skillful management" was not involved in the construction of Limerick #1. Third, as discussed in detail in OCA's Main Brief, III-56-66, the NRC without a doubt would have treated Limerick differently had the plant's construction been more advanced. It is simply incredible - and inconsistent with the actual experience at other plants - that the NRC would have forced Limerick to remain completed but not in operation for over two years.

The company's final component of its exculpatory discussion is its statement that "a review of the company's financial condition during the 1970's clearly demonstrates that sufficient funding could not have been raised in order to significantly accelerate plant completion." If PECO here is attempting to assert financial constraints as the basis for its 1976 and 1978 construction delays, then the statement falls within the scope of the Administative Law Judge's

ruling in response to Staff's Motion to Strike and therefore should be stricken or disregarded. If, instead, PECO is referring to the "financial analysis" performed by its witness TB&A, then the assertion is without merit for the reasons set out in Staff's Main Brief at pp. 169-171.

Staff respectfully submits that PECO's attempts to deny that any delays occurred or, alternatively, that such delays had no effect on the construction schedule or final cost of the plant, are inherently incredible. As found by the Commission in its Limerick #1 order, the company did not want the plant completed in 1981. For the company to attempt to evade responsibility for its own imprudent actions is not surprising, given PECO's history of presenting "yes but" analyses. Should the company's position be adopted, the direct and inevitable result is that the Commission's Limerick #1 order will be perceived as a meaningless nullity and utilities will be free to engage in imprudent actions with impunity in the confident expectation that they can find some outside agent or factor that was "concurrent and controlling."

G. Staff's Adjustment To Disallow Costs Of Construction Errors By Bechtel Should Be Adopted.

Staff witness, Michael Gruber, has recommended an adjustment to PECO's rate base claim which would disallow costs associated with certain construction errors by Bechtel. (See Staff Main Brief, p. 216-218). PECO has argued that this adjustment is inappropriate because 1) "approximately one-third of the items were associated with the direct or indirect impact of regulating change;" 2) that the items involved are small in comparison with the total size of the project and did not interfere with the project schedule; and 3) negotiations will determine whether the company will receive any funds as a result of the backcharges. (PECO Main Brief, p. 3-77 to 3-78).

Several problems exist with respect to the arguments proferred by PECO. The first problem relates to the assertion that some of the items are a result of regulatory change. It is admitted that pursuant to NRC actions, a number of changes were implemented at the Limerick station; however, these changes and their attendant costs did not find their way into PECO's response to the Commission filing regulations at 52 Pa. Code §53.53, II-A-B which requested an identification of all outstanding claims against project managers etc. PECO for some unexplained reason has differentiated between the items identified in the filing requirements at II-A-3 and changes required by regulation. Based upon PECO's own

interpretation of the filing requirements, these items are properly classified by Staff as outstanding claims and the costs for the errors precipitating any claim should be disallowed.

With regard to PECO's argument that the items are minor and did not interfere with the project schedule, Staff acknowledges that virtually any costs for specific items would pale in comparison to a multi-billion dollar project. Comparison of claims against the total cost of a project should not represent the basis for any allowance or disallowance of an adjustment. As for the impact of the errors on the project schedule, PECO's argument misses the mark. The point is that where the cost of construction errors are included in the rate base, the ratepayers are forced to pay for the poor quality work and the replacement work. They are charged twice for the same work.

PECO's final argument that negotiations will determine whether the company will receive any funds as a result of the back charges flies in the face of the statutorily mandated burden of proof borne by the utility. Negotiations may ultimately resolve the issue, but the Commission must determine the ratemaking treatment at this time and to do that, PECO has the duty to establish that these costs <u>are</u> properly recovered from ratepayers.

Staff's adjustment is proper and should be adopted.

VI. ENERGY COST RATE REVISION

A. Pages 6-5 through 6-10 Of PECO's Main Brief Should Be Stricken or Disregarded.

In its Brief, the company at pages 6-5 through 6-10 presents its argument that the Commission should modify its ECR #8 order by providing that the unreconcilable energy costs be limited to $35 million. Staff respectfully submits that inclusion of this material is inappropriate and improper as it is based on testimony and evidence ordered stricken by the Presiding Officer on March 10, 1986. Therefore, the noted sections of PECO's Brief should be stricken or disregarded by the Administrative Law Judge.

In response to a Motion to Strike filed by Commission Trial Staff on January 23, 1986, the Administrative Law Judge ordered all testimony and evidence -- including subsequent testimony without specific designation -- stricken. PECO did not seek interlocutory review of that ruling and order.

Staff agrees that PECO has the right to take exception or otherwise appeal the Ruling and Order; such appeal, however is to the Commission via exceptions to the Recommended Decision, and not to the Administrative Law Judge in brief. The result of the company's stratagem is to circumvent the Commission's rules of practice and procedure by, in effect, seeking reconsideration by the Administrative

Law Judge of his prior Ruling and Order. This is not appropriate, nor permitted by the rules of procedure. By including this discussion based on stricken testimony, PECO clearly is demonstrating its contempt for the Presiding Officer. In this connection it should be noted that PECO is not even attempting to demonstrate why the Ruling and Order are in error; rather, the company simply is proceeding as if the Ruling and Order had never been issued.

Staff respectfully submits that the discussion contained in pages 6-5 through 6-10 of PECO's Main Brief is in violation of the Ruling and Order issued by the Administrative Law Judge, is in violation of the Commission's Rules of Practice and Procedure, and represents an impermissible attempt to persuade the Presiding Officer to Reconsider his Ruling and Order. Therefore, the material should be stricken or disregarded by the Administrative Law Judge.

B. The Commission Cannot and Should Not Weaken its ECR #8 Order by Agreeing to a Cap.

It is Staff's opinion that any mention of the testimony relating to $35 million cap is not appropriately before the Administrative Law Judge. If Staff's Motion to Strike or Disregard is denied, the following discussion is presented.

As discussed supra the March 10, 1986 Ruling and Order struck all of PECO's testimony and evidence relating to the $35 million cap. Your Honor correctly recognized that the Commission cannot modify its ECR #8 order in this proceeding because PECO timely and properly appealed the ECR #8 order. As stated in the Ruling, memo at p. 5:

> We agree with Staff that in view of the pending appeal, neither can the Commission proceed further in regard to the ECR-8 order in the ECR proceeding or in this rate case.
>
> Rule 1701 of the Pennsylvania Rules of Appellate Procedure states that:
>
> (a) General rule. Except as otherwise prescribed by these rules, after an appeal is taken or review of a quasijudicial order is sought, the trial court or other governmental unit may no longer proceed further in the matter.

As PECO timely appealed the ECR #8 order, and as none of the exceptions delineated in Rule 1701 apply, the Commission is without authority in this proceeding to set aside or modify the order which is the subject of PECO's appeal.

The Administrative Law Judge went on to explain why the cap issue is not properly a part of the instant rate proceeding:

> However, such conclusion [that neither res judicata, collateral estoppel nor Section 316 applies] does not provide support to PECO to submit testimony in this proceeding. The evidence presented by Mr. Hill and Mr. Brennan, addressing the present and future financial condition of the Company and the impact of the proposed ECR modification on the Company's financial situation, in support of a modification of ECR-8 by adopting a $35 million cap on any disallowance of energy costs, is not relevant in this proceeding. Such evidence should be presented at the ECR-8 proceeding, or in a separate petition to the Commission seeking a modification of ECR-8. To that extent, such evidence, relating to the $35 million cap, whether included in Statements 28A and 18B and Exhibit JFB-2, or in subsequent testimony without specific designation, should be stricken.
>
> As we view it, the Commission directed us to ensure that the correct "ingredients" were included in PECO's ECR, for without proper ingredients the Commission's 80%/20% provision would be meaningless, could be manipulated, and would fail to establish the effect intended.
>
> However, nowhere in such assignment do we read a mandate to review, modify, "second-guess", or overrule the Commission's 80%/20% provision. Any attempt on our part to modify the Commission's ECR-8 order, whether by imposing a $35 million cap, or otherwise, would be presumptuous and contrary to the Commission's assignment.

> Consequently, testimony by Mr. Brennan or Mr. Hill seeking to modify the Commission's ECR-8 order would not be relevant and should be stricken.

Mimeo at pp. 7, 8 (emphasis in original).

As the Administrative Law Judge properly recognized, the Commission cannot modify its ECR #8 order by adopting a cap in this proceeding. In this connection it should be noted that the issue is much broader than whether there should be a $35 million cap; once that possibility is admitted to be relevant then the issue is whether the ECR #8 order should be modified. That is an extremely complex question as there are literally hundreds of modifications that can reasonably be advanced. For example, the GEC proposed a nuclear operating standard. (This testimony also was stricken pursuant to the March 10, 1986 Ruling and Order). Other possible modifications are a higher or lower cap, a different splitting of the reconciled/unreconciled energy costs, different performance criteria, or no ECR at all. In reliance on the Administrative Law Judge's Ruling and Order, Staff did not present testimony on these issues. This is yet another reason why the company's discussion should be stricken or disregarded.

In addition, there are compelling substantive reasons why any cap on the unreconciled energy costs should be rejected by the Commission.

First, the concept of a cap is inconsistent with the ECR #8 order. As discussed at pp. 233-243 of Staff's Main Brief, the Commission in the strongest possible terms

expressed its displeasure with PECO's management of its energy costs. In numerous places in the order the Commission stated its recognition of the "immediate need" to change PECO's ECR mechanism, and its repeated intention to provide an "incentive" for PECO to "alter its behavior" and "improve its generating plant performance." (Order, pp. 160-161). Obviously, the Commission gave a great deal of consideration to the appropriate means by which such an incentive could be provided and the appropriate split of reconciled/unreconciled energy costs. As the Commission explained:

> The exclusion of 20% of the total energy costs from reconciliation should provide PECO with a sufficient incentive to achieve efficient cost effective generation and economical purchased power costs while at the same time producing no undue risk of substantial financial harm to the Company when such costs are based on historic or reasonably expected energy cost changes.

Order, p. 161.

The Commission in its order did not determine that a sufficient incentive would be provided by 20% or $35 million, whichever was lower. The incentive found to be reasonable was 20%. The Commission should not permit PECO to indirectly dilute this necessary incentive.

Second, by providing that 20% of energy costs will not be reconciliable, the Commission recognized the substantial degree of control PECO exercises over its energy costs. In its Main Brief, PECO constantly reiterates that its energy

costs are "outside its control" and "may vary through no fault of the Company" (See, for example, p. 6-8 of PECO's Brief). These contentions are without merit for the following reasons:

(1) the major cause of the extreme fluctuations in PECO's ECR over the last several years has been outages of PECO's own baseload units. There certainly can be no dispute that PECO exercises direct control over its own units, both those it operates and those it jointly owns;

(2) It is PECO's position that it cannot control the energy costs resulting from operations of other PJM members. While PECO, of course does not directly control the generating units of other utilities, because of its pre-eminent position in PJM, it certainly is possible that PECO would be successful in obtaining some type of PJM operating efficiency agreement. The point is that PECO ratepayers must pay energy costs associated with these PJM members' units; it is only equitable and reasonable that PECO be required to ensure that those costs are as low as possible, and

(3) PECO also mentions changes in fuel prices as being beyond the company's control (PECO Main Brief, p. 6-7). Frankly, Staff is suprised to learn of PECO's admission of powerlessness in this regard. There are numerous steps PECO can take to avail itself of the lowest possible fuel costs and these steps, including the appropriate mix of contract and spot purchases, selection of additional

sources of supply, etc., should have been taken previously. The fact is they were not, primarily because, with a 100% reconciliation of energy costs there simply was no incentive for PECO to keep its fuel costs low.

Third, the company asserts that "a cap would at least partially reflect the" existing incentives PECO already has in place to control energy costs." (PECO Main Brief, p. 6-9). This contention on its face is meritless: (1) it is a tacit admission that the purpose of the cap is to weaken the incentive ordered by the Commission; (2) the "existing incentives" identified by PECO were in place when the Commission issued its ECR #8 order and obviously found to be ineffective; and (3) the "incentives" listed by PECO are no incentives at all:

> -PJM:
> economic dispatch is a relative ranking system; there is no scrutiny of members' operating costs nor any effort to keep those costs down; uneconomic costs flow through the PJM system (Tr. 2236-39);
>
> -Existing Commission procedures:
> these are all "reactive" and "after the fact" procedures as recognized by the Commission its ECR #8 order. These procedures involve substantial Commission resources, and entail literally millions of dollars of expenses which are borne by PECO's ratepayers, so their use should be limited to necessary situations, (Tr. 2240-42)

-Competition:
PECO has an absolute monopoly on electric service; (Tr. 2239-40) and

-Management recognition of rate increases:
In light of the fact that PECO's rates are currently among the highest in the nation and will be the highest if its rate request is granted in full, this "incentive" obviously has had little effect.

The final major substantive reason advanced by PECO to support its cap, is the company's "substandard financial condition" (PECO Main Brief, p. 6-9). There are numerous responses to this assertion: (1) the company's financial condition is the direct result of its own decisions to continue the ambitious construction program; (2) this Commission does not engage in below-the-line ratemaking; (3) the impact of the 80%/20% split was explicitly recognized by the Commission in its ECR #8 order; (4) there is the equal possibility of a windfall to the company, as recognized by PECO at p. 6-8; and (5) if the company were really concerned about its financial viability, it would cancel Limerick #2. Obviously, the company's "substandard financial condition" is its own fault; in this respect, PECO is more analogous to PG&W then to Met Ed.

Staff respectfully submits that the cap proposed by PECO should be rejected for the following reasons:

(1) the Commission is without authority to modify its ECR #8 order in this proceeding;

(2) other modifications may be more appropriate;

(3) it would dilute the incentive found necessary by the Commission and permit PECO to engage in "business as usual;" and

(4) no compelling reason has been shown for adoption of this or any other cap.

C. PECO and the GEC Have Shown No Reason Why Staff's Proposed ECRF Should Not Be Adopted.

1. The unreconciled energy costs should be normalized on the same basis as every other expense.

While for the most part, the company's ECR contentions (adopted by the Governor's Energy Council in its Main Brief) have been addressed at length in Staff's Main Brief and shown to be of little probative value, some statements require brief response.

First, PECO states that its methodology and Staff's do not "achieve the same goals with equal effectiveness" (page 6-11). Staff's goal is to implement the Commission's ECR #8 order so as to provide the incentive the Commission intended in order that PECO will "operate its generating plants in an efficient manner and to minimize fuel costs" (ECR #8 Order, p. 160). As the Commission succinctly declared:

> ALJ Kashi also observed that the ECR mechanism is one tool which the Commission may use to modify a utility's behavior. Our resolution of this matter will provide the Company with an incentive to alter its behavior and make accurate estimates of its projected energy costs as well as to operate its generating plants in an efficient manner.
> ECR #8 Order at p. 161.

In contrast, the company's admitted goal is to make the Commission's ECR #8 Order ineffective by diluting any incentive impact. PECO witness Harris admitted as much:

> It is not my reading of this Commission order that the company is precluded from structuring the proposed fuel clause in a way that it would find beneficial.
> (Tr. 2205, emphasis supplied).

The revised ECR should not be designed to be "beneficial" to the company. That would negate the entire intention behind the Commission's 80/20% split. PECO's obvious goal is to gut the Commission's ECR #8 order - it presented testimony that there should be no 80/20% at all; it suggested that the unreconciled energy costs be capped at $35 million, which is less than half the amount disallowed by the Commission in its ECR #8 order, and two-thirds of the amount suspended for investigation in ECR #9;[1/] it proposed that the 20% be established annually, thus negating any normalizing effect; and it suggested tariff language that will allow the company to ignore the 80/20% split in the future. The Commission should reject this self-serving attempt to return to the "business as usual" practices found unacceptable after an intensive 2-year investigation.

There are five points raised by the company in response to Staff's ECRF proposal:

1. "Staff's proposal would be difficult and time consuming to administer" (PECO Main Brief, p. 6-12).

As discussed in Staff's Main Brief at pp. , Staff's proposal instead is easy to administer because it incorporates exactly the same procedure - a base energy fuel component coupled with reconciled energy costs pursuant to

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1/ In this connection, it also should be noted that the cost swing of $175 million which will cause the $35 million to come into play is greater than the first year change in energy costs ($155 million) expected by the company with and without Limerick #1 in operation.

§1307 - that is currently in effect. It is the company's methodology which would increase the administrative burden on the Commission because it requires extensive ECR prospective reviews annually in addition to reconciliation investigations and base case proceedings.

2. Staff's proposal is not flexible (PECO Main Brief, p. 6-12).

The Commission has already determined that PECO's prior ECR mechanism - which was 100% "flexible" and responsive to changing conditions - had been abused by the company. Utilities always point to falling fuel prices to support totally automatic adjustment clauses but the points to remember is that these clauses never benefit ratepayers in the long-run because (1) fuel prices never decline for an extended period. Even the company asserts that fuel prices "will level out and increase," and (2) the major fluctuations in electric energy cost rates are due to outages of base load generating units; not to fluctuating fuel prices.

3. "Staff's proposal is inconsistent with the cost of service studies and revenue allocations" (PECO Main Brief, p. 6-13).

Frankly, Staff is amazed that PECO can bring itself to make this assertion. First, it is incredible that the company can assert that the Commission should not change a claim simply because that is what is included in the filing. Second, it is normal and indeed, necessary, for utilities to include in their compliance filings various Commission adjustments. It is especially important that

there be an accurate energy cost level established in this proceeding, as recognized by the Administrative Law Judge:

> JUDGE MATUSCHAK: Mr. Harris, it could be possible, couldn't it, that the 80/20 could be so manipulated that the 20 percent could be absorbed without any damage to the company? Suppose, for instance, that the estimate is made based on -- to take it to the extreme -- [oil] generated electricity and that the company uses nuclear instead, so that the estimate may be based on [oil] generated electricity and the use of nuclear at your cost could negate the 20 percent; it would be a meaningless thing.
>
> THE WITNESS: Your Honor, under this proposal if fuel costs declined, the stockholders would receive a benefit under the 80/20 split, and the $35 million cap here also puts a limit on the benefit that the stockholders would receive from these fluctuations, which may or may not have to do with the company's fuel management practices.
>
> JUDGE MATUSCHAK: But the reliability of the 80/20 split is contingent upon a fair estimate in the first place.
>
> THE WITNESS: I agree that it is a function of the initial estimate. However, we have found, especially in forecasting energy prices, that we are not able to produce very good forecasts of energy prices.
>
> JUDGE MATUSCHAK: Don't you think that the Commission realized that the 80/20 was not meaningful unless a proper recognition was taken of whether the estimate and the basis for the estimate of the company were valid, that the 80/20 wouldn't be meaningful at all?
>
> THE WITNESS: Your Honor, I'm sure that in producing its forecasted fuel costs the company's estimates and assumptions are monitored very closely. Even with the best intentions, analysts throughout the industry and throughout

> the country have not been very successul in forecasting fuel costs. The volatility of the market for fuel is so great that there has not been very good success in those estimates.
> Tr. 2206-08.

4. Staff has "erroneously" interpreted the Commission's ECR #8 order" (PECO Main Brief, pp. 6-13-16).

See, Staff's Main Brief at pp. 233-48.

5. Staff's legal position that unreconciled energy costs cannot be recovered via Section 1307 is incorrect (PECO Main Brief, pp. 6-16-18).

In support of its position, PECO cites the Commonwealth Court's decision in Community Central Energy Corporation v. Pa. P.U.C., 51 Pa. Commonwealth Ct. 142, 413 A.2d 1197 (1980). Upon closer review, it is apparent that this decision is not determinative of the issue present in the case at bar, namely, may prudently incurred energy costs be disallowed as the result of Commission policy in the absence of specific imprudency findings? In contrast, the holding in Community Central is merely that the Commission can disallow actually incurred energy expenses "for good reason."

PECO seems to be saying that the Commission can be totally discretionary in choosing to disallow recovery of Section 1307 costs. That simply is not true. It is true -and has always been obvious - that the Commission can disallow recovery "for good reason." Later cases, such as National Fuel Gas Distribution Corp. v. Pa. P.U.C., 81 Pa. Commonwealth Ct. 148, 473 A.2d 1109 (1984) make this distinction clear:

> The statutory provision referred to authorizes a utility, subject to subsequent audit, to recover from its customers any shortfall in revenues collected pursuant to the GCR with reference to the utility's experienced purchased gas expenses. NFG contends that the Commission has no power to prohibit in advance such a recovery of undercollections and the Commission offers in its accompanying opinion neither supporting reasoning nor authority for the prohibition. Inasmuch as we are compelled to return this matter to the Commission for further explanation with respect to the amount of the refund, we further direct the Commission, should it again prohibit subsequent recovery of NFG's experienced undercollections, to make appropriate findings and conclusions in support of that facet of the refund order.

Obviously, what is anticipated is that pursuant to §1307(e), all actually incurred energy costs will be recovered except those specifically disallowed by the Commission, and that specific disallowance must be supported on a case by case basis with "appropriate findings and conclusions" sufficient to be sustained on appeal.

See also the Commonwealth Court's holding that the Commission may not disallow as a policy matter and in the absence of specific findings of unreasonableness, a predetermined percentage of claimed rate case expense. Butler Twp. Water Co. v. Pa. P.U.C., 81 Pa. Commonwealth Ct. 40, 473 A.2d 219 (1984).

Staff would find PECO's assertions with respect to §1307(e) much more credible if its ECRF formula recognized the 80/20% split. It does not; and it is more than likely that if PECO's methodology is accepted by the Commission, an

attempt by the Commission to disallow 20% as part of the reconciliation process without a specific imprudency finding, will be contested by the company.

The policy of an 80/20% split, especially the tariff formula submitted by PECO which omits any reference to the 80/20%, does not in and of itself establish good reason not to permit reconciliation pursuant to §1307(e). Hearings and imprudency determinations would, under the company's interpretation, be necessary on a case by case basis.

For the reasons above and in Staff's Main Brief, Staff respectfully submits that its ECRF methodology must be accepted by the Commission. PECO's proposal, with its yearly revaluations of the 20%, provides no long term incentives for efficient operation. While the projected energy costs presented in this proceeding are reasonable, there are no guarantees that improved performance or higher, more reasonable capacity factors will be incorporated in next year's calculations. The company therefore will be able next year, under its proposal, to return to the "business as usual" practices found unacceptable by the Commission.

2. Staff's interim revision provision Should be adopted by the Commission.

A few comments are in order in response to the company's discussion at pages 6-24 through 6-26 of its Main Brief.

First, at page 6-24, the company uses the term "C" factor. As admitted by PECO witness Hill on cross-examination, that term does not appear anywhere on PECO's tariff; he used it for "simplicity in this presentation" (Tr. 2244). "C" factor is equivalent to the proper term "F" factor.

Second, PECO states at p. 6-24 that "the change proposed by the Trial Staff is clearly a modification to the company's ECR and as such should not be considered in this proceeding in accordance with the ALJ's March 10, 1986 ruling." Admittedly, Staff's interim revision tariff incorporates the 80%/20% split ordered by the Commission; PECO in its Brief does not mention any specific allegations as to how otherwise Staff's proposal modifies the company's ECR. It must not be forgotten that in its ECRF submission, PECO's tariff had completely deleted the interim revision section of its current ECR. In addition, if this contention is to be taken seriously, it is untimely and inappropriate. PECO should have filed a Motion to Strike before the close of the record, rather than waiting to make the assertion in its Brief.

Third, PECO, by misquoting Staff's testimony, has misstated Staff's position with respect to the interim

revision provision. At pages 6-24-25, PECO makes the statement, allegedly contained in Staff Stmt. ECR-2, "If the company's proposal...is adopted, the interim rate provision as proposed, is no longer necessary." What Staff witnesses Hosler and Rosenthal actually said was "If the Company's proposal... is adopted, the interim revision provision as proposed is no longer appropriate" (Staff Stmt. ECR-2 p. 8).

This inadvertant misquotation changes the meaning of the testimony. It is not Staff's position that there should be no interim revision provision in the tariff if PECO's proposal is adopted. The point that Messrs. Hosler and Rosenthal were making is that the interim adjustment provision recommended by them would have to be revised if the company's ECRF procedure is adopted by the Commission because there would have to be some recognition that the unreconciled 20% portion of energy costs must remain unchanged until the next ECRF filing. Otherwise, of course, the 20% would be constantly revised so as to render the unreconcilable requirement a nullity. The appropriate procedure, in contrast, is that the interim revision provision would apply to the 80% reconciliable portion but that interim adjustment to the 20% would be precluded.

Fourth, the company asserts that the basis upon which interim adjustments should be made is the E-factor year, year, not the F-factor year as proposed by Staff. See, Staff Main Brief, pp. 251-252. The sole support PECO can muster to buttress its position is brief testimony and one answer

given by Mr. Dougherty during cross-examination in the ECR #9 proceeding. This reliance is misplaced.

As that case was settled (the Settlement Petition was approved by the Administrative Law Judge on April 1, 1986; it awaits Commission action), the Commission never accepted Mr. Dougherty's testimony.

In addition, it should be noted that Staff's final proposed language does not include the time period on which the decision to revise the rate should be based. This change from the original tariff proposal was designed to allow the Commission to retain its flexibility in this matter. Staff's opinion, however, remains that the expected over or collections expected to occur through end of the computation year should receive primary emphasis. To only look to the end of the reconciliation year as argued by PECO completely ignores expectations for a 2 month period. While it is true that these months will not effect the "E" factor of the next ECRF, a large over or under collection during these months will impact the following ECRF. Thus to ignore the potential variance during those months will obviously create a situation where an avoidable large variance will occur.

The final issue raised by PECO is how the revision should be applied; Staff's position is that it should be done on a prospective 12-month basis, consistent with the Commission's GCR-5 order. The company instead suggests it be calculated on the remaining months of the computational

year (PECO Main Brief, pages 6-25-26). The only reason advanced by PECO is that "electric sales are far less seasonal than gas." This is, of course, true; but with a strong peaking utility such as PECO, it is equally as important to avoid seasonal mismatches and undue advantage or detriment to the electric hearing or air conditioning.

Staff's recommended interim adjustment is as follows:

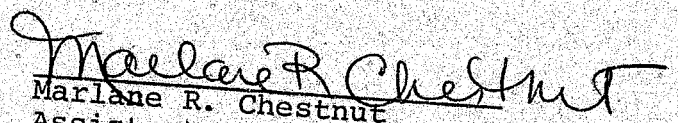
> However, such rate may be revised on an interim basis subject to approval of the Pennsylvania Public Utility Commission upon determination that the then effective rate will result in substantial over or under collection. In such case the "F" factor of the rate may be revised on a prospective twelve-month basis effective for the remainder of the ECRF computation year. Such revision shall become effective 30 days from the date of the revised filing unless otherwise ordered by the Commission.

Therefore, for the reasons stated above and in Staff's Main Brief at pp. 249-253, Staff's ECRF tariff should be adopted by the Commission because it is reasonable, protects the interests of PECO's ratepayers, is consistent with Commission precedent and appropriately implements the Commission's ECR #8 order.

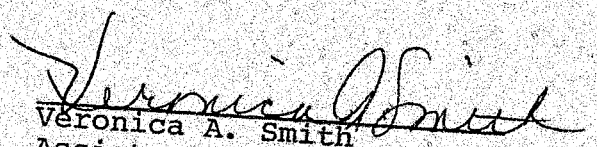
VII. CONCLUSIONS

For the foregoing reasons, Staff respectfully requests that the Commission adopted the recommendations presented by Staff in its Main and Reply Briefs.

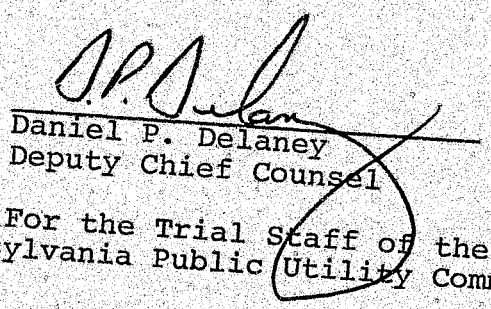
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Dated: April 14, 1986

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Dated: April 11, 1986

DPO - VS - MC

PHILADELPHIA ELECTRIC COMPANY,	:	IN THE COMMONWEALTH COURT
Petitioner	:	OF PENNSYLVANIA
v.	:	
PENNSYLVANIA PUBLIC UTILITY COMMISSION,	:	
Respondent	:	No. 453 C.D. 1986

O R D E R

NOW, March 26, 1986, upon consideration of petitioner's motion to discontinue and there being no opposition thereto, said motion is granted and the above petition for review is hereby discontinued.

J.

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APR 11 1986

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APR 14 1986

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Deputy Prothonotary - Chief Clerk

Services Administration General Counsel Washington, DC 20405

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April 11, 1986

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SECRETARY'S OFFICE
Public Utility Commission

Mr. Jerry Rich, Secretary
Pennsylvania Public Utility Commission
North Office Building - Room G-18
Commonwealth & North Streets
Harrisburg, PA 17120

Re: Pa. P.U.C. v. Philadelphia Electric Company
Docket No. R-850152

Dear Mr. Rich:

Enclosed for filing with the Commission in the above-referenced proceedings are the original and nine (9) copies of the Reply Brief of the General Services Administration on behalf of the Federal Executive Agencies.

Copies have been served on all active parties of record and the Administrative Law Judge, to ensure their receipt on the due date of April 14, 1986.

Kindly stamp the enclosed extra copy of this cover letter when received, and return it to us.

If any questions arise in connection with this filing, please contact GSA counsel Michael J. Ettner at (202) 566-1156)

Sincerely,

For R. COLETTE MCKENNA
Assistant General Counsel

Enclosures

cc: Honorable Joseph P. Matuschak
Parties of Record

Before The
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION, et al.	)	
v.	)	Docket No. R-850152
PHILADELPHIA ELECTRIC COMPANY	)	

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Public Utility Commission

REPLY BRIEF
Of The
GENERAL SERVICES ADMINISTRATION
On Behalf Of The
FEDERAL EXECUTIVE AGENCIES

DOCKETED
APR 16 1986

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Due: April 14, 1986

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Certificate of Service

I. INTRODUCTION

The General Services Administration ("GSA") has reviewed the Initial or Main Briefs of all active parties in this proceeding, and finds it necessary to respond to several points raised in the Initial Brief of Philadelphia Electric Company ("PECO" or the "Company"). These points, which deal with GSA's recommended cost of capital and our proposed inflation adjustment to O&M expenses, are discussed below.

II. COST OF CAPITAL

A. PECO has distorted several facts concerning GSA's proposed treatment of premiums associated with debt reacquisitions.

GSA's cost of capital witness, Mr. Winter, has demonstrated that the Company's proposed rate treatment of premiums paid for debt redemption will result in over-recovery of those premiums. GSA St. 1A, p. 10. Mr. Winter has set forth a more appropriate treatment for recovery of these premiums. In response, PECO contends Mr. Winter's concern over fair treatment of premiums "is meaningless" and his argument that the Company's adjustment does not reflect the accrual of interest on the premiums "is also groundless." PECO Initial Brief, p. 7-55.

It must first be noted that the dollar amount of the premiums, and the period over which the premiums should be recovered, are not points of controversy. Both items are known

and agreed upon. This circumstance sets the recovery issue apart from other issues, such as the proper rate treatment of continuing changes in the Company's rate base, to which PECO mistakenly likens the debt premium question.

PECO openly concedes that the unamortized premium balance will change each year, and that this change will not be reflected in rates now proposed. PECO Initial Brief, p. 7-55, para. 2. This represents a concession that its proposal will result in over recovery. Over recovery also is guaranteed because the Company will earn a profit or interest on the cumulative amount of premiums recovered throughout the period over which recovery occurs. PECO has not refuted this fact, yet inconsistently it refuses to reflect prospective interest earnings in its presentation.

The Company argues that: (1) the refinancing was undertaken for the benefit of the ratepayers (Id., p. 7-55); (2) the Company will pay interest on the replacement debt before it is reflected in rates (Id., pp. 7-55, 7-56); and (3) the impact of Mr. Winter's recommendation is comparable to reducing the Company's requirement for cash working capital which has already been reflected in the Company's rate proposal (Id., p. 7-56). The first and second arguments underscore the natural bias in the Company's position, since benefits from the refinancing accrue to both ratepayers and stockholders, not just the ratepayer as PECO alleges. Indeed,

stockholders become the immediate beneficiaries since the difference in coupon requirements between the reacquired high coupon debt and lower coupon replacement debt flows directly to stockholders. The ratepayer, on the other hand, continues to pay rates based on service costs of the high coupon debt until rates are adjusted in a subsequent rate case.

Regarding PECO's third argument, if the result of Mr. Winter's recommendation were fully included elsewhere in the Company's rate proposal, there would be no need for further argument on its part. However, while PECO's cash working capital figure may include an amount for the lag between receipt of revenues and payment of debt interest, this amount is a rate base item that excludes the effects of (1) the declining balance in debt premium outstanding, and (2) the interest earned by the Company on cumulative amounts of premium recovered, both of which reduce PECO's cost of debt.

In summary, the premiums paid to reacquire high coupon debt and the period over which these premiums are to be recovered are known with certainty and are not a point of dispute. Therefore, this issue is not similar to issues associated with prospective changes in rate base or prospective selling or issuance expenses. The immediate beneficiary of high coupon debt reacquisition is PECO's body of shareholders, not the ratepayer, as suggested by the Company. Ratepayers continue to pay rates based on high coupon debt until new rates based on the lower coupon replacement

debt become effective. The Company's proposed rate treatment of debt premiums will inevitably result in over recovery of the premiums, as is recognized in PECO's Initial Brief.

Since the premium amount and period for recovery are known, the debt premium issue is similar to that of determining annual requirements for a pension plan. The debt premium issue is, in fact, less complex than determination of annual pension plan requirements, due to the greater uncertainty associated with employee turnover rates, life expectancy, and retirement age.

As recommended by Mr. Winter, standard annuity tables may be used to calculate annual amounts necessary to recover the debt premiums within the specified period. GSA St. 1A, p. 10. Mr. Winter's approach is designed to recover precisely the required amount (in contrast to the Company's approach which is designed for over-recovery) and is therefore fair to both ratepayers and stockholders. GSA's recommendation should be accepted and applied in this proceeding.

B. PECO continues to misinterpret the meaning of yields on Treasury bill futures contracts.

When estimating prospective yields on floating rate notes, PECO proposes the following approach:

> "...the use of current yields on futures contracts is reasonable and appropriate because it reflects the composite market results of actual transactions

by investors who have risked their money based on their expectations as to future Treasury bill rates." PECO Initial Brief, pp. 7-52 and 7-53.

GSA has shown this approach to be inappropriate. GSA witness Winter has convincingly documented the recent upward bias in futures contract yields (GSA St. 1A, Schedule 15), and he has referenced a published statement by Dr. Robert Kopprasch specifically noting that futures pricing (and therefore futures yields) are not based on expectations for prospective market yields. GSA St. 1, p. 4. Dr. Kopprasch, as Vice President in Salomon Brothers' bond portfolio group, has direct contact with investors in futures contracts, and is a recognized authority in the field of futures trading.

PECO witness Brennan has been unable to cite an opposing view from a comparably well-qualified source. Mr. Brennan himself has not indicated possession of futures trading experience or training in his qualifications. Lacking expert opinion in its defense, the Company argues that the Commission has not disallowed Mr. Brennan's methodology in prior rate cases. However, in light of the new evidence presented by GSA in this case, we urge the ALJ and Commission to reconsider this issue anew and reject use of Treasury bill future contract yields as a basis for projecting costs of floating rate issuances. Instead, consensus market forecasts of futures yields, such as those contained in the Blue Chip publication relied upon by Mr. Winter, offer a more reasonable foundation for projecting these costs.

C. PECO distorts facts concerning the cost of preferred stock.

At p. 7-57 of its Initial Brief, PECO states:

> "Witness Winter asserts that preferred stock may be issued at less than the cost of long-term debt. He offers no support for this proposition other than his own speculation... ."

This allegation requires response. First, the ALJ and Commission can readily find that Mr. Winter has indeed offered support for his position, by documenting the observation that a company's preferred stock typically sells at a lower cost than its long-term debt. GSA St. 1A, Schedule 16. This fact is explained by the effect of an 85% exclusion from Federal taxes of preferred stock dividends. Although preferred stock yields may, at times, exceed yields on the same issuer's debt, this is not the typical relationship, and is unlikely to occur unless the preferred stock dividends are in jeopardy of omission. While PECO's dividends have not been in jeopardy in the recent past, and are not now in jeopardy, that situation may have been present on the last occasion when PECO concurrently issued long-term debt and preferred stock. PECO references such an occasion on p. 7-57 of its Initial Brief, but GSA has been unable to find the date of the issuance or any mention of these concurrent issuances on p. 50 of PECO St. 28B, which is cited in support of this point.

While the above information is intended to clarify the record, the question remains, what cost should be assigned to

PECO's May 1986 prospective issuance of preferred stock? Actual market rates on recently issued preferred stock, and near-term consensus yield forecasts, confirm Mr. Winter's recommendation of 10.10% as being fully adequate, if not excessive. GSA St. 1A, pp. 10-11. For example, Toledo Edison issued new preferred stock on March 5, 1986 at a cost of 9.55% (EBASCO, Analysis of Public Utility Financing, p. 4-P). S&P's BB- rating for Toledo Edison's preferred stock is comparable to that for PECO. Regarding Company-specific data, PECO itself recently registered to sell 25-year debentures with a 10.375% coupon (these coupons will not receive the 85% exclusion from Federal taxation). Also, the April 1, 1986, Blue Chip Financial Forecasts shows consensus expectations for little, if any, change in capital costs over the near-term. In light of the above, Mr. Winter's 10.10% finding is now at the upper end of an acceptable range, and should be an upper bound on the ALJ and Commission's consideration on this issue.

D. PECO makes several unsupportable statements concerning Mr. Winter's testimony on cost of common equity, and several misstatements of fact.

1. GSA witness Winter's dividend yield calculation is appropriate.

PECO argues that the 16-week period from which Mr. Winter's dividend yield is calculated is "too short a time period to provide a representative result and is too volatile to be accepted... ." PECO Initial Brief, pp. 7-83 to 7-84. In support

of this position, PECO notes first that the 16-week average yield decreased 150 basis points between the time Mr. Winter's direct, and surrebuttal, testimonies were prepared; and secondly, that the Commission has relied on 12-month and spot data for calculating the yield. Aside from the obvious inconsistency in its argument (PECO would accept spot data but dismiss 16-week average data), the Company has not addressed the crux of the issue, namely, in selecting a yield term, what does the analyst hope to represent?

GSA's view is also the most widely accepted and appropriate response: yield results should be representative of the cost of equity during the period in which associated rates are to be in effect. While Mr. Winter's efforts have been directed to obtaining this result, PECO appears to believe it more appropriate to base cost of equity findings on dividend yields which are now over a year old. Such yields are representative of neither current nor prospective costs of capital. Of course, no controversy would exist if capital costs were stable and trendless, but that is clearly not the case.

Significant declines in PECO's cost of capital, and costs of capital in general, have occurred during the past several months. These declines are continuing. The magnitude of this slide has been documented by Mr. Winter. GSA St. 1A, Schedule 17. Furthermore, no near-term increase in capital costs is likely, according

to consensus market forecasts. GSA St. 1, p. 48. Based on these developments, Mr. Winter's recent 16-week average yields must be considered a more accurate indicator of current and near-term prospective capital costs than yields from over a year ago relied upon by PECO. Surely it is PECO's position, not GSA's, that is inconsistent with cost of capital principles in the ratemaking context.

2. PECO misstates the basis for Mr. Winter's short-term growth rate.

PECO alleges that GSA witness Winter's short-term growth rate "is based solely on forecast data... ." PECO Initial Brief, p. 7-84. This statement woefully misrepresents the facts. Mr. Winter testified as follows:

> "To determine the appropriate growth rates for input to my DCF model, I relied on updated growth rate forecasts from the investment community along with data presented in my direct testimony on historical, concomitant, growth rates in dividends and stock price for both PECO and utility companies in general." GSA St. 1A, p. 14.

Hence, historical data was utilized as well as forecast data. Company witness Brennan's contrary statement is simply inexplicable. PECO St. 28B, p. 49.

3. Mr. Winter properly used investment firm growth forecasts.

PECO mistakenly contends that Mr. Winter's result is based on selective use of investment firm growth forecasts. PECO

Initial Brief, p. 7-85. The Company can point to no evidence in the record that Mr. Winter "selectively" chose the growth forecasts included in his testimony, nor is there any reason to believe that biased choices have occurred. It is true that changes have occurred over time in the group of forecasting firms mentioned in Mr. Winter's testimony, but this is understandable. A full explanation of these changes (e.g., the fact that a certain firm may not have covered a particular utility company being analyzed) is contained in the record. GSA St. 1A, p. 18.

4. PECO's assertion that Mr. Winter has ignored Merrill Lynch's long-term growth forecast and the Company's historical growth rate is incorrect.

The Company contends: "Witness Winter's 1-2% range ignores both PECO['s] historical growth rate of 2-3% and the Merrill Lynch, long-term [growth rate] of 2.9%. PECO Initial Brief, p. 7-85. On the contrary, Mr. Winter clearly states that his long-term growth rate findings are based on both PECO's historical growth rates and the Merrill Lynch forecast. GSA St. 1A, p. 16. A direct input to his DCF equation is a 2.9% long-term growth rate (GSA St. 1A, p. 17), which exactly equals the Merrill Lynch forecast that PECO erroneously believes was ignored.

5. PECO incorrectly implies that Mr. Winter has updated only his dividend yield, and not his growth rate.

PECO questions whether Mr. Winter has updated his growth rate forecasts from investment firms. PECO Initial Brief,

p. 7-86. In fact, Mr. Winter did update his growth rate forecasts from investment firms by providing the most recently available forecasts from each firm at the time his original and updated testimony was prepared. GSA St. 1 and GSA St. 1A, Schedules 12 and 18. Review of that evidence reveals that of the fourteen short-term dividend and earnings forecasts found in GSA St. 1, Schedule 12, only one was revised upward by the time GSA St. 1A was filed in mid-February 1986. This contradicts PECO's assertion that growth expectations for PECO have increased sufficiently to offset the significant drop that occurred in its dividend yield. PECO has not provided a shred of evidence supporting its assertion. What's more, even if a change had occurred in forecasted growth, PECO would discount that change since it insists that primary weight be accorded to historical growth figures.

III. INFLATION ADJUSTMENT TO O&M EXPENSE

PECO's Initial Brief offers several criticisms of the proposals of GSA and Staff witnesses concerning the Company's reliance on a 5.8% corporate inflation rate for the future test year. PECO Initial Brief, pp. 7-101 to 7-105. Most of these points are addressed in GSA's Initial Brief, at pp. 19-21. Two points need further emphasis.

First, PECO chooses to ignore the amount of test year O&M expense increases due to use of its excessive inflation factor in the 900-series of accounts, found in GSA Ex. 13 (PECO response to IR-GSA-5-2; Tr. 4070). See GSA Initial Brief, pp. 20-21. Secondly, PECO continues to assert that use of the Gross National Product-Implicit Price Deflator (GNP-IPD) is inappropriate for adjusting labor expenses, and therefore no adjustment is necessary. PECO Initial Brief, p. 7-105. This is clearly wrong, since such a position means that, in effect, the non-PECO labor costs are being increased by 5.8%. Nowhere in the record is there support for a 5.8% increase for non-PECO labor. Based upon all the evidence of record, GSA witness Kelley's downward adjustment to O&M expense of $1,741,164 is the most appropriate treatment of the inflation adjustment issue.

IV. CONCLUSION

For the reasons set forth above, and in our Initial Brief, GSA requests the presiding Administrative Law Judge to recommend rejection of the rate increase request contained in Philadelphia Electric Company's Supplement No. 15 to its Tariff Electric-Pa. P.U.C. No. 26. GSA urges the ALJ to:

(1) Adopt an overall cost of capital no greater than 11.97%, including a cost of common equity of no greater than 14.56%; and

(2) Adjust PECO's test year O&M expense downward by $1,741,164, to reflect more reasonable inflation rate estimates.

Dated at Washington, D.C., this 11th day of April, 1986.

Respectfully submitted,

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Certificate of Service

I hereby certify that on April 11, 1986, I served copies of the Reply Brief of the General Services Administration upon the following parties to Docket No. R-850152.

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Re: Pennsylvania Public Utility Commission, et al.,
v. Philadelphia Electric Company
Docket No. R-850152

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Dear Secretary Rich:

Enclosed for filing with the Commission, please find the original and nine (9) copies of the Reply Brief on behalf of the Philadelphia Area Industrial Energy Users Group (PAIEUG) in the above-captioned proceeding.

As evidenced by the attached Certificate of Service, all parties of record to this proceeding have been provided with copies in the manner indicated.

Respectfully submitted,

McNEES, WALLACE & NURICK

By David M. Kleppinger
David M. Kleppinger

DMK/fam

Enclosures

HAND DELIVERED

cc: All Parties of Record (w/encl.)

CONSUMER FOLDER

CERTIFICATE OF SERVICE

Pennsylvania Public Utility Commission, et. al., :
v. : Docket No. R-850152
Philadelphia Electric Company :

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APR 14 1986

SECRETARY'S OFFICE
Public Utility Commission

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION, et al.,

v.

PHILADELPHIA ELECTRIC COMPANY

Docket No. R-850152

REPLY BRIEF ON BEHALF OF PHILADELPHIA AREA INDUSTRIAL ENERGY USERS GROUP*

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BUDD COMPANY - THE HUNTING PARK PLANT
LIQUID AIR CORPORATION
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NABISCO, INC.
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BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION, et al.,	:	
v.	:	Docket No. R-850152
PHILADELPHIA ELECTRIC COMPANY	:	

REPLY BRIEF ON BEHALF OF PHILADELPHIA AREA INDUSTRIAL ENERGY USERS GROUP*

I. INTRODUCTION

The Philadelphia Area Industrial Energy Users Group (PAIEUG) remains committed to the positions as explicitly stated in its Main Brief filed on April 7, 1986. This Reply Brief will be limited to specific responses to criticisms by other parties to the PAIEUG proposals.

Despite the PECo criticisms regarding the PAIEUG phase-in proposal, the PAIEUG phase-in constitutes a reasonable compromise balancing the interests and risks of PECo shareholders and PECo ratepayers. PECo has not specifically quantified the alleged serious negative impact on its financial conditions if the PAIEUG phase-in proposal is adopted, and PAIEUG disagrees with the notion that a six-year average Limerick revenue requirement is not a generally accepted ratemaking principle. Furthermore, the incorporation of sinking fund depreciation into the PAIEUG phase-in proposal is consistent

with the Commission's adoption of comparable depreciation techniques for the Pennsylvania Power & Light Company.

The PAIEUG phase-in proposal represents a reasonable balancing of ratepayer and shareholder interests in light of the PAIEUG analysis concluding that Limerick Unit 1 will not produce net benefits to PECO ratepayers over its service life. This PAIEUG analysis, while criticised by PECo for its use of a 14.3% discount rate, indicates that serious questions surround the economic viability of Limerick Unit 1. Given these serious economic questions, and the PAIEUG position that more reasonable load forecasts and capital cost estimates would have underscored these questions to PECO, PAIEUG does not believe that this Commission can burden PECo ratepayers with the entire base rate request sought by PECo.

In the area of rate structure/rate design, PAIEUG maintains its position that a 4CP cost-of-service study is appropriate for allocating PECo's production and transmission plant as long as the study is adjusted for the abnormality of weather in the 1984 data year. The results of the PAIEUG cost-of-service study fully support the proposed distribution of this increase as set forth by PAIEUG, such that each class receives an approximate equal percentage increase to its non-fuel revenues.

The internal rate design proposed by PAIEUG for Rate HT represents the most reasonable method of matching the costs incurred by Rate HT customers with the revenue stream from those individual customers. Arguments by several other intervening parties which would modify the cost allocation methodology and yet continue to utilize PECo's rate design method for Rate

HT would grossly distort the cost tracking capabilities of Rate HT customers' revenue streams. These parties simply cannot selectively adopt an energy allocation for production and transmission plant and then attempt to force the results of that cost allocation methodology into the rate design technique utilized by PECO for designing Rate HT.

PAIEUG refers the Commission to its Main Brief for the most complete argument in support of each PAIEUG recommendation. PAIEUG will discuss below only the specific rebuttal to the arguments contested by other parties regarding the PAIEUG phase-in proposal and the rate structure/rate design recommendations.

II

REVENUE REQUIREMENT/PHASE-IN ARGUMENT

A. THE COMMISSION SHOULD REJECT PECo'S CONTENTION THAT THE PAIEUG PHASE-IN PLAN WILL SERIOUSLY IMPACT THE COMPANY'S FINANCIAL CONDITION, IS UNACCEPTABLE DUE TO A SIX-YEAR AVERAGE LIMERICK REVENUE REQUIREMENT AND DUE TO ITS INCORPORATION OF SINKING FUND DEPRECIATION.

PECo presented only three criticisms of the PAIEUG phase-in plan. First, PECo contends that the PAIEUG plan will seriously impact the Company's financial conditions and prevent it from completing its construction program. PECo Main Brief, pp.2-54. The only support for this PECo criticism is the fact that the Company's cash flow would be reduced by approximately $1 billion through 1991 and produce an impact similar to the Governor's Energy Council proposed phase-in plan. Id. However, PECo never

presented a precise quantification of the alleged negative impact on the Company's financial condition as a result of the PAIEUG phase-in plan.

While the Company compared it's financial results under Commission Trial Staff, Office of Consumer Advocate, City of Philadelphia, and Governor's Energy Council rate increase and recommendations, it failed to do so for the PAIEUG proposal. Furthermore, the reduction in the Company's cash flow through 1991 would provide the company with an appropriate financial signal for evaluating the continued viability of Limerick Unit II construction. PAIEUG does not believe that the Company should receive a substantial rate increase with a generous phase-in plan simply to maintain cash flow levels which will permit it to continue construction of Limerick Unit II, a unit which has been deemed by PAIEUG and the Administrative Law Judge presiding over the Limerick Unit II investigation as an uneconomic energy supply alternative.

Finally, while PECO contends that the negative impact of the PAIEUG phase-in plan would be similar to the GEC plan, PAIEUG respectfully disagrees. First of all, the financial impacts of the GEC ten-year phase-in plan do not significantly differ from PECo's own proposal. See, PECo Main Brief, pp.2-7. This comparison indicates that the GEC plan would produce earnings per share only 4¢ less than the PECo proposal in 1998. Furthermore, the return-on-equity between the GEC proposal and the PECo proposal is only .2% in 1989 and AFUDC as a percent of earnings is essentially identical. Because the PAIEUG phase-in lasts only six years, while the GEC proposal lasts ten years, PAIEUG does not believe that the

Commission can accept a PECo contention that the financial results are similar without a precise quantification by PECo. Therefore, this alleged reason for rejecting the PAIEUG phase-in plan should be ignored by the Commission.

Secondly, PECo claims that the use of the six-year average Limerick revenue requirement is contrary to generally accepted ratemaking principles. PECo Main Brief, pp.2-54. Whether generally accepted ratemaking principles can be applied in situations where a utility already having some of the highest rates in this jurisdiction is requesting an additional 30% increase is certainly debatable, and the PAIEUG proposal to average the Limerick revenue requirement over a six year period is an attempt to ease the burden placed upon PECo's ratepayers. Due to the unique position of PECo and it's investment in Limerick Unit 1, PAIEUG believes that alternatives to generally accepted ratemaking principles must be pursued. Furthermore, the proposal to average Limerick revenue requirements over six years represents only a $29 million adjustment to PECo's annual revenues (PECo Main Brief, pp.2-56, fn.11) and would prevent PECo from including the built in attrition adjustment for Limerick Unit 1 as explained in the PAIEUG Main Brief at pp.17-20. The substantial variations to the revenue requirements associated with PECo's other generating units as argued by PECo in it's Main Brief can easily be accommodated with further rate increase requests by the Company. What PECo is essentially arguing at pp.2-56 of it's Main Brief is that the $29 million per year adjustment within the PAIEUG phase-in plan will "cover" other revenue requirement increases beyond the future test year associated

with increased operating and maintenance expenses, general wage increases, and refinancings associated with maturing fixed securities. This precisely represents the type of attrition adjustment previously rejected by this Commission in a prior PECo proceeding. Pennsylvania Public Utility Commission v. Philadelphia Electric Company, 56 PUR 4th 637 (1983). Therefore, the PECo recommendation to reject the PAIEUG phase-in on the basis that the six-year average Limerick revenue requirement does not generally comport with accepted ratemaking principles should be rejected by the Commission.

The final PECo criticism of the PAIEUG phase-in plan is the incorporation of a sinking fund depreciation technique. PECo's criticism that sinking fund depreciation results in the deferral of capital recovery to the end of a plant's life is technically correct but the effect of this deferral is a desirable one when presented with a unit like LImerick Unit 1 which either has no net economic benefit over its life (as calculated by PAIEUG), or whose benefits do not outweight costs until several years into the service life of the unit. The deferrals achieved through sinking fund depreciation are clearly desirable and will more closely match the cost recovery for Limerick Unit 1 with whatever benefits ratepayers may receive in the later years of the unit's operation.

PECo's second criticism is that sinking fund depreciation would violate the proposed amendment to FASB 71. This criticism is pure speculation and PAIEUG does not believe that this Commission can be governed in its ratemaking decisions by a proposed amendment to FASB 71.

Furthermore, Pennsylvania Power & Light Company's utilization of a modified sinking fund depreciation methodology was deemed to comply with "generally accepted accounting principles" by the auditors reviewing its financial statements. PAIEUG Stmt. 1A, p.3. Therefore, PAIEUG alternatively suggested a modified sinking fund depreciation technique consistent with the PP&L proposal in order to assure PECo that FASB 71 would not be violated. PAIEUG Stmt. 1A, p.3.

B. THE "RISKINESS ANALYSIS" PERFORMED BY PAIEUG WITNESS FALKENBERG SUPPORTS THE PAIEUG PHASE-IN PLAN.

PECo spent considerable time in it's Main Brief at pp.5-69 through 5-87 discussing the defects and relevance of PAIEUG witness Falkenberg's analysis concerning the riskiness of the Limerick 1 venture. PAIEUG finds it interesting that PECo characterizes PAIEUG witness Falkenberg's presentation as a "suggested disallowance" when the three specific revenue requirement adjustments made by PAIEUG are premised upon sound ratemaking principles -- 50% of common plant, denial of attrition adjustment, and sinking fund depreciation. The so-called "riskiness" analysis performed by Mr. Falkenberg simply adds additional support to the substantial Commission precedent supporting the three adjustments outlined in the PAIEUG Main Brief at pp.12-23.

Characterizing Mr. Falkenberg's "riskiness" analysis as an attempt to create an irrelevant ratemaking standard is a misnomer. This analysis was used by Mr. Falkenberg as an analytical tool to underscore the risk of the

Limerick construction project and to make PECo aware that some risk sharing must occur between shareholders and ratepayers. No specific revenue requirement disallowance has been premised specifically on this riskiness analysis.

PECo's criticisms of the PAIEUG analysis clearly imply that Dr. Hieronymus' "prudence only" standard should be applied to PECo's Limerick 1 investment. The only way to fail the "prudence only" standard is to act unreasonably. PAIEUG Stmt. 1A, p.25. If PECo believes that the Falkenberg test is too easily failed, the Commission must recognize that the PECo-preferred prudence test is too easily passed. Id. While the load forecast, capital cost projections, and operating and maintenance expense assumptions regarding Limerick Unit 1 could not be deemed "unreasonable", a rational utility management employee would have questioned the accuracy of such forecasts in light of data currently available at the time. Such an analysis is precisely what Mr. Falkenberg performed and this analysis convinced PAIEUG that PECo should have been cognizant of the risky nature of its investment in Limerick 1 and the possiblity that such risk would have to be shared between PECo stockholders and PECo ratepayers. Unless some risk sharing technique is developed by this Commission, PECo will never be held unaccountable for its erroneous load forecast and capital cost projections outlined in the PAIEUG Main Brief at pp.32-35.

PECo's characterization of the Falkenberg analysis as "hindsight" is also inaccurate. With regard to the PECo load forecast analysis, Mr. Falkenberg stated, "I can show that other analysists within the utility

industry could have developed much different and more reasonable forecasts using very simple techniques available during this period." PAIEUG Stmt. 1, p.41 (emphasis added). Similarly, regarding Mr. Falkenberg's analysis of the early Limerick capital cost estimates, he stated, "thus, the question is whether the Company had acted differently before 1980 if it had perceived the possibility of Limerick costing more to build. Secondly, I wish to see what level of cost might have been expected for Limerick, based on information available before the TMI accident." Id., p.49 (emphasis added). Therefore, the Falkenberg analyses utilized information available to PECo during the time period relevant to the planning stages of Limerick Unit 1. No hindsight was ever utilized or condoned by Mr. Falkenberg.

PECO also criticizes Mr. Falkenberg's analysis as being methodologically flawed. While responsible expert consultants can debate endlessly on the accuracy of the assumptions and inputs of any regression analysis, the criticisms leveled by PECo regarding Mr. Falkenberg's Limerick capital cost projections simply miss the purpose of the analysis. Mr. Falkenberg simply sought to observe the trends in nuclear plant costs in the 1978 time frame based on data available to PECo at that time. His regression equation, whose explanatory value variables were all statistically significant, predicted that the final installed cost of Limerick 1 would be $2,454/KW as predicted in 1978. PAIEUG Stmt. No. 1, p.54. The PECo prediction at this time was $1,509/KW. Id. While PECo criticises the Falkenberg methodology and has submited alternative regression analyses producing lower capital cost estimates, the fact remains that the final

installed cost of Limerick Unit 1 exceeded $3,300/KW. Therefore, given the purpose of the Falkenberg analysis which was to identify whether PECo should have recognized the riskiness of its Limerick 1 construction cost venture, PECo should have recognized that, by 1978, it was predicting a final installed cost for Limerick well below what the industry would have predicted at that time.

PECo also criticises Mr. Falkenberg's "riskiness" analysis of PECo's load forecasting as being methodologically flawed. PECo Main Brief, pp.5-78 through 5-87. Once again, PECo misinterprets the purpose of Mr. Falkenberg's analysis. Mr. Falkenberg specifically stated, "I did not imply PECo should have relied exclusively on trend-line modeling for load forecasting in the 1970's. I simply implied it is a useful yardstick to measure PECo's forecasts against." PAIEUG Stmt. 1A, p.19. Mr. Falkenberg simply suggested that acceptable trend-line techniques available in the utility industry during the early 1970s would have indicated that PECo's end use methodology consistently overstated actual load growth. Furthermore, as PECO moved through the early 1970s, it should have recognized that its forecasting technique was consistently overstating the actual loads experienced.

The Commission must simply ask the question: How long should PECo have continued to utilize an end use forecasting technique without a trend-line technique as a check when PECo's end use technique consistently overstated actual growth levels? For example, PECo's 1973 load forecast projected a 707MW growth in peak demand which is 2.7 times greater than the

level actually experienced during the previous ten years. In 1974, PECo projected a load growth of 640MW when the prior ten year period experienced an actual increase of only 276MW. Similarly, in 1975, PECo projected an 849MW load growth compared to an historical level of 261MW. Each year, the PECo expectation was not realized. PECo Stmt. 1, p.45.

Given this actual experience compared to the PECo forecast, PAIEUG is simply suggesting that PECo should have critically reviewed its load forecasting technique and checked it against other techniques available in the utility industry at that time. To continue with a load forecasting methodology for over five years when that methodology consistently produced excessive forecasts over actual load growth is highly questionable and underscores the fact that PECo should have recognized the risk of continuing with the construction of Limerick Unit 1 based on load growth needs. PAIEUG Stmt. 1A, pp.21-22. While a portion of the PECo forecasting error can be attributable to business cycles and increasing fuel prices, the PAIEUG analysis establishes that the forecast would have been much too high even had none of these unforeseen events taken place and past trends had continued. Id. p.23.

Therefore, the PAIEUG method is not methodologically flawed, does consider the reasons for PECo's forecast results and actually confirms that a reasonable check on PECo's load forecasting methodology would have convinced PECO that its growth projections were uncharacteristically high and consistently failed to materalize. With this knowledge, PECo should have recognized the riskiness of the Limerick construction venture and, now

that full rate relief for the Limerick 1 project is being requested, some sharing of that risk is necessary.

II

RATE STRUCTURE/RATE DESIGN ARGUMENT

A. THE PAIEUG ADJUSTMENTS TO THE COST-OF-SERVICE STUDY PRESENTED BY PECO ARE NECESSARY TO REFLECT REALISTIC CLASS RATE-OF-RETURN LEVELS.

PECo opposes the PAIEUG weather adjustment and the class peak adjustment for Rate HT curtailable load in its Main Brief at pp.7-155 through 7-158. These criticisms ignore the well-established fact in this proceeding that the 1984 peak load data utilized for the 1986 cost-of-service study reflect abnormally low peak loads for the weather sensitive classes. One purpose of the PAIEUG weather adjustment was to correct the abnormally high load factors for the weather sensitive classes. The PECo method of using the ratio of the 1984 peak to the 1984 sales does not correct this defect. However, by weather adjusting the 1984 peak data, the load factors for the weather sensitive classes are returned to historically reasonable levels. See, PAIEUG Main Brief, p.53. If, as PECo suggests, the 1984 sales data is also weather adjusted, then the load factor defects found in the Company cost-of-service study would not be eliminated in that the ratio giving rise to the load factor would return to PECo's original calculation. TR.4145.

While the Commission has consistently stated that it utilizes cost-of-service studies only as a guide in developing a proposed distribution of a rate increase, the study should represent realistic rate-of-return levels for the customer classes. PAIEUG has discussed in its Main Brief the inconsistency of the 1986 cost-of-service study with prior cost-of-service study results presented by PECo to this Commission. Therefore, prior to utilizing the current cost-of-service study as a guide, the PAIEUG weather adjustment must be considered and the results of the PAIEUG study should guide the Commission in allocating the increase among customer classes.

The second adjustment PAIEUG made to the Company cost-of-service study concerns the removal of the coincident peak demands of Rate HT customers utilizing curtailable service. PAIEUG believes that the Commission and the Company should encourage the use of curtailable service as a load management tool and believe that such curtailable service should be recognized in a cost-of-service study as not contributing to the class coincident peak. Failure to recognize the lower quality of service serves to depress the rate-of-return for the entire Rate HT class and distorts the results of the PECo cost-of-service study. Whether PECo actually interrupted these customers at the time of its system peak is immaterial to the cost implications for the Company given the fact that it had the oppportunity to curtail this service.

B. PECO'S CRITICISMS OF AN ACROSS-THE-BOARD INCREASE EXCLUDING FUEL COSTS ARE INCONSISTENT WITH PECo'S PRIOR RATE CASES.

The PAIEUG Main Brief specifically outlined the case history supporting across-the-board increases excluding fuel-related revenues. PECo opposes the PAIEUG recommended distribution due to the differential increases experienced by the customer classes on a total revenue basis. However, comparable differential increases have been proposed by PECo and accepted by the Commission in prior Commission cases.

PAIEUG is recommending an increase to the residential class of approximately 1.3 times the system average increase. Similarly, at Docket No. R-822291, PECo proposed, and the Commission accepted, an increase to the residential class approximately 1.3 times the system average increase. TR.4117-4118. Once again, at Docket No. R-842590, PECo proposed, and the Commission accepted a proposed distribution of the increase such that the residential class would receive an increase 1.6 times the system average increase. TR.4118-4119.

Based on the foregoing, PAIEUG recommends the adoption of it's proposed distribution of the increase which is thoroughly consistent with prior PECo proposals and prior Commission decisions accepting those proposals which apply equal percentage increases to each customer class excluding fuel revenues.

C. THE PAIEUG RATE HT RATE DESIGN PROPOSAL IS COMPLETELY SUPPORTABLE WITHOUT THE BARY CURVE AND IRRESPECTIVE OF THE ALLEGED "CALCULATION" ERROR IN THE ANALYSIS.

PECo opposes the PAIEUG Rate HT rate design proposal on the basis that the Company's use of the Bary curve is independent of the selection of the cost allocation method. PECo Main Brief, p.7-180. PAIEUG is astounded by this criticism in light of the fact that PECo itself has oppposed the Rate HT rate design proposals of three other parties - Office of Consumer Advocate, Pennsylvania Business Utility Users Group, and University of Pennsylvania/Utility Users' Committee - on the basis that these parties proposals distort the rate design for Rate HT. However, these parties simply applied the Bary curve analysis to the results of their respective cost-of-service studies which erroneously allocate a substantial portion of production and transmission plant on the basis of energy. If the use of the Bary curve were independent of the selection of the cost allocation method as outlined by PECo in it's Main Brief, the distorted rate designs achieved by the OCA, PBUUG and UP/UUC would not exist even if those parties continued to erroneously allocate production and transmission plant on the basis of energy. Therefore, the selection of a cost allocation methodology and the use of the Bary curve are intertwined sufficiently to create a need for consistency between the cost allocation method and the rate design method. As stated in the PAIEUG Main Brief, the only cost-of-service study method consistent with the Bary curve is the noncoincident peak allocation method,

and the expert treatise developing the Bary curve confirms the PAIEUG position. PAIEUG Stmt. 2, p.12.

The second PECo criticism of the PAIEUG Rate HT rate design proposal is that the original testimony of PAIEUG witness Pollock contained a calculation error. A review of the transcript at pp.3680-3684 will reveal that this alleged "calculation" error was caused by the fact that Mr. Pollock did not have available to him sufficient information at the time he prepared his testimony to perform the calculation which he subsequently accepted on cross-examination. Mr. Pollock's acceptance of the Company's calculation does not at all affect his proposed Rate HT rate design. Furthermore, PAIEUG does not find it unreasonable to increase the Rate HT demand charge by its recommended 95% in light of the fact that PECo is requesting an increase in its fixed cost rate base of over 122% in this proceeding. See, PAIEUG Main Brief, p.3.

D. THE ENERGY BASED ALLOCATIONS FOR PRODUCTION AND TRANSMISSION PLANT ADVOCATED BY THE OFFICE OF CONSUMER ADVOCATE, THE PENNSYLVANIA BUSINESS UTILITY USER GROUP, THE UTILITY USERS' COMMITTEE/UNIVERSITY OF PENNSYLVANIA, AND CEPA SHOULD ALL BE REJECTED AS THEORETICALLY INCORRECT AND INCONSISTENT WITH PRIOR COMMISSION PRECEDENT.

Each of these parties advocating some type of energy-based classification and allocation of PECo's production and transmission plant rely upon cost/benefit theory as opposed to a generally accepted principle of cost causation. PAIEUG Stmt.3A, p.3. None of these parties can dispute the fact that when PECo initially planned Limerick Unit 1, and for several

years after the initial planning stages, PECo believed that the unit would be needed for increased load growth. Whether the unit would produce fuel cost savings as a side effect of the cause for building the unit was a speculative in the early 1970s as it is today. However, each of these parties seeks to justify their allocation of Limerick 1 on an energy basis pursuant to a theory which at least impliedly argues that the large high load factor customers will be the primary beneficiaries of the energy savings produced by Limerick 1.

Such an allocation is based upon fuel cost savings which, by their own admission, will not materalize. Therefore, under the philosophy presented by the Office of Consumer Advocate and the Utility Users' Committee/University of Pennsylvania, a substantial portion of the Limerick Unit 1 investment, be it 64% or 90%, would be allocated under a theory totally inconsistent with the position of the Office of Consumer Advocate and the Utility Users' Committee which states that over the service life of Limerick 1, no net benefits attributable to fuel savings are obtained. This gross inconsistency in their presentations is sufficient to reject an energy-based allocation for Limerick 1 or any other production and transmission plant.

The position of the OCA and UUC/UP contrasts with that of PAIEUG in that the PAIEUG witness testifying to the economics of Limerick Unit 1 consistently indicated that the capacity from Limerick Unit 1 would eventually be needed to meet peak load growth. While Limerick Unit 1 may not add reliability currently to the PECo system, it will add reliability

sometime during it's service life. This contrasts with the position of the OCA and UUC/UP which indicates that no net fuel cost savings will be achieved from Limerick Unit 1 in its entire service life. Therefore, logic would indicate that an appropriate allocation method for Limerick 1 is based on its need to meet the coincident peak on the PECo system as opposed to a methodology which attempts to allocate the plant based on nonexistent fuel cost savings.

The defects in the OCA and UUC/UP arguments underscore the point raised by PAIEUG witness Pollock when he stated that energy-based classifications and allocations of production plant confuse the cause of the construction with the effect of that construction. PAIEUG Stmt. 3A, p.6. These parties also present incomplete analyses in that they emphasize only the capital cost side of the total cost picture. If these parties wish to allocate capital costs on the basis of energy, a symmetrical allocation for fuel and purchased power costs associated with that capital cost investment is also necessary. Therefore, if a high load factor class is to be allocated above average capital costs as these parties would propose, then it follows that such classes should also be allocated the below average fuel costs associated with those above average capital cost plants. Id. pp.3-4. The Main Brief filed by UUC/UP underscored this point and stated "the cost of capacity at Limerick is so high as compared to the cost of a peaking unit that the fuel savings from Limerick, even if operated 100% of the year, are not large enough to offset the difference." UUC/UP Main Brief, pp.62-63. Yet, this same party presents a nonsensical argument that these nonexistent

fuel savings should be the basis for the allocation of the capital costs for Limerick 1. The Commission must reject such arguments as grossly inconsistent and uphold it's prior Orders which have continually allocated all of PECo's production and transmission plant on the basis of the 4CP methodology. None of these parties have raised any novel arguments which have not been previously addressed by this Commission and appropriately rejected in these prior PECo rate cases.

Another theoretical flaw in the peak-and-average methodology advocated by the OCA and CEPA is that it consistently double counts energy consumption in that the energy component of fixed costs is allocated on a year-round energy consumption basis while the demand component of fixed costs is allocated on the total coincident peak demand of each class. Thus, the average portion of the peak demand is counted twice in the allocation process. PAIEUG Stmt.3A, p.17. When correcting for this defect as well as the symmetrical argument outlined above, PAIEUG has concluded that the results of a properly conducted energy-based allocation methodology are not materially different from the 4CP cost-of-service study results presented by PAIEUG. Id. p.22.

Finally, the alleged Commission precedent supporting energy-based allocations of production and transmission plant are less than persuasive. The citation to Pennsylvania Commission precedents regarding West Penn Power Company and Duquesne Light Company ignore the significant differences in load characteristics on those two utility compared to PECo. None of these parties have performed the detailed analysis of both PECo and PJM load

characteristics which were included in Appendix B to PAIEUG Stmt. 2 and confirmed the necessity for allocating production and transmission plant on the PECo system based on the 4 summer coincident peaks. Aside from the extreme differences in load characteristics, this Commission has already decided several PECo cases since its West Penn Power and Duquesne Light decisions which have continually upheld the 4CP method.

References by these parties to Metropolitan Edison Company are also inappropriate in that the Commission has only approved an energy-based allocation of TMI-1 and not the remaining production and transmission plant on the Met-Ed system. Other than TMI-1, the Commission has approved a cost allocation methodology based on two summer and two winter coincident peaks for Met Ed. Again, by utilizing both summer peaks and winter peaks, it is evident that the Met-Ed system load characteristics are drastically different than the load characteristics on the PECo system which give rise to a summer peak allocation methodology.

Isolated references by these parties to other Commission jurisdictions wherein some type of energy-based allocation has been approved are certainly not binding upon this Pennsylvania Commission which has consistently applied a coincident peak method of allocation for PECo over the last ten years. Furthermore, these other jurisdictions have not consistently upheld energy-based allocations of production and transmission plant. For example, the North Carolina Public Utilities Commission has approved coincident peak cost-of-service study methodologies after the Carolina Power & Light Company decision at 49 PUR 4th 62 (1982) as referenced by the UUC/UP. See, e.g.,

re: Duke Power Company, 60 PUR 4th 333, 336, (1984). Several other Commissions have consistently utilized variations of the coincident peak methodology for allocating production and transmission plant. See, e.g., re: Utah Power & Light Company, 56 PUR 4th 296, 301 (1983); 52 PUR 4th 436, 446-447 (1983); re: Ohio Edison Company, 55 PUR 4th 423, 428-429 (1983); re: Cleveland Electric Uliminating Company, 38 PUR 4th 494, 499-501 (1980); re: Union Electric Company, 53 PUR 4th 565, 570-572 (1983); re: Kansas City Power & Light Company, 38 PUR 4th 1, 27 (1980); re: Texas-New Mexico Power Company, 48 PUR 4th 435, 456 (1982); re: ElPaso Electric Company, Docket 5700, October 3, 1984, Hearing Examiner's Report, p.112-114. A review of the Commission's decisions in the above-cited proceedings will reveal that Pennsylvania is not alone in adhering to a coincident peak cost-of-service study methodology even in situations where large base load units are being added to a company's rate base.

Based on the foregoing methodological flaws as well as the substantial precedent, PAIEUG recommends the adoption of its adjusted 4CP cost-of-service study methodology and a rejection of the energy-based allocation methodologies set forth by the OCA, PBUUG, UUC/UP and CEPA.

E. THE RATE DESIGN IMPLICATIONS FOR RATE HT WHICH WOULD FOLLOW FROM THE ENERGY BASED ALLOCATIONS OF PRODUCTION AND TRANSMISSION PLANT ADVOCATED BY THE OCA, PBUUG, UUC/UP AND CEPA WOULD BE DISASTEROUS TO SOUTHEASTERN PENNSYLVANIA INDUSTRY.

At page 7-151 of it's Main Brief, PECo quantified the impacts on Rate HT of the allocation methodologies proposed by UUC/UP, OCA and PBUUG. These

allocation proposals result in tail block energy charges on Rate HT of 5.91¢/kwh, 5.75¢/kwh, and 5.41¢/kwh respectively. These compare to PECo's proposed Rate HT tail block charge of 3.75¢/kwh and the PAIEUG proposal of 3.18¢/kwh. The PBUUG witness conceded that his proposed tail block charge of 5.41¢/kwh represents an increase in the non-fuel component of that charge of approximately 255%. TR.3588. The increases proposed by the OCA and UUC/UP would exceed this 255% level.

The effects of the exorbitant tail block energy charges would be to worsen the system load factor for PECo, produce substantial income instability, and reduce the incentive to shift or increase power and energy requirements to the off-peak hours. PAIEUG Stmt. 3A, pp.18-21. PAIEUG does not believe that Rate HT customers can absorb such a dramatic modification to the internal rate design of Rate HT, nor does PAIEUG believe that PECO could tolerate the degree of income instability created by these rate design proposals. See, PAIEUG Main Brief, p.46.

IV

CONCLUSION

For the foregoing reasons, PAIEUG recommends that the Commission adopt the positions taken in its Main Brief and as enunciated in this Reply Brief.

and reject the Company and other intervenor criticisms of the PAIEUG position.

Respectfully submitted,

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Dated: April 11, 1986

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

COPY

PENNSYLVANIA PUBLIC UTILITY COMMISSION

V.

PHILADELPHIA ELECTRIC COMPANY

DOCKET NO. R-850152

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Appendix

1. Dr. Schinnar And The City Went Out Of Their Way To Provide Adequate And Sufficient Information to PECO

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I. INTRODUCTION

In its Main Brief filed on April 7, 1986, the City of Philadelphia ("City") set forth its position on the issues which it raised in this proceeding and responded to arguments made by other parties during the case which were inconsistent with the City's position. The City will not repeat those responses at this time. Rather, this Reply Brief will be limited to responses to arguments of opposing counsel not previously rebutted by the City in its Main Brief and additional responses on certain issues where some further clarification and support of the City's position is deemed necessary.

II. ECONOMIC IMPACT ANALYSIS

A. The Results Of The Wharton Study Have Been Corroborated By PECO

The Wharton Policy Modeling Workshop ("Wharton PMW") study presented by Dr. Arie Schinnar in this proceeding established that Philadelphia Electric Company's ("PECO") request to increase electric rates by $671 million or 28.2% over the next three (3) years ("PECO's Rate Proposal") would adversely impact upon the Philadelphia Metropolitan Area economy. City Main Brief at 9-12. If PECO's Rate Proposal were implemented there would be economic decline in each sector of the economy including manufacturing, commercial, government and residential. Id. Nineteen thousand (19,000) new jobs in the region would be lost by 1989 if PECO's Rate Proposal were adopted by the Pennsylvania Public Utility Commission ("PUC" or Commission"). Id. The adverse impact of PECO's Rate Proposal is more fully described at pages 9-15 of the City's Main Brief.

PECO has alleged that it was unable to verify that results of the Wharton PMW study ("Wharton study" or "Dr. Schinnar's study") due to insufficient information regarding the study. PECO Main Brief at 17-28. The City has previously asserted that PECO tactically chose not to take full advantage of the wealth of information which Dr. Schinnar provided it regarding the Wharton study in order to avoid addressing the substance of the Wharton study. City Main Brief at 45-46. (See Section 1 of the Appendix for list of information and materials provided to PECO regarding the Wharton study). Ironically, evidence of record also established that PECO unwittingly corroborated the results of the Wharton study.

Corroboration refers to the support for a study conducted by one person through the independent analysis of another. Tr. 3425. The following

evidence of corroboration by PECO of Dr. Schinnar's results were established in these proceedings.

1. PECO Has Previously Filed A Proposed Rider Lowering The Rates Of Its Manufacturing Customers In Order To Retain Present Customers, Attract New Customers, And Increase Employment In The Region

PECO has previously filed an Employment and Economic Recovery Rider at R-832357 for its manufacturing customers. PECO's stated reason for filing this rider was summarized in a document entitled "Comments of the Philadelphia Electric Company Supporting the Implementation of Its Proposed Employment and Economic Recovery Rider" filed with the PUC which read in part as follows:

> A. "Q: Why did PECO file an Employment and Economic Recovery Rider? A: The purpose of the rider is to encourage existing manufacturers to remain in the area and expand here, and new manufacturers to move here by reducing their electric costs, thereby increasing local employment and the economic well-being of the area."

Tr. 4423.

This establishes PECO's understanding of the relationship between electric rates and growth in the region's economy. The proposed rider lowering the rates of its manufacturing customers was offered in order to retain present manufacturers on the system, to keep them from seeking alternative energy sources, to allow them to expand, and to attract new industrial customers. Lowering the electric rates of its manufacturers would also increase regional employment according to PECO. Dr. Schinnar's study similarly established that a significant increase in electric rates would drive customers to alternative energy

sources and energy conservation, thus reducing overall demand for PECO electricity and would consequently contribute to an inflation spiral. It was also established that for every manufacturing job created there are additional jobs created in turn in order to feed, clothe and otherwise serve that manufacturing employee and his/her family. City St. No. 1A at 26. Therefore, electric rate increases impact on the growth in jobs in the Philadelphia regional economy. City's Main Brief at 11. PECO's Economic Recovery Rider cited above also establishes this fact.

2. PECO Witness Perl's method results in a job loss projection which exceeds the Wharton PMW study by 1,568.

As stated at pages 18-19 of the City's Main Brief, Dr. Schinnar projected new job loss if PECO's Rate Proposal were implemented, using Dr. Lewis Perl's method. The result was 20,764 new jobs lost. This exceeds Dr. Schinnar's projection of new jobs lost by 1,568. Id. Dr. Perl's method was taken from the Lukens Steel case in which he projected job loss. PECO has alleged that Dr. Perl's method for projecting job loss in the Lukens Steel case cannot be used to project job loss in this case. PECO Main Brief at 2-28. The stated reason is that in the Lukens Steel case Dr. Perl projected job loss for the entire Commonwealth of Pennsylvania and not just the Philadelphia region. Id.

However, in Dr. Perl's rebuttal testimony in this case he presented three modifications which could be made to his method in order to make it applicable to the present case. PECO St. No. 11A at 20-21. Those three modifications were: (1) to assume manufacturing in the Philadelphia Metropolitan Area is 36% of that in Pennsylvania; (2) reduce the employment elasticity to reflect the Philadelphia area as opposed to the entire Commonwealth of Pennsylvania, and

(3) reduce the multiplier effect to reflect the percentage of disposable income spent by Philadelphia area residents as opposed to Commonwealth residents. Id. Dr. Schinnar made all of these modifications as proposed by Dr. Perl and derived the projection of 20,764 new jobs lost if PECO's Rate Proposal is implemented. City St. No. 1A at 11-12. Thus, Dr. Perl's method also corroborates the results of the Wharton study.

3. PECO witnesses Hogan and Schink also corroborated the Wharton PMW study.

As more fully stated at pages 16-18 of the City's Main Brief, Drs. William Hogan and George Schink further corroborated Dr. Schinnar's study. PECO witnesses Hogan and Schink projected the loss of 3,000 and 3,555 new jobs respectively, if PECO's Rate Proposal is implemented. City Main Brief at 16-18. These projections, however, are based on their calculations of only one of the effects of significantly increased electric rates on employment opportunities in the regional economy. Id. They have contradicted themselves on which isolated effect of increased electric rates should be calculated - Hogan having calculated the effect of PECO's Rate Proposal on secondary inflation economy-wide, and Schink having calculated the direct impact of PECO's Rate Proposal on the cost-of-doing business. Id. at 17, 18. When their calculations are added together, and two additional calculations reflecting energy conservation and interfuel substitution, and employer multiplier are added in, their projections of new job loss is comparable to that of Dr. Schinnar. Id. at 16-18. PECO's Rate Proposal if implemented would adversely effect employment growth in the regional economy as a result of all four factors occurring simultaneously. Id. These four causes of loss of job growth are therefore additive. It is

particularly curious that Dr. Hogan[1] omitted interfuel substitution and conservation from his calcualtion of loss of job growth in the regional economy. Dr. Hogan testified in the Limerick II Investigation that it was important to consider interfuel substitution and conservation when measuring the economic impact of electric rate increases. City Main Brief at 17. He specifically stated that "[f]aced with projected increases in electricity prices for the next several years, the effects of energy conservation and interfuel substitution greatly moderate the growth in electricity demand." Id.

4. Clemente Admitted That Economic Decline Could Follow Implementation of PECO 's Rate Proposal But That He Could Not Measure It With His Own Sociological Study.

As more fully set forth at pages 19-22 of the City's Main Brief PECO witness Frank Clemente admitted that economic decline could result from PECO's Rate Proposal but that he could not measure it with his sociological study. He testified:

> JUDGE MATUSCHAK: By your study, what light can you give us on the effect of the proposed electric rate increase in the service area of Philadelphia Electric Company?

---

1 Dr. Hogan has characterized effect of PECO's Rate Proposal on the economy in the following manner:

> Part of the impact of higher costs in one area would be reduced wages in other areas, and part would be in lost output and job growth.

PECO St. No. 37 at 18. He further testified that PECO's Rate Proposal would necessitate "borrowing from savings" by ratepayers, the availability of unemployment compensation, welfare and other government "transfer" payments. PECO St. No. 37A at 10; PECO Main Brief at A-36.

THE WITNESS: I can't predict the Philadelphia Electric area in particular, but what I can say from my general study is --

* * *

JUDGE MATUSCHAK: Are you telling us that the increase in electric rates in the Philadelphia area will have no effect on the economic situation in the service area of Philadelphia Electric Company?

THE WITNESS: No. They could have an effect, but based upon the previous study that we have done it doesn't seem as -- we can't find major adverse economic effects in areas that have had large rate increases.

Tr. 4466-68.

Thus, the testimony of Clemente also corroborates Dr. Schinnar's study.

B. PECO Was Provided An Opportunity To Thoroughly Review The Wharton Model.

PECO has alleged that it was unable to thoroughly review the Wharton model and therefore it was unable to validate the reasonableness of the model. PECO main Brief at 2-19. PECO did have the opportunity to thoroughly review the model in the following ways:

1. PECO consultants conducted sensitivity analysis at Wharton PMW.

Five PECO consultants over the course of a three day period, February 10-12 had an opportunity to conduct sensitivity analysis using the Wharton model. City St. No. 1A at 13-14. Sensitivity analysis is a form of testing and refers to observing a computer model's behavior when various growth rate and inflation rate assumptions for example are input into the computer.

Tr. 3424. Seventy-five (75) sensitivity analysis runs using different inflation and growth rate assumptions were made by Dr. Schinnar under the supervision of a PECO consultant. City St. No. 1A at 13-14. Thus, PECO had an opportunity to test the reasonableness and soundness of the Wharton model under various scenerios.

2. PECO was presented with a technical report which contains the final, precise mathematical specifications of the Wharton model.

Dr Schinnar presented PECO with a 66 page technical report (PECO Exh. 22) which contains 130 mathemetical equations and 19 tables and diagrams. It is not a general outline of the Wharton model as alleged by PECO. PECO Main Brief at 2-20. It contains the final precise mathematical specifications for the Wharton model. City St. No. 1A at 13. This technical report provides a complete documentation of the model's structure as utilized in this proceeding. Id. The Wharton model has application for many regional policy matters yet to be fully examined such as tax policy. PECO Exh. No. 22 at VII(1). The other reports referred to in the technical report go to such other policy matters which are beyond the scope of this case. Id.

3. PECO was allowed an opportunity to review the computer code of the Wharton model.

PECO has characterized the Wharton model as a "black box" which should not be considered in the rate-making process in this case. PECO Main Brief at 2-21. PECO was provided an opportunity to read the computer code of the Wharton model. City St. 1A at 13. The computer code and accompanying printouts which were provided to PECO provide the complete model proce-

dures and data. Not one of the five consultants PECO sent to Wharton PMW on Feb. 10-12, 1986, to review the model could read its computer code. Tr. 4619. This computer code was made available under a protective agreement drawn-up by PECO's counsel on Feb. 7, 1986, and signed by each of PECO's consultants. Tr. 4620-21. Therefore, this useful information was made available to PECO and it was not equipped and/or inclined to use it.

C. The Wharton model Has Been Publicly Reviewed And Accepted

The Wharton model contrary to PECO's assertions has been publicly reviewed and accepted. See, PECO Main Brief at 2-19. The Wharton model has been presented to the Philadelphia Federal Reserve Bank and at graduate and faculty seminars City St. No. 1 at 4. Dr. Stephen Feldman, a witness for the University of Pennsylvania and the Utility Users Committee in this case, testified that he has conducted sensitivity runs using the Wharton model. Tr. 3860, 3876. He has attended all of the workshops in which the model was presented and he shares a dissertation student with Dr. Schinnar. Id. Dr. Feldman has used a variation of the Wharton model in testimony in another case and he vouches for the soundness and reasonableness of the Wharton model. Tr. 3874.

D. The Wharton Study Accounted for Growth In The Economy.

PECO has drawn the inference that the Wharton Study did not consider growth in the economy in the projection of 19,000 new jobs lost. PECO Brief at 2-17. This is untrue. The Wharton model can be run in two ways-through a comparative static analysis and a dynamic or growth analysis. City St. No. 1A at 13, 14, 18; Tr. 3276-3281. The comparative static analysis looked at the Philadelphia metropolitan area in the year 1981 in order to gauge the reaction of the economy in that year to a 28.2% electric rate increase proposed

by PECO in this proceeding. City St. No. 1A at 18; Tr. 3276-3281. This static analysis held growth constant in order to isolate the effect of the electric rate increase on the regional economy in the year 1981.[2] Id. The resulting loss in existing jobs was 19,000. City St. No. 1 at 18; Tr. 3276-3281. The dynamic or growth analysis however, does include growth and projects into the future. City St. No.1 at 13-14; Tr. 3276-3281. Based on 4% inflation and 3% growth the dynamic analysis projected over 19,000 new jobs lost over the three (3) year period 1986 through 1989. See tables 4 and 5 on page 14 of City St. No. 1 for simulations of dynamic or growth analysis.

E. Dr. Schinnar's Surrebuttal Testimony Did Not Include Intermediate Calculations, He Skipped Intermediate Calculations In Order To Expose What Was Coveniently Omitted From The Incomplete Calculations Of Loss Of Job Growth By PECO's Witnesses.

PECO has falsely alleged that Dr. Schinnar 's surrebuttal testimony in this proceeding, City Statement No. 1A contains intermediate calculations. PECO Main Brief at 2-23. Intermediate calculations were not presented in this case. (See Section 2 of Appendix for an explanation of what intermediate calculations are and why a request for them by PECO in this case constituted unduly burdensome and harassing discovery.) The table in City Statement No. 1A of the four causes[3] of loss of employment opportunities resulting from

---

2 The rate of inflation was set at 5%

3 The four (4) effects on the economy occuring simultaneously upon implementation of PECO's Rate Proposal as well as the calculations of new job loss by PECO's witnesses are discussed at Section II, part A(3) of this Reply brief.

implementation of PECO's Rate Proposal reflects the computer's responses to Dr. Schinnar's mimickery of the incomplete calculations of new job loss by PECO's witnesses. Tr. 46-43-45, 4671. Dr. Schinnar testified that he "actually skipped intermediate calculations in order to obtain these results." Tr. 4671.

F. The Wharton Model Is Based On Sound Logic.

PECO alleged that the Wharton model "contains significant conceptual and structural flaws and modeling errors"". PECO Main Brief at 2-24 thru 2-25, A-23 thru A-40. Dr. Schinnar has thoroughly addressed these allegations in his surrebuttal testimony (City St. No. 1A) and has established that they are without merit. The major allegations are addressed below:

1. The entire Philadelphia Metropolitan Area would experience the loss of new jobs if PECO's Rate Proposal is implemented.

PECO claims that the Wharton model "improperly includes geographic areas not within PECO's service territory" and therefore, overstates the loss of new jobs by 25%. PECO Main Brief at A-25 -- A-26. According to PECO, areas within the Philadelphia Metropolitan Area[4] not directly served by PECO should not be included in the Wharton model's calculation of new job loss. Id. Dr. Schinnar, however, established that "[t]he Philadelphia SMSA cannot be artificially partitioned because economic activities in the region are highly interdependent." City St. No. 1A at 28. For example, Businesses and industies located within the Philadelphia metropolitan area are dependent upon consumers located within PECO's service territory, such as those consumers located in the

4 The Philadelphia metropolitan area or SMSA includes the Pennsylvania counties of Philadelphia, Bucks, Chester, Delaware and Montgomery and the New Jersey counties of Burlington, Camden and Gloucester. City Main Brief at 3-4.

City of Philadelphia. Therefore, when those consumers experience a loss of purchasing power for goods and services as a result of a PECO rate increase, those businesses and industries located outside of PECO's service territory are affected. Less of their goods and services are purchased, their expansion is slowed, and this results in a loss of employment opportunities. (See Tr. 3427-28 for other examples.)

Even when the impact of PECO's Rate Proposal on loss of job growth is limited to PECO's service territory, the resulting job loss figure is significant. PECO's service territory would lose 15,373 new jobs or 80% of the 19,196 job loss figure projected for the entire Philadelphia metropolitan area. Dr Schinnar testified as follows:

> It is not correct that the STARLOC model overestimates by 25% the impact on employment in PECO's service area. Figure 6 in City Statement No. 1 clearly shows that of the 19,196 loss in job growth, 15,783, or about 82.2%, would occur in the Pennsylvania part of the SMSA, with about 97.4% of that figure, or 15,373, in PECO's service area. Thus the loss in job growth within PECO's service area is 80% of the 19,196 figure.

City St. No. 1A at 28. Thus, the negative impact of PECO's Rate Proposal on employment opportunities is severe whether one looks at the entire Philadelphia metropolitan area or PECO's service territory solely.

2. If PECO's Rate Proposed is implemented the negative effects of conservation and interfuel substitution on employment opportunities would affect all sectors of the economy.

PECO has alleged that it solely would be effected by loss of employment opportunities as a result of the conservation and interfuel substitution which would take place if its Rate Proposal is implemented. PECO

Main Brief at A-32—A-35. PECO therefore, alleges that the Wharton model's projection of 3,142 new jobs lost as a result of conservation and interfuel substitution is overstated. Id. Dr. Schinnar has established that employment opportunities in all sectors of the regional economy and not just PECO, would be affected by conservation and interfuel substitution. The reason is that expenditures for gas and all other alternative fuels leave the regional economy because these fuel substitutes are imported from outside of the Philadelphia region. A larger share of the expenditures for PECO electricity however, remain in the regional economy. As the demand for PECO electricity declines and substitution to alternative fuels such as gas increases, less expenditures remain in the regional economy. This results in a decline in regional business and consequently a loss in regional employment opportunities.

3. The Wharton model accurately calculates the deflation of expenditures on final demand.

PECO has claimed that the Wharton model double counts the deflation of expenditures on final demand. PECO Main Brief at 2-24. Dr. Schinnar has established that this allegation is unfounded. He testified as follows in regard to this matter:

> Q. What is the second so-called "error" that Dr. Hogan finds in your model?
> A. Dr. Hogan charges that "there is a double counting of the deflation of expenditures on final demand" (p. 13) in the STARLOC model. There is no double counting here. Dr. Hogan and I discussed this issue at length on the afternoon of February 10, 1986, in my office. I will try to explain it again, using an example. Consider the expenditures on electricity of a particular industry, with an own-price elasticity of -0.3. With a 12.44% real price increase, electricity demand in that sector will drop by approximately -3.7%. But because price is rising by 12.44% and demand is dropping by 3.7%, the net change in expenditures is (1-0.037) x

(1+0.1244=1.083 or any 8.3% increase inexpenditures. Equation (6.3) in PECO Exhibit No. 22 performs this adjustment directly in terms of a change in the technical coefficients of the table of interindustry transactions. However, the 8.3% increase in expenditures does not accurately reflect the level of economic activity, and since the employment coefficients are keyed on actual levels of economic activity, the number has to be deflated, 1.083/1.124 = 0.963, and only then used to drive employment. This helps to preserve the intermediate demand transaction in real terms; otherwise employment will fluctuate excessively with variations in price rather than economic activity. City St. No. 1A at 28.

Testing Has Established That The Wharton Model Accurately Projects What Will Occur In The Future.

G. PECO claimed that the Wharton model is untested and therefore should not be considered in the ratemaking process in this case. PECO Main Brief at 22. Dr. Schinnar however has established that the Wharton model has been tested and has accurately projected what will occur in the future. The Wharton model has accurately "projected" growth in the manufacturing and non-manufacturing sectors over the 19 year period 1965-1983. City St. No. 1 at 37, figures 16 and 17. These "projections" result from a procedure which reverses the forecast to derive the projected performance of the economy in previous years. The accuracy of these projections further confirms that the Wharton model is a reliable tool which must be utilized in the determination of just and reasonable rates in this proceeding.

III. FINANCIAL ANALYSIS

A. To Presently Charge Rate Payers for Limerick II Would Be Unlawful.

At pages 2-32 through 2-33 of its Main Brief PECO asserts that its Rate Proposal is necessary for the completion of Limerick II. Specifically it stated:

> Third, the Company's plan is reasonable because it will complete the phase-in of the Limerick I rate increase at or about the time Limerick 2 is completed and must be reflected in rates. Also, the Company's plan reduces the risk that Company rate levels in the 1990's could be forced to economically injurious levels by a combination of excessively deferred revenues and other uncontrollable forces. These risks are greatly increased by proposals such as those of opposing parties which defer today's costs for extended future recovery.
>
> Fourth, while the Company's phase-in program will have an effect on cash flow, it provides the necessary capital to permit completion of Limerick II. As noted above, the Commission has determined that Limerick II is needed to provide generating capacity in 1991 and that its completion with a cost cap is in the public interest. In addition, as described above in Section II(A)(2), the Company's phase-in of the requested rate increase will not have any significant negative impact on the economy of the Company's service territory. Thus, the Company's proposal benefits current ratepayers by mitigating the rate increase associated with Limerick I, while benefiting future ratepayers by providing the necessary capital to complete Limerick II.

PECO Main Brief at 2-32 -- 2-33. Thus, PECO proposes to impose a rate plan on consumers --which overwhelming evidence of record has established would cause extreme economic hardship on the Philadelphia regional economy in order to

ensure construction of another potentially burdensome plant. Legal precedent and Commission policy prohibit the imposition of rates for plant which is "not used and useful" in service to the public. Green v. Pennsylvania Public Utility commission, 473 A.2d 209, 214 (Pa. Commw. 1984). Limerick II, which is not scheduled for completion and commercial operation until 1991 is therefore not used and useful and therefore its costs should not be a part of allowed rates in this proceeding. In regard thereto City witness Gregory Palast stated as follows:

> To complete Limerick II, PECO will have to borrow approximately $2 billion in the next four (4) years. (PECO response to Ir-OCA-I-26; Financial Analysts Forecasts.) There is little doubt that the Company can finance the $1.5 billion required to fund the City's seventeen (17) year phase-in program. There is some doubt that the Company can easily finance Limerick II. It may be that the Company can not easily finance both. If so, the Commission should not reject a much-needed phase-in of Limerick I rates over an appropriate period of time in order to subsisize the Company's Limerick II financing.

City St. No. 2A at 12. Therefore, PECO's Rate Proposal, which it stated is designed to ensure the construction of Limerick II must be rejected.

It should also be noted that the City has recommended an extended deferred revenue recovery period of ten (10) years if PECO's full increase is granted. This recommendation reflects consideration of the possibility of Limerick II in base rates. The extended deferred revenue recovery period is designed to help ameliorate the impact of Limerick II in base rates. As stated in the City's Main Brief, if Limerick II is allowed in base rates, those rates should also be phased-in over a reasonably long period of time in order to minimize the harm to the economy. City Main Brief at 15, footnote 9.

B. PECO Has Provided No Evidence of Record That It Would Lose Potential Investors If It Implemented A Longer Than Ten (10) Year Phase-In Plan

PECO has stated that the City's recommended phase-in plan is unacceptable because it goes beyond 10 years in violation of the FASB-71 exposure draft. The City's proposed phase-in plan would, therefore, discourage investment in PECO and increase investment risk, PECO alleged. PECO Main Brief at 2-41. PECO, however, provides no empirical or scientific support for this assertion. PECO has the burden of proving through substantial evidence each and every aspect of its proposal to increase rates. 66 Pa. C.S.A. §315(a); Lower Frederick Tp. Water Co. v. Pennsyvania Public Utility Commission, 409 A.2d 505, 48 Pa. Commw. 222, 226-27 (1980). PECO has not met its burden of proof with regard to the impact of the FASB-71 exposure draft on investors so as to necessitate its proposed six (6) year rate plan. Therefore, PECO's six (6) year rate plan --which is based on the Company's unsupported allegations that a longer rate plan would increase investor risk — must be rejected because it is not based on substantial evidence. See the City's Main Bief at pages 28-31 for a more detailed discussion of FASB-71.

IV. RATE STRUCTURE

The Pennsylvania Business Utility Users Group ("PBUUG") alleged that Philadelphia Street Lighting (SLP) -- for which PECO has proposed a 0% increase in rates -- has not received a fair share of the rate increase. PBUUG Main Brief at 17-18. PBUUG further asserted that the allocation of Limerick I production and transmission plant on an energy basis is appropriate because this plant was built for its fuel savings and therefore it should be cost on an energy basis. Id. These allegations are addressed below.

A. The Allocation of Production and Transmission Plant Costs On A Coincident Peak Demand Basis Is Appropriate Because It Reflects The Way Costs Are Incurred And Therefore It Should Be Adopted

As more fully set forth at pages 39-44 of the City's main brief, transmission and production plant are designed and sized to meet the coincident peak load demand on the system. City Main Brief at 42. It is therefore appropriate to allocate production and transmission plant using a coincident peak demand method as was used by PECO in this proceeding. The Commission adopted this method in PECO's last rate proceeding. Pa. PUC v. Philadelphia Electric Company, R-842590, (January 25, 1985) mimeo at 137.

B. Evidence Of Record Establishes That Philadelphia Street Lighting Has Been Subsidizing Other Classes And Therefore Has Paid More Than Its Fair Share Of Electric Rates

With regard to PBUUG's "fairness" argument the City asserts that record evidence established that under present rates SLP's rate of return is 174% of the system average rate of return. City Main Brief at 39. SLP is thus subsidizing other customer classes. Id. Also, as an off-peak customer, SLP helps

to keep system and in turn other customers' costs down. This argument is more fully set forth at pages 43-44 of the City's Main Brief. In summary, evidence of record establishes that SLP is deserving of no increase in rates on an equitable basis as well as on a cost basis.

V. CONCLUSION

For the reasons set forth above as well as those set forth in the City's Main Brief, the City respectfully requests that its recommendations as set forth at pages 5-6 and in the conclusion of its Main Brief be adopted.

Respectfully submitted,

April 14, 1986

Charles E. Rainey, Jr.
Assistant City Solicitor

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City Solicitor

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1. Dr. Schinnar And The City Went Out Of Their Way To Provide Adequate And Sufficient Information To PECO

Dr. Schinnar provided a wealth of information to PECO during the course of these proceedings. This was often a burdensome, time-consuming, and expensive task but the information was provided as expeditiously as possible. The following is a list of the information provided:

1. A complete technical report of the STARLOC model (PECO Exh. 22) was provided to PECO on Jan. 27, 1986. This Technical Report is 66 pages long and contains 130 mathematical equations and 19 tables and diagrams. It contains all of the detailed mathematical specifications and estimated parameters of the STARLOC model. It is the only document available which completely describes the structure of the STARLOC model and it constitutes the workpaper associated with Dr. Schinnar's direct testimony in this case. This Technical Report was not submitted on the same date as the direct testimony (January 14, 1986) because it had not been completed at that time. Dr. Schinnar, however, rushed to finish this comprehensive document and it was submitted to PECO upon its completion.

2(a) Dr. Schinnar responded to five sets of interrogatories.

2(b) The City also served written responses to:
(i) PECO's on-the-record data request of February 13, 1986;
(ii) an oral data request made by PECO's consultants when they met with Dr. Schinnar on February 10-12, 1986.

3. Dr. Schinnar met at the Wharton School with five PECO consultants on February 10-12, 1986. During the course of those three days PECO's consultants:

(a) were lectured by Dr. Schinnar on the model's formulation. City St. No. 1A at 13-14.

(b) reviewed working papers referred in the model's technical report. City St. No. 1A at 13.

(c) inspected computer printouts containing the

entire model computer code. Id.

(d) inspected all parameters and data bases of the model. Id.

(e) conducted sensitivity analysis runs with the model. Id. Seventy-five (75) sensitivity analysis runs were made at the direction of one PECO consultant. Id. at 13-14. In addition, a PECO representative was provided with 370 test runs of the model conducted by Dr. Schinnar and his staff. Id. at 13-14.

4. Dr. Schinnar testified that PECO's representatives could have taken greater advantage of these discovery conferences and obtained even more information had they been so inclined. Id. at 14. For example, he stated that while he made himself, his workshop (Wharton PMW) and his materials available for 2½ days, Dr. Hogan was present for only one afternoon; Dr. Schink only inspected the model parameters and code for two hours; and Mr. Kirby Owen limited sensitivity analysis runs to a two-hour session. Id. at 14.

5. Workpapers and computer printouts were submitted along with Dr. Schinnar's surrebuttal testimony.

6. On March 7, 1986, Dr. Schinnar made available at the Wharton School Supplemental Staff notes pursuant to 52 Pa. Code §5.404, regarding the construction of the STARLOC model. Dr. Schink reviewed this material over a three hour period from 2:00 p.m. to 5:00 p.m.[1]

2. PECO's Request For Intermediate Calculations Constituted Harrassing And Unduly Burdensome Discovery Which Is Prohibited Under The Pennsylvania Code

Section 5.361(a)(2) of Title 52 of the Pennsylvania Code, 52 Pa. Code §5.361(a)(2) prohibits unduly burdensome and harrassing discovery. During

[1]Dr. Schink had originally scheduled a meeting with Dr. Schinnar for 10:00 a.m. on March 7, 1986, at Wharton PMW. He, however, postponed the meeting until 2:00 p.m.

the discovery conferences held at Wharton PMW on February 10-12, 1986, PECO's consultants requested all intermediate calculations contained in Dr. Schinnar's computer model. Dr. Schinnar informed PECO that this would be an extremely burdensome, costly, and time consuming task because this information was completely internalized within the computer memory and could not be withdrawn from the computer in its present state. City St. No. 1A at 14. The intermediate calculations encompass the thousands of calculations from which Dr. Schinnar derived his results in this case. Tr. 3352. Dr. Schinnar testified that in order to provide the intermediate calculations the computer code would have to be modified and the model re-tested. City St. No. 1A at 14. Dr. Schinnar told PECO that it would take three weeks at a cost of $20,000 to provide the intermediate calculations Supplemental responses to interrogatories submitted on March 5, 1986; City St. No. 1A at 14. The City submits that it was unreasonable for PECO to request that the City and Dr. Schinnar invest that kind of time, money, and manpower to produce those materials. PECO's request constituted unduly burdensome and harassing discovery under Title 52 of the Pennsylvania Code. 52 Pa. Code §5.361(a)(2). It should also be noted that PECO did not show that this material was crucial to its case. The City further submits that if this material were crucial to PECO's case it could have moved to compel this material. It should further be noted that PECO had never agreed to incur the $20,000 cost associated with production of this material.

For all of the above reasons, the City submits that PECO had access to adequate and sufficient discovery materials to analyze the validity and accuracy of the STARLOC model if it were so inclined. As Dr. Schinnar has stated in testimony, PECO has been provided all available data, documents, information and materials regarding the STARLOC model and his testimonies. Tr. 4664.

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April 14, 1986

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Mr. Jerry Rich, Secretary
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Harrisburg, Pennsylvania 17120

Re: Pennsylvania Public Utility Commission v.
Philadelphia Electric Company, Docket No. R-850152

Dear Mr. Rich:

Enclosed for filing with the Commission is an original and nine (9) copies of the Reply Brief submitted jointly on behalf of the Southeastern Pennsylvania Transportation Authority ("SEPTA") and the National Railroad Passenger Corporation ("Amtrak").

Very truly yours,

J. Thomas Morris

J. Thomas Morris

JTM/ejz
Enclosures

cc: Honorable Joseph P. Matuschak (w/ encl.)
All parties (w/ encl.)

DO NOT FOLD

CERTIFICATE OF SERVICE

I hereby certify that I am, this 14th day of April, 1986 serving by special messenger (except as noted below) the Reply Brief on behalf of Southeastern Pennsylvania Transportation Authority and National Railroad Passenger Corporation, upon the persons listed below:

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Public Utility Commission

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

BEFORE ADMINISTRATIVE LAW JUDGE JOSEPH P. MATUSCHAK

NATIONAL RAILROAD PASSENGER CORPORATION	:	COMPLAINT DOCKET
	:	NO. R850152C-007
v.	:	
PHILADELPHIA ELECTRIC COMPANY	:	

SOUTHEASTERN PENNSYLVANIA TRANSPORTATION AUTHORITY	:	COMPLAINT DOCKET
	:	NO. R-850152C-008
v.	:	
PHILADELPHIA ELECTRIC COMPANY	:	

FOLDER

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April 14, 1986

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APR 15 1986

The Southeastern Pennsylvania Transportation Authority ("SEPTA") and the National Railroad Passenger Corporation ("Amtrak") jointly submit this Reply Brief to respond to points raised in the Main Briefs submitted by several of the parties to this proceeding.

I. The Record Strongly Supports Consolidation Of Proposed Rates EP-S And EP-A Into A Single Rate EP

In response to the proposal of SEPTA and Amtrak that a single rate be established for the railroads (consisting of a consolidation of the proposed rates EP-S and EP-A),[1] PECO has stated on pp. 7 - 171-172 of its Main Brief that its proposal to establish two separate rates "will more precisely track the cost of serving these two customers and reflect differences in their load characteristics." The record in this case, however, does not reflect any significant differences in the load profiles or any other characteristic of SEPTA and Amtrak that would warrant two separate rates for the railroads. On the contrary, SEPTA and Amtrak exhibit uniquely similar load patterns. Both of these customers exhibit distinct and systematic twin peak daily load patterns, with high peaks relative to most other customers in both the morning and evening (SEPTA/Amtrak St. No. 1 at p. 18). Moreover, unlike the PECO system, which peaks in the summer, SEPTA and Amtrak are

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[1] Significantly, PECO's proposal to remove SEPTA and Amtrak from the HT class has not been opposed by any party to this proceeding. SEPTA and Amtrak, of course, strongly support removal of the railroads from the HT class, as discussed at pp. 9-13 of their Main Brief.

generally winter peaking customers (Id.). The load profiles of SEPTA and Amtrak are further linked by reason of Amtrak's redelivery of a significant amount of its power to SEPTA (Id. at p. 7). Therefore, SEPTA's load requirements comprise a part of Amtrak's load profile.

PECO's assertion in support of two separate rates for the railroads ignores the overwhelming similarities between SEPTA and Amtrak -- including their similar load profiles, cost characteristics, end-use, joint use of rail facilities and significant sharing of energy costs (SEPTA/Amtrak St. No. 1 at p. 22). The similar cost characteristics of SEPTA and Amtrak warrant special emphasis. On the one hand, the demand costs of both SEPTA and Amtrak are significantly lower than the average demand costs of other large customers served in the HT class (SEPTA/Amtrak St. No. 1 at pp. 8-9). On the other hand, the customer costs for SEPTA and Amtrak are $1,583 and $1,279 respectively per delivery point, which is significantly higher than the customer cost of $268 for members of the HT class (Id. at p. 20).

In conclusion, all of these similarities between SEPTA and Amtrak strongly warrant a single traction power class applicable to the railroads. Moreover, consolidation of rates EP-S and EP-A would not affect PECO's revenues or the rates charged to any other customers (SEPTA/Amtrak St. No. 1 at p. 23). Thus, there is no justification whatsoever for two separate classes for the railroads. Accordingly, the Commission should approve the consolidation of the

proposed rates EP-S and EP-A into a single rate EP, as discussed more fully in the Main Brief of SEPTA and Amtrak at pp. 13-15.

II. The Commission Should Approve PECO's Four Peak Cost Of Service Study

Several of the intervenors, namely, the OCA and the UUC/UP, have cited a series of decisions in Pennsylvania and other jurisdictions where public utility commissions have accepted a variety of energy-weighted allocation methodologies. Although virtually all of these decisions were cited in PECO's last rate case (Docket No. 842590) in support of alternative energy-based methods, the Commission determined, consistent with prior practice, that PECO's Four Peak cost of service study was acceptable. Pa. P.U.C. v. PECO, R-842590, Opinion and Order dated January 25, 1985 at p. 137. Indeed, the issue of the appropriateness of PECO's Four Peak methodology has been litigated extensively in at least four prior PECO rate cases (PECO St. No. 24A at p. 2). In each instance, the Commission has declined to adopt an allocation of PECO's fixed production plant costs on the basis of variable energy costs, as urged by several of the intervenors in this case. Significantly, the Commission approved PECO's Four Peak cost of service study in the last rate case even though a substantial portion of PECO's generation plant consisted of nuclear base load facilities.

In addition to the numerous rate cases in which this Commission has approved PECO's Four Peak method, similar peak responsibility cost of service studies have been approved in recent

cases in Pennsylvania and other jurisdictions. See, e.g., Pa. P.U.C. v. Pennsylvania Power and Light Company, 67 P.U.R. 4th 30, 87 (1985); Re Union Electric Company, 53 P.U.R. 4th 565 (Illinois, 1983); Re Ohio Edison Company, 55 P.U.R. 4th (1983); Re Arkansas Electric Cooperative, 65 P.U.R. 4th 269 (1985); Re Utah Power and Light Company, 66 P.U.R. 4th 32 (1985); Re Texas-New Mexico Power Company, 48 P.U.R. 4th 435 (1982).

Unquestionably, class contribution to system peak demand is a well-recognized basis for the allocation of electric production and transmission costs. For example, the methods of allocating costs on this basis are recognized as one of the principal allocation methodologies in the National Association of Regulatory Utility Commissioners Cost Allocation Manual, an authority relied on by OCA witness Oliver in his discussion of other cost of service issues (OCA St. 8 at p. 18).

SEPTA and Amtrak, submit, in conclusion, that the most appropriate precedents to follow are those of PECO's own rate cases which have utilized the Four Peak method in numerous past rate cases. For these reasons, SEPTA and Amtrak agree with PECO, the P.U.C. Trial Staff, the P.A.I.E.U.G., the City of Philadelphia and the Pennsylvania Food Merchants Association that no sufficient reason has been advanced in this proceeding for rejecting the Four Peak method in favor of any of the various energy-based allocations that have been proposed.

III. Conclusion

For all of the foregoing reasons, and the reasons discussed in their Main Brief, SEPTA and Amtrak request that the Commission approve a single rate EP consisting of a consolidation of the proposed rates EP-S and EP-A. Further, SEPTA and Amtrak urge, for reasons stated in their Main Brief, that the consolidated rate EP be based on the actual cost of serving the railroads, based on PECO's Four Peak cost of service study.

Respectfully submitted,

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SCHEDULE OF TESTIMONY AND EXHIBITS

I. Hearing Exhibits

	Admitted
SEPTA/Amtrak Exh. No. 1	Jan. 8, 1986

II. Proposed Testimony and Exhibits

Witness	Statement/Exhibit	Date Admitted
Rudden	SEPTA/Amtrak St. No. 1	Feb. 20, 1986
Rudden	Exh. RJR-1 through 6	Feb. 20, 1986
Rudden	SEPTA/Amtrak St. No. 1A	March 10, 1986
Rudden	SEPTA/Amtrak St. No. 1B	March 10, 1986
Vuchic	SEPTA/Amtrak St. No. 2	Feb. 20, 1986
Vuchic	Exh. VRV-1	Feb. 20, 1986